Brookfield
Renewable N.A.

October 14, 2026

Debbie-Anne A. Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Subject: Bar Mills Project (FERC No. 2194-000) Surrender Application and Decommissioning Plan

Dear Secretary Reese:

Brookfield White Pine Hydro LLC (hereinafter "BWPH" or "Licensee") is applying to the Federal Energy Regulatory Commission (hereinafter "FERC" or "Commission") to surrender the license for the Bar Mills Waterpower Project (hereinafter "Project"), as described below. The Project is currently licensed to BWPH as Project No. 2194 (124 FERC ¶ 62,153 (2008)). The current license expires on July 31, 2048.

The Bar Mills Project includes an existing concrete dam, granite headworks, an intake canal, downstream fish passage facility, powerhouse, appurtenant equipment, and an approximately 5.3 mile long, 263-acre impoundment. The Project has two generating units with a total rated generating capacity of 4.0 megawatt (MW) and a maximum hydraulic capacity (total turbine capacity) of 3,120 cubic feet per second (cfs). A more detailed description can be found in the Surrender Application, Exhibit A, and the Decommissioning Plan.

The Bar Mills Project has significant operational challenges that have prevented the generating units from running since 2017. These challenges are associated with Alkali Aggregate Reactivity (AAR) for which there is no long-term remedy except for full reconstruction. This option is not financially viable when coupled with existing migratory fish passage requirements. Thus, BWPH is proposing surrender of the license with decommissioning and dam removal. Certain structures identified in the attached Surrender Application and Decommissioning Plan will be retained for future use and continue to be maintained by BWPH.

Based upon the studies conducted and available resource information for the project, an environmental analysis of the proposed action is described in Section 4 of the Exhibit E. Associated mitigation measures are described in Section 2.1.2 of the Decommissioning Plan.

Drafts of Surrender Application and Decommissioning Plan were distributed to agencies and the public on June 3, 2026, for a 90-day comment period and were made available for download at https://barmills.brookfieldusprojects.com/documents/ and on FERC's eLibrary (https://elibrary.ferc.gov/eLibrary/search) under docket number P-2194. BWPH held a public meeting to provide an overview of the draft Surrender Application and draft Decommissioning Plan on June 25, 2026, at the Hollis Town Hall in Hollis, Maine.

BROOKFIELD WHITE PINE HYDRO LLC
460 Civic Center Drive, Augusta, ME 04330
T +1 207.755.5600 F +1 207.755.5655 brookfieldrenewableNA.com

BWPH will also submit state, federal, and local (i.e., the Towns of Buxton and Hollis) permit applications in the late 2026 and early 2027. Federal and state permitting agencies and FERC will provide an opportunity for public comments that will be considered by each respective agency. As identified in Section 4.0 of the Decommissioning Plan, BWPH anticipates construction activities to commence in 2028, unless FERC and permitting approval allow for activities to begin in 2027.

If you have questions about the Surrender Application or the Decommissioning Plan or would like additional information, please contact David Heidrich at 207-755-5608 or by email at david.heidrich@brookfieldrenewable.com.

Sincerely,



Randall Dorman
Senior Compliance Manager – New England and Rest of Country (LA, NC, and TN)

Cc: Distribution List (Attached)
K. Poquette, R. Nadeau, D. Heidrich, J. Seyfried, M. Leblanc; BWPH
A. Qua, K. Cooley; Kleinschmidt Associates

Bar Mills Distribution List
October 2026

Matt Buhyoff
Consultation Biologist/Merrymeeting Bay
Salmon Recovery Coordinator
FERC (Merrymeeting Bay Salmon Habitat
Recovery Unit)
NOAA- National Marine Fisheries Service
Maine Field Office
17 Godfrey Drive Suite 1
Orono, ME 04473
matt.buhyoff@noaa.gov

Dan Tierney
Atlantic Salmon Recovery
Coordinator/Consultation Biologist
Federal Energy Regulatory Commission (Maine)
NOAA- National Marine Fisheries Service
Greater Atlantic Regional Fishiers Office
55 Greater Republic Drive
Glouster, MA 01930
dan.tierney@noaa.gov

Donald Dow
Hydro/Fish Passage Engineer
NOAA- National Marine Fisheries Service
Maine Field Office
17 Godfrey Drive Suite 1
Orono, ME 04473
donald.dow@noaa.gov

Timothy Timmermann
Director
US Environmental Protection Agency
Office of Enviornmental Review. Regiona 1: New
England
5 Post Office Square
Suite 100
Boston, MA 02109
timmermann.timothy@epa.gov

Andrew Raddant
Regional Environmental Officer
US Department of the Interior
15 State Street
Suite 400
Boston, MA 02109
andrew_raddant@ios.doi.gov

Patrick Dockens
US Fish and Wildlife Service
Maine Ecological Services Field Office
306 Hatery Road
East Orland, ME 04431
patrick_dockens@fws.gov

Kimberly Spiller
US Fish and Wildlife Service
Maine Ecological Services Field Office
306 Hatery Road
East Orland, ME 04431
kimberly_spiller@fws.gov

Greg Stewart
Chief of Applied Hydrology Branch
US Geological Survey
New England Water Science Center
196 Whitten Road
Augusta, ME 04333
gstewart@usgs.gov

John Cannella
NPS Hydro Power Manager
US National Park Service
Department of Interior
1100 Old Santa Fe Trail
Santa Fe, NM 87505
john_cannella@nps.gov

Bar Mills Distribution List
October 2026

Bryan Mercier
Director
US Department of the Interior
Bureau of Indian Affairs
MS 4606 MIB
1849 C Street NW
Washington, DC 20240
bryan.mercier@bia.gov

Harold Peterson
Manager
National Hydropower Compliance Program
Bureau of Indian Affairs
545 Marriott Drive
Suite 700
Nashville, TN 37214
Harold.Peterson@bia.gov

Heather Stukas
Project Manager
US Army Corps of Engineers
Maine Project Office
442 Civic Center Dr Suite 350
Augusta, ME 04330
heather.s.stukas@usace.army.mil

John Perry
Environmental Review Program Supervisor
Maine Department of Inland Fisheries and Wildlife
353 Water Street
41 State House Station
Augusta, ME 04333
John.Perry@maine.gov

Laura Paye
Hydropower Coordinator
Maine Department of Environmental Protection
Bureau of Land Resources
17 State House Station
Augusta, ME 04333
Laura.paye@maine.gov

Clair Biggs
Maine Department of Environmental Protection
Bureau of Land Resources
17 State House Station
Augusta, ME 04333
claire.briggs@maine.gov

Andrew Wood
Senior Resource Biologist
Maine Department of Inland Fisheries and Wildlife
Environmental Review Program
353 Water Street
Augusta, ME 04333
Andrew.J.Wood@maine.gov

Jim Vogel
Senior Planner
Maine Bureau of Parks and Lands
22 State House Station
Augusta, ME 04333
Jim.Vogel@maine.gov

James Pellerin
Reional Fisheries Biologist
Maine Department of Inland Fisheries and Wildlife
Sebago Lake Region
15 Game Farm Rd
Gray, ME 04039
James.Pellerin@maine.gov

Bar Mills Distribution List
October 2026

Nick Kalejs
Assistant Regional Fisheries Biologist
Maine Department of Inland Fisheries and Wildlife
Sebago Lake Region
15 Game Farm Rd
Gray, ME 04039
Nicholas.Kalejs@maine.gov

Sean Ledwin
Director
Maine Department of Marine Resources
Bureau of Sea Run Fisheries and Habitat
21 State House Station
Augusta, ME 04333
sean.m.ledwin@maine.gov

Casey Clark
Maine Department of Marine Resources
21 State House Station
Augusta, ME 04333
casey.clark@maine.gov

Erin Wilson
Federal Consistency Coordinator
Maine Department of Marine Resources
Maine Coastal Program
21 State House Station
Augusta, ME 04333
dmrcoastalprogram_fc@maine.gov

Lars Hammer
Marine Resource Specialist
Maine Department of Marine Resources
21 State House Station
Augusta, ME 04333
lars.hammer@maine.gov

Kirk Mohney
Director
Maine Historic Preservation Commission
55 Capitol Street
55 State House Station
Augusta, ME 04333
kirk.mohney@maine.gov

Megan Rideout
Review & Compliance/CLG Coordinator
Maine Historic Preservation Commission
55 Capitol Street
55 State House Station
Augusta, ME 04333
Megan.M.Rideout@maine.gov

Maine Natural Areas Program
177 State House Station
Augusta, ME 04333-0177
maine.nap@maine.gov

John L. Myers
Town Clerk
Town of Buxton
185 Portland Rd
Buxton, ME 04093
jmyers@buxton.me.us

Crystal Gaudet
Town Clerk
Town of Hollis
34 Town Farm Rd
Hollis, ME 04042
cgaudet@hollismaine.org

Robert Nasdor
Northeast Stewardship Director
American Whitewater
65 Blueberry Hill Lane
Sudbury, MA 01776
bob@americanwhitewater.org

Bar Mills Distribution List
October 2026

Andrew Fisk, Ph.D.
Northeast Regional Director
American Rivers
1101 14th Street NW
Suite 1400
Washington, DC 20005
afisk@americanrivers.org

Andrew Beahm
Executive Director
Maine Audubon Society
20 Gilsland Farm Rd
Falmouth, ME 04105
abeahm@maineaudubon.org

John Burrows
Vice President of US Operations
Altantic Salmon Federation
Fort Andross 14 Maine St
Suite 202
Brunswick, ME 04011
jburrows@asfmaine.org

Landis Hudson
Executive Director
Maine Rivers
PO Box 782
Yarmouth, ME 04096
landis@mainerivers.org

Steven G. Heinz
Maine Council of Trout Unlimited
3 Spruce Lance
Cumberland Foreside, ME 04110
heinz@maine.rr.com

Mark Zakutansky
Director of Conservation Polic Engagement
Appalachian Mountain Club
100 Illickls Mill Rd
Bethleham, PA 18017
mzakutansky@outdoors.org

Eliza Townsend
Maine Appalachian Mountain Club
15 Moosehead Lake Rd
Greenville, ME 04441
etownsend@outdoors.org

Cheri Dunning
Executive Director
Saco River Corridor Commission
81 Maple St
PO Box 283
Cornish, ME 04020
srcc@srcc-maine.org

Saco River Recreational Center
PO Box 363
189 Swans Falls Rd
Fryeburg, ME 04037
swansfalls@sacorivercouncil.org

Mark Woodruff
Saco Salmon Restoration Alliance
17 Lower Egypt Rd
Buxton, ME 04093
markw@sacoriver.net

Christopher Sockalexis
Tribal Historic Preservation Officer
Penobscot Indian Nation
Cultural and Historic Preservation Program
12 Wabanaki Way
Indian Island, ME 04468
chris.sockalexis@penobscotnation.org

Bar Mills Distribution List
October 2026

Charles Loring Jr.
Director, Department of Natural Resources
Penobscot Indian Nation
12 Wabanaki Way
Indian Island, ME 04468
Charlie.Loring.Jr@penobscotnation.org

Dan McCaw
Fisheries Biologist
Penobscot Indian Nation
Department of Natural Resources
12 Wabanaki Way
Indian Island, ME 04468
dan.mccaw@penobscotnation.org

Cody Dillingham
Fisheries Biologist
Penobscot Indian Nation
Department of Natural Resources
12 Wabanaki Way
Indian Island, ME 04468
cody.dillingham@penobscotnation.org

Clarisa Sabattis
Chief
Houlton Band of Maliseet Indians
88 Bell Rd
Littleton, ME 04730
csabattis@maliseets.com

Isaac St. John
Tribal Historic Preservation Officer
Houlton Band of Maliseet Indians
88 Bell Rd
Littleton, ME 04730
istjohn@maliseets.com

Donald Soctomah
Tribal Historic Preservation Officer
Passamaquoddy Tribe
PO Box 159
Princeton, ME 04668
Soctomah@gmail.com

William J. Nicholas, Sr.
Chief
Passamaquoddy Tribe
Indian Township
PO Box 301
Princeton, ME 04468
chief.wnicholas@gmail.com

Jenny Gaenzle
Tribal Historic Preservation Officer
Aroostook Band of Micmacs
7 Northern Rd
Presque Isle, ME 04769
jgaenzle@micmac-nsn.gov

Sheila McCormack
Chief
Aroostook Band of Micmacs
7 Northern Rd
Presque Isle, ME 04769
smccormack@micmac-nsn.gov

Renee Lewis
Committee Member
BWPH Decommissioning Committee
19 Usher Mill Rd
Hollis, ME 04042
rlewis@varcapadvisors.com

Bar Mills Distribution List
October 2026

Jim Boutin
Committee Member
BWPH Decommissioning Committee
118 Country Club Rd
Hollis, ME 04042
jboutin@gmail.com

Mark Blier
Committee Member
BWPH Decommissioning Committee
50 Hall Rd
Buxton, ME 04093
Mark.Blier@legislature.maine.gov

Paul Mattor
Committee Member
BWPH Decommissioning Committee
PO Box 85
Bar Mills, ME 04004
pmattor@sacoriver.net

Dan Yarumian
Committee Member
BWPH Decommissioning Committee
398 Plains Rd
Hollis, ME 04042
dyarumian@hollismaine.org

Heath Knight
Committee Member
BWPH Decommissioning Committee
61 Old Thompson Rd
Buxton, ME 04093
hknight.buxton.me@gmail.com

Jamie Marshall
Committee Member
BWPH Decommissioning Committee
174 Lower Egypt Road
Buxton, ME 04093
jamiemar@maine.rr.com

Terry Walters
Committee Member
BWPH Decommissioning Committee
8 Oxford Dr
Hollis, ME 04042
tcwawa@securespeed.us

Cindy Fanning
Committee Member
BWPH Decommissioning Committee
PO Box 374
Bar Mills, ME 04004
fanningshawkhouse@yahoo.com

Mark Woodruff
Committee Member
BWPH Decommissioning Committee
17 Lower Eygpt Rd
Buxton, ME 04093
markw@sacoriver.net

David Heidrich
BWPH
david.heidrich@brookfieldrenewable.com

Ryan Nadeau
BWPH
ryan.nadeau@brookfieldrenewable.com

Bruce Digennaro
Essex Parnership
bruce@essexpartnership.com

West Buxton Library
director@westbuxtonpubliclibrary.org

Hollis Library
director@holliscenterpubliclibrary.org

Bar Mills Distribution List
October 2026

Berry Library
berrylibrary93@gmail.com

Salmon Falls Library
salmonfallslibrary@gmail.com

BEFORE THE
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR LICENSE SURRENDER
BAR MILLS PROJECT NO. 2194

(1) Brookfield White Pine Hydro LLC (hereinafter "BWPH" or "Licensee") applies to the Federal Energy Regulatory Commission (hereinafter "FERC" or "Commission") for a surrender of the license for the Bar Mills Hydroelectric Project (hereinafter "Project"), as described in the attached exhibits. The Project is currently licensed to BWPH as Project No. 2194 (124 FERC ¶ 62,153 (2008)). The current license expires July 31, 2048. BWPH is the only entity that has any proprietary right or interest in the Project.

The FERC license requires run-of-river operations and seasonal minimum bypass and downstream flows from the Project, consistent with the 1997 Flow Agreement[1], and the FERC approved Minimum Flow Monitoring Plan (2011)[2]. The Project is also subject to the 2007 Saco River Fisheries Assessment Agreement[3], amended in 2019[4], which sets the operational date for upstream fish passage facilities at the Project (or an alternative developed in consultation with fisheries agencies) to be May 1, 2025. On November 30, 2020, in accordance with the fish passage alternative specified in the 2019 Amendment, BWPH filed a letter with FERC indicating its intent to surrender the license for the Bar Mills Project.

The Bar Mills Project has significant operational challenges that have prevented the generating units from running since 2017. These challenges are associated with an unavoidable condition called Alkali Aggregate Reactivity (AAR) which occurs when certain aggregates used in the concrete for the dam and/or powerhouse absorb water and cause expansion and cracking over a period of many years. There is no long-term remedy for AAR at the Bar Mills Project except for full reconstruction.

[1] The April 30, 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River was incorporated as appropriate into the individual project licenses for the Hiram, Bonny Eagle, and Skelton projects.
[2] FERC. 2011. Order Amending Flow Monitoring Plan. Issued January 4, 2011. Accession No.: 20110104-3002.
[3] FERC 2007. Order Modifying and Approving Fish Passage Assessment Report and Recommendations for Fish Passage and Fisheries Management. 120 FERC ¶ 62,050
[4] FERC 2019. Order Approving Revised Fish Passage Assessment and Fish Passage Installation Schedule. 168 FERC ¶ 62,035

(2) The location of the Project is:

State:	Maine
County:	York
Township or nearby town:	Towns of Buxton and Hollis
Stream or other body of water:	Saco River

(3) The exact name and business address and telephone number of the applicant are:

Brookfield White Pine Hydro LLC
460 Civic Center Drive
Augusta, ME 04330

(4) The exact name and business address of each person authorized to act as agent for the applicant in this application are:

Mr. Nathan Stevens
Vice President
Brookfield White Pine Hydro LLC
460 Civic Center Drive
Augusta, ME 04330

It is requested that copies of all correspondence pertaining to this application be provided to:

Ryan Nadeau	Andy Qua
Brookfield White Pine Hydro LLC	Kleinschmidt Associates
460 Civic Center Drive	PO Box 650, 141 Main Street
Augusta, ME 04330	Pittsfield, ME 04967

(5) The applicant is a domestic corporation and is not claiming preference under section 7(a) of the Federal Power Act.

(6) (a) The statutory or regulatory requirements of the State of Maine, in which the Project is located, which would, assuming jurisdiction and applicability, affect the Project with respect to bed and banks, and to the appropriation, diversion and use of water for power purposes, and with respect to the right to engage in the business of developing, transmitting and distributing power, and in any other business necessary to accomplish the purposes of the license under the Federal Power Act are:

(i) Maine Waterway Development and Conservation Act, Maine Revised Statutes Annotated (M.S.R.A.) Title 38, §630 et. seq.

(ii) Mill and Dam Act, M.S.R.A Title 38, §651 et. seq.

(iii) Small Power Production Act, M.S.R.A Title 35-A, §3302 et. seq.

(b) The steps which the Applicant has taken, or plans to take, to comply with each of the laws cited above are:

(i) The Maine Waterway Development and Conservation Act (MWDCA), enacted in 1983, regulates certain construction or reconstruction of hydropower projects which change water levels or flows above or below a dam. Because BWPH is proposing to remove spillway structures, approval from Maine Department of Environmental Protection will be required under the MWDCA.

(ii) The Mill Act, enacted in 1821, in part allows riparian owners to maintain dams and raise water. The statute does not require any permits and has been interpreted by the Maine Supreme Judicial Court to apply to hydroelectric generating plants. See Veazie v. Dwinel, 50 Me. 479 (1862). Maine case law has also held that owners of the riverbed have the right to the natural flow of a stream as it passes through their land, Wilson & Son v. Harrisburg, 107 Me. 207 (1910). Licensee either owns or has flowage rights to all project lands and waters.

(iii) The Small Power Production Act is Maine's "mini-PURPA" statute, which exempts small power production facilities, including small hydroelectric sites not exceeding 80 MW capacity, from control or regulation by the Maine Public Utilities Commission, except for some retail rate-making purchases. When it was operating, the power from the Project was less than 80 megawatts (MW) and no approval was required for this Project.

(7) The Bar Mills Project includes an existing concrete dam, granite headworks, an intake canal, downstream fish passage facility, powerhouse, appurtenant equipment, and an approximately 5.3 mile long, 263-acre impoundment. The Project has two generating units with a total rated generating capacity of 4.0 MW and a maximum hydraulic capacity (total turbine capacity) of 3,120 cubic feet per second (cfs).

(8) No lands of the United States are affected by the Project.

(9) This is an existing Project that is proposed for decommissioning and dam removal. Certain structures as described in Exhibit A will remain in place and continue to be maintained by BWPH. BWPH is the owner and operator of all existing Project facilities. BWPH either owns or has flowage rights to all Project lands.

(10) (a) The Project is located entirely within York County. The mailing address for York County is:

York County Commissioners
45 Kennebec Road
Alfred, ME 04002

(b) Towns having a population of 5,000 or more and located within 15 miles of the Project dam are:

Truc Dever
City Manager
City of Biddeford
205 Maine Street
Biddeford, ME 04005
(207) 284-9313

Diana Asanza
Town Manager
Town of Old Orchard Beach
1 Portland Avenue
Old Orchard Beach, ME 04064

Danielle West
City Manager
City of Portland
389 Congress Street
Portland, ME 04101

Ryan D. Pelletier
City Administrator
City of Saco
300 Main Street
Saco, ME 04072

Steven R. Buck
City Manager
City of Sanford
919 Main Street
Sanford, ME 04073

Scott Morelli
City Manager
City of South Portland
25 Cottage Road
South Portland, ME 04106

David Morse
Mayor
City of Westbrook
2 York Street
Westbrook, ME 04092

Robert Burns
Town Manager
Town of Windham
8 School Street
Windham, ME 04062

(c) There are no special purpose political subdivisions affected by the Project, or that would likely be interested in, or affected by, the application.

(d) There are no Native American tribes affected by the Project.

(11) Applicant has, in accordance with 18 CFR § 4.32 (a) (3) made a good faith effort to notify, by certified mail, the following entities of the filing of this application:

(a) Every property owner of record of any interest within the bounds of the Project;

(b) The entities listed in (10) above;

(c) Other governmental agencies that would likely be interested in or affected by the application.

(12) In accordance with Section 4.61 of the Commission's regulations, the following Exhibits are attached to and made a part of this application:

Exhibit A – Project Description
Exhibit E – Environmental Report
Exhibit F – General Design Drawings (*provided under separate cover for security purposes*)
Exhibit G – Project Maps
Exhibit H – Description of Project Management and Need for Project Power – Exhibit H is not applicable as the Project no longer generates power and is proposed for decommissioning and removal. Through decommissioning, it will no longer be under FERC jurisdiction.

SUBSCRIPTION

This Application for License Surrender for the Bar Mills Project, FERC No. 2194 is executed in the State of Maine, County of Kennebec, by Nate Stevens, Vice President, Brookfield White Pine Hydro LLC, 460 Civic Center Drive, Augusta, Maine, 04330, who, being duly sworn, deposes and says that the contents of this application are true to the best of his knowledge or belief and that he is authorized to execute this application on behalf of Brookfield White Pine Hydro LLC. The undersigned has signed this application this 13th day of October 2026.

BROOKFIELD WHITE PINE HYDRO LLC

By _____

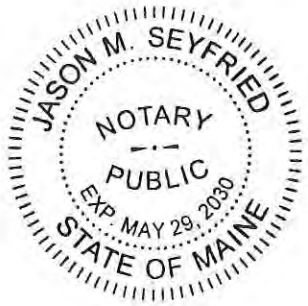
Nate Stevens
Vice President, Operations | NEROC
Brookfield White Pine Hydro LLC

VERIFICATION

Subscribed and sworn to before me, a Notary Public of the State of Maine this 13th day of October 2026.

_____
(Notary Public)

(My Commission Expires May 29, 2030/seal



BAR MILLS HYDROELECTRIC PROJECT

FERC NO. 2194

APPLICATION FOR LICENSE SURRENDER

EXHIBIT A

PROJECT DESCRIPTION AND OPERATIONS

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1.0 INTRODUCTION

The Bar Mills Hydroelectric Project (Bar Mills Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 2194, is an existing 4.0 megawatt (MW) licensed development owned and operated by Brookfield White Pine Hydro LLC, (BWPH). The original license for Bar Mills was issued May 11, 1956. An Order Issuing Subsequent License (Minor Project) was issued by FERC on August 26, 2008. The current license expires July 31, 2048. On November 30, 2020, BWPH notified the Federal Energy Regulatory Commission of its intent to surrender the FERC license (P-2194).

The FERC license requires run-of-river operations and seasonal minimum bypass and downstream flows from the Project, consistent with the 1997 Flow Agreement[1], and the FERC approved Minimum Flow Monitoring Plan (2011)[2]. The Project is also subject to the 2007 Saco River Fisheries Assessment Agreement[3], amended in 2019[4], which sets the operational date for upstream fish passage facilities at the Project (or an alternative developed in consultation with fisheries agencies) to be May 1, 2025. On November 30, 2020, in accordance with the fish passage alternative specified in the 2019 Amendment, BWPH filed a letter with FERC indicating its intent to surrender the license for the Bar Mills Project.

The Bar Mills Project has significant operational challenges that have prevented the generating units from running since 2017. These challenges are associated with an unavoidable condition called Alkali Aggregate Reactivity (AAR) which occurs when certain aggregates used in the concrete for the dam and/or powerhouse absorb water and cause expansion and cracking over a period of many years. There is no long-term remedy for AAR at the Bar Mills Project except for full reconstruction.

[1] The April 30, 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River was incorporated as appropriate into the individual project licenses for the Hiram, Bonny Eagle, and Skelton projects.
[2] FERC. 2011. Order Amending Flow Monitoring Plan. Issued January 4, 2011. Accession No.: 20110104-3002.
[3] FERC 2007. Order Modifying and Approving Fish Passage Assessment Report and Recommendations for Fish Passage and Fisheries Management. 120 FERC ¶ 62,050
[4] FERC 2019. Order Approving Revised Fish Passage Assessment and Fish Passage Installation Schedule. 168 FERC ¶ 62,035

2.0 PROJECT LOCATION

The Bar Mills Project is located in the towns of Buxton and Hollis, York County, Maine (See Figure 2-1). The Project is situated on the Saco River at river mile (RM) 19, 14.5 miles above head-of-tide. There are seven hydroelectric facilities on the main stem of the Saco River; all are located in Maine. The uppermost project on the main stem, Swans Falls (FERC No. 11365), followed by Hiram (FERC No. 2530), Bonny Eagle (FERC No. 2529), West Buxton (FERC No. 2531), Bar Mills (FERC No. 2194), Skelton (FERC No. 2527), and Cataract (FERC No. 2528). A map locating the Saco River hydro projects is included as Figure 2-1.

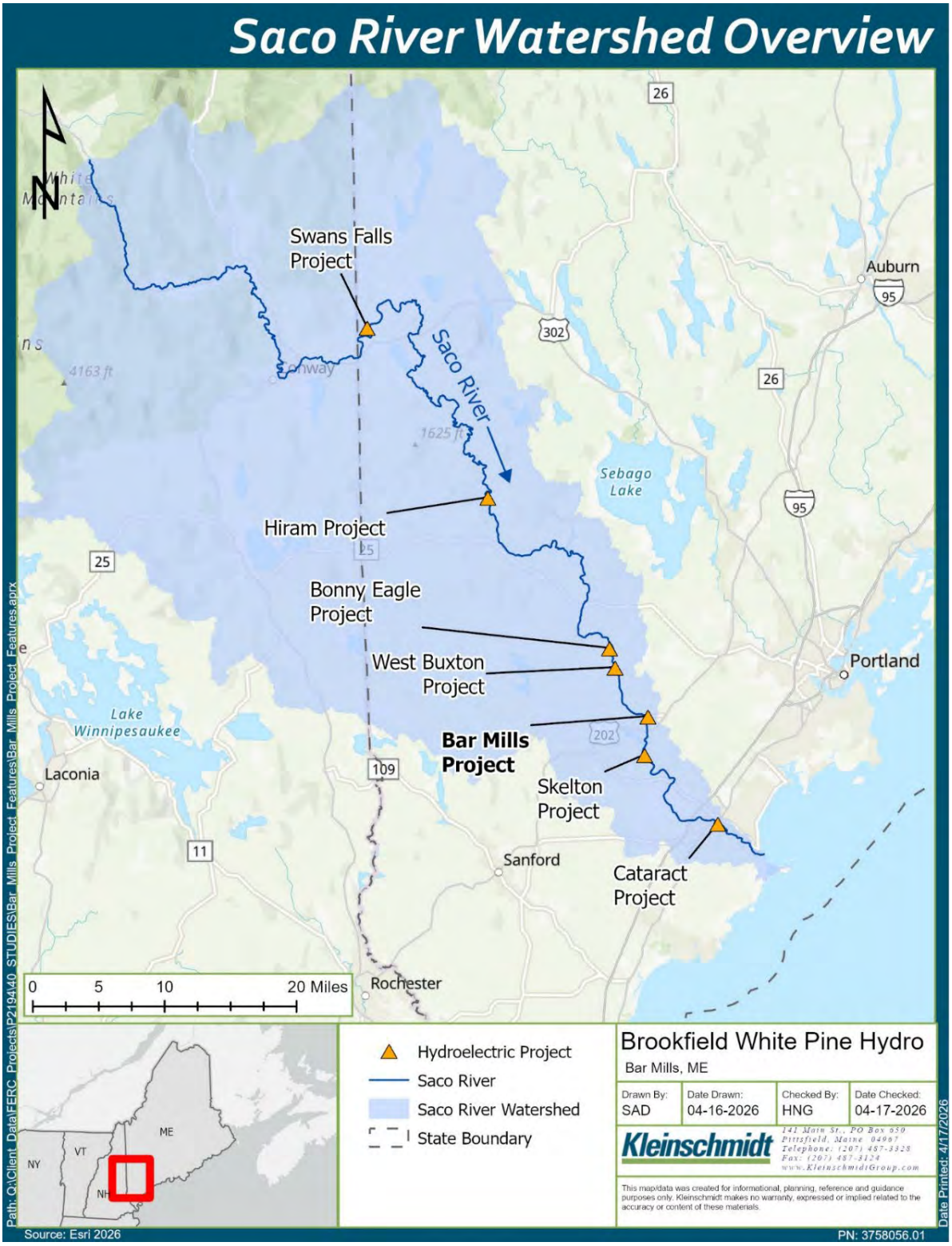


Figure 2-1 Saco River Watershed Overview

3.0 DESCRIPTION OF PROJECT

3.1 Existing Project Facilities

3.1.1 Project Structures

The Project structures include a concrete dam that spans the river, a granite headwork structure located at the entrance to the intake canal, a canal that conveys flow to the powerhouse, a downstream fish passage facility, a powerhouse, and appurtenant equipment. An aerial view of these Project structures is included in Figure 3-1.

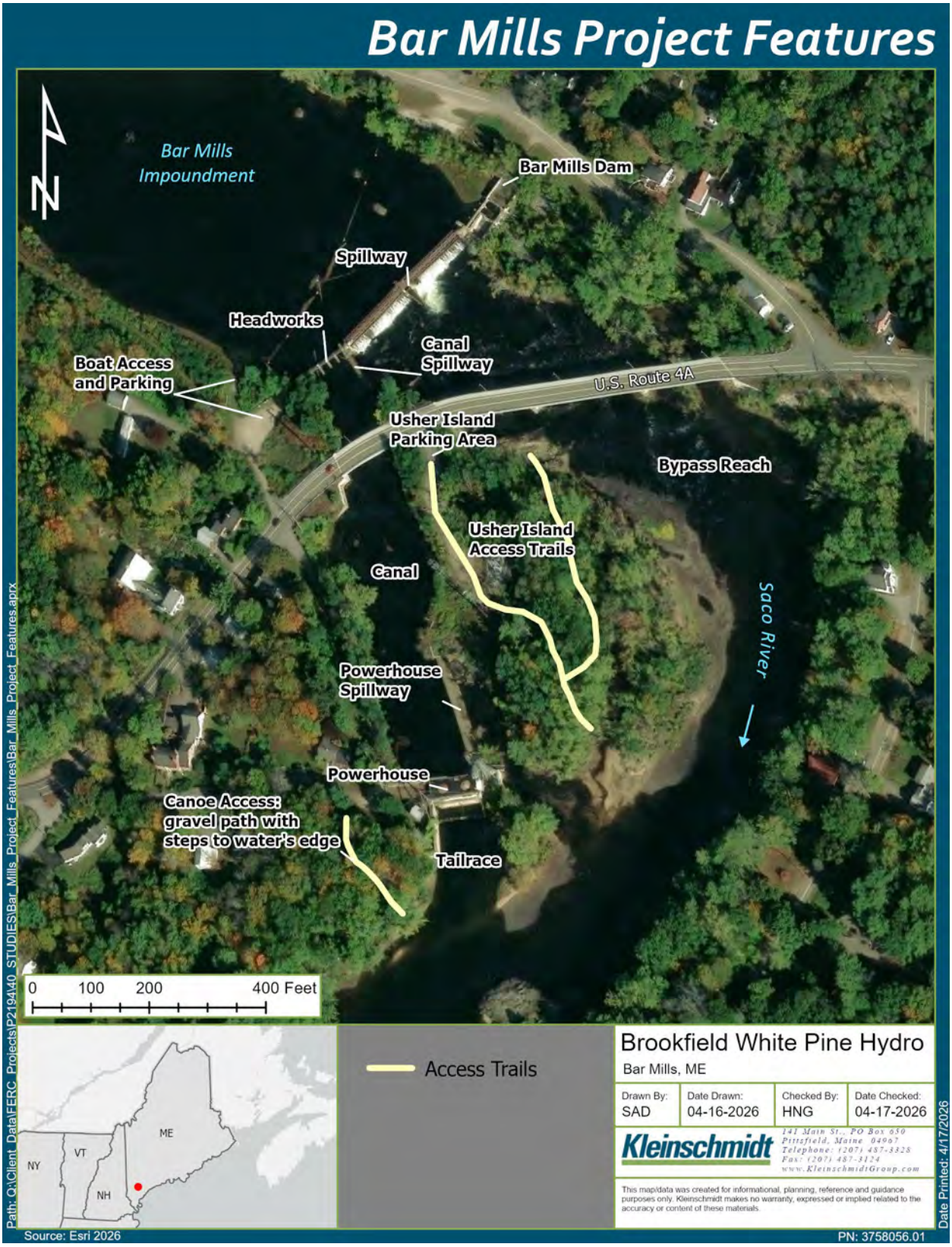


Figure 3-1 Bar Mills Project Features

3.1.2 Reservoir

The Project reservoir is approximately 263-acre, 5.3-mile-long impoundment. Normal pond elevation for the Project is 148.5 feet NGVD. Since the Project is run-of-river, there is no useable storage behind the dam.

3.1.3 Dam

The main dam is founded on bedrock, with a maximum height of approximately 21 feet with an average height of approximately 15 feet. The permanent spillway crest is at Elevation 141.75 feet and is topped with 6.75-foot-high hinged steel flashboard panels. The project includes the remnants of the Rogers Fibre Mill foundation, consisting of an approximately 100-foot long concrete structure on the east side connected to a 14-foot wide spillway abutment. The concrete spillway is approximately 264 feet long including a 14-foot wide low flow gate structure located in the center of the spillway. An approximately 14-foot wide concrete abutment is located on the western end of the spillway and joins the spillway to the canal headworks structure and canal wall/auxiliary spillway. An operating bridge spans the entire length of the spillway with an electric hoist located on the bridge used for operating the hinged flashboard panels. Beyond the canal headworks (discussed below) the dam includes an earthen embankment containing a buried concrete cut-off wall, approximately 50 feet in length. The Project dam develops a head of 21 feet between the normal full headpond elevation (148.5') and normal tailwater elevation (127.5').



Photo 3-1 Downstream View of Spillway

3.1.4 Intake Canal

An approximately 94-foot long headworks structure is located at the entrance to the canal. The headworks structure consists of four stone masonry piers and two concrete abutments which can be fitted with stoplogs to allow for the dewatering of the canal for maintenance. There are no gates at the headworks structure, and the structure is not used to control flow into the canal. A steel walkway extends across the headworks structure to provide access from the west end of the dam to the spillway abutment and operating bridge.

The canal extends approximately 735 feet from the headworks structure to the powerhouse. The minimum width of the canal is approximately 75 feet, near the headworks. The maximum width of the canal is approximately 180 feet, about mid-way in its length. The canal was excavated into soil and bedrock and includes concrete saddle dikes to maintain the normal operating levels. The west side of the canal is primarily an earthen slope. At the top of the slope is the powerhouse access road. The east side of the canal is formed by the canal spillway composed of a 90-foot long masonry/concrete overflow section adjacent to the spillway, excavated bedrock slopes and various masonry and concrete non-overflow saddle dams approximately 311 feet long, and a 175-foot long concrete overflow section near the powerhouse, referred to as the powerhouse spillway. The overflow portions of the canal wall have a crest elevation of 148.5', matching the

normal full impoundment elevation. Non-overflow sections have crest elevations ranging from 149.5′ to greater than 155.0′.

The powerhouse spillway includes a seven-foot-wide surface gate and sluice for downstream fish passage immediately adjacent to the powerhouse. There is a 6-foot by 6-foot opening located at the base of the powerhouse spillway used for draining the canal with stoplogs that can be removed manually.



Photo 3-2 Headworks Structure



Photo 3-3 Canal Looking from Bridge Towards Powerhouse Under Drawdown

3.1.5 Powerhouse

The Project powerhouse substructure and a large part of the 40-feet wide by 80-feet long super-structure are constructed of reinforced concrete. The majority of the powerhouse is located below grade level and is not readily visible from the access road. The powerhouse roof is built of waterproof membrane overlaying wood planks and supported by structural steel framing. Roof hatches are located over each of the two units. A stiff leg 25-ton outdoor derrick crane is located at the west end of the powerhouse. The crane house is mounted on concrete piers and is steel framed and covered with corrugated aluminum siding. The powerhouse substructure includes the two turbine water intakes and draft tubes, two headgates, and trashracks.

The powerhouse substructure includes the two turbine water intakes and draft tubes, two headgates, and trashracks. The existing turbines are vertical-shaft, fixed-propeller Leffel units, each rated at 3,000 Hp (2.25 MW). Wicket gates control flow to each of the units. The combined maximum hydraulic capacity of the turbines is approximately 3,120 cfs.



Photo 3-4 Aerial Image of Powerhouse

3.1.6 Tailrace

The tailrace consists of an excavated channel extending from the powerhouse to the river and is approximately 200 feet long with a normal water elevation of 127.5'. The Project tailwater is influenced by the downstream Skelton Project headpond which, at a full pond of 127.5', backwaters into the Bar Mills tailrace.

3.1.7 Bypass Reach

The bypass reach consists of the natural river channel extending from the dam spillway to the powerhouse tailrace and is approximately 1,500 feet from the dam to the confluence with the tailwater with a normal water elevation of 127.5'. The bypass reach is likewise influenced by backwater effect of the downstream Skelton Project impoundment.

3.1.8 Appurtenant Facilities and Equipment

3.1.8.1 Transmission Facilities

The Project related transmission facilities include the generator leads, generator breakers, a 2.4 kV bus, a 2.4 kV breaker, transformer bank No. 1, and high side switch T1H. The transformer bank is a three phase unit (rated 5,000 kVA, 34/2.4 kV). The line that transmits energy from the transformer bank to the local utility is not part of the licensed Project.

3.1.8.2 Downstream Fish Passage

The construction of a downstream fish passage facility at the Project was completed in 2000. It began operation in 2001. The fish passage facility consists of a seven-foot-wide gate leading to a metal flume which deposits downstream-migrating fish into a permanently watered pool. A conveyance/passage flow of 120 cfs is discharged through the sluice gate from May 1 (or at 10°C ambient river temperature – whichever occurs first) through June 15 (or at 18°C ambient river temperature – whichever occurs first) annually to pass downstream migrating fish.

Table 3-1 Bar Mills Project Facilities and Descriptions

Bar Mills Project – FERC No. 2194	
Description	Number or Fact
General Information	
FERC Number	2194
License Issued	August 26, 2008
License Expiration Date	August 26, 2048
License Type	Major License
Licensed Capacity	4.0 MW
Project Location	
	Buxton and Hollis (York County), Maine
River	Saco River, located at approximately river mile 19
Project Drainage Area	1,591 square miles
USGS Gages:	
Name	No. 01064500-Saco River near Conway, NH
Drainage Area at Gage	385 square miles
Period of Record	1929-Present
Maximum Flow at Gage	47,200 cfs – 03/27/53

Bar Mills Project – FERC No. 2194	
Minimum Flow at Gage	40 cfs – 03/10/32
Mean Annual Flow at Gage	946 cfs
Name	No. 01066000 – Saco River @ Cornish, ME
Drainage Area at Gage	1,293 square miles
Period of Record	1916-Present
Maximum Flow at Site	46,600 cfs – 03/21/36
Minimum Flow at Site	244 cfs – 10/07/64
Mean Annual Flow	2,719 cfs
Operation	Formerly daily cycling, with approximately 2.0 ft impoundment fluctuation – taken off line in 2017
Next Upstream Dam	West Buxton (FERC No. 2531) owned by FPL Energy
Next Downstream Dam	Skelton (FERC No. 2527) owned by FPL Energy
Impoundment	
Normal Full Pool Elevation	148.5’
Length	5.3 miles
Surface Area	263 acres
Volume Capacity	500 acre-feet useable
Tailwater	
Normal Elevation	127.5’
Dam	
Construction	Concrete founded on bedrock
Total Length	1,148 feet of water retaining structures include dam and canal sections, and a 14-foot-wide sluice at the center of the dam
Spillway Section:	
Length	306 ft (includes a 14-foot sluice and two 14-foot non-overflow abutments on either end of structure)
Height	Approximately 7 feet to sill
Flashboards	6.75 ft hinged steel
Permanent Crest Elevation	141.75’

Bar Mills Project – FERC No. 2194	
Canal Headworks:	
Construction	Concrete abutments and masonry piers with walkway
Length	94 feet
Canal	
Construction	Stone masonry and concrete with various overflow and non-overflow sections
Length	Approximately 735 feet
Powerhouse	
Construction	Reinforced concrete with wood plank roof supported on structural steel framing.
Length	80 feet
Width	40 feet
Turbines (Units 1 & 2 are identical)	
Type	Vertical shaft, fixed propeller
Manufacturer	James Leffel & Company
Hp rating	3000
Rated Gross Head (ft)	20
Speed (rpm)	120
Minimum Hydraulic Capacity (cfs)	950 one unit
Maximum Hydraulic Capacity (cfs)	3,120 combined
Generators (Units 1 & 2 are identical)	
Type	Vertical shaft, umbrella type
Manufacturer	Westinghouse Electric Corporation
KVA	2500
Phase	3
Cycles	60
Volts	2400
Power Factor	0.8
kW	2000
Total Installed Capacity	4000 kW
Turbine Governors	
Units 1 & 2	
Manufacturer	Woodward
Type	Motor driven
Output	30,000 ft lbs.
Powerhouse Crane	
	25-ton derrick with 90-foot boom

Bar Mills Project – FERC No. 2194	
Traveling Hoist	
	Used for operating flashboards on main spillway
Transmission Facilities	
Project-related transmission facilities	Generator leads, generator breakers
	2.4 kV bus, 2.4 kV breaker, Transformer Bank No. 1 high side switch T1H
Line from powerhouse	The transformer bank is a three phase unit (rated 5,000 kVA, 34/2.4 kV) and power from the Project is transmitted to the local utility system via a 34 kV three-phase non-project transmission line.

3.1.9 Land Ownership

Brookfield either owns or has flowage rights to all Project lands. There are no federal lands with the Projects' boundaries. BWPH will access the removal area from property owned by BWPH and from an area owned by the Town of Buxton, which includes deeded access for dam related activities.

3.1.10 Proposed Project Facilities

BWPH is proposing complete removal of the spillway to return the Saco River to free-flowing, unimpeded by the dam structure. Removal will include the spillway in its entirety, the timber crib dam that preceded the existing Bar Mills Dam, headwork structures, canal spillway, and former Rogers Fibre Mill Foundation.

The canal will remain mostly unchanged and will not be filled with soil materials. The powerhouse spillway at the downstream end of the canal will remain in its current configuration. The existing canal drain gate opening has timber stoplogs on the upstream face of the spillway. Those stoplogs will be removed to allow drainage of the canal. The powerhouse will remain in its current configuration with minor modifications. The derrick crane on the roof of the powerhouse will be removed along with its associated operating building. It is anticipated that the transformer on the powerhouse roof will be drained and removed.

The current conceptual layout would also include a new diversion weir (approximately two to three feet high) at the upstream end of the canal to direct flow and downstream

migrating fish away from the canal, and a drain gate opening at the downstream end of the canal to allow the canal to drain after high flow conditions.

BWPH will continue to maintain the remaining project features, including the powerhouse and surrounding lands and public recreational access, with the exception of the boat launch which will be reverted to a natural state with the concrete planks removed and bank stabilized.

4.0 PROJECT OPERATION

4.1 Existing Project Operation

FERC licensed operation of the Bar Mills Project is as a run of river facility. Units 1 and 2 are considered out-of-service indefinitely as of May and Dec. 2017, respectively as a result of concrete growth from AAR impeding the operation of the turbine/generator equipment. Prior to the station shutdown, the Bar Mills impoundment levels would generally fluctuate once or twice daily up to 2-feet below normal full pond elevation of 148.5 USGS datum to accommodate flow releases from the Bonny Eagle Project, located upstream of the Bar Mills Project. According to the Flow Agreement, the flow requirements at Bar Mills, which are determined by flow releases made at the upstream Bonny Eagle Project are: from April 1 through June 30, the impoundment will be maintained within 1 foot of the full pond elevation (run of river); from July 1 through September 30, minimum flows will be 400 cfs or inflow, whichever is less; from October 1 through November 15, minimum flows will be 600 cfs or inflow, whichever is less; and from November 16 through March 31, minimum flows will be 250 cfs or inflow, whichever is less. The Bar Mills Project will also maintain a continuous 100-cfs minimum flow in the bypass reach from April 1 to October 31, and a 50-cfs minimum flow from November 1 to March 31.

Because the powerhouse is no longer operational, all flows pass over the spillway and through the bypassed reach. The hinged flashboards continue to be manipulated to maintain impoundment water levels within license limits.

4.1.1 Estimated Average Annual Generation

The Bar Mills Project has significant operational challenges that have prevented the generating units from running for the last five years (non-operational since 2017). Prior to being taken offline, the average annual generation was 18,850 MWH

4.1.2 Estimated Average Head

The estimated average head at the Project is approximately 21 feet.

4.1.3 Reservoir Surface Area and Storage Capacity

The reservoir impounded by Bar Mills Dam, extending upstream from the top of the spillway at approximately elevation 148.5 NGVD, has an estimated surface area of 263 acres.

4.1.4 Plant Hydraulic Capacity and Stream Flow

The combined maximum hydraulic capacity of the two Project generating units is approximately 3,120 cfs. However, because the generating units are no longer in service, inflow to the project is passed over the spillway.

Daily average flow data for the Bar Mills Project were obtained from USGS Gage No. 01066000 Saco River at Cornish, Maine for January 1, 1996, through December 31, 2025; the gage is approximately 25 river miles upstream of the Bar Mills dam. The drainage area at the USGS Gage is 1,294 square miles. The drainage area at the Bar Mills dam is 1,591 square miles. The data from the USGS Gage were prorated to the Bar Mills Project based on the ratio of their drainage areas (1591 acres/1294 acres = 1.23). The mean and median flows over the 1996 to 2025 period were 3,744 cfs and 2,768 cfs, respectively. Flow duration curves are provided in Exhibit E.

5.0 CAPITAL AND OPERATION AND MAINTENANCE COSTS

The Project operated and produced power until 2017 when it was taken out of service indefinitely. Due to the overall cost to redevelop the project and meet migratory fish passage requirements, BWPH is electing to surrender the FERC license, remove certain components of the project features and continue to own and maintain other features (e.g., the powerhouse).

BWPH estimates that the total cost of the decommissioning of the Bar Mills Hydroelectric Project and planned removal of various dam and spillway features is between $7-12 million in present day costs. Delays in the construction timeline pose the risk of increasing these costs in future years.

5.1 Planning, Studies, and Outreach to Date

The Bar Mills Decommissioning project has required several years of sustained effort and significant financial investment before any physical dam removal activity has begun. To date, BWPH has spent approximately $1.0 million on engineering, environmental field studies, sediment sampling, community engagement, regulatory coordination, and preparation of the license surrender and draft decommissioning plan required by FERC. In addition to these early-phase efforts, additional consulting, engineering, and permitting support will continue into 2027 as part of the formal surrender process. This work reflects the complexity of responsibly evaluating dam removal at a site with shared infrastructure, historic industrial use, and close proximity to homes, public safety assets, and recreational resources.

5.2 Dam Removal and Site Restoration

BWPH estimates that dam removal and primary site restoration will cost between approximately $5.5 million and $7.5 million, depending on final scope, construction sequencing, and regulatory requirements. These estimates include mechanical contractor work, demolition activities, temporary facilities, engineering and construction oversight, project management, and contingency allowances. The upper end of the estimate reflects scenarios where additional structures are removed or where permitting and construction challenges increase complexity. These figures are planning-level estimates, not fixed prices, and will be refined as the decommissioning plan is finalized and reviewed by agencies.

5.3 Future Unknown Costs

In addition to the estimated dam removal costs, several potential future obligations remain unknown or difficult to quantify at this time. These include possible well mitigation measures for nearby private drinking water wells if impacts are identified; fire suppression alternatives for dry hydrants that would be affected once the dam is removed; recreational enhancements or public access improvements requested by the towns; and long-term fish passage and river restoration considerations following dam removal. Each of these items will require further study, agency review, and coordination with the Towns of Buxton and Hollis before costs can be defined.

As such, no reliable dollar estimates can yet be assigned, but BWPH is conservatively estimating that these measures may cost anywhere from $1-4 million. BWPH will carefully measure and evaluate all requests and prioritize those that have the greatest value to the public.

6.0 PURPOSE OF THE PROJECT

The Project operated and produced power until 2017 when it was taken out of service indefinitely. Due to the overall cost to redevelop the project and meet migratory fish passage requirements, BWPH is electing to surrender the FERC license, remove the spillway, and retain the powerhouse for other purposes that will be determined in the future.

7.0 DAM DECOMMISSIONING PLAN

The Bar Mills Dam Decommissioning Plan is included in Appendix A of Exhibit E.

8.0 LANDS OF THE UNITED STATES

In this proceeding involving the Bar Mills Project, the applicant believes that no issues regarding lands of the United States exist.

9.0 VALUE OF PROJECT POWER

The Project has not operated since 2017; therefore, there is no associated project power value. BHWP does not require the Project power to support its overall generation portfolio to meet existing and future customer demand.

10.0 ESTIMATED CHANGE IN PROJECT GENERATION

BHWP is proposing to surrender the license and decommission the Bar Mills Project; therefore, there is no change in Project generation compared to baseline, as the Project is not currently operational and is not generating electricity.

BAR MILLS HYDROELECTRIC PROJECT
FERC NO. 2194

APPLICATION FOR LICENSE SURRENDER

EXHIBIT E
ENVIRONMENTAL DOCUMENT

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Final Surrender Application\20261012 Exhibit E Bar Mills Surrender.docx

DEFINITIONS OF TERMS, ACRONYMS, AND ABBREVIATIONS

af	Acre-foot, the amount of water needed to cover one acre to a depth of one foot.
APE	Area of Potential Effect as pertaining to Section 106 of the National Historic Preservation Act.
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BOD	Biological Oxygen Demand
CFR	Code of Federal Regulations
cfs	cubic feet per second
Commission	Federal Energy Regulatory Commission
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DLA	Draft License Application
DO	dissolved oxygen
DOE	US Department of Energy
DOI	US Department of Interior
EA	Environmental Assessment
EAP	Emergency Action Plan
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EL	Elevation
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information Systems
GWh	Gigawatt-hour (equals one million kilowatt-hours)
Hp	Horsepower
Hz	hertz (cycles per second)
HPMP	Historic Properties Management Plan
Installed Capacity	The nameplate MW rating of a generator or group of generators
Interested Parties	The broad group of individuals and entities that have an interest in a proceeding
kW	Kilowatt
kWh	kilowatt-hour
MBPL	Maine Bureau of Parks and Lands
MAS	Maine Audubon Society
MDEP	Maine Department of Environmental Protection

MDIFW	Maine Department of Fish and Wildlife, Agency of Natural Resources
MDMR	Maine Department of Marine Resources
MFS	Maine Forest Service
MGS	Maine Geologic Survey
MHPC	Maine Historic Preservation Commission
MNAP	Maine Natural Areas Program
MSPO	Maine State Planning Office
MW	Megawatt
MWh	megawatt-hour
NEPA	National Environmental Policy Act
NGO	Non-governmental organization
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Services, same as NOAA Fisheries
NOAA Fisheries	NOAA National Marine Fisheries Service, same as NMFS
NPS	National Park Service
NRCM	Natural Resources Council of Maine
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
PM&E	Protection, Mitigation and Enhancement Measures
PMF	Probable Maximum Flood
Project Boundary	The boundary line defined in the Project license issued by FERC that surrounds those areas needed for operation of the Project.
Project Vicinity	The general geographic area in which the Project is located
RM	River mile
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer
TNC	The Nature Conservancy
TU	Trout Unlimited
USACE	US Army Corps of Engineers
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
WQC	Water Quality Certificate

1.0 INTRODUCTION

1.1 Background

Brookfield White Pine Hydro, LLC, (BWPH) owns and operates the Bar Mills Project (Project), between the Town of Buxton and the Town of Hollis, York County, Maine. The Project facilities are located on the Saco River at approximately river mile 19 (as measured from the river mouth at Camp Ellis, Maine) approximately 14.5 miles above head-of-tide. The project boundary extends upstream to the West Buxton Project (FERC No. 2531) boundary and downstream to the Skelton Project (FERC No. 2527) boundary at the Project tailwater (Figure 1-1). The Project boundary, including the impoundment and upstream flowage easements, extends approximately 5.3 miles along the Saco River from RM 19, approximately 0.3 miles below Bar Mills Dam, to RM 24.3, the lower extent of the West Buxton Project tailrace.

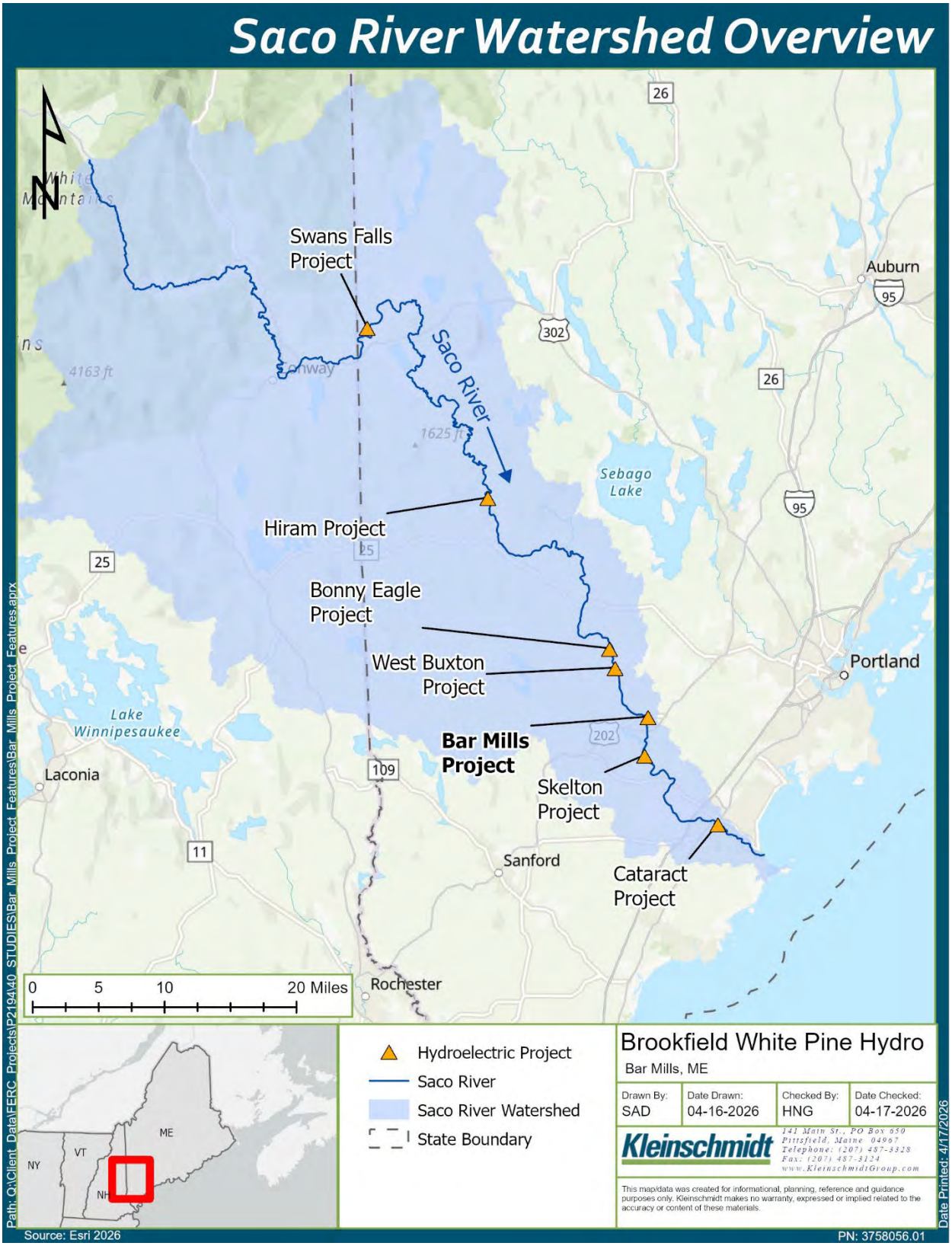


Figure 1-1 Saco River Watershed Overview

1.2 Saco River Settlement Agreement

BWPH filed an Offer of Settlement, known as the 2007 Saco River Fisheries Assessment Agreement (2007 Agreement)[1], with the Federal Energy Regulatory Commission on March 26, 2007. The 2007 Saco River Fisheries Assessment Agreement established the need, design, and schedule for future upstream anadromous fish passage facilities at the Bar Mills, West Buxton, Bonny Eagle, and Hiram Projects. FERC issued a License Order on August 26, 2008[2], upholding the 2007 Agreement. The 2007 Agreement and 2008 Project License require upstream fish passage to be operational at the Bar Mills Project by May 1, 2016. On November 1, 2017, BWPH filed an extension of time request to May 1, 2020[3], to install and commence operation of an upstream anadromous fish passage facility at the Bar Mills Project. Previous extensions of time (to May 1, 2018[4], and May 1, 2019[5]) had been granted to avoid interference with a Maine Department of Transportation (MDOT) bridge replacement project that was occurring within the project boundary. In the 2017 request, BWPH clarified that discussions with the US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and Maine Department of Marine Resources (MDMR) had centered around alternative fish passage measures on the Saco River that may be more beneficial than a new fish passage facility at the Bar Mills Project. FERC approved the extension of time on January 18, 2018. By Order[6] dated July 17, 2019, FERC approved a 2019 Saco River Fisheries Agreement Amendment which revised the 2007 Fish Passage Assessment Agreement, and the fish installation schedule contained therein. The operational date for upstream fish passage facilities at the Project (or alternative developed in consultation with fisheries agencies), under the terms of the 2019 Saco River Fisheries Assessment Agreement Amendment is May 1, 2025.

On November 30, 2020[7], in accordance with the fish passage alternative specified in the 2019 Amendment, BWPH filed a letter with FERC indicating its intent to surrender the

[1] FERC 2007. Order Modifying and Approving Fish Passage Assessment Report and Recommendations for Fish Passage and Fisheries Management. 120 FERC ¶ 62,050

[2] FERC. 2008. Order Issuing New License. Issued August 26, 2008. Accession No.: 20080826-3019

[3] Bar Mills Project (FERC No. 2194-ME) Extension of Time Request for Upstream Fish Passage Facility Installation. Accession No.: 20171101-5188

[4] FERC 2015. Order Granting Extension of Time. Accession No.: 20150626-3027

[5] FERC 2017. Order Granting Extension of Time. Accession No.: 20170104-3020

[6] FERC. 2019. Order Approving Revised Fish Passage Assessment and Fish Passage Installation. Accession No.: 20190717-3068

[7] Bar Mills Project (FERC No. 2194-ME) Notification of Intent to Surrender License. Accession No. 20201130-5095

license for the Bar Mills Project. The Bar Mills Project has significant operational challenges that have prevented the generating units from running since 2017. These challenges are associated with an unavoidable condition called Alkali Aggregate Reactivity (AAR) which occurs when certain aggregates used in the concrete for the dam and/or powerhouse absorb water and cause expansion and cracking over a period of many years. There is no long-term remedy for AAR in the Bar Mills Powerhouse except full reconstruction.

BWPH determined that surrendering the FERC Project license and decommissioning the Project is the most viable solution in balancing operational, environmental, future dam safety need, and addressing fish passage requirements. BWPH proposes full removal of the spillway, log sluice, canal headworks structure on the west side of the river, and demolition of the former Rogers Fibre mill intake on the east side of the river.

1.3 Purpose of Exhibit E

This Exhibit E conforms with the content requirements of 18 CFR § 4.61(d). Exhibit E is the Environmental Report, structured in the format of an Environmental Assessment. The purpose of the Exhibit E is to describe the existing resources at the Bar Mills Project, and how the existing and proposed Project facilities or operations may affect those resources, including measures for protection, mitigation, and enhancement (PME) with respect to each resource affected. Exhibit E also assesses potential impacts of license surrender and decommissioning on environmental resources. This analysis is based on available information and on the results of studies conducted during the surrender application process.

2.0 CONSULTATION

2.1 Scoping

Following consultation with the resource agencies on dam breach and removal options[8], BWPH issued a Preliminary Scoping Document (PSD) on August 1, 2022, describing the Project, and the proposed action for decommissioning of the project structures and surrender of the project license, including dam removal. Comments were requested to be submitted by September 1, 2022.

BWPH held a public informational meeting for the license surrender and decommissioning process, including presentation of plans for partial dam removal, for the Project at the Town of Buxton municipal office on August 2, 2022.

BWPH issued a Draft Study Plan on May 31, 2023 to provide the federal and state agencies, stakeholders and the general public with a description of studies and methodologies that BWPH intends to conduct in support of the Application for License Surrender and Decommissioning Plan for BWPH's proposed removal of the Bar Mills Dam. Studies were intended to inform analysis of potential project effects and mitigation measures and provide information necessary for state and federal permit applications [e.g., Maine Department of Environmental Projection's (MDEP) Maine Waterway Development and Conservation Act (MWDCA) and US Army Corps of Engineers (USACE) Section 401 permit applications].

BWPH compiled a list of resource issues and studies to be conducted in 2022 and 2023, partially informed through public outreach, which was posted to the project website and distributed to stakeholders on December 5, 2022. BWPH requested that comments and additional study requests be submitted by January 6, 2023.

BWPH issued the Draft Study plan for 30-day agency and public comment and requested any comments be submitted in writing by June 30, 2023.

BWPH had intended to conduct studies during the summer and fall of 2023, however, due to the abnormally high level of precipitation in Maine and New England during the

[8] Meetings were held with the US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Maine Department of Marine Resources (MDMR), and Maine Department of Inland Fisheries and Wildlife (MDIFW) on December 17, 2021 and May 19, 2022 to discuss fish passage outcomes for various breach alternatives.

summer, most of the studies were delayed to 2024. A Draft Study Report focusing on the findings of these studies was provided to agencies and stakeholders on October 22, 2025, with a public meeting held on October 30, 2025, and a public comment deadline of December 6, 2025.

2.2 Agency and Public Comments

Comments on the Draft Study Plans were received by August 15, 2023. A matrix of responses for the Draft Study Plans were appended to the Final Study Plan issued in August 2023. A Draft Study Report was issued in October 2025, comments on the Draft Study Report were received in December 2025. A matrix of responses for the Draft Study Report is included in Appendix A of the Final Study Report. The Final Study Report is being filed concurrently with the Surrender Application and Decommissioning Plan.

2.3 Surrender Application and Decommissioning Plan

A draft Surrender Application and Decommissioning Plan was distributed to agencies and the public for a 90-day review period. On June 25, 2026, BWPH held a public meeting during the comment period to provide an overview of the Surrender Application and Decommissioning Plan. Comments received by September 1, 2026 were addressed, to the extent appropriate, in the final application and Decommissioning Plan prior to filing with FERC.

2.4 Decommissioning Committee

In response to feedback from the Towns of Hollis and Buxton during the study planning process, BWPH formed a Decommissioning Committee of ten representatives selected by the Towns to review a preliminary draft of the DSR, to identify primary issues of concern, and to form subcommittees to evaluate alternatives to address recreational access, water supply under lower water levels associated with groundwater wells and fire suppression, and other concerns identified by the committee members. A series of meetings of the Committee have been held over the course of 2025 and 2026.

3.0 PROPOSED ACTION AND ALTERNATIVES

3.1 No-Action Alternative

The no-action alternative is typically the baseline from which to compare the proposed action (i.e., license surrender and decommissioning of the Bar Mills Project) and the action alternatives that are assessed. The no-action alternative was not considered by BWPH due to migratory fish passage requirements. The 2007 SA and 2008 License require BWPH to install upstream fish passage. BWPH considered redevelopment of the powerhouse to enable operation of the two generating units in addition to establishing upstream fish passage at the Project. Redevelopment of the project coupled with construction of upstream fish passage facilities would be cost prohibitive, therefore the proposed alternative is to surrender the license and decommission the Project. BWPH proposes full removal of the spillway, log sluice, canal headworks structure on the west side of the river and demolition of the former Rogers Fibre mill intake on the east side of the river.

The no-action alternative is not considered further.

3.2 Existing Facilities

The Project dam extends from the east side of the Saco River adjacent to the site of the former Rogers Mill in Buxton to the Project canal headworks on the Hollis (west) shore of the river. The main dam is founded on bedrock, with a maximum height of approximately 21 feet and an average height of approximately 15 feet. An approximately 94-foot long headworks structure is located at the entrance to the canal. The headworks structure consists of four stone masonry piers and two concrete abutments which can be fitted with stoplogs to allow for the dewatering of the canal for maintenance. The canal extends approximately 735 feet from the headworks structure to the powerhouse. The minimum width of the canal is approximately 75 feet, near the headworks. The maximum width of the canal is approximately 180 feet, about mid-way in its length. The powerhouse spillway includes a 7-foot-wide surface gate and sluice for downstream fish passage immediately adjacent to the powerhouse. There is a 6-foot by 6-foot opening located at the base of the powerhouse spillway used for draining the canal with stoplogs that can be removed manually. The Project powerhouse substructure and a large part of the 40-foot-wide by 80-foot-long super-structure are constructed of reinforced concrete. The majority of the powerhouse is located below grade level and is not readily visible from the access road. The powerhouse roof is built of waterproof membrane overlaying wood planks and supported by structural steel framing. The powerhouse has two turbine units with an

installed capacity of 4.0 megawatts (MW). The tailrace consists of an excavated channel extending from the powerhouse to the river and is approximately 200 feet long with a normal water elevation of 127.5′.

Figure 3-1 provides an aerial depiction of primary project features. A full project description is contained in Exhibit A.

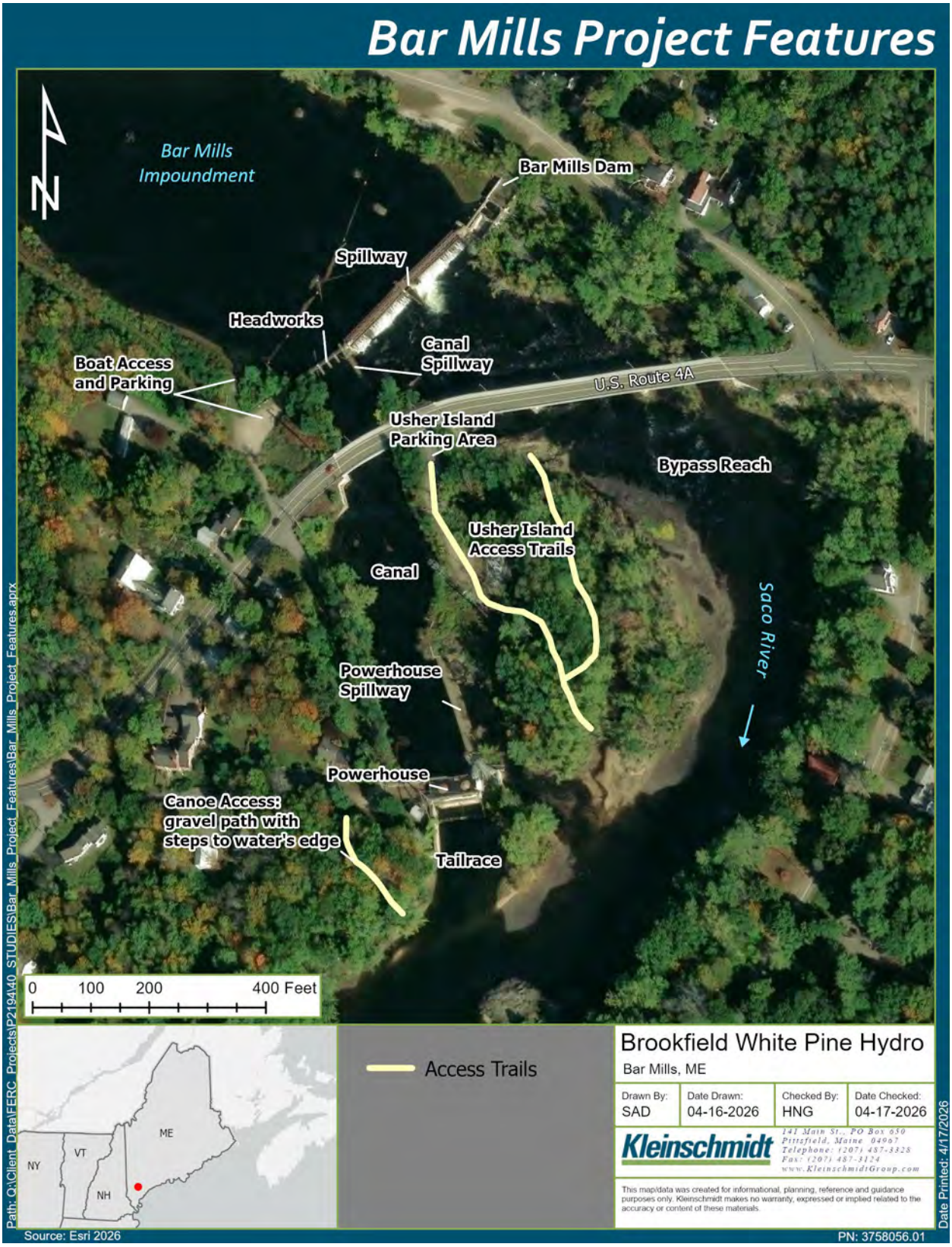


Figure 3-1 Bar Mills Project Features

3.3 Licensed Operations

Licensed operation of the Bar Mills Project is as a run of river facility. Units 1 and 2 are considered out-of-service indefinitely as of May and Dec. 2017, respectively, as a result of concrete growth from AAR impeding the operation of the turbine/generator equipment. Prior to the station shutdown, the FERC license authorized run-of-river operations. The Project operates consistent with the 1997 Flow Agreement[9], and the FERC approved Minimum Flow Monitoring Plan (2011)[10]. Also prior to shutting down the station, the Bar Mills impoundment level were fluctuated once or twice daily up to 2 feet below normal full pond elevation of 148.5 USGS datum to accommodate flow releases from the Bonny Eagle Project, located upstream of the West Buxton Project and Bar Mills Project. According to the FERC license and Minimum Flow Monitoring Plan[11], the flow requirements at the Project are:

- from April 1 through June 30, the impoundment will be maintained within 1 foot of the full pond elevation (run of river); outflow approximately equal to inflow (run-of-river operations) and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
- from July 1 through September 30, the impoundment will be maintained within 2 feet of the full pond elevation; a Project minimum flow of 400 cfs or inflow, whichever is less and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
- from October 1 through October 31, the impoundment will be maintained within 2 feet of the full pond elevation and a Project minimum flow of 600 cfs or inflow, whichever is less and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
- from November 1 to November 15, the impoundment will be maintained within 2 feet of the full pond elevation; and a Project minimum flow of 600 cfs or inflow, whichever is less and a minimum bypass reach flow of 50 cfs, or inflow, whichever is less, will be maintained; and

[9] The April 30, 1997, Instream Flow Agreement for Hydroelectric Projects on the Saco River was incorporated as appropriate into the individual project licenses for the Hiram, Bonny Eagle, and Skelton projects.
[10] FERC, 2011. Order Amending Flow Monitoring Plan. Issued January 4, 2011. Accession No.: 20110104-3002.
[11] Order Amending Approved Flow Plan - 134 FERC ¶ 62,002.

- from November 16 through March 31, the impoundment will be maintained within 2 feet of the full pond elevation; and a Project minimum flow of 250 cfs or inflow, whichever is less and a minimum bypass reach flow of 50 cfs or inflow, whichever is less.

Minimum flows, other than those specifically required for the bypass reach are generally conveyed through the powerhouse via generation. During time of unit outage, or during times of inflows in excess of station capacity, flows are conveyed to the bypass reach via the spillway. Due to alkali-aggregate reaction (AAR) conditions observed in the powerhouse caused by construction materials utilized in the 1950s, Units 1 and 2 are considered out-of-service indefinitely as of May and Dec. 2017, respectively. Since that time, all flows at the Bar Mills Project have passed via the spillway and bypass reach and the headpond has been maintained at 148.5', unless flashboards are lowered during periods of high inflow conditions.

3.4 Existing Environmental Measures

Construction of a downstream fish passage facility at the Project was completed in 2000. It began operation in 2001. The fish passage facility consists of a seven-foot-wide gate leading to a metal flume which deposits downstream-migrating fish into a permanently watered pool. A conveyance/passage flow of 120 cfs is discharged through the sluice gate from May 1 (or at 10^{o}C ambient river temperature – whichever occurs first) through June 15 (or at 18^{o}C ambient river temperature – whichever occurs first) annually to pass downstream migrating fish.

3.5 Proposed Action

BWPH proposes license surrender and full removal of the spillway, log sluice, canal headworks structure on the west side of the river and demolition of the former Rogers Fibre mill intake on the east side of the river. The proposed action also includes removal of the canal spillway adjacent to the headgate structure and construction of a flow diversion weir to restrict flows from entering the canal except for high flow events that would likely occur once or twice a year. BWPH will maintain a 6-foot by 6-foot opening located at the base of the powerhouse spillway to keep the canal drained.

In summary, BWPH will remove the following project features:

- the entire main spillway and log sluice;
- remnant timber crib dam;

- canal headworks structure;
- crane, crane house, and transmission tower; and
- canal spillway.

Project features that may be modified but generally left in place include:

- canal and associated structures;
- powerhouse spillway;
- powerhouse and two generating units, and
- certain project recreation facilities.

In addition, BWPH will demolish the former Rogers Fibre Mill foundation, including fill and seeding to support river access from Buxton shoreline. BWPH conducted concrete testing for asbestos with assistance from TRC, as requested by MDEP. Preliminary results indicate that no asbestos was present in the concrete samples.

All exposed erodible soils within an estimated approximately 20-foot-wide shoreline restoration corridor along both sides of the approximately 5-mile-long reach, including suitable portions of islands exposed by project-related water-level changes, will be stabilized and revegetated as soon as practicable.

BWPH intends to remove the dam in three phases using two cofferdams. Details about sequencing, erosion control, and preliminary designs are contained in the Decommissioning Plan provided in Appendix A.

Once all decommissioning has been completed, BWPH intends to retain ownership of the powerhouse and surrounding lands (e.g., Usher Island). As a real estate investment entity, BWPH's parent company considers the powerhouse and surrounding land a valued asset that can potentially be repurposed for other future uses. The powerhouse and existing recreational access (canoe portage and trails on Usher Island) will continue to be maintained by BWPH. The impoundment boat launch will be reverted back to a natural state and the shoreline will be stabilized.

BWPH will continue to monitor and maintain the retained Bar Mills structures following decommissioning to ensure the site remains safe, secure, and in good condition. This will include routine inspections and maintenance of the powerhouse and spillway areas, as well as fencing, signage, security measures, and landscaping, as appropriate.

Existing facility plans and programs will also be reviewed following decommissioning and updated as necessary based on the final site configuration and applicable regulatory requirements. Inspection and maintenance frequency will be established based on site conditions, retained structures, and ongoing regulatory obligations rather than through a separate Bar Mills-specific maintenance plan.

In summary, BWPH intends to implement the following protection, mitigation, and enhancement measures as part of its proposed action to surrender the license and decommission the project. Several of these measures are more fully discussed later in this application.

- Continue to maintain the powerhouse and existing recreational access (canoe portage and trails on Usher Island);
- Implement a slow drawdown of the reservoir to protect resident fish, catadromous American eels, and mussels;
- If directed by the Maine Historic Preservation Commission, document the Bar Mills Project using Maine Historic Building Record photography in compliance with Historic American Buildings Survey/Historic American Engineering Record standards;
- Limit tree clearing to the USFWS restriction timeframe for protection of listed bat species; and
- Develop a planting plan to add vegetation in the immediate area of the powerhouse. The purpose of this plan is to improve the aesthetics of the powerhouse after all decommissioning work has been completed.

In addition, BWPH intends to implement three mitigation measures that are not part of its proposed action for license surrender but instead, will be implemented "off license." BWPH does not seek FERC approval for the following:

Town of Hollis Recreation Site

As described in Section 4.13.1.1, BWPH collaborated with the Town of Hollis to determine a new recreational access area upstream of the Bar Mills Dam on the Hollis side of the river. The new access area will be constructed on lands currently owned by the Town of Hollis, located on the same property as the municipal office building. The access area will be developed by BWPH and owned and operated by the Town of Hollis. It will permit river access to the area of the current Bar Mills impoundment, approximately midway between

Bar Mills Dam and West Buxton Dam. BWPH is not seeking FERC approval because this site is located outside the Project boundary.

Private Groundwater Wells

As described in Section 4.7.2.2, BWPH is working with the Decommissioning Committee to coordinate a groundwater well survey for landowners abutting the river from approximately the intake canal to West Buxton dam. BWPH intends to identify, monitor, and mitigate any private groundwater wells that are adversely affected by the loss of the project's impoundment. BWPH is not seeking FERC approval because these wells are located outside the Project boundary.

Dry Hydrants

Also as described in Section 4.7.2.2, BWPH will continue to collaborate with the Hollis and Buxton Fire Chiefs to design and implement mitigative measures for fire suppression (e.g., dry hydrant alternatives). BWPH is not seeking FERC approval because these hydrants are located outside the Project boundary.

3.6 Alternatives Considered but Eliminated from Further Analysis

3.7 Federal Government Takeover of the Project

No party suggested that a federal takeover of the Bar Mills Project would be appropriate, and no federal agency has expressed an interest in operating the Project. There is no evidence that indicates a federal takeover should be recommended to Congress. A federal takeover of the Project is not a reasonable alternative and is not considered further.

3.7.1 Surrender and Decommissioning of the Project With Partial Removal

BWPH evaluated a partial spillway removal in addition to a full spillway removal. However, based on agency and stakeholder feedback on partial removal, BWPH is now proposing full removal of the spillway. Therefore, partial spillway removal is not considered further.

4.0 ENVIRONMENTAL ANALYSIS

4.1 General Description of the Project Vicinity

4.2 Saco River Basin

The Saco River has three principal headwaters in Maine and New Hampshire. The Swift River joins the Sace River in Conway, NH and the Ossipee and the Little Ossipee Rivers meet the Saco River in Cornish and East Limington, Maine, respectively. The Project area is located below the confluence of the Saco River and the three principal contributing headwaters, and approximately 19 miles above the mouth at the Atlantic Ocean.

The Saco River watershed has a drainage area of 1,703 square miles, rising in the White Mountains of New Hampshire and runs approximately 120 miles to the mouth located at Ferry Beach, Maine (Maine Rivers 2024). The project boundary extends 5.3 miles upstream of the dam to the tailwater of the West Buxton Project (FERC No. 2531). Downstream, the Project boundary extends approximately 250 feet to the upper end of the Skelton Project boundary (FERC No. 2527).

Approximately 85 percent of the Saco River Basin is forested, and 10 percent is under agricultural use (FERC 1996). Water in the Saco River is used for a variety of purposes including water supply, industrial uses, hydroelectric generation, and recreation. The Saco River is used as a source of drinking water after treatment for the cities of Saco and Biddeford (FPL Energy 2003).

4.3 Tributaries within Project Boundary

There are 22 intermittent and 3 perennial streams within the Bar Mills Project boundary. The three perennial streams entering the impoundment are Smith Brook, Crockett Brook, and Casper Brook.

4.4 Dams Within the Basin

The Bar Mills Project is the third of a series of six hydropower developments located on the Saco River which are owned and operated by BWPH. The projects, in order, are Cataract (river mile (RM) 6), Skelton (RM 17), Bar Mills (RM 19), West Buxton (RM 24), Bonny Eagle (RM 26) and Hiram (RM 48).

4.5 References

Federal Energy Regulatory Commission (FERC). 1996. Final Environmental Impact Statement for Saco River Projects. FERC/FEIS-0077.

FPL Energy Maine Hydro LLC (FPLE Maine). 2003. Bar Mills Hydroelectric Project, FERC No. 2194, Application for New License, Volume I – Application and Exhibits A, E, F, G and H and Appendix A.

Maine Rivers. 2024. Saco River Watershed. Accessed: April 24, 2026. Available at: Saco River Watershed - Maine Rivers

4.6 Geology, Soils, and Sediments

4.6.1 Affected Environment

Physiography/Topography

The Saco River Basin can be divided into four distinct physiographic regions. The uppermost northern portion of the basin is located in the White Mountain region of New Hampshire. This portion of the basin is characterized by high mountains of greater than 5,000 feet in elevation and rugged terrain which has been extensively eroded by glacial action. The uppermost reach of the river basin is very steep as the Saco River falls approximately 1,200 feet in the first 14 miles through narrow valleys of exposed bedrock. The terrain remains rough and steep as the river flows through Bartlett and North Conway, New Hampshire where it is joined by the Ellis River and the Swift River, respectively (CMP 1991).

In Maine, the Saco River moves into the New England Upland area and specifically into a physiographic region known as the Conway-Fryeburg Plain. This region is a broad, relatively flat valley that was once a glacial lake. Today, this valley contains some of the state's most significant agricultural and wetland areas. From Fryeburg to Hiram, the Saco River moves southeast through the Conway-Fryeburg Plain, where it intersects numerous ponds and wetlands formed in glacial depression. The river through this region is wide and shallow with a slope of less than one foot per mile (CMP 1991).

At Hiram, the Saco River passes into the Eastern Foothills physiographic region. The portion of the basin is characterized by steep hills and broad flat valleys, with elevations from 500 to 800 feet. This region contains many natural lakes and ponds, the result of significant glacial activity. The Ossipee and the Little Ossipee Rivers, both major tributaries to the Saco River, join the Saco River in this region at Cornish and Limington, respectively (CMP 1991).

At Limington, the Saco River moves into the lowermost portion of the basin and the final distinct physiographic region, the Seaboard Lowlands. The topography of this region is the result of glaciation and marine invasion and is characterized by low relief with rolling hills rising above the broad, flat plains. The Project is located within the Seaboard Lowlands physiographic region (CMP 1991).

Bedrock and Surficial Geology

The geology of the Project area is part of the Vassalboro Formation and consists of metamorphic rock derived from sedimentary rock and granite of Silurian-Ordovician age (Maine Geological Survey ((MGS)) 1985a). The bedrock is overlain by post-glacial alluvial deposits and glacial deposits (MGS 1985b).

The surficial deposits along the Project area are predominantly glacial deposits left behind during the last ice age. When this massive sheet of ice retreated, it left what is now the Project area submerged under water. The deposits that blanket the underlying bedrock are composed of the material that accumulated during this time, known as glaciomarine deposits. These consist of silt, clay, sand, and minor amounts of gravel. Small, isolated areas of heterogeneous mixtures of sand, silt, clay, and stones, known as glacial till, are located in the upland areas. Upstream from the dam, along the impoundment, are alluvial deposits which consist of sand, silt, and gravel (MGS 1985b). There is a sand and gravel aquifer located approximately 500-feet-east of the dam (MGS 1979).

Soils

Soils within the Project area predominately belong to the Scantic-Raynham-Buxton association. The Scantic and Raynham soils are poorly drained, nearly level, and have seasonal high-water tables. The Buxton soils are moderately well drained to somewhat poorly drained and are found on gently sloping to moderately steep and hilly terrain.

The Marlow-Brayton-Peru association may also occur adjacent to and on the lands northerly of the impoundment area between Bar Mills and West Buxton. These soils are deep, nearly level to moderately steep, well drained to poorly drained soils that were formed in the moderately coarse textured, compact glacial till. The Marlow soils are well drained, the Brayton soils are somewhat poorly drained to poorly drained, and the Peru soils are moderately well drained (USDA 1982).

Sediment Quality and Quantity

BWPH performed a risk assessment of properties and remaining structures within the Project boundary. This included a quantification and composition of sediment behind the Bar Mills Dam and the submerged timber crib dam immediately upstream. In addition, the assessment identified potential areas of shoreline bank erosion.

Sediment Quantity

In June of 2024, Ocean Surveys, Inc, conducted a sub-bottom profiling survey in the lower section of the impoundment (just upstream of Bar Mills dam to the remnant bridge piers, approximately 2,200 feet upstream of the dam). Results of the survey determined that the survey area investigated is underlain by surficial hardbottom (bedrock/glacial till) throughout the river, with the exception of small portions of sand/gravel and silt/clay along the western and eastern shorelines, respectively (OSI 2024). Results indicate that little sediment exists within the survey area and that preconstruction removal is unnecessary.

Sediment Quality

TRC observed that the sampled soil in the area of the former Rogers Fibre Mill foundation does exhibit some hazardous waste characteristics, but did not contain detectable amounts of asbestos (TRC 2025). However, cobble and boulder material used to stabilize the area prevented sampling below six inches. Due to the restriction in sampling below 6 inches TRC (2025) is uncertain whether potentially impacted soils are present below the stabilizing material.

In anticipation of future water levels being lowered following decommissioning of the Bar Mills Dam, BWPH conducted surveys in shoreline areas that would likely be exposed. TRC (2025) states that the sampling results, while limited in overall extent, suggest that human exposure is not likely to be a significant pathway of concern in the sampled areas.

Erosion

An erosion survey of the Project area was conducted in June 2002 associated with the FERC relicensing. The results of the survey indicated that shoreline erosion is not prevalent in the Project area (FPLE Maine 2003). A few small, concentrated areas of erosion were observed along the impoundment during the survey; however, the primary cause of these small areas of erosion was determined to be a result of human foot traffic to access the river near homes. Project operations were not considered to be a potential cause of erosion primarily because shoreline areas that are not subject to heavy human use did not have significant erosion except in localized areas where natural erosion would be expected (i.e., very steep shoreline areas with non-cohesive soils) (FPLE Maine 2003). Natural erosion in areas of steep banks with non-cohesive soils were observed in a few

small places but was limited to small areas at the upstream edge of the upper island and on exposed outer banks, which showed signs of minor slumping and tree toppling (FPLE Maine 2003).

Seismicity

Earthquakes in northeastern North America are assumed to occur during occasional releases of stress along zones of weakness within the earth's crust. There have been no significant movements along any of the faults in this region since the last ice age. However, earthquakes do occur in Maine. These occurrences have been small and no severe damage due to earthquake activity has ever been recorded at the facility. The regular occurrence of small earthquakes indicates that there may be some crustal deformation occurring in the northeastern United States. Modern and historical records indicate relatively higher activity in eastern, central, and southwestern parts of the state (MGS 2001). The largest recorded earthquake in Maine occurred in 1904 and had a Modified Mercalli Intensity of VII. In 1957 an earthquake occurred in Portland, approximately 15 miles from the Project area, with an intensity of VI and a magnitude of 4.2 (MGS 2015). Decommissioning dams in an earthquake-prone area reduces the risk of structural failure during seismic events, thereby minimizing the potential for downstream flooding and damage to critical infrastructure

4.6.2 Environment Effects

Temporary geomorphic adjustments are anticipated including bank erosion and sediment redistribution, as the river reestablishes a natural gradient and flow regime. Exposed soils and fine sediments in the former impoundment area may be subject to short-term erosion until stabilization and revegetation occur. Over time, sediment transport and channel morphology are expected to stabilize, supporting the restoration of natural riverine processes and habitats. The removal of the spillway is anticipated to restore natural geomorphic processes, support the development of a stable river channel, and enhance the geological integrity of the project area over time. Although soil/sediment testing indicated the presence of some unfavorable materials, only a very small amount are anticipated to be removed as part of the dam removal activities, if any. Removed materials will require disposal off-site at an approved landfill facility.

Due to the dated existing information from the prior relicensing, the potential for shoreline bank erosion along the impoundment was surveyed through field investigations conducted in September 2024. Bank Erosion Hazard Index (BEHI) ratings indicate that

much of the shoreline on the impoundment is at high risk of erosion. However, these conditions are expected to stabilize quickly once the spillway is removed, with many of the sandy banks adjusting to the new water elevation and rapidly becoming vegetated.

BWPH proposes to seed the newly exposed banks after construction cofferdam removal when water levels have stabilized. All exposed erodible soils within an estimated approximately 20-foot-wide shoreline restoration corridor along both sides of the approximately 5-mile-long reach, including suitable portions of islands exposed by project-related water-level changes, will be stabilized and revegetated as soon as practicable. It is estimated that up to approximately 25 acres of shoreline will be seeded with a native riparian seed mix. Revegetated areas will be inspected and maintained for a minimum of three complete growing seasons, and deficient areas will be reseeded until sufficient coverage is achieved.

Due to the newly exposed sandy banks, there will be some movement of the finer material in the system; however, historically, this reach was a cobble/boulder-dominated stream, and the general channel form, shape, and extent are not anticipated to change substantially following dam removal. The presence of a cobble and bedrock dominated riverbed in the upper reach and downstream of the Bar Mills Dam indicates that the channel bed is relatively stable and, once spillway removal occurs, the river will settle back into its historical, pre-dam channel form.

4.6.3 Unavoidable Adverse Effects

While the BEHI ratings indicate that much of the shoreline in the study area is at high risk of erosion, these conditions are expected to stabilize quickly once the spillway is removed, with many of the sandy banks adjusting to the new water elevation and rapidly becoming vegetated. The general channel form, shape, and extent are not anticipated to change substantially following the spillway removal.

4.6.4 References

Central Maine Power (CMP). 1991. Application for New License for Major Project Existing Dam Greater than 5.0MW, Skeleton Project, FERC No. 2527. Augusta, Maine.

Maine Geological Survey (MGS). 1985a. Bedrock Geologic Map of Maine.

Maine Geological Survey (MGS). 1985b. Surficial Geologic Map of Maine.

Maine Geological Survey (MGS). 1979. Open file No. 79-6. Sand and Gravel Aquifers Map 5, Cumberland and York Counties, Maine.

Maine Geological Survey (MGS). 2015. Earthquakes in Maine. Maine Department of Agriculture, Conservation & Forestry. Available at: https://www.maine.gov/dacf/mgs/hazards/earthquakes/quake.htm, Accessed: March 31, 2026.

OSI Inc. 2024. Survey Report (OSI Report No. 24ES011) Subbottom Profiling Survey.

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4.7 Water Resources

4.7.1 Affected Environment

4.7.1.1 Water Withdrawals

There are no known withdrawals of water from the Project impoundment. The Saco River downstream of the Project is used as a source of drinking water for the cities of Saco and Biddeford but no water withdraw facilities are located in the impoundment.

4.7.1.2 Water Discharges

Potential non-point sources of discharge into the Saco River watershed include agricultural run-off, road salt, and sediment inputs due to silvicultural activities (FERC 1996). However, there are no observed significant areas of non-point discharge into Project waters. According to information obtained through the Maine Department of Environmental Protection (MDEP) and the US Environmental Protection Agency (USEPA), there are no permitted point source discharges to the Project impoundment (MDEP 2025). Direct discharges to the Saco River occur mainly downstream in the urban areas of Biddeford and Saco, Maine. Most of these sites occur at former mill complexes or municipal wastewater treatment facilities.

The former Rogers Fiber Mill, a previously remediated Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site located on the east bank beyond the Project spillway, has drainage discharge into a channel adjacent to the Project bypass reach area.

4.7.1.3 Water Quantity

The Project is operated as run-of-river. Within the powerhouse, Units 1 and 2 are considered out-of-service indefinitely as of May and December 2017, respectively. Since this time, all flows at the Bar Mills Project have passed via the spillway and bypass reach and the headpond has been maintained at 148.5'.

Prior to the closure of Units 1 and 2, the Project followed the below minimum flow schedule:

Bar Mills Project Minimum Flow	
April 1- June 30	the impoundment will be maintained within 1 foot of the full pond elevation (run of river); outflow approximately equal to inflow (run-of-river operations) and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
July 1- September 30	the impoundment will be maintained within 2 feet of the full pond elevation; a Project minimum flow of 400 cfs or inflow, whichever is less and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
October 1- October 31	the impoundment will be maintained within 2 feet of the full pond elevation and a Project minimum flow of 600 cfs or inflow, whichever is less and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
November 1- November 15	the impoundment will be maintained within 2 feet of the full pond elevation; and a Project minimum flow of 600 cfs or inflow, whichever is less and a minimum bypass reach flow of 50 cfs, or inflow, whichever is less, will be maintained;
November 16- March 31	the impoundment will be maintained within 2 feet of the full pond elevation; and a Project minimum flow of 250 cfs or inflow, whichever is less and a minimum bypass reach flow of 50 cfs or inflow, whichever is less.

Daily average flow data for the Bar Mills Project were obtained from USGS Gage No. 01066000 Saco River at Cornish, Maine for January 1, 1996, through December 31, 2025; the gage is approximately 25 river miles upstream of the Bar Mills dam. The drainage area at the USGS Gage is 1,294 square miles. The drainage area at the Bar Mills dam is 1,591 square miles. The data from the USGS Gage were prorated to the Bar Mills Project based on the ratio of their drainage areas (= 1591/1294 = 1.23). The mean and median flows over the 1996 to 2025 period were 3,744 cfs and 2,768 cfs, respectively (Table 4-1). The monthly mean flow ranged from 1,497 cfs in September to 8,704 cfs in April. The lowest daily mean flow occurred on September 13, 2002 (305 cfs), and the highest daily mean flow occurred on June 18, 1988 (33,087 cfs). Flow duration curves are provided in Appendix B.

Table 4-1 Daily Average Flow Statistics for January 1, 1996, to December 31, 2025, at the Bar Mills Dam

Month	Minimum (cfs)	Median (cfs)	Mean (cfs)	Maximum (cfs)
January	726	2,940	3,438	13,776
February	892	2,189	2,620	11,722
March	1,023	3,690	4,358	18,573
April	1,402	7,423	8,704	25,092
May	1,316	5,172	5,927	25,215
June	566	2,583	3,336	33,087
July	530	1,599	2,434	12,300
August	309	1,091	1,678	11,587
September	305	946	1,497	12,054
October	310	1,796	2,658	17,589
November	613	3,235	3,818	17,835
December	913	3,702	4,456	24,723
All Data	305	2,768	3,744	33,087

4.7.1.4 Water Quality

The State water quality classification for Project waters, including the impoundment and tailwater, is Class A (Title 38 MRSA §467 (12)(A)(8)). Class A waters are the second highest classification given to Maine rivers. Waters immediately upstream of the Project are also Class A waters, whereas the Skelton impoundment just downstream of the Project is listed as Class GPA (Great Pond A). The Maine statutes which define the water quality classification include provisions that recognize that some changes to aquatic life and habitat have occurred due to existing hydropower impoundments. The provision states that within the influence of a pre-existing hydropower Project impoundment, habitat characteristics and aquatic life criteria of Class A waters are considered met if Class C criteria are met (Title 38 MRSA §464 (10)(A)). The standards for Class A waters and the standards for Class C aquatic life are:

> CLASS A WATER QUALITY STANDARDS FOR MAINE WATERS
>
> *Class A waters are included in the second highest classification of waters, only lower than the Class AA waters. Class A waters are designated as suitable for drinking water after disinfection treatments. Class A waters are also suitable for the following uses: fishing, recreation on and in the water, navigation, industrial process and cooling water supply, hydroelectric power generation (except as prohibited under Title 12, Section 403), and as habitat for fish and other aquatic wildlife. Class A waters do not contain less than seven parts per million or 75 percent saturation dissolved*

oxygen, whichever is higher. The aquatic life and bacteria content of Class A waters will be as naturally occurs.

CLASS C AQUATIC LIFE STANDARDS FOR MAINE WATERS

Discharges to Class C waters may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters, and maintain the structure and function of the resident biological community.

BWPH conducted a desktop search, compilation, and summary of existing baseline water quality data, including prior relicensing studies and any recent and ongoing water quality monitoring and data reported by the state, the SRCC, and any other relevant sources.

Maine statute 38 MRSA (§464-470) establishes the basis for the State's classification system of surface waters (Table 4-2). The State has one standard for the classification of lakes and great ponds, GPA, which includes inland bodies of water artificially formed or increased that have a surface area greater than 10 acres. The State's riverine surface waters can be classified as Class AA, A, B, or C waters.

Table 4-2 State of Maine Standards for Classification of Surface Waterbodies

Standard	Description
GPA (lakes)	Suitable for drinking water after disinfection, recreation, fishing, agriculture, industrial process and cooling water supply, hydroelectric power generation, navigation, and as habitat for fish and other aquatic life.
Class AA	Managed for their outstanding natural ecological, recreational, social, and scenic qualities. Direct discharge of wastewater, dams, and other significant human disturbances are prohibited.
Class A	Managed for high quality with limited human disturbance allowed. Direct discharges are allowed but highly restricted.
Class B	General-purpose waters that are managed to attain good quality water. Well-treated discharges with ample dilution are allowed.
Class C	Managed to attain at least the swimmable-fishable goals of the federal Clean Water Act and to maintain the structure and function of the biological community.

Source: MDEP, 2024. Maine Legislature n.d.

MDEP reports on the condition of its streams, rivers, lakes, ponds, marine, and estuarine waters biennially through requirements associated with the federal Clean Water Act. MDEP bases its water quality assessments on five major listing categories as described below (MDEP, 2024):

- **Category 1:** Attaining all designated uses and water quality standards, and no use is threatened;
- **Category 2:** Attains some designated uses; no use is threatened; and insufficient data or no data and information is available to determine if the remaining uses are attained or threatened (with presumption that all uses are attained);
- **Category 3:** Insufficient data and information to determine if designated uses are attained (with presumption that one or more uses may be impaired);
- **Category 4:** Impaired or threatened for one or more designated uses, but does not require development of a TMDL (Total Maximum Daily Load) report;
- **Category 5:** Waters impaired or threatened for one or more designated uses by a pollutant(s), and a TMDL report is required.

The reach of the Saco River at the Bar Mills Project is designated in the draft 2024 Integrated Water Quality Report as Category 2: rivers and streams attaining some designated uses, no use is threatened, and insufficient data and no data and information is available to determine if the remaining uses are attained or threatened (MDEP 2024a).

Several water quality monitoring studies have been completed in the Bar Mills Project vicinity since 2000. The results from these studies are summarized below.

2001 Monitoring/Previous Relicensing

FPLE Maine collected ambient water quality data (temperature and DO) at four sites (upper impoundment, lower impoundment, tailrace, bypass reach) at the Bar Mills Project from August 26 to August 29, 2001, to support the FERC relicensing (Figure 4-1) (FPLE Maine 2003). Monitoring was completed in the morning (before 7 AM) and in the late afternoon (after 4 PM). Vertical profiles of the water temperature, DO concentration, and DO percent saturation at the upper and lower sites demonstrated that the impoundment did not stratify. In the impoundment, the water temperature ranged from 22.8°C to 24.4°C (73.0°F to 75.9°F), the DO concentration ranged from 8.0 mg/L to 8.8 mg/L, and the DO percent saturation ranged from 93.4 percent to 105.2 percent (Table 4-3, Table 4-4). In the bypass reach, the water temperature, DO concentration, and DO percent saturation ranged from 22.8°C to 24.9°C (73.0°F to 76.8°F), 8.1 mg/L to 9.1 mg/L, and 94.9 percent to 105.7 percent, respectively (Table 4-5). In the tailwater, the water temperature, DO concentration, and DO percent saturation ranged from 23.1°C to 24.3°C (73.6°F to 75.7°F), 8.3 mg/L to 8.5 mg/L, and 97.1 percent to 101.2 percent, respectively (Table 4-6). Results of the study and comments provided by the MDEP demonstrated that the Bar Mils Project waters met the designated Class A water quality standards (FPLE Maine 2003, MDEP 2008).

FPLE Maine collected benthic macroinvertebrate samples from the Bar Mills Project impoundment in August through September 2001 in support of the FERC relicensing (Figure 4-1) (MDEP 2024b). Benthic macroinvertebrate sampling was completed in the Bar Mills bypass reach from July to August 2002 (MDEP 2024c). The results of macroinvertebrate sampling in the Bar Mills impoundment and bypass reach and comments provided by the MDEP indicated that Bar Mills Project waters were attaining their designated aquatic life standards for Class A waters (FPLE Maine 2003, MDEP 2008).

Table 4-3 Water Quality Data, August 26-29, 2001, Bar Mills Upper Impoundment

Sample Dates:		8/26/2001			8/27/2001						8/28/2001						8/29/2001		
River Flow (CFS):		GENERATING, NO SPILL, 325 CFS			LEAKAGE, NOT GENERATING, 325 CFS						NO SPILL, SPILLING PM, NOT GENERATING, 350 CFS						LEAKAGE, GENERATING, 325 CFS		
Time:		6:30 PM			5:30 AM			6:00 PM			6:30 AM			5:30 PM			6:30 AM		
Weather/Temp:		PARTLY CLOUDY, 80'S			HUMID, HIGH 60'S			OVERCAST, HUMID			PARTLY CLOUDY			PARTLY CLOUDY			CLEAR COOL		
Depth (Meters) Location	**Sample**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**
	1/4	8.4	24.2	99.8	8.3	23.0	96.8	8.8	23.8	104.9	8.0	22.9	93.4	8.4	23.9	99.6	8.1	23.1	94.8
Surface	**1/2**	8.4	24.3	99.7	8.3	23.1	96.8	8.8	23.8	105.1	8.0	22.9	93.5	8.4	23.9	99.5	8.1	23.1	94.9
	3/4	8.3	24.2	99.8	8.2	23.1	95.9	8.8	23.8	105.2	8.0	22.8	93.6	8.4	23.9	99.6	8.1	23.1	94.5
	1/4	8.3	24.1	99.6	8.2	23.1	96.1	8.8	23.7	104.1	8.0	23.0	93.8	8.3	23.9	99.6	8.1	23.1	94.3
1	**1/2**	8.3	24.2	99.6	8.3	23.1	96.8	8.7	23.8	105.1	8.1	23.0	93.9	8.3	23.8	99.4	8.1	23.1	94.3
	3/4	8.3	24.2	99.8	8.2	23.1	95.6	8.8	23.7	104.7	8.1	23.0	93.9	8.3	23.8	99.6	8.1	23.1	94.4
	1/4	8.3	24.1	99.4	8.2	23.1	95.5	8.7	23.7	102.7	8.0	23.0	93.8	8.3	23.8	99.4	8.1	23.1	94.4
2	**1/2**	8.3	24.2	99.4	8.2	23.2	95.6	8.7	23.7	102.5	8.0	23.0	93.8	8.3	23.8	99.4	8.1	23.1	94.3
	3/4	8.3	24.1	99.6	8.2	23.1	95.5	8.8	23.7	104.1	8.0	22.9	93.8	8.3	23.8	99.4	8.1	23.1	94.2
	1/4	8.3	24.1	99.4	8.2	23.1	95.5	8.7	23.7	102.4	8.0	23.0	93.7	8.3	23.8	99.2	8.1	23.1	94.3
3	**1/2**	8.3	24.1	99.2	8.2	23.2	95.6	8.7	23.7	102.4	8.0	23.0	93.8	8.3	23.8	99.3	8.1	23.1	94.2
	3/4	8.3	24.1	99.4	8.1	23.1	95.1	8.8	23.7	103.0	8.0	22.9	93.8	8.3	23.8	99.4	8.1	23.1	94.1
	1/4	8.3	24.0	99.2	8.2	23.1	95.5	8.6	23.6	101.8	8.0	23.0	93.7	8.3	23.7	99.0	8.1	23.1	94.3
4	**1/2**	8.3	24.0	99.1	8.0	23.2	93.8	8.6	23.6	101.4	8.0	23.0	93.8	8.3	23.7	99.1	8.0	23.1	93.7
	3/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/4	8.3	24.0	99.1	8.1	32.1	94.8	8.6	23.5	101.1	8.0	22.9	93.6	8.3	23.7	99.0	8.1	23.1	94.3
5	**1/2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Transect Location	**Secchi Disk Depth (m)**	**Total Depth (m)**	**Secchi Disk Depth (m)**	**Total Depth (m)**	**Secchi Disk Depth (m)**	**Total Depth (m)**	**Secchi Disk Depth (m)**	**Total Depth (m)**	**Secchi Disk Depth (m)**	**Total Depth (m)**	**Secchi Disk Depth (m)**	**Total Depth (m)**
	1/4	4	5	4.5	5	5	5	5	5	5	5	4.8	4.8
	1/2	4	4	4	4	4	4	4	4	4	4	4	4
	3/4	3	3	2.8	2.8	3	3	3	3	3	3	3	3

Notes: NS - No sample due to water depth.
Transects sampled from east to west.

Table 4-4 Water Quality Data, August 26-29, 2001, Bar Mills Lower Impoundment

Sample Dates:		8/26/2001			8/27/2001						8/28/2001						8/29/2001		
River Flow (CFS):		GENERATING, NO SPILL, 325 CFS			LEAKAGE, NOT GENERATING, 325 CFS						NO SPILL, SPILLING PM, NOT GENERATING, 350 CFS						LEAKAGE, GENERATING, 325 CFS		
Time:		6:30 PM			5:30 AM			6:00 PM			6:30 AM			5:30 PM			6:30 AM		
Weather/Tem:		PARTLY CLOUDY, 80'S			HUMID, HIGH 60'S			OVERCAST, HUMID			PARTLY CLOUDY			PARTLY CLOUDY			CLEAR COOL		
Depth (Meters)	**Sample Location**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**	**D.O. (mg/L)**	**Temp. (°C)**	**% Sat.**
	1/4	8.3	24.4	99.9	8.4	23.8	99.5	8.8	23.8	103.9	8.3	23.0	96.6	8.4	23.9	99.7	8.3	23.0	96.9
Surface	1/2	8.3	24.3	100.0	8.5	23.8	100.1	8.8	23.8	103.5	8.3	23.0	96.7	8.4	23.9	99.7	8.3	23.1	96.2
	3/4	8.3	23.3	99.9	8.4	23.8	99.8	8.7	23.7	103.1	8.3	23.0	96.7	8.4	23.9	99.8	8.3	23.1	96.8
	1/4	8.3	24.4	99.5	8.2	23.8	98.7	8.8	23.8	103.5	8.3	23.0	96.5	8.3	23.9	99.6	8.3	23.1	96.9
1	1/2	8.3	24.4	99.6	8.4	23.9	99.1	8.8	23.7	103.5	8.2	23.1	96.1	8.4	23.9	99.7	8.3	23.1	96.5
	3/4	8.3	24.4	99.1	8.3	23.9	99.4	8.7	23.7	103.0	8.3	23.1	96.2	8.4	23.9	99.7	8.3	23.1	96.6
	1/4	8.3	24.4	99.9	8.4	23.9	99.5	8.7	23.7	102.4	8.2	23.2	96.3	8.3	23.8	99.5	8.3	23.1	96.9
2	1/2	8.2	24.4	98.9	8.3	23.9	98.8	8.7	23.7	102.6	8.2	23.2	96.3	8.3	23.8	99.6	8.3	23.1	96.6
	3/4	8.3	24.4	99.5	8.4	23.9	99.3	8.7	23.7	102.8	8.3	23.2	96.4	8.3	23.8	99.7	8.2	23.1	96.2
	1/4	8.3	24.4	99.2	8.3	23.9	98.8	8.7	23.5	102.1	8.2	23.2	96.3	8.3	23.7	99.5	8.3	23.1	96.9
3	1/2	8.3	24.4	98.7	8.3	23.8	99.0	8.7	23.6	102.1	8.2	23.2	96.3	8.3	23.8	99.5	8.3	23.1	96.6
	3/4	8.2	24.4	98.5	8.4	23.8	99.4	8.7	23.6	102.1	8.2	23.2	96.3	8.3	23.8	99.5	8.2	23.1	96.2
	1/4	8.3	24.4	99.1	8.3	23.9	98.5	8.7	23.4	101.2	8.2	23.2	96.2	8.3	23.7	99.2	8.3	23.1	96.4
4	1/2	8.3	24.4	99.4	8.3	23.8	98.8	8.7	23.4	101.2	8.2	23.2	96.2	8.3	23.7	99.4	8.3	23.1	96.7
	3/4	8.3	24.4	99.0	8.3	23.8	99.3	8.7	23.5	101.5	8.2	23.2	96.1	8.3	23.7	99.4	8.2	23.1	96.3
	1/4	8.2	24.4	98.6	8.3	23.8	98.4	8.6	23.4	100.2	8.2	23.2	96.1	8.3	23.7	99.2	8.2	23.1	96.0
5	1/2	8.2	24.4	98.7	8.3	23.8	98.5	8.6	23.4	100.4	8.2	23.2	96.1	8.3	23.7	99.2	8.3	23.1	96.4
	3/4	8.2	24.4	98.7	8.3	23.8	99.1	8.6	23.4	100.5	8.2	23.2	96.1	8.3	23.7	99.4	8.3	23.1	96.4
	1/4	NS	NS	NS	8.3	23.8	98.2	NS	NS	NS	NS	NS	NS	8.3	23.7	99.1	8.2	23.1	95.5
6	1/2	8.1	24.4	97.2	8.3	23.8	98.5	8.6	23.3	100.3	8.2	23.2	96.1	8.3	23.6	99.1	8.2	23.1	96.4
	3/4	8.2	24.4	98.7	8.3	23.8	98.7	8.6	23.4	100.2	8.2	23.2	96.0	8.3	23.7	99.2	8.2	23.1	96.3
	1/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.3	23.6	99.1	8.2	23.1	95.2
7	1/2	NS	NS	NS	8.3	23.8	98.2	8.5	23.3	99.8	8.2	23.2	96.1	8.3	23.6	99.1	8.2	23.1	96.3
	3/4	8.2	24.4	98.5	8.3	23.8	98.4	8.6	23.3	100.0	8.2	23.2	96.0	8.3	23.6	99.2	8.2	23.1	96.3
	1/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
8	1/2	NS	NS	NS	8.2	23.8	97.7	8.4	23.2	99.6	8.2	23.2	96.0	8.3	23.6	99.0	8.2	23.1	96.1
	3/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.3	23.6	99.0	8.2	23.1	96.1

	Secchi Disk	Total	Secchi Disk	Total	Secchi Disk	Total	Secchi Disk	Total	Secchi Disk	Total	Secchi Disk	Total
Transect Location	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**	**Depth (m)**
1/4	5	5	5	5.2	5	5	5.2	5.3	5	6.4	5	6.5
1/2	5	5	5	7.5	5	7.4	5.2	7.4	5	7.5	5.5	7.4
3/4	5	6.6	5	6.6	5	6.3	5.2	6.7	5	7.4	5	7.3

Notes:

NS - No sample due to water depth.

Transects sampled from east to west.

Table 4-5 Water Quality Data, August 26-29, 2001, Bar Mills Bypass Reach

Sample Dates:	8/26/2001			8/27/2001						8/28/2001						8/29/2001		
River Flow (CFS):	NO SPILL, GENERATING, 325 CFS			LEAKAGE, NOT GENERATING, 325 CFS						NO SPILL, SPILLING PM, NOT GENERATING, 350 CFS						LEAKAGE, GENERATING, 325 CFS		
Time:	7:00 PM			5:20 AM			7:00 PM			6:50 AM			6:15 PM			6:50 AM		
Weather/Temp:	PARTLY CLOUDY, 80'S			HUMID, HIGH 60'S			OVERCAST, HUMID			PARTLY CLOUDY			PARTLY CLOUDY			CLEAR COOL		
Depth	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.
Mid	8.1	24.9	98.1	8.2	22.8	94.9	8.6	24.0	103.8	8.8	22.9	102.1	8.7	23.7	102.7	9.1	22.9	105.7
Transect Location	Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)	
Mid	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	

Table 4-6 Water Quality Data, August 26-29, 2001, Bar Mills Tailwater

Sample Dates:	8/26/2001			8/27/2001						8/28/2001						8/29/2001		
River Flow (CFS):	NO SPILL, GENERATING, 325 CFS			LEAKAGE, NOT GENERATING, 325 CFS						NO SPILL, SPILLING PM, NOT GENERATING, 350 CFS						LEAKAGE, GENERATING, 325 CFS		
Time:	5:45 PM			7:10 AM			7:00 PM			6:55 AM			6:25 PM			7:05 AM		
Weather/Temp:	PARTLY CLOUDY, 80'S			HUMID, HIGH 60'S			OVERCAST, HUMID			PARTLY CLOUDY			PARTLY CLOUDY			CLEAR COOL		
Depth	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.	D.O. (mg/L)	Temp. (°C)	% Sat.
Mid	8.3	24.3	99.5	8.3	23.6	97.1	8.4	23.8	100.1	8.4	23.1	97.6	8.5	24.1	101.2	8.5	23.2	99.3
Transect Location	Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)		Secchi Disk Depth (m)	Total Depth (m)	
Mid	1	1		1	1		1	1		1	1		1	1		1	1	

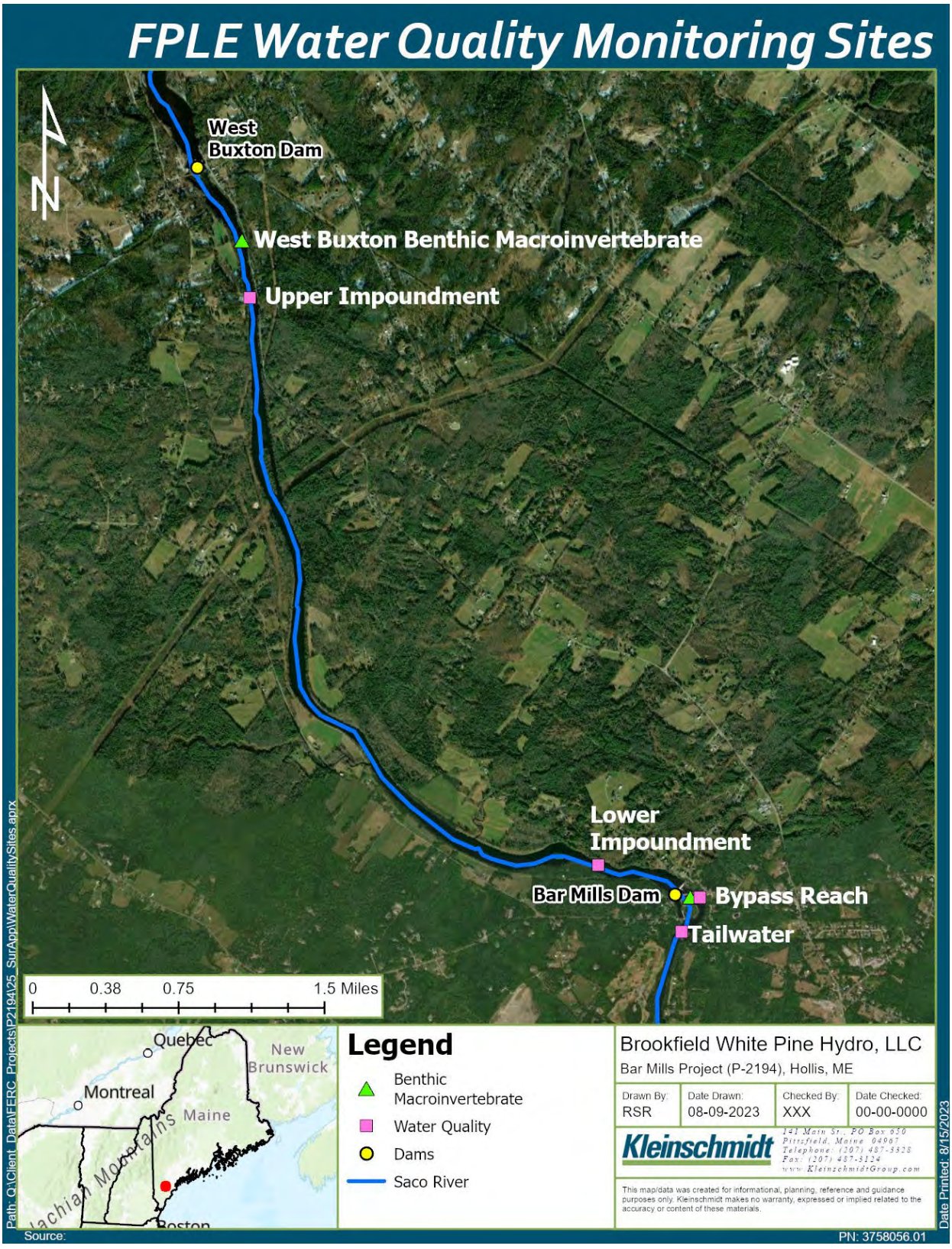


Figure 4-1 Water Quality Study Sampling Sites at the Bar Mills and West Buxton Projects

West Buxton Project Studies

The licensee of the West Buxton Project (FERC No. 2531) completed water quality monitoring in 2013 in the West Buxton impoundment and tailrace (BWHP 2015). The monitoring was conducted in support of the project relicensing and in accordance with MDEP sampling protocols. The Bar Mills Project impoundment extends upstream approximately 5 river miles to the downstream extent of the West Buxton Project.

Vertical profiles of water temperature and DO (concentration and percent saturation), a water transparency measurement, and water samples (analyzed for chlorophyll-a, total phosphorus, pH, color, total alkalinity) were collected two times per month from June to October 2013 at the deep spot in the impoundment. The vertical profiles demonstrated that the impoundment did not thermally stratify. The water temperature ranged from 12.7°C (54.9°F) to 25.9°C (78.6°F), the DO concentration ranged from 7.7 mg/L to 12.3 mg/L, and the DO percent saturation ranged from 93.8 percent to 115.6 percent demonstrating that DO was in attainment with the Class A standards. Chlorophyll-a (1.0 µg/L to 2.6 µg/L in 9 of 10 samples), total phosphorus (9 µg/L to 18 µg/L), pH (6.9 to 7.2), and the water transparency (2.1 m to 4.8 m) also met Class A standards and indicated low productivity.

In the West Buxton tailrace, sampling was conducted once per week in the morning and afternoon for 10 weeks between July 17 and September 18, 2013 (BWHP 2015). The water temperature ranged from 17.0°C (62.6°F) to 26.6°C (79.9°F), the DO concentration ranged from 8.2 mg/L to 10.2 mg/L, and the DO percent saturation ranged from 96.6 percent to 107.3 percent. Class A standards for DO were met on all sampling days.

Benthic macroinvertebrate community sampling was conducted downstream of the West Buxton tailrace from July 26 to August 23, 2013 (Figure 4-1). Results from this sampling indicated that the macroinvertebrate community was diverse, abundant, and rich in taxa and that sensitive organisms accounted for a large portion of the community. MDEP evaluated the results of the macroinvertebrate samples collected in the West Buxton tailwater area with their linear discriminant model and determined that the aquatic community in the Saco River downstream of the West Buxton Project attained Class A standards (BWHP 2015, MDEP 2024d).

Saco River Corridor Commission Water Quality Monitoring

Water quality monitoring has been conducted by the SRCC since 2001 at numerous (over 50) stations along the Saco River (SRCC 2020). The SRCC monitoring program collects surface water quality data once or twice per month from May to September or October at sites along the Saco River, the Ossipee River, the Little Ossipee River, and several smaller tributaries and ponds (SRCC 2020).

Turbidity, pH, conductivity, DO concentration, DO percent saturation, water temperature, and E-coli data from four sites at or near the Bar Mills Project are presented below (Figure 4-2, Table 4-7, Table 4-8, Table 4-9, Table 4-10). Site S18 is located just upstream (approximately 200 feet) of the Bar Mills dam and powerhouse on river left near the site of the old Rogers Fibre Mill. Site S17 is approximately 6.5 river miles upstream of the Bar Mills Dam and approximately 500 feet upstream of the Bonny Eagle Project powerhouse. Site S19-U is approximately 2.3 river miles downstream of the Bar Mills dam in the Skelton Project impoundment, and Site S19-J is approximately 3.2 river miles downstream and just above the Skelton Project dam.

At Site S18 just upstream of the Bar Mills dam, approximately 98 percent and 99 percent of the DO concentration and percent saturation measurements exceeded the standards of 7 mg/L and 75 percent saturation, respectively Table 4-7). The median DO concentration and percent saturation from 2001 through July 2023 were 8.7 mg/L and 96.8 percent, respectively. The median and average pH (6.9) met Class A standards (Table 4-7). Maximum water temperatures (approximately 24°C to 26°C) were observed in mid-July through August. Turbidity and conductivity levels were low.

At Site S17 at the Bonny Eagle Project, 99 percent of the DO data exceeded the Class A standards with median DO levels of 8.6 mg/L and 96.8 percent saturation (Table 4-8). The median and average pH (6.9) met standards and 89 percent of the data was between 6.5 and 9.0. At Site S19-U, over 90 percent of the DO data exceeded the standards; 86 percent of the pH data was between 6.5 to 9.0 (Table 4-9). TKN and total phosphorus were measured during some years at Site S19-U; the concentrations of both parameters were low. All of the available DO and pH data at Site S19-J (from 2022 and 2023) met Class A standards (Table 4-10).

Table 4-7 Water Quality Data Collected at Site S18 Upstream of the Bar Mills Dam off Depot Street by SRCC, 2001-2023

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation)	Water Temperature (°C)	E. coli (CFUs/100 mL)
Aug-Oct 2001	6.6 - 7	0.8 - 1.1		7.4 - 9.6	84.9 - 88.4	11.1 - 22.5	54 - 87
April-Nov 2002	6.5 - 7.4	0.6 - 6.9		6.6 - 12.3	72.1 - 114.2	6.1 - 26.1	
April-Oct 2003	6.6 - 7.5	0.9 - 5.3		6.3 - 13.9	75.7 - 127	6.8 - 24.8	
April-Oct 2004	5.9 - 7.4	1 - 11.5		7.1 - 12.3	79.9 - 96.1	4.9 - 23	
April-Oct 2005	6.7 - 8.7	1 - 9.3		6.9 - 12	77.2 - 102.1	6 - 23	
April-Oct 2006	6.9 - 8	0.7 - 3.5		7 - 11.5	73.3 - 105.8	11.2 - 25.8	
May-Oct 2007	6.9 - 7.7	0.8 - 2.5		7 - 10.9	79.7 - 110.6	14.9 - 26	
May-Oct 2008	6.5 - 6.9	1 - 5.6		6.5 - 10.6	78.7 - 100.3	13.1 - 25.4	
May-Sept 2009	6.5 - 7.4	1.8 - 3	11.3 - 16.7	8.4 - 9.8	96.6 - 102.1	15.5 - 22.9	
May-Sept 2010	6.4 - 6.9	1.2 - 3.1	20.1 - 29.9	8 - 10.5	90.7 - 113	15.3 - 26.2	
May-Oct 2011	6.7 - 7.6	1 - 38.4	16.8 - 30.7	7.5 - 9.7	88.3 - 101.9	14.5 - 27	
May-Oct 2012	6.6 - 7.8	1.3 - 3.1	17 - 27	8 - 9.8	96.1 - 98.8	15 - 25.6	
May-Sept 2013	6.6 - 7.6	1.2 - 2	19 - 25.1	8.2 - 10.1	93.4 - 100.2	15 - 23	
May-Sept 2014	6.7 - 7	1.2 - 2.9	19.7 - 28.4	8.1 - 10.3	95.5 - 101	14.2 - 23.9	
May-Sept 2015	6.5 - 6.9	0.8 - 1.7	19.4 - 31	7.9 - 10.2	96 - 100.4	14.6 - 25.6	
May-Sept 2016	6.5 - 6.8	0.8 - 1.8	23.1 - 33.4	7.6 - 10.2	94.3 - 100	14.5 - 26.3	
May-Sept 2017	5.9 - 6.6	1.2 - 3.5	19.3 - 30.3	8.3 - 9.9	95.4 - 102.2	15.4 - 23.3	
May-Sept 2018	6.1 - 8.3	0.9 - 3.7	24 - 35.7	8 - 9.8	93.8 - 101.6	16 - 26.4	
May-Sept 2019	6.2 - 8.7	1.2 - 2.8	48.8 - 75.6	6.7 - 11.3	75.2 - 102.4	10.8 - 24.6	
May-Sept 2020	6.2 - 7.3	0.7 - 2	45.4 - 81	7.9 - 9.9	95.3 - 102	15.6 - 26.8	
May-Sept 2021	6.1 - 9.1	1.2 - 2.3	47.7 - 72.1	7.9 - 10.2	94.6 - 98.4	13.9 - 25.3	
May-Sept 2022	6.6 - 7	1.1 - 3.6	54.6 - 82.1	7.7 - 10.5	95.6 - 99.4	12.8 - 26.1	4.1 - 59.8
May-July 2023	6.7 - 6.9	1.5 - 6.2	36.1 - 59.7	9 - 10.9	98.5 - 104	13.4 - 20.6	2 - 139.1
Median	**6.9**	**1.5**	**27.4**	**8.7**	**96.8**	**20.5**	**29.8**
Average	**6.9**	**2.1**	**35.8**	**8.8**	**95.3**	**19.5**	**41.8**

Table 4-8 Water Quality Data Collected at Site S17 near Bonny Eagle Island by SRCC, 2001-2023

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation	Water Temperature (°C)	E. coli (CFUs/100 mL)
Aug-Oct 2001	6.7 - 7	0.7 - 1.5		7.3 - 10	85.8 - 94.7	11.8 - 22.5	16 - 69
April-Oct 2002	6.6 - 7.6	0.6 - 1.8		7.2 - 11.3	83.6 - 103.9	8.2 - 24.9	
April-Oct 2003	6.5 - 7.2	0.8 - 4.8		7.1 - 12.6	85.0 - 111.9	6.8 - 25.8	
April-Oct 2004	5.9 - 7.1	0.8 - 1.5		7.1 - 12.1	84.3 - 118.9	4.5 - 24	
April-Oct 2005	6.6 - 7.2	1 - 4.3		7.6 - 11.6	88.6 - 98.8	5 - 23	
May-Oct 2006	6.8 - 8.7	0.7 - 3.1		6.9 - 10.7	73.1 - 102.5	13.3 - 25.7	
May-Oct 2007	6.9 - 7.9	0.7 - 2		7.5 - 11.3	83.9 - 111.5	15 - 25.7	
May-Oct 2008	6.5 - 7.9	1.1 - 2.6		6.5 - 10.8	79.7 - 102.9	13.1 - 25.5	
May-Sept 2009	6.4 - 7.6	1.1 - 4.2	9.5 - 17.1	8.2 - 9.8	96.8 - 100	15.9 - 22.9	
May-Sept 2010	6.5 - 7.7	1.2 - 2.7	19.7 - 29.4	8.2 - 10.2	98.8 - 104.3	15.5 - 25.2	
May-Oct 2011	6.9 - 7.6	1 - 35.8	16.6 - 31.2	7.9 - 9.6	94 - 100.5	14.4 - 26.2	
May-Oct 2012	6.7 - 7.3	1.6 - 3	16.8 - 26.9	7.8 - 9.7	93.4 - 99.3	15.4 - 25.6	
May-Sept 2013	6.8 - 8	1 - 2.2	10.3 - 23.7	8.2 - 10	94.5 - 100.3	15.2 - 23.4	
May-Sept 2014	6.9 - 7.4	1.3 - 2.5	19.9 - 26.3	8.4 - 10.2	98.4 - 101.5	14.5 - 23.6	
May-Sept 2015	6.5 - 7.1	0.9 - 1.9	19.3 - 29.3	8.1 - 10.5	98.1 - 101.4	14 - 25.7	9.8 - 34.5
May-Sept 2016	6.2 - 6.9	0.9 - 1.7	22 - 33.1	7.9 - 10.1	96.9 - 99.9	15 - 26.3	
May-Sept 2017	5.8 - 6.9	1.2 - 4.6	19 - 29.3	8 - 9.7	94 - 100.1	15.8 - 23.2	
May-Sept 2018	6.4 - 8.3	1 - 2.5	23.7 - 35.2	7.5 - 9.7	92.7 - 98.6	16.2 - 26.7	
May-Sept 2019	6.2 - 9.3	1.3 - 3	46 - 71	7.6 - 10.9	92.1 - 99.4	11.2 - 24.4	
May-Sept 2020	6.2 - 7.6	1 - 1.7	43.1 - 85.3	7.5 - 9.7	90.6 - 101.6	15.7 - 26.6	
May-Sept 2021	6.2 - 7.1	1.1 - 2.1	50.5 - 71.4	7.7 - 10.1	92.7 - 99.8	14.2 - 25.1	
May-Sept 2022	6.5 - 7	1.1 - 1.7	51.5 - 83.1	7.8 - 10.4	93.5 - 99.4	13.7 - 26.2	2 - 39.3
May-July 2023	6.5 - 7.4	1.9 - 5	35.1 - 58.6	8.6 - 10.4	96.5 - 99.7	13.3 - 20.7	3.1 - 151.5
Median	**6.9**	**1.4**	**28.0**	**8.6**	**96.8**	**20.5**	**16.5**
Average	**6.9**	**1.7**	**36.4**	**8.8**	**96.1**	**19.6**	**28.0**

Table 4-9 Water Quality Data Collected at Site S19-U in the Skelton Project Impoundment by SRCC, 2001-2023

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation)	Water Temperature (°C)	TKN (mg/L)	Total Phosphorus (mg/L)	E. coli (CFUs/100 mL)
Aug-Oct 2001	6.5 - 7.1	0.9 - 2.1		6.5 - 9.1	76.7 - 109.4	12 - 25.3			19 - 93
April-Nov 2002	6.5 - 7.5	1.3 - 6.7		6 - 11.2	73.4 - 105	8 - 25.2	0.2 - 3.2	0.01 - 0.85	0 - 0
April-Oct 2003	6.8 - 7.3	1.1 - 5.2		6.6 - 12	76.2 - 113.7	6.8 - 26.1	0.2 - 0.8	0.01 - 0.18	7.5 - 1000
April-Oct 2004	6.2 - 7.9	0.9 - 3.2		7.5 - 13.5	87.8 - 147.6	4.5 - 23.5	0.2 - 0.8	0.005 - 0.41	0 - 70.4
April-Oct 2005	6.6 - 7.4	1 - 10.3		6.7 - 13	79.9 - 107.2	4.5 - 28	0.3 - 0.3		0 - 68
May-Oct 2006	6.7 - 8.8	1 - 8.6		6.7 - 9.9	72 - 99.1	13.3 - 25.6	0.3 - 0.5	0.008 - 0.018	2 - 160
May-Oct 2007	6.6 - 9.1	1 - 2.4		6.9 - 11.4	75.7 - 112.4	14.2 - 27.2	0.3 - 0.6		2.1 - 129.6
May-Oct 2008	6.5 - 7	1.4 - 2.3		7 - 10.8	73.7 - 107.3	12.8 - 24.5	0.3 - 0.3	0.007 - 0.02	2 - 72.1
May-Sept 2009	6.4 - 6.9	1.6 - 4.8		7.1 - 10.7	83.3 - 116.5	18.1 - 23.6	0.3	0.011 - 0.017	1 - 72.7
May-Sept 2010	6.2 - 6.8	1.9 - 2.2		5.5 - 8.3	60.4 - 102.2	16.1 - 27	0.3 - 0.3	0.009 - 0.013	1 - 10.9
May-Oct 2011	6.5 - 7.4	1.1 - 51.2	25.4 - 62.4	5.8 - 9.3	52.1 - 98.3	10.9 - 27.7	0.3		5.2 - 121
May-Oct 2012	6.6 - 7.5	1.6 - 2.5	16.4 - 39	6.9 - 9.7	80.1 - 97.4	15.9 - 26.2	0.4	0.014 - 0.015	3.1 - 74.9
May-Sept 2013	6.5 - 7.6	1.3 - 1.8	19.9 - 23.9	7.4 - 8.6	73.7 - 96.8	15 - 24.2	0.3 - 0.4		4.1 - 51.2
May-Sept 2014	6.6 - 6.9	1.3 - 1.9	16.5 - 27.4	7.7 - 10.2	89.1 - 103.4	15.7 - 24.8	0.4 - 0.5		3.1 - 18.9
May-Sept 2015	6.4 - 6.8	1.3 - 2.3	22.7 - 31.6	6.3 - 8.9	62.3 - 102.1	15 - 26	0.4 - 0.7	0.022	1 - 25.6
May-Sept 2016	6.5 - 6.8	1.2 - 1.8	22.6 - 32.4	6.4 - 8.8	79.2 - 104	15.2 - 27.1	0.3 - 1.5	0.02 - 0.065	1 - 48.8
May-Sept 2017	6 - 6.6	1.5 - 2.9	19.8 - 29.9	7.5 - 10.4	89.9 - 106.5	15.8 - 24.2	0.7	0.013 - 0.018	9.7 - 42.6
May-Sept 2018	6 - 8.1	1 - 2.6	24.2 - 35.9	8 - 10.2	98 - 101.8	16 - 26.7	0.3 - 0.5	0.006 - 0.04	13.4 - 307.6
May-Sept 2019	6.3 - 8.3	1.1 - 2.7	47.9 - 73.5	8.1 - 11.4	97.7 - 103.4	10.8 - 24.7		0.007 - 0.012	5.2 - 73.3
May-Sept 2020	6.2 - 7.1	0.9 - 1.7	45.7 - 81.6	7.9 - 10.2	97 - 101.7	15.5 - 26.6		0.008 - 0.055	11 - 62
May-Sept 2021	6 - 8.8	1.1 - 2.3	48.2 - 71.9	8.1 - 10.6	96.6 - 101.8	13.8 - 25.3		0.001 - 0.044	9.8 - 325.5
May-Sept 2022	6.6 - 7.2	1.1 - 1.9	54.9 - 84.6	7.7 - 10.7	96.2 - 101.3	13.1 - 26.3			2 - 83.3
May-July 2023	6.7 - 7	1.5 - 7.9	35.9 - 59.8	9.3 - 11	100.4 - 105.2	13.4 - 20.6			3 - 285.1
Median	**6.8**	**1.6**	**30.4**	**8.3**	**94.8**	**21.2**	**0.3**	**0.01**	**17.2**
Average	**6.9**	**2.1**	**40.0**	**8.5**	**93.2**	**20.2**	**0.4**	**0.1**	**40.5**

Table 4-10 Water Quality Data Collected at Site S19-J at the Public Boat Launch Upstream of the Skelton Project Dam by SRCC, 2022-2023

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation)	Water Temperature (°C)
May-Sept 2022	6.5 - 7.0	1.4 - 5.3	54.0 - 80.7	7.2 - 10.9	87.8 - 103.3	12.8 - 27.5
May-July 2023	6.6 - 7.4	1.7 - 6.6	34.6 - 54.3	8.6 - 10.8	95.4 - 105.3	14.3 - 21.5
Median	**6.8**	**2.0**	**58.9**	**8.5**	**97.1**	**20.0**
Average	**6.8**	**2.8**	**59.4**	**8.9**	**98.0**	**20.2**

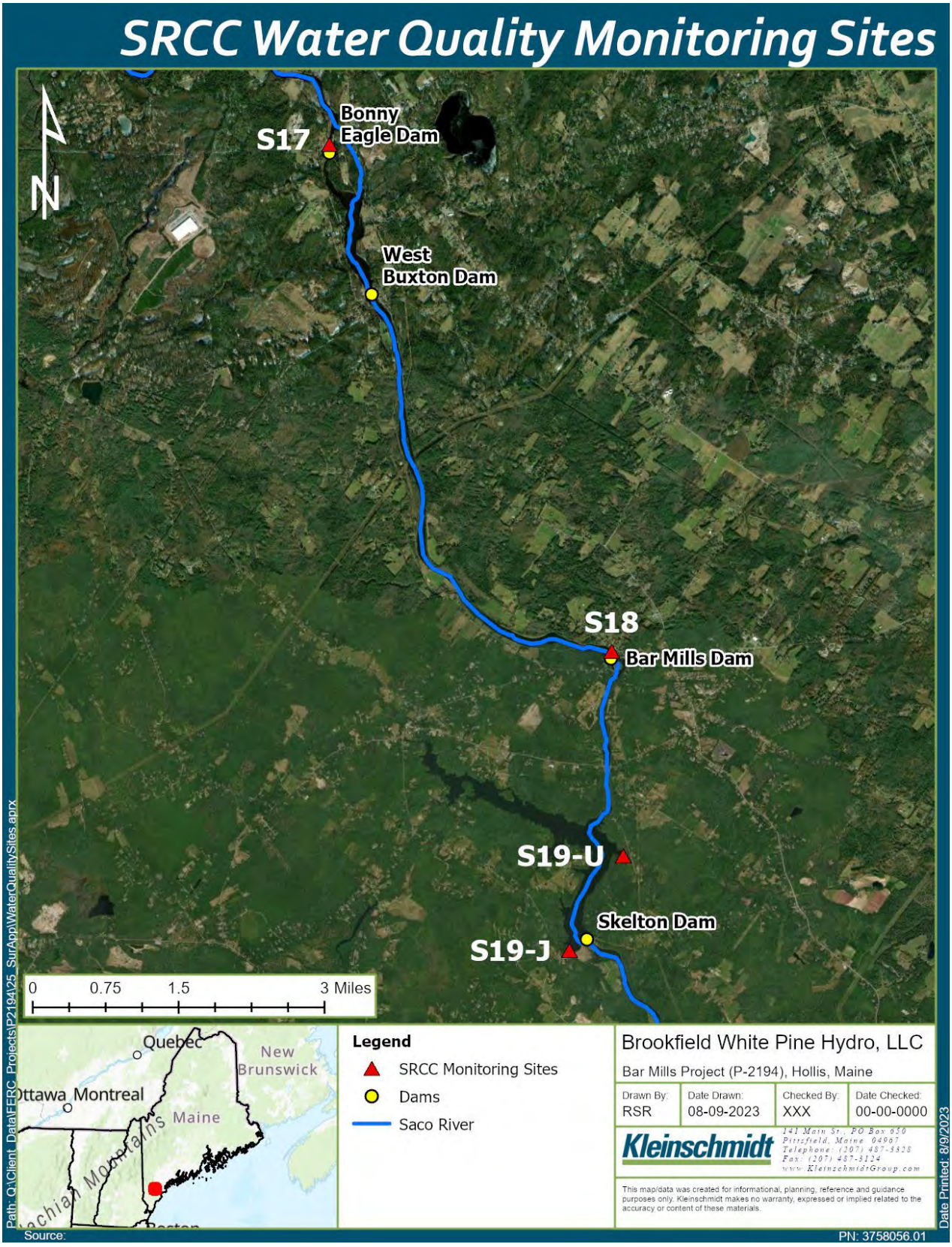


Figure 4-2 SRCC Monitoring Sites near the Bar Mills Project

Water quality monitoring was completed at 18 sites along the Saco River between North Conway, NH, and Biddeford, ME, by researchers from the University of New England between 2010 and 2012 (Zeeman and Spillane 2015). Overall, water quality was found to be good with low chlorophyll-a, nutrient, and E-coli levels. DO ranged between approximately 7 mg/L to 12 mg/L and 90 percent to 105 percent.

4.7.2 Environmental Effects

4.7.2.1 Water Quantity

BWPH completed a river elevation model of the reach from Bar Mills Dam to the upper limit of the existing impoundment just downstream of West Buxton. A 1-dimensional (1D) and 2-dimensional (2D) hydraulic model was developed using the state-of-the-art U.S. Army Corps of Engineers' HEC-RAS v6.1 software to simulate the water levels and depths for the existing conditions and full spillway removal conditions. Each condition modeled three flows: 300 cubic feet per second (cfs), 400 cfs, and the annual median flow of 2,476 cfs. The 300 cfs flow is intended to represent the lowest summer flow and 400 cfs represents the typical low summer flow.

In addition to using the model to characterize and compare pre- and post-spillway removal water level conditions, BWPH used the model output and historic hydrology data to evaluate potential impacts to water supply wells and dry hydrants resulting from lower impoundment levels.

Hydraulic modeling of water depths at 300 cfs, 400 cfs, and the annual median flow of 2,476 cfs determined the anticipated change in maximum and average water depths through the reach between Bar Mills dam and the remnant bridge piers (hydraulic control). The modeled reduction in normal water levels in this reach averages 7.8 feet across the three flow conditions and the average reduction in depth is 6.2 feet (Table 4-11, and Figure 4-3 through 4-5). Average and maximum water depths under 300, 400, and 2,476 cfs are presented in Table 4-11.

Table 4-11 Maximum and Average Water Depth for Average Mean, Lowest, and Typical Low Summer Flows Under Full Spillway Removal Conditions

Maximum Water Depth, Bar Mills Dam to Pier Remnants (ft)			
	300 cfs	400 cfs	2,476 cfs
Existing Conditions	17.5	18.1	19.2
Post Full Spillway Removal	9.9	10.0	11.6
Change in Maximum Depth	7.6	8.1	7.6

Average Water Depth, Bar Mills Dam to Pier Remnants (ft)			
	300 cfs	400 cfs	2,476 cfs
Existing Conditions	8.3	8.4	9.3
Post Full Spillway Removal	2.2	2.2	2.9
Change in Average Depth	6.1	6.1	6.4

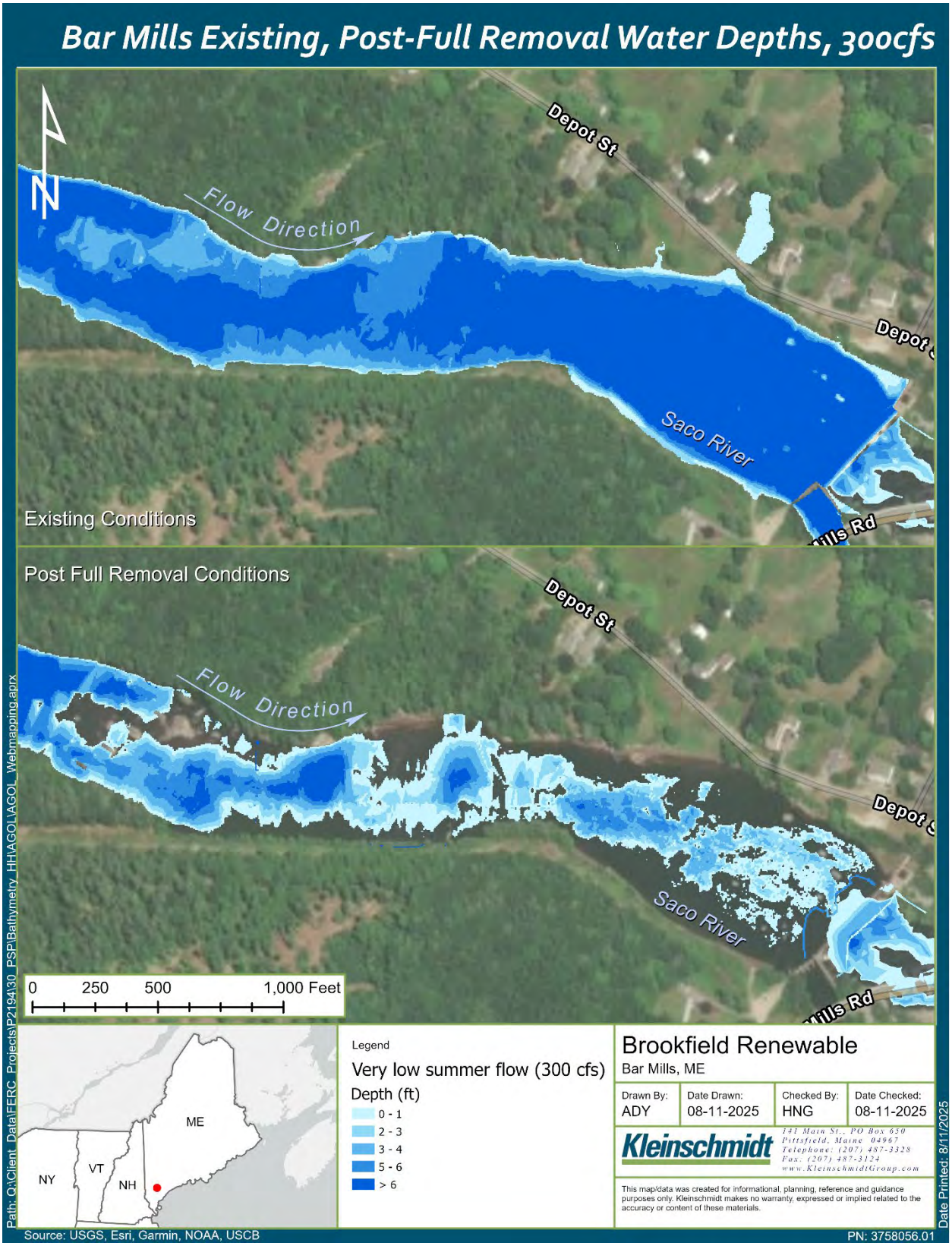


Figure 4-3 Hydraulic Modeling 300 cfs Existing and Full Spillway Removal

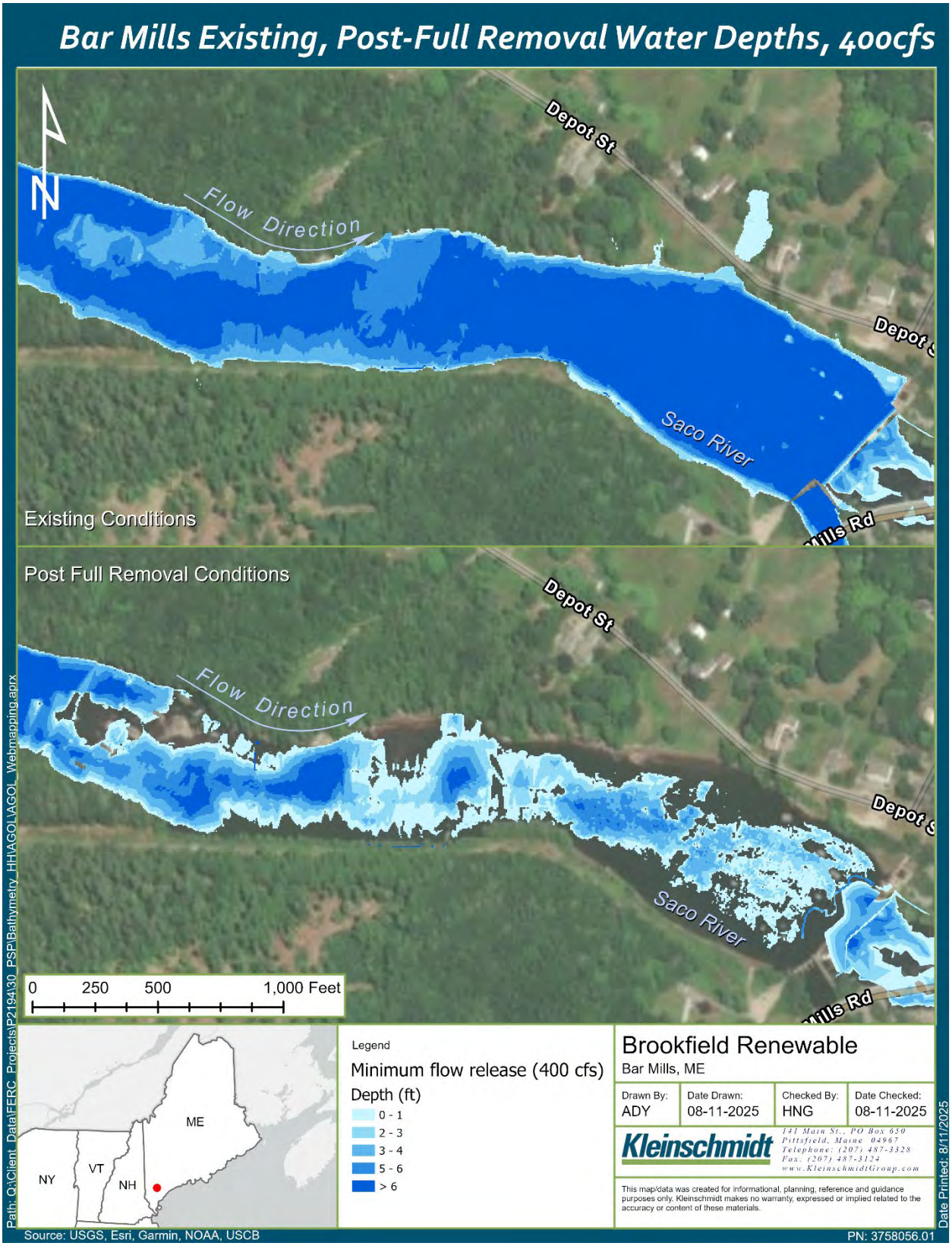


Figure 4-4 Hydraulic Modeling 400 cfs Existing and Full Spillway Removal

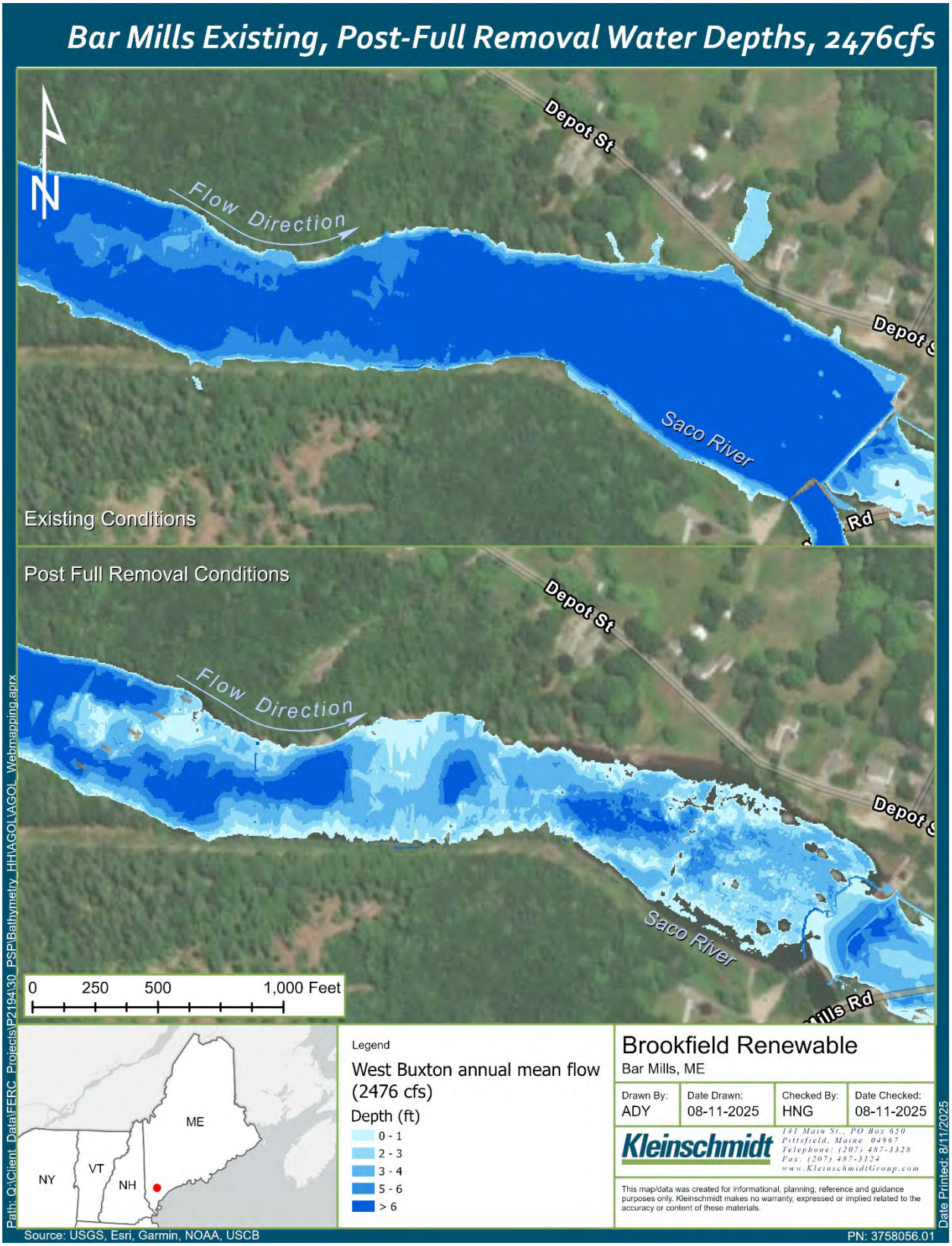


Figure 4-5 Hydraulic Modeling 2,476 cfs Existing and Full Spillway Removal

Removal of the Bar Mills Spillway will restore the pre-dam flow regime in this section of the Saco River, resulting in more natural seasonal fluctuations in water quantity. The elimination of the impoundment will reduce or eliminate artificial water level control, allowing the river to respond directly to precipitation and watershed hydrology. The spillway removal is anticipated to lower surface water elevations in the former impoundment and adjacent Saco River, returning both surface and groundwater levels near the former impoundment to pre-dam conditions.

4.7.2.2 Water Supply Wells and Dry Hydrants

Based upon stakeholder concerns during the scoping and study planning phase of the surrender process, BWPH has committed to survey, monitor, and mitigate private groundwater wells and dry hydrants that are adversely affected by license surrender and dam decommissioning. However, these measures are not part of BWPH's proposed action for license surrender and will be implemented "off license". Therefore, BWPH is not seeking FERC approve for these measures.

TRC conducted an evaluation of wells in the vicinity of Bar Mills Dam that may be affected by the dam's removal. TRC (2025) notes that because the surface water of the impoundment and Saco River is hydraulically connected to the adjacent and underlying groundwater flow system, lower water levels in the impoundment and river will result in lower groundwater elevations near the former mill pond. TRC (2025) found that the greatest change in surface water elevation will be just immediately upstream of the Bar Mills dam with normal surface elevation reduced by approximately 18 feet at the dam, from a normal impoundment elevation of 148.5 NGVD to a few feet above the proposed new elevation of the stream channel of approximately 127.5 feet NGVD (Figure 4-6). The change in surface elevation will be progressively less moving upstream from the dam and the hydraulic control in the area of the remnant bridge piers. Normal water levels (50% exceedance or 2,725 cfs) in the river upstream of the hydraulic control are anticipated to be reduced by approximately 2.5 feet following removal of the dam; however, these effects will be lessened due to the natural topography of the riverbed. Flow durations will not change as inflow to this segment of the river will not be affected by removal of the spillway.

TRC (2025) further states that the impact of dam removal on groundwater elevations will be attenuated with distance from the impoundment laterally and with distance upstream from the dam. TRC identified three ways in which a lower groundwater level could affect private wells:

- a drop in groundwater elevation could dewater a portion of the upper saturated thickness of the bedrock connected to the well;
- lowered groundwater elevations could require pumps to be set deeper within the well; and
- lowering the static head would require pumps to lift water higher and depending on the age and type of pump, this could lead to reduced flow.

The extent of effects will not be known until the spillway is removed, at which time BWPH would assess the need for mitigation measures. BWPH continues to collaborate with Decommissioning Committee members to coordinate a well survey for landowners abutting the river reach from approximately the intake canal to West Buxton dam. This information will aid BWPH in evaluating potential risk of impacts on wells based on technical data (e.g., type of well, depth, proximity to the river) and inform any potential mitigation plans. Rather than limiting the survey to the radius considered by TRC, the Decommissioning Committee determined it appropriate to survey landowners along the river corridor from Bar Mills dam to West Buxton dam.

BWPH has received 65 well survey responses from landowners along the river corridor. BWPH plans to work with TRC and process the data with a hydrologic/water table model. BWPH will develop a monitoring plan in collaboration with well owners and TRC to monitor those wells that may become impacted from the Bar Mills dam removal.

Two dry hydrants currently draw water from the Bar Mills impoundment: one is located on Depot Street in Buxton, and the other is on Canal Road in Hollis. The Towns of Buxton and Hollis requested a study to determine whether the dry hydrants will remain operational and whether the proposed diversion weir at the upstream end of the canal will allow sufficient water to keep the hydrants operational. BWPH and the Hollis and Buxton Fire Chiefs evaluated alternatives to modify and/or relocate the dry hydrant intakes, but determined relocation is not viable. Therefore, BWPH will evaluate the feasibility of installing a water storage tank in the vicinity of the Rogers Fibre Mill site as an off-license measure. BWPH anticipates additional consultation with the Towns regarding groundwater wells, fire suppression, and recreational access as BWPH implements the Decommissioning Plan.

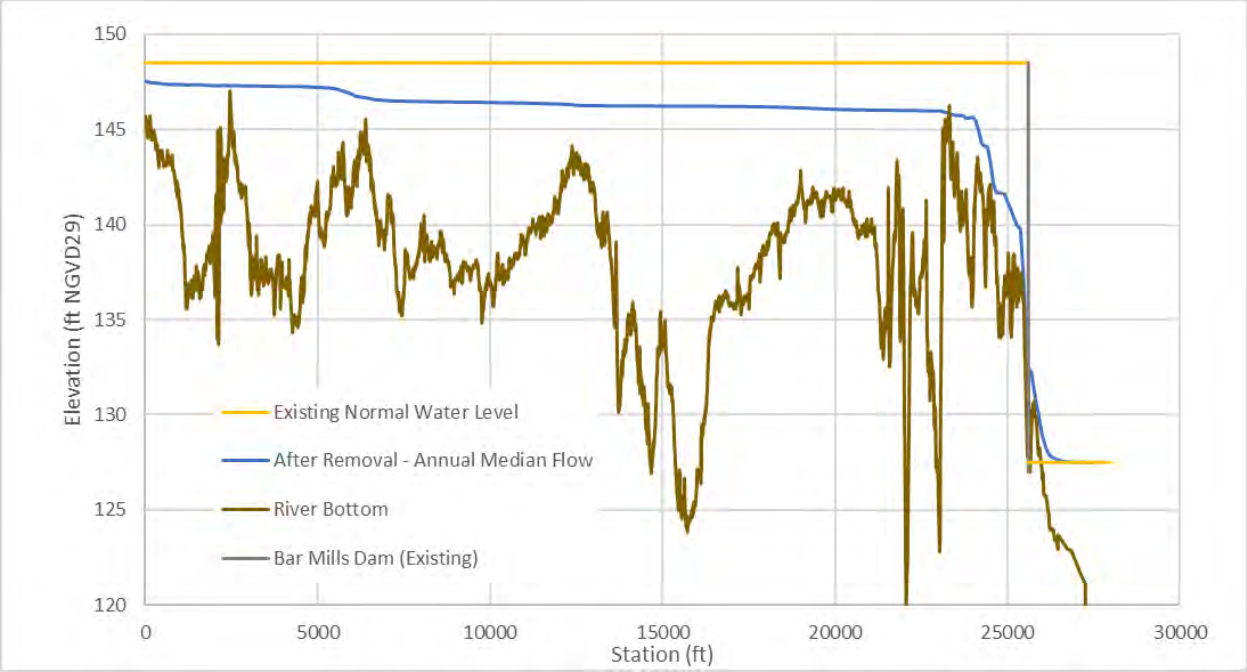


Figure 4-6 Upstream Water Levels[12]

4.7.2.3 Water Quality

BWPH anticipates the removal of the Bar Mills Project spillway to result in both short-term and long-term effects on water quality. In the short term, the release and downstream transport of limited accumulated sediments may temporarily increase turbidity and suspended solids, potentially affecting aquatic habitats and water clarity. There may also be a temporary release of nutrients or organic material previously trapped in the impoundment, which could lead to localized decreases in dissolved oxygen levels.

Over the long term, water quality is expected to improve as the river resumes natural flow and sediment transport processes. The restoration of free-flowing conditions typically reduces the potential for thermal stratification and stagnation, resulting in more stable dissolved oxygen levels and water temperatures. The reestablishment of natural riffle-run sequences and improved connectivity can further support the recovery of aquatic ecosystems and enhance overall water quality. These changes are generally considered beneficial for riverine health and habitat.

[12] Station 0 is the upstream extent of the Bar Mills Project boundary at the West Buxton tailwater.

4.7.3 Unavoidable Adverse Effects

4.7.3.1 Water Quantity

Lowered surface water levels will result in corresponding decreases in groundwater elevations near the former impoundment, with the impact attenuating with distance from the mill pond and upstream from the dam. Groundwater supply wells were identified along the impoundment that may be affected by reduced groundwater levels. Potential effects on these wells include partial dewatering of the upper saturated bedrock, the need to set pumps deeper within the wells, and possible reduced pump flow rates due to increased lift requirements. The full extent of these effects will not be known until after the spillway removal, at which point further assessment and potential mitigation may be necessary.

Based upon stakeholder concerns during the scoping and study planning phase of the surrender process, BWPH has committed to measures specific to water supply wells and dry hydrants. These measures are not part of the proposed action and are assumed to be handled off-license without a need for FERC approval. BWPH is coordinating a well survey for landowners along the river corridor to evaluate potential risks and inform mitigation planning. Additionally, alternatives for modifying or relocating dry hydrant intakes are under consideration in consultation with municipal fire departments as part of the ongoing decommissioning process.

4.7.3.2 Water Quality

Unavoidable effects may include a temporary increase in turbidity and suspended sediment concentrations as the limited accumulated sediments are mobilized and transported downstream. This may also result in the short-term release of nutrients or organic material previously trapped in the impoundment, potentially causing localized decreases in dissolved oxygen levels and temporary impacts to aquatic habitats. These effects are generally limited in duration and are most pronounced during and immediately following removal activities, diminishing as the river system stabilizes and resumes natural flow and sediment transport processes.

4.7.4 References

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4.8 Fisheries and Aquatic Resources

4.8.1 Affected Environment

4.8.1.1 Resident Fish

MDIFW manages the lower Saco River from head-of-tide upstream to East Limington, including the project waters, as a warm-water fishery (MDIFW 1982). Within this reach, MDIFW also manages tributaries and river bypass reaches below dams to support wild and stocked cold-water fish, including brook trout and brown trout (MDIFW letter dated May 30, 2003). The principal warm-water fisheries include self-sustaining populations of smallmouth bass, largemouth bass, chain pickerel, and white perch.

Fisheries Surveys

FPLE Maine conducted a fisheries study at the Project in October 2001 within the Project impoundment, bypass reach, and tailwater using multiple gear types. The study collected a total of 751 fish representing 17 species from the Project area; Table 4-12 summarizes catch by species and sampling location. Smallmouth bass were the most abundant species collected at the Project, representing 35 percent of the total catch. The relative abundance of smallmouth bass ranged from 28 percent in the tailwater to 55 percent in the upper bypass reach. Within the Project impoundment, smallmouth bass and largemouth bass comprised 44 percent and 15 percent of the total catch, respectively. Surveys of other impounded riverine areas in Maine found that large and smallmouth bass together accounted for between 4 percent and 58 percent of total catches (FPLE Maine 2003).

Table 4-12 Common and Scientific Names and Number of All Fish Species Collected at Sampling Areas during the October 2001 Fisheries Sampling

Common name	Scientific name	Impoundment	Crockett Brook (mouth)	Unnamed Tributary (mouth)	Bypass Reach (free flowing areas)	Bypass reach (backwater areas)	Tailwater	Total
American eel	*Anguilla rostrata*	8	0	0	9	1	0	18
Black crappie	*Pomoxis nigromaculatus*	7	3	1	0	0	2	13
Blacknose dace	*Rhinichthys atratulus*	12	0	0	0	0	0	12
Brown bullhead	*Ameiurus nebulosus*	2	0	3	2	0	0	7
Brown trout	*Salmo trutta*	1	0	0	0	0	0	1
Chain Pickerel	*Esox niger*	16	8	2	0	0	0	26
Common shiner	*Luxilus cornutus*	24	15	1	0	3	0	43
Cusk (Burbot)	*Lota lota*	3	0	0	1	0	0	4
Fallfish	*Semolitus corporalis*	10	0	0	4	0	0	14
Golden shiner	*Notemigonus crysoleucas*	1	7	0	0	0	0	8
Herring spp.	*Clupeid*	0	0	0	0	40	95	135
Largemouth bass	*Micropterus salmoides*	46	0	1	1	0	0	48
Pumpkinseed sunfish	*Lepomis gibbosus*	17	0	1	7	6	14	45
Smallmouth bass	*Micropterus dolomieu*	137	0	0	32	33	60	262
White perch	*Morone americana*	0	0	0	0	10	11	21
White sucker	*Catastomus commersoni*	14	15	10	2	5	19	65
Yellow perch	*Perca flavescens*	13	3	2	0	0	11	29

Resident Fish Impoundment Tributary Access

In consideration of the reduction in normal water surface elevation in the impoundment that would result from full spillway removal, BWPH conducted field studies to assess impacts to tributary access for resident fish species. The three perennial streams in the study area were Smith Brook, Crockett Brook, and Casper Brook.

During the 2024 field study, field staff observed that the three primary tributary streams contained either stagnant water (Crockett and Casper brooks) or flowing water (Smith Brook) within the thalweg at the drawn-down impoundment elevation. In Crockett Brook and Casper Brook, water remained stagnant for more than 150 feet upstream of their confluences with the Saco River. The drawn-down impoundment elevation reduced water depths and exposed shoreline banks at all three tributary confluences. During an approximately 5-foot impoundment drawdown to the approximate post-breach impoundment water level, the confluences of Crockett and Casper brooks with the Saco River maintained approximately one foot of water depth. The 2024 field study occurred during drought conditions thus there was little to no flow in the two streams. With no backwatering under dam removal conditions, water levels are reduced by 2-3 feet or so. Under current day normal impoundment levels, the backwater effect extends upstream within Crockett Brook about 1,000 feet.

Smith Brook maintained a continuous thalweg of flowing water, with depths ranging from 0.5 to 1 foot (Kleinschmidt 2025). Field staff noted that flow originating from Smith Brook was substantially colder than Saco River water under observed conditions, and that the confluence area consisted of a mixed substrate of sand, silt, and gravel.

Bass Spawning

FPLE Maine performed a bass spawning survey at the Project in June 2002 to document the number and location of smallmouth and largemouth bass nests in the Project area by snorkeling all shorelines in the Project waters (FPLE Maine 2003).

During the survey, FPLE Maine observed a total of 12 bass nests in the impoundment, all of which were observed in the middle portion of the impoundment in depths between 2.5 to 5 feet of water (FPLE Maine 2003). Six nests observed in the impoundment were in a water velocity refuge downstream of a small island and the remaining six nests were dispersed along the shoreline area of the mid-impoundment (FPLE Maine 2003).

FPLE Maine also observed 11 bass nests in the lower, backwatered area of the bypass reach, where nests were observed in 2.5 to 4 feet of water in large gravel and cobble substrates (FPLE Maine 2003). In the tailwater area, FPLE observed eight bass nests which were dispersed on both shorelines in three to six feet of water in large gravel and cobble substrates (FPLE Maine 2003).

Because smallmouth bass have been documented spawning in water depths ranging from 0.8 to 12 feet (VFWD 2017), tributary depths at the Saco River confluences are not anticipated to limit access for spawning bass. The minimum suitable zone of passage (ZOP) is defined as a water depth equivalent to two-thirds of the body thickness of the largest target fish expected to move through a reach, where body thickness represents the distance from the dorsal musculature to the underside of the fish (Bovee 1982). This criterion supports fish passage and movement in natural channels.

Using proportional measurements for bass presented in Smith (1985), a standard body length of 71.5 millimeters (mm) corresponds to a body depth of 29 mm, yielding a ratio of 0.41. The preferred adult lengths for smallmouth and largemouth bass identified by VFWD (2017) are 14 and 15 inches, respectively. An average bass length of 14.5 inches would therefore correspond to an estimated body depth of approximately 5.9 inches, requiring a ZOP of about 3.9 inches. Observed depths at tributary mouths exceed this minimum requirement and would not limit passage for smallmouth or largemouth bass.

4.8.1.2 Migratory Fish

Historically, twelve species of diadromous fish utilized the lower Saco River including Atlantic salmon (*Salmo salar*), alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), American shad (*Alosa sapidissima*), rainbow smelt (*Osmerus mordax*), striped bass (*Morone saxatilis*), Atlantic sturgeon (*Acipenser oxyrinchus*), shortnose sturgeon (*Acipenser berivostrum*), Atlantic tomcod (*Microgadus tomcod*), sea lamprey (*Petromyzon marinus*), sea-run brook trout (*Salvelinus fontinalis*), and American eel (*Anguilla rostrata*). It is believed that all anadromous species except for Atlantic salmon were unable to pass the falls at the head tide in Saco/ Biddeford, which is now the site of the Cataract Project (FERC No. 2528), and utilized only the tidal reach of the river below the falls. There is no known historical documentation of shad or river herring occurring above the falls at Saco or Biddeford. One catadromous species, American eel migrates through and has been identified in the Project area and were documented in relatively low abundance in the 2001 FPLE Maine Fisheries Survey (FPLE Maine 2003). However, the 1994 Amendment One to the Saco River Strategic Plan for Fisheries Management states that "The Department of

Marine Resources' objective of the Saco River Plan is to restore runs of anadromous American shad and river herring to the Saco River and its tributaries upstream to the base of the Hiram dam" (MDMR 1994).

In 2019, BWPH and the resource agencies executed a revised Saco River Fish Passage Assessment Agreement (SRFAA) for migratory fish species, superseding the 2007 SRFAA[13]. The 2019 Amendment replaced Section 5.3.b.1, including a provision for a "single permanent upstream anadromous fish passage facility at each of the Projects, or an alternative method agreed upon and approved by the Parties" with an implementation schedule of May 1, 2025, for the Bar Mills Project. Without an economically viable solution to return the generating units to an operable condition, BWPH determined that surrendering the FERC Project license and decommissioning the Project through a full spillway removal is the most viable solution for balancing operational, environmental, future dam safety needs, and meeting fish passage requirements under the SRFAA.

The Bar Mills Dam removal is intended to restore the impounded reach back to a free-flowing condition. A hydraulic model was developed using empirical river flow and bathymetry data collected within the reach and using the U.S. Army Corps of Engineers' HEC-RAS software. The model outputs include water velocity, depth and water surface elevation (WSEL) at 5, 50, and 95 percent exceedance flows during the fish passage season (May 1 – July 31). This information was used to evaluate the suitability of a zone-of-passage that would allow migratory fish species to access upstream habitats. The model was used to develop riverbed slope profile (Figure 4-7), water depth (Figure 4-8, Figure 4-11 and Figure 4-14), water velocity (Figure 4-9, Figure 4-12 and Figure 4-15) and riverbed elevation profile (Figure 4-10, Figure 4-13, and Figure 4-16) plots to estimate the post dam removal conditions of the area currently occupied by the Bar Mills Dam. The plots represent low (95% exceedance, 762 cfs), median (50% exceedance, 2,725 cfs) and high flow (5% exceedance, 9,930 cfs) scenarios.

Two channels are expected to occur within the existing dam footprint, a primary channel on river left, looking downstream, and a secondary channel on river right (Figure 4-9). The channel bathymetry in these areas consists of a steep bed slope of 4.8 percent and 7.6 percent, which drops 6.7 feet and 9.7 feet over a distance of 141 feet and 127 feet, at the primary and secondary channels, respectively. Flow is somewhat constricted through

[13] Saco River Fish Passage Assessment - Offer of Settlement and Explanatory Statement FPL Energy Maine Hydro LLC - Cataract Project (No. 2528), Skelton Project (No. 2527), Bar Mills Project (No. 2194), West Buxton Project (No. 2531), Bonny Eagle Project (No. 2529), Hiram Project (No. 2530).

these channels resulting in shallow, fast-flowing hydrology. At low flow conditions (762 cfs) water depth is less than 0.5ft deep across most of the constriction with a thalweg in the middle of deeper water (1.0 -1.5ft) occupying about 20 percent of the wetted width of the river (Figure 4-7). Water velocity accelerates through the constriction reaching speeds as high as 8-10 fps in the thalweg and slowing to 2-6 fps at the margins (Figure 4-9). The lowest water velocities occur in the shallowest areas.

Zone-of-Passage

Fish swimming speed and stamina, locomotion and the mechanics of fish swimming, are important considerations when evaluating potential hydraulic barriers to upstream migration. Swimming speeds and endurance vary with species and body morphology, fish length, water temperature and other variables (Katopodis, and Gervais 2016). Water depth is another key factor in a fish's ability to navigate an area and shallow water depth exacerbate challenges to navigation. Fish are capable of locomotion in very shallow water over short distances, in extreme cases fish have been observed moving through reaches so shallow that their backs are out of the water. However, these are unusual and short-lived circumstances and swim performance criteria assume full body submergence (NMFS 2022). In this analysis we assume that the minimum passage depth is 1.5 times the body depth.

The species of interest for this analysis include only those diadromous species that necessarily need access to upstream habitat to complete their life cycle and include American shad, river herring (alewife, blueback herring), American eel, and Atlantic salmon. Of these species only river herring and American eel regularly migrate upstream past Skelton Dam and therefore have the potential to migrate to the Bar Mills area of the Saco River. River herring (453,620 passed over a ten-year period between 2015 and 2025) are the focus of this analysis, but we have also included American eel, American shad and Atlantic salmon, which occasionally pass upstream of Skelton dam in low numbers, (eel passage unknown, 17 salmon, and 730 American shad between 2015 and 2025) (MDMR 2026).

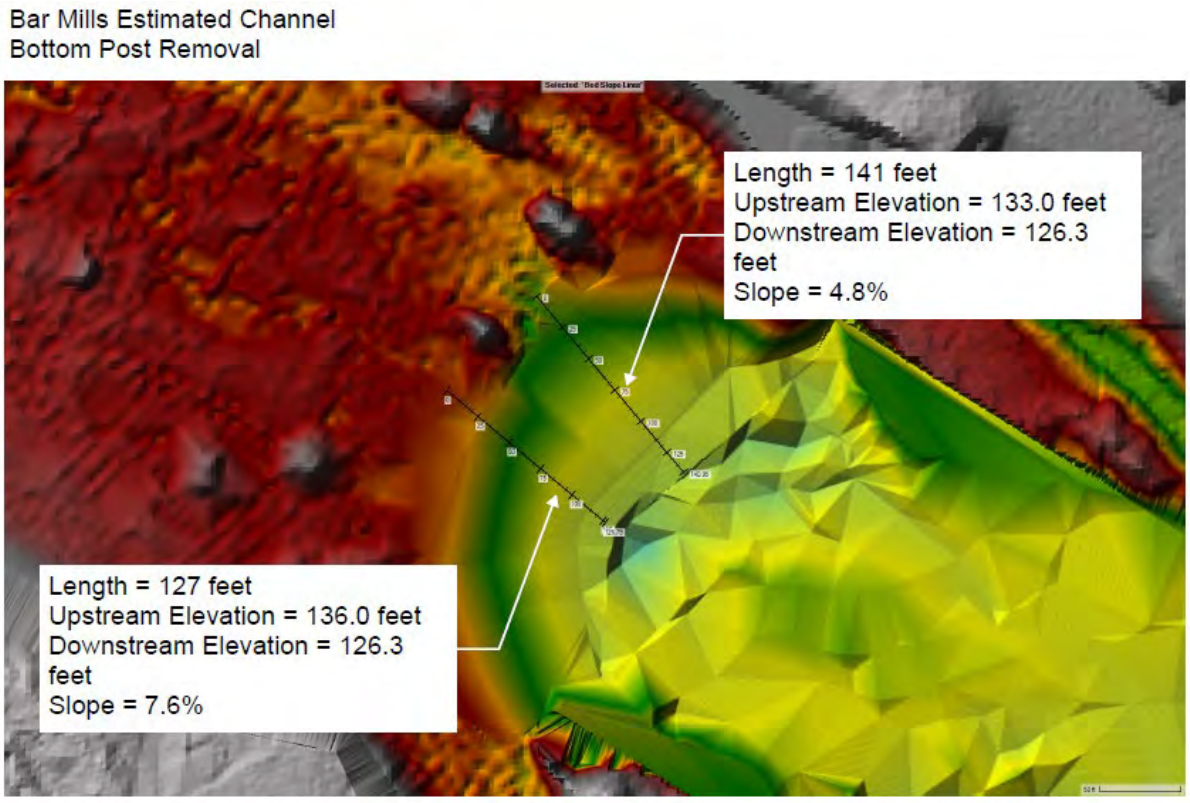


Figure 4-7 Bed Profiles at the Bar Mills Dam Site

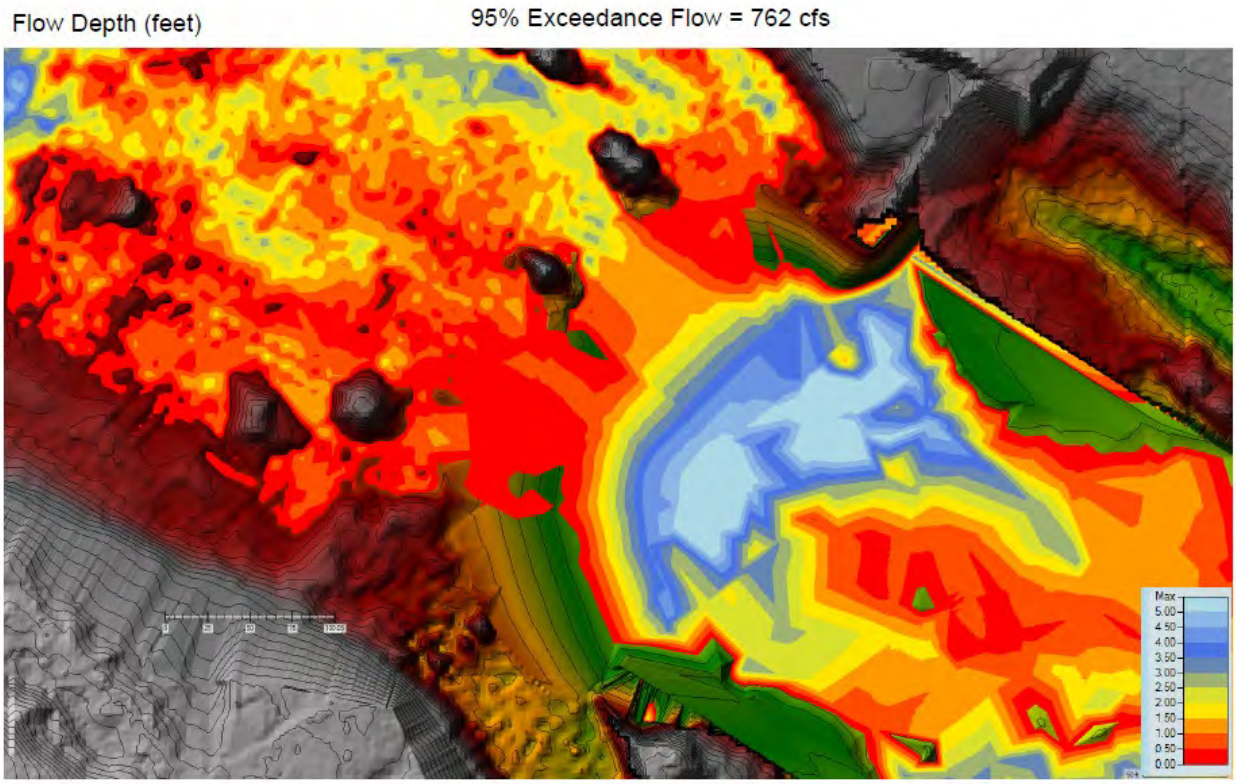


Figure 4-8 Water Depth (ft) at the Bar Mills Dam Site at Low Flow (95 percent exceedance)

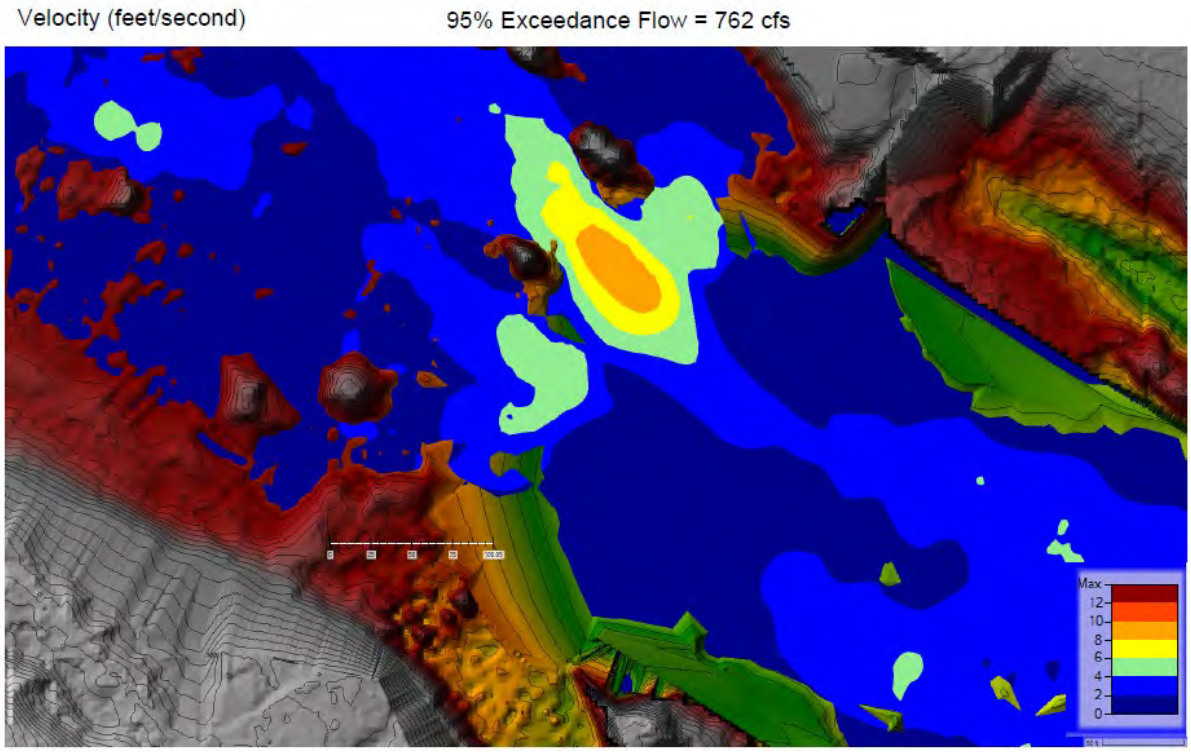


Figure 4-9 Water Velocity (fps) at the Bar Mills Dam Site at Low Flow (95 percent exceedance)

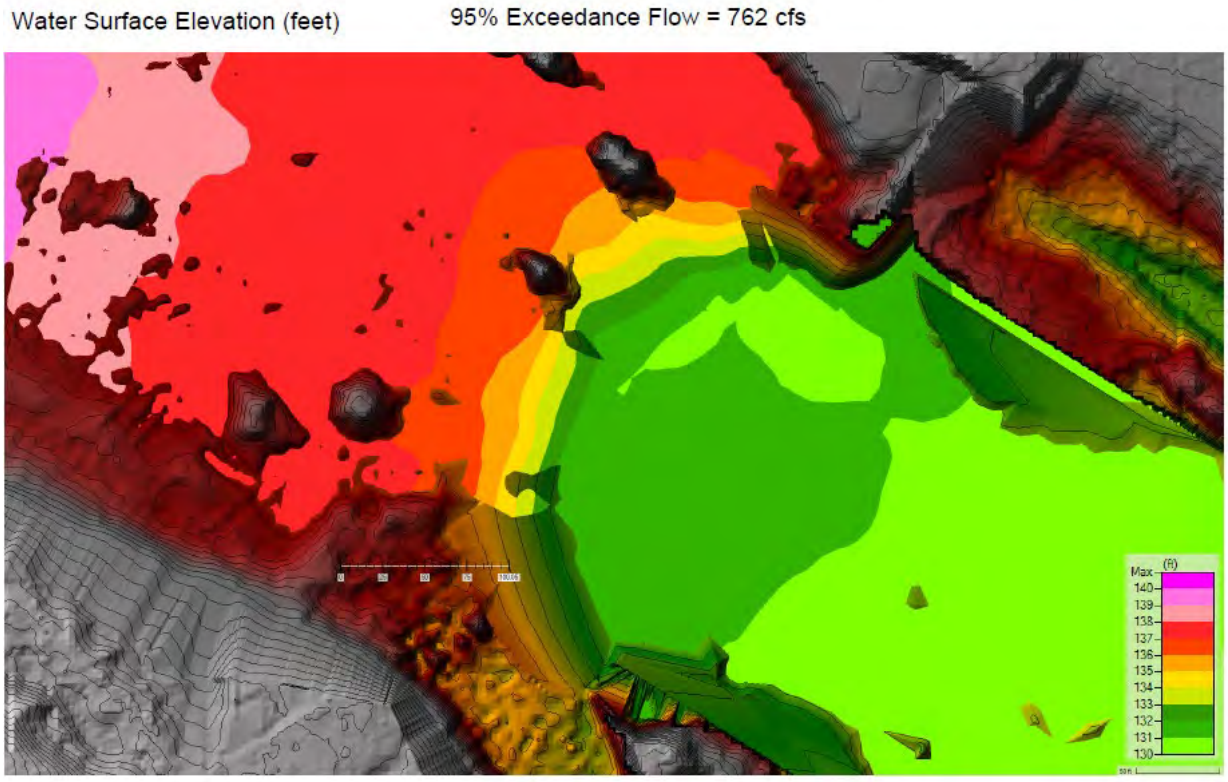


Figure 4-10 WSEL at the Bar Mills Dam Site at Low Flow (95 percent exceedance)

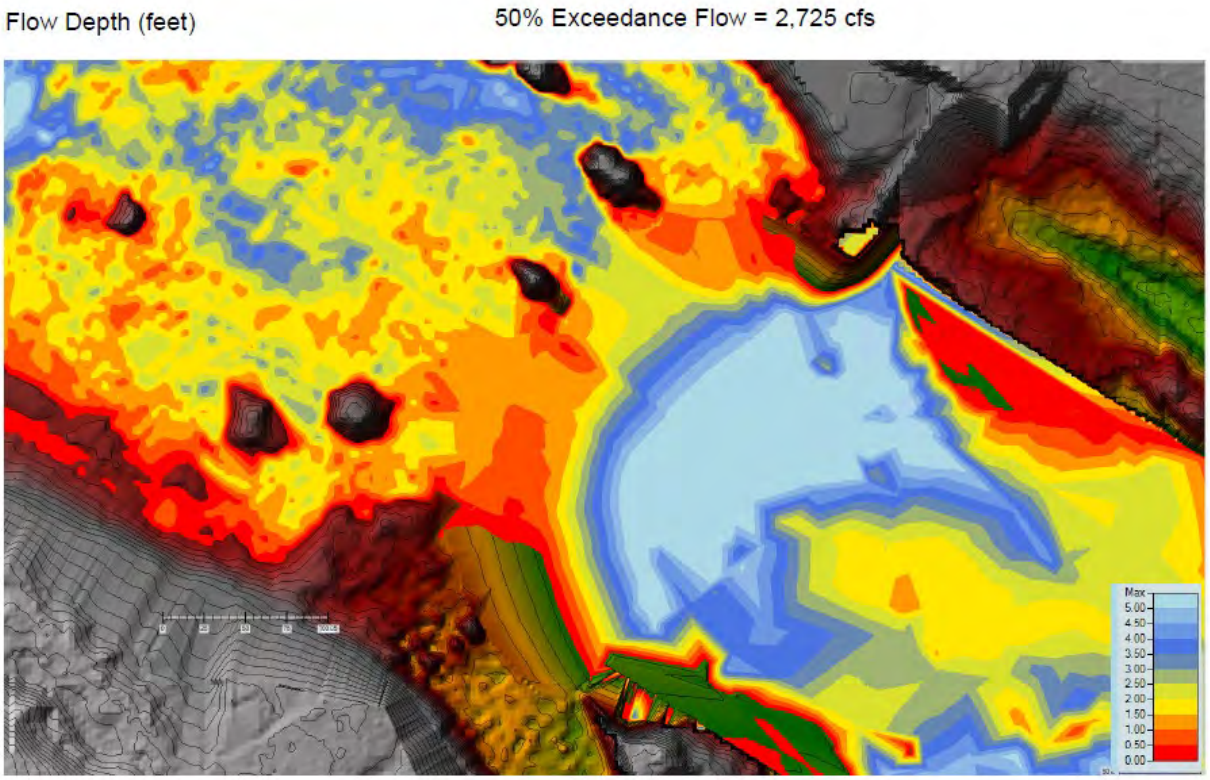


Figure 4-11 Water Depth (ft) at the Bar Mills Dam Site at Median Flow (50 percent exceedance)

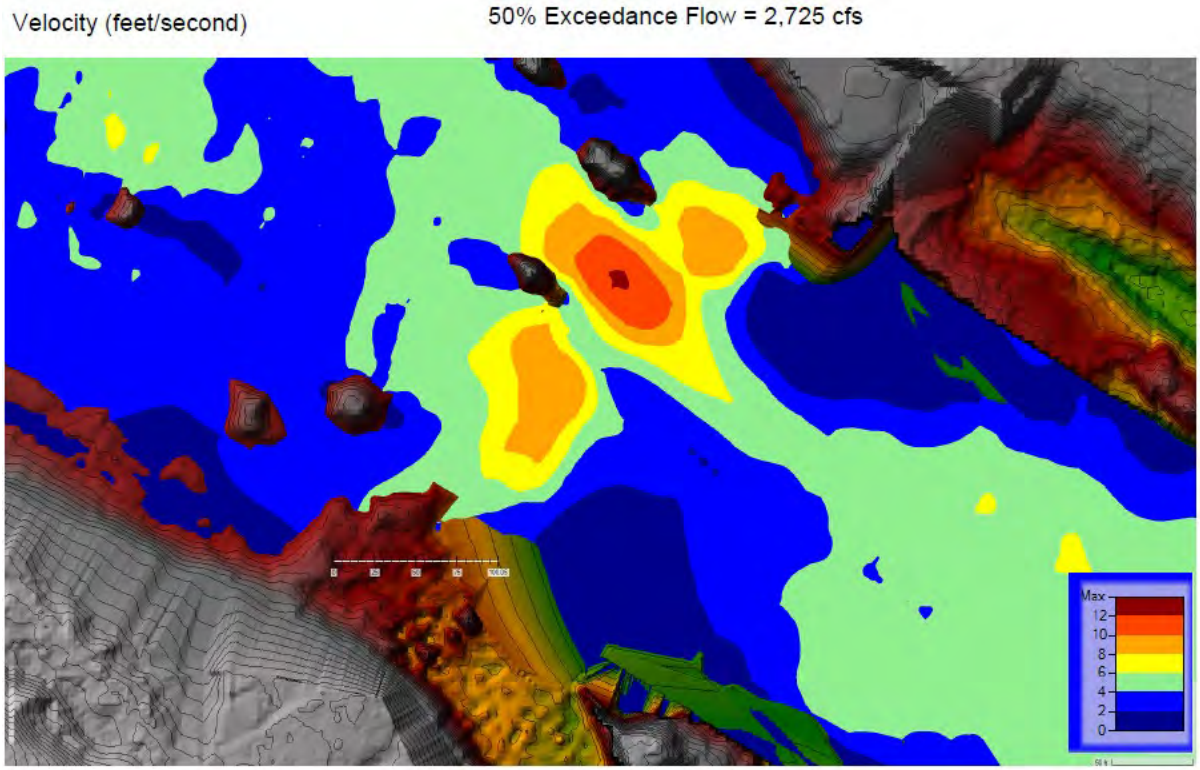


Figure 4-12 Water Velocity (fps) at the Bar Mills Dam Site at Median Flow (50 percent exceedance)

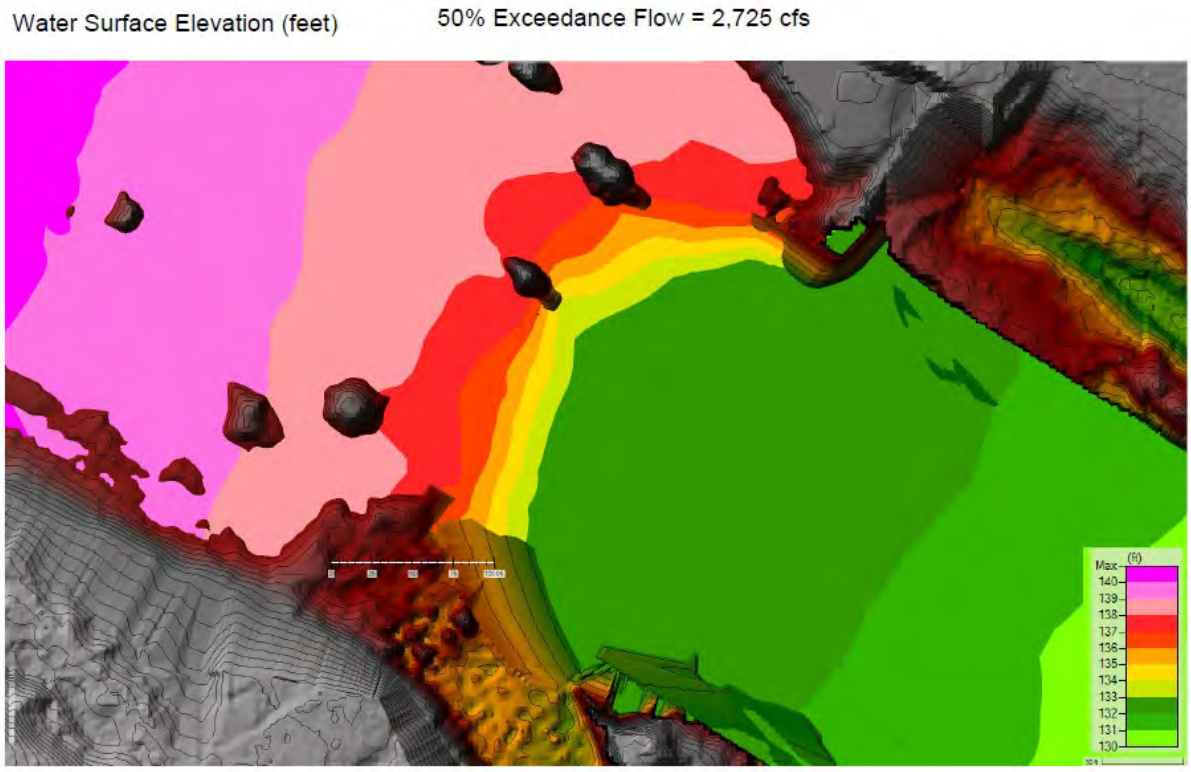


Figure 4-13 WSEL at the Bar Mills Dam Site at Median Flow (50 percent exceedance)

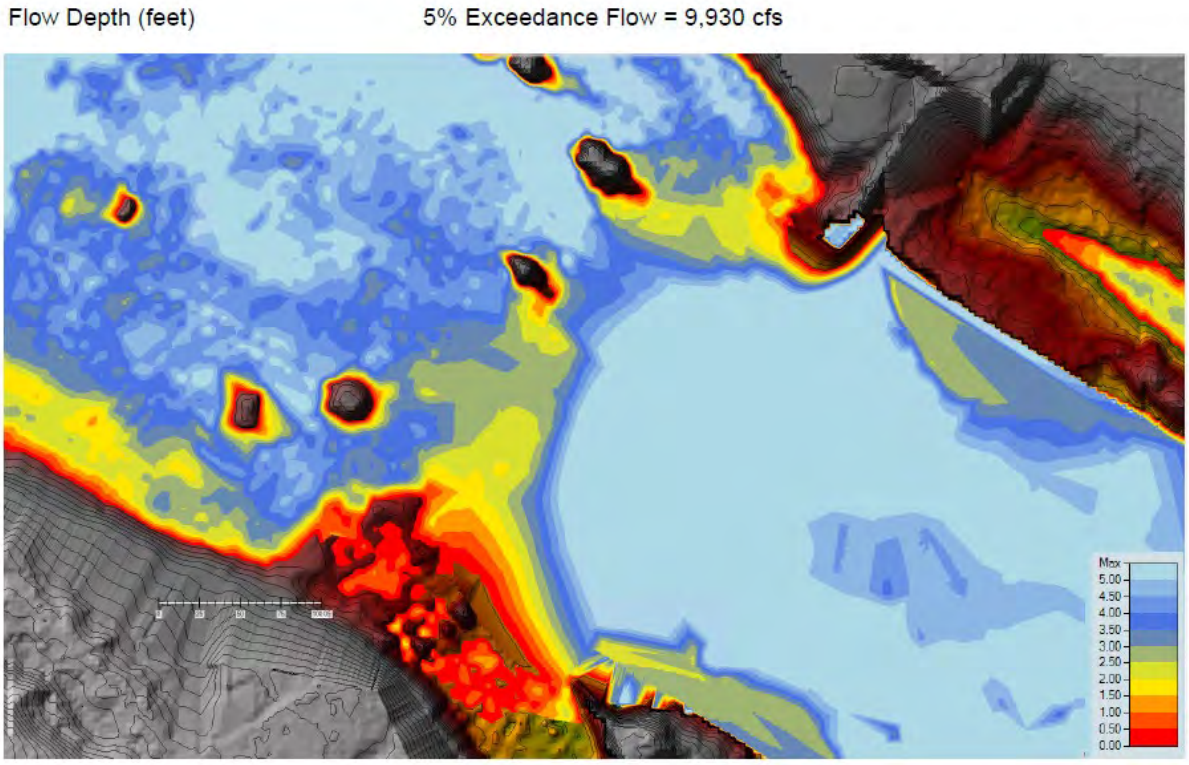


Figure 4-14 Water Depth (ft) at the Bar Mills Dam Site at High Flow (5 percent exceedance)

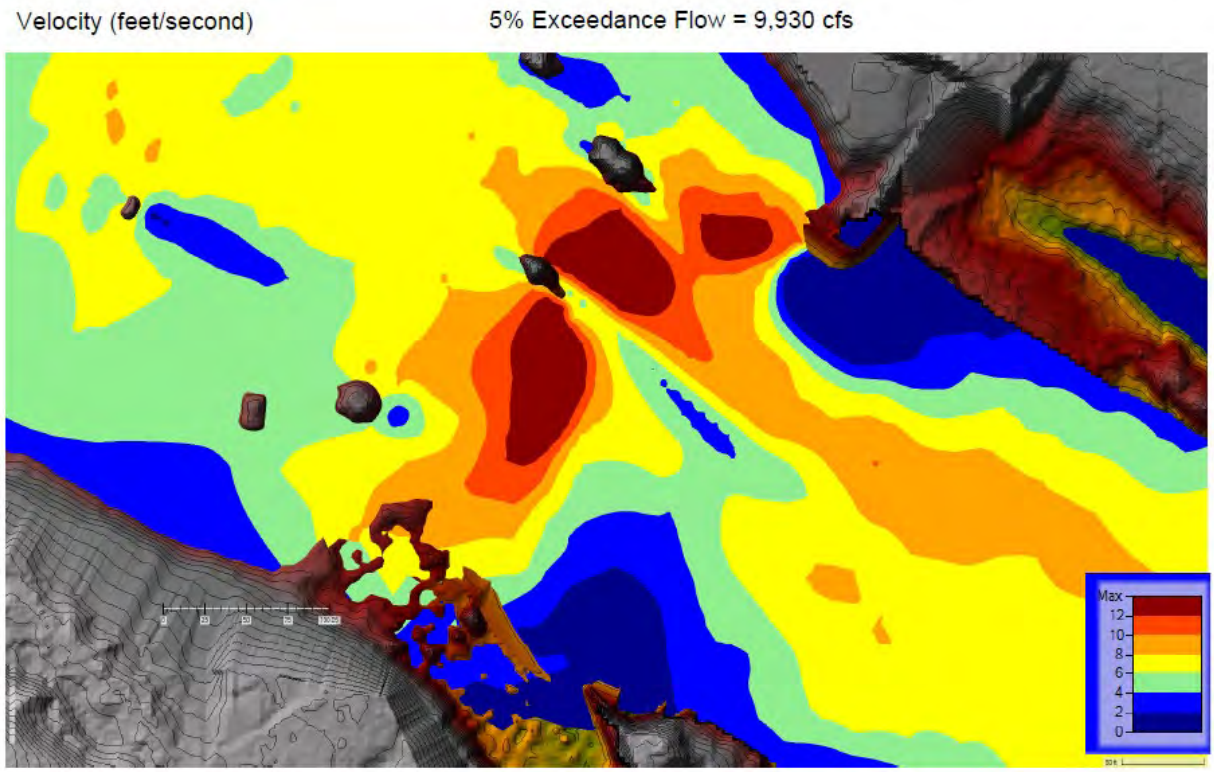


Figure 4-15 Water Velocity (fps) at the Bar Mills Dam Site at High Flow (5 percent exceedance)

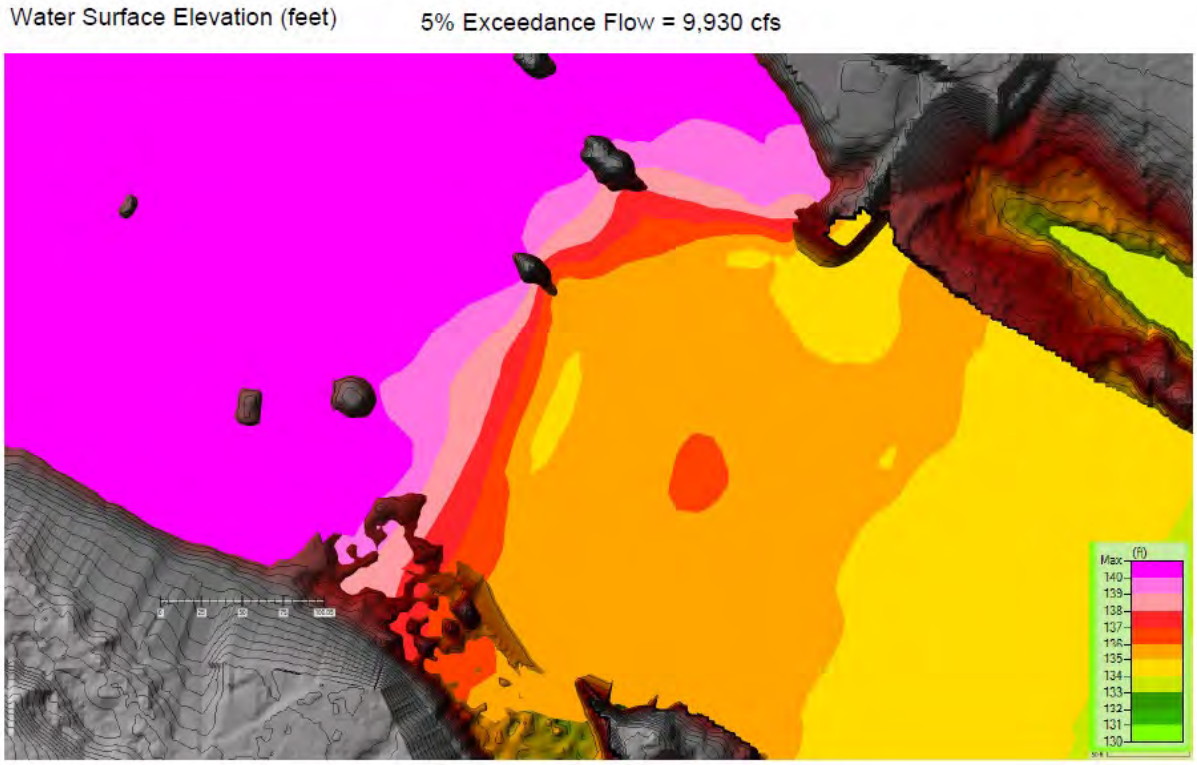


Figure 4-16 WSEL at the Bar Mills Dam Site at High Flow (5 percent exceedance)

Swim Performance Online Tool

A tool developed by Di Rocco and Gervais (2025) named the Swim Performance Online Tools or SPOT https://fishprotectiontools.ca/index.html was used, in conjunction with the hydraulic model out puts to estimate if fish are expected to be able to traverse the post-removal constriction area.

Low Flow Scenarios (95 Percent Exceedance Flow = 762 cfs)

River Herring (alewife and blueback herring) Low Flow Scenario (762 cfs)

Fish Size Basis (MDMR 2026)

- Total Length Range – 25 – 30cm
- Body Depth Range – 6.5 – 9.5 cm

Minimum swim depth range (1.5x body depth) – 9.75 (0.32 ft) – 14.25 cm (0.47 ft)

Model Results – Total Length – 28 cm at a distance of 23m or 75 ft.
2.5% of 280 mm Herring can swim in 1.9 m/s (6.23 ft/s) current for at least 23 m
12.5% of 280 mm Herring can swim in 1.7 m/s (5.6 ft/s) (current for at least 23 m
50% of 280 mm Herring can swim in 1.3 m/s (4.3 ft/s) current for at least 23 m
87.5% of 280 mm Herring can swim in 1.1 m/s (3.6 ft/s) current for at least 23 m
97.5% of 280 mm Herring can swim in 0.92 m/s (3.0 ft/s) current for at least 23 m

With water velocities exceeding 8 fps over a distance of approximately 23 m (approximately 75ft) in all areas of suitable depth at the low flow scenario, few, if any river herring attempting to pass upstream through the constriction, are likely to be successful.

American Eel

Fish Size Basis - Yellow Phase Eel (MDMR 2026)

- Total Length Range – 15–35 cm
- Body Depth Range – 0.7 -1.0 cm

Minimum swim depth range (1.5x body depth) – 1.05cm (0.03 ft) – 1.5 cm (0.05 ft)

Model Results – Total Length – 25 cm at a distance of 23m or 75 ft.
2.5% of 250 mm Eel can swim in 0.74 m/s (2.4 ft/s) current for at least 23 m
12.5% of 250 mm Eel can swim in 0.52 m/s (1.7 ft/s) current for at least 23 m
50% of 250 mm Eel can swim in 0.32 m/s (1.0 ft/s) current for at least 23 m
87.5% of 250 mm Eel can swim in 0.2 m/s (0.7 ft/s) current for at least 23 m
97.5% of 250 mm Eel can swim in 0.14 m/s (0.5 ft/s) current for at least 23 m

With water velocities exceeding 2 fps over a distance of approximately 23 m (approximately 75ft) in all areas of suitable depth at the low flow scenario, approximately 2.5 percent of American eel attempting to pass upstream through the constriction are likely to be successful. However, this is likely a low estimate as eel are adept at moving through very shallow water and using wetted substrate opportunistically, often leaving the water altogether to ascend barriers, particularly when small in size.

American Shad

Fish Size Basis (USFWS 2026)

- Total Length Range – 51 -61cm
- Body Depth Range – 18 - 20cm

Minimum swim depth range (1.5x body depth) – 27 cm (0.89 ft) – 30 cm (0.98 ft)

Model Results – Total Length – 50 cm at a distance of 23m or 75 ft.

2.5% of 500 mm Herring can swim in 3.8 m/s (12.5ft/s) current for at least 23 m
12.5% of 500 mm Herring can swim in 3.3 m/s (10.8 ft/s) current for at least 23 m
50% of 500 mm Herring can swim in 2.6 m/s (8.5 ft/s) current for at least 23 m
87.5% of 500 mm Herring can swim in 2.1 m/s (6.9 ft/s) current for at least 23 m
97.5% of 500 mm Herring can swim in 1.8 m/s (5.9 ft/s) current for at least 23 m

With water velocities exceeding 8 fps over a distance of approximately 23 m (approximately 75ft) in all areas of suitable depth at the low flow scenario, as many as half of American shad attempting to pass upstream through the constriction are likely to be successful.

Atlantic salmon

Fish Size Basis (USFWS 2026)

- Total Length Range – 70-76 cm
- Body Depth Range – 15- 18 cm

Minimum swim depth range (1.5x body depth) – 22.5 cm (0.74 ft) – 30 cm (0.89 ft)

Model Results – Total Length – 75 cm at a distance of 23m or 75 ft.

2.5% of 750 mm Salmon & Walleye can swim in 6.3 m/s (20.7 ft/s) current for at least 23 m
12.5% of 750 mm Salmon & Walleye can swim in 4.4 m/s (14.4 ft/s) current for at least 23 m
50% of 750 mm Salmon & Walleye can swim in 2.6 m/s (8.5 ft/s) current for at least 23 m
87.5% of 750 mm Salmon & Walleye can swim in 1.5 m/s (4.9 ft/s) current for at least 23 m
97.5% of 750 mm Salmon & Walleye can swim in 1.1 m/s (3.6 ft/s) current for at least 23 m

With water velocities exceeding 8 fps over a distance of approximately 23 m (approximately 75ft) in all areas of suitable depth at the low flow scenario, as many as half of Atlantic salmon attempting to pass upstream through the constriction are likely to be successful.

Mid-Flow Scenarios (50 Percent Exceedance Flow = 2,725 cfs)

American shad

Fish Size Basis (USFWS 2026)

- Total Length Range – 51 - 61cm
- Body depth range – 18 - 20cm

Minimum swim depth range (1.5x body depth) – 27 cm (0.89 ft) – 30 cm (0.98 ft)

Thalweg Model Results – Total Length – 50 cm at a distance of 40 m or 130 ft.
2.5% of 500 mm Herring can swim in 2.6 m/s (8.5 ft/s) current for at least 40 m
12.5% of 500 mm Herring can swim in 2.3 m/s (7.5 ft/s) current for at least 40 m
50% of 500 mm Herring can swim in 1.8 m/s (5.9 ft/s) current for at least 40 m
87.5% of 500 mm Herring can swim in 1.5 m/s (4.9 ft/s) current for at least 40 m
97.5% of 500 mm Herring can swim in 1.3 m/s (4.3 ft/s) current for at least 40 m

With water velocities exceeding 8 fps over a distance of approximately 40 m (approximately 130 ft) in the thalweg during a mid-flow scenario, less than 2.5 percent American shad attempting to pass upstream through the thalweg constriction are likely to be successful. However, with the increase in flow, additional areas with suitable depth (1.0 - 1.5ft) for shad locomotion becomes available on the river left channel (looking upstream) (Figure 4-11).

River Left Channel Model Results – Total Length – 50 cm at a distance of 18 m or 60 ft.
2.5% of 500 mm Herring can swim in 4.5 m/s (14.8 ft/s) current for at least 18 m
12.5% of 500 mm Herring can swim in 3.8 m/s (12.5 ft/s) current for at least 18 m
50% of 500 mm Herring can swim in 3.1 m/s (10.2 ft/s) current for at least 18 m
87.5% of 500 mm Herring can swim in 2.5 m/s (8.2 ft/s) current for at least 18 m
97.5% of 500 mm Herring can swim in 2.1 m/s (6.9 ft/s) current for at least 18 m

With water velocities exceeding 8 fps over a distance of approximately 18 m (approximately 60ft) in all areas of suitable depth at the mid-flow scenario, as many as 87.5 percent of American shad attempting to pass upstream through the RL channel high velocity constriction are likely to be successful. However, the additional flow increased the

upstream extent of **moderate velocity (6 ft/s)** to approximately 61 meters or 200 ft (Figure 4-11), which greatly reduces the probability of success to less than 2.5 percent for shad attempting to migrate upstream through this reach. The cumulative effects of the moderate and high velocity areas further reduce the probability of shad passing through this area. Ultimately, very few shad are likely to ascend through the constriction reach at mid-flow.

River Left Channel Model Results – Total Length – 50 cm at a distance of 61 m or 200 ft.

2.5% of 500 mm Herring can swim in 2 m/s (6.6 ft/s) current for at least 61 m
12.5% of 500 mm Herring can swim in 1.7 m/s (5.6 ft/s) current for at least 61 m
50% of 500 mm Herring can swim in 1.4 m/s (4.6 ft/s) current for at least 61 m
87.5% of 500 mm Herring can swim in 1.1 m/s (3.6 ft/s) current for at least 61 m
97.5% of 500 mm Herring can swim in 0.94 m/s (3.1 ft/s) current for at least 61 m

Atlantic salmon

Fish Size Basis (USFWS 2026)

- TL range – 70-76 cm
- Body depth range – 15- 18 cm

Minimum swim depth range (1.5x body depth) – 22.5 cm (0.74 ft) – 30 cm (0.89 ft)

Model Results – Mid-flow scenario (2,725 cfs), TL – 75 cm at a distance of 40 m or 130 ft.
2.5% of 750 mm Salmon & Walleye can swim in 5.2 m/s (17.1 ft/s) current for at least 40 m
12.5% of 750 mm Salmon & Walleye can swim in 3.6 m/s (11.8 ft/s) current for at least 40 m
50% of 750 mm Salmon & Walleye can swim in 2.2 m/s (7.2 ft/s) current for at least 40 m
87.5% of 750 mm Salmon & Walleye can swim in 1.3 m/s (4.3 ft/s) current for at least 40 m
97.5% of 750 mm Salmon & Walleye can swim in 0.9 m/s (3.0 ft/s) current for at least 40 m

With water velocities exceeding 8 fps over a distance of approximately 40 m (approximately 130 ft) in all areas of suitable depth within the thalweg at the mid-flow scenario, approximately 12.5 percent of Atlantic salmon attempting to pass upstream through the thalweg constriction are likely to be successful. However, with the increase in flow, additional areas with suitable depth (1.0 - 1.5ft) for salmon locomotion is available on the river left channel (looking upstream) (Figure 4-11).

River Left Channel Model Results – Total Length – 75 cm at a distance of 18 m or 60 ft.
2.5% of 500 mm Salmon & Walleye can swim in 4.8 m/s (15.7 ft/s) current for at least 18 m
12.5% of 750 mm Salmon & Walleye can swim in 3.4 m/s (11.2 ft/s) current for at least 18 m
50% of 750 mm Salmon & Walleye can swim in 2 m/s (6.6 ft/s) current for at least 18 m
87.5% of 750 mm Salmon & Walleye can swim in 1.2 (3.9 ft/s) m/s current for at least 18 m
97.5% of 750 mm Salmon & Walleye can swim in 0.83 (2.7 ft/s) m/s current for at least 18 m

With water velocities exceeding 8 fps over a distance of approximately 18 m (approximately 60ft) in all areas of suitable depth at the mid-flow scenario, approximately 12.5 percent of salmon attempting to pass upstream through the river left channel of the constriction are likely to be successful. Further, the additional flow increased the upstream extent of **moderate velocity (6 ft/s)** to approximately 61 meters or 200 ft, which exhibits a similar probability of navigation through the reach, 12.5 percent, though the cumulative effects of both the high velocity area (>8ft/s) and the moderate velocity area are likely to exacerbate the challenge of migration through this area.

River Left Channel Model Results – Total Length – 75 cm at a distance of 61 m or 200 ft.
2.5% of 500 mm Salmon & Walleye can swim in 3.2 m/s (10.5 ft/s) current for at least 61 m
12.5% of 500 mm Salmon & Walleye can swim in 2.2 m/s (7.2 ft/s) current for at least 61 m
50% of 500 mm Salmon & Walleye can swim in 1.3 m/s (4.3 ft/s) current for at least 61 m
87.5% of 500 mm Salmon & Walleye can swim in 0.8 m/s (2.6 ft/s) current for at least 61 m
97.5% of 500 mm Salmon & Walleye can swim in 0.55 m/s (1.8 ft/s) current for at least 61 m

4.8.1.3 Freshwater Mussels

FPLE Maine conducted a mussel survey during the previous relicensing during the summer of 2001 in the Project impoundment, bypass reach, and tailrace. The survey determined that mussel populations at the Project consist primarily of Eastern elliptio (*Elliptio complanata*). Relics of Triangle Floater (*Alasmidonta undulata*) were found in the impoundment and bypass reach. Substrates along the impoundment perimeter consist of sand and mud which provide suitable habitat for Eastern elliptio (Nedeau et al. 2000). Most of the individuals observed in the impoundment were located in depths greater than three feet.

FPLE collected a subsample of 25 Eastern elliptio from the impoundment which ranged in length from 57 to 93mm. FPLE observed and collected one relic Triangle Floater along the impoundment shoreline which measured 34mm.

FPLE Maine collected relics of 15 triangle floaters from the lower portion of the bypass reach. FPLE Maine observed several hundred relics of Eastern elliptio along the shore of the lower bypass reach. Of the relics collected by FPLE along the lower bypass reach shoreline triangle floaters ranged in length from 31 to 44mm and eastern elliptio ranged in length from 39 to 100mm. One live Eastern elliptio was observed along the western shore of the bypass reach in an area of calm water approximately one foot deep in cobble and gravel substrate (FPLE, 2003).

4.8.2 Environmental Effects

4.8.2.1 Resident Fish

There may be short term effects to resident fish passage into and out of tributaries to the former impoundment. However, a slow drawdown will help reduce adverse impacts on resident fish species. The Proposed Action may also have direct, short-term impact on individual mussels located in the drawdown area. BWPH will attempt to reduce this impact by drawing down the impoundment gradually and in stages, allowing mussels to move to deeper water and facilitating relocation efforts.

4.8.2.2 Migratory Fish

The analysis utilizing the SPOT tool assumes migrating fish are subject to the reference water velocities continuously. An example of a real-world application in which this may be the situation includes fish swimming through a culvert, flume or raceway. In natural settings, such as the Saco River, velocity refuge areas (e.g., boulders, other bathymetric features and eddies) provide opportunity for fish to rest as they ascend challenging high velocity reaches, reducing fatigue impacts. As such, the estimates of probable passage reported herein are likely to be an under estimation. This analysis indicates that even after restoration to free-flowing conditions, the Bar Mills dam site may continue to impede migratory species under certain river flow conditions due to the steeply sloped bedrock riverbed immediately upstream. The former timber crib dam's location and design was intended to leverage natural geographic features that inherently create a potential impediment to migratory passage, the extent of which will be unknown until the structures are removed.

4.8.2.3 Freshwater Mussels

The Proposed Action may have direct, short-term impact on individual mussels located in the impoundment as it is drawn down during construction. BWPH will attempt to reduce

this impact by drawing down the impoundment gradually and in stages, allowing mussels to move to deeper water and facilitating relocation efforts.

4.8.3 Unavoidable Adverse Effects

Construction may cause short-term unavoidable effects on fisheries habitat, including sedimentation and increased turbidity. Due to the limited amount of sediment in the construction area, these effects are expected to be minor and transitory. Best Management Practices (BMPs), including erosion and sediment control measures, will be employed to limit the extent and duration of any such effects.

Results of the hydraulic and biological performance evaluation indicate that post-removal conditions at the Bar Mills Dam site are unlikely to consistently provide an effective zone of passage for upstream-migrating fishes across the range of flows evaluated during the fish passage season. Bathymetric data show that the former dam footprint corresponds to a naturally steep hydraulic control characterized by high bed slopes, shallow depths, and elevated water velocities concentrated through one primary and one secondary channel. These conditions persist under low (95 percent exceedance) and mid-range (50 percent exceedance) flows, producing extended reaches of fast water (>6–8 ft/s) over distances that exceed the sustained swimming capabilities of most individuals for river herring, American shad, and Atlantic salmon, even where minimum depth criteria are met. Passage opportunities are most limited at low flows due to shallow depths and high velocities, while mid-flow conditions modestly increase available depth but also extend the longitudinal distance over which biologically challenging velocities occur, resulting in similarly low cumulative passage probabilities.

Among the species evaluated, American eel are most likely to successfully negotiate the constriction, particularly given their documented ability to exploit shallow water, wetted substrates, and non-traditional passage routes that are not fully captured by hydraulic or swim performance modeling. By contrast, river herring—the predominant diadromous species currently accessing this reach of the Saco River—are expected to experience substantial passage limitation under both low- and mid-flow scenarios, with successful ascent likely restricted to a small proportion of the population and potentially limited to brief hydrologic windows. Although larger-bodied species such as American shad and Atlantic salmon exhibit greater swimming capacity, model results suggest that only a fraction of individuals would be able to traverse the high-velocity constriction zones, and cumulative fatigue across sequential moderate- and high-velocity reaches further reduces effective passage probability.

While the application of the SPOT tool likely underestimates true passage by assuming continuous exposure to reference velocities and not accounting for micro-scale velocity refugia, the overall findings consistently point to this reach functioning as a significant hydraulic bottleneck following dam removal. The analysis supports a conclusion that the Bar Mills Dam was constructed at a location that may historically represented a natural impediment to upstream migration. Consequently, dam removal may not provide longitudinal connectivity for diadromous fishes at this site.

4.8.4 References

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4.9 Botanical Resources

4.9.1 Affected Environment

FLPE completed a terrestrial resources study in September of 2001 that assessed wetland and upland habitats; rare, threatened and endangered species; and wildlife resources in the Project area. In July of 2024 BWPH conducted a shoreline survey to characterize existing wildlife, botanical, and wetland resources, including invasive botanical species along the immediate shoreline of the Project boundary.

Cover types along the impoundment and tailrace are primarily composed of mature mixed hardwood upland forest, agricultural lands, and utility rights-of-way. Additional, though less extensive, cover types include a variety of palustrine wetlands—forested, scrub-shrub, emergent, and unconsolidated bottom—as well as scattered areas of residential development. Two wooded upland islands are also present within the middle and lower sections of the impoundment.

Riparian Upland

The mixed hardwood forest cover type within the Project area is typically mature with a high degree of vertical and horizontal complexity, including well-developed shrub and sapling layers, snags, and down wood. Dominant tree species include shagbark hickory (*Carya ovata*), white oak (*Quercus alba*), and black birch (*Betula lenta*). Shagbark hickory is particularly common along the shoreline. Other common tree species present in the area include red oak (*Quercus rubra*), basswood (*Tilia americana*), white pine (*Pinus strobus*), white ash (*Fraxinus americana*), sugar maple (*Acer saccharum*), yellow birch (*Betula alleghaniensis*), white birch (*Betula papyrifera*), gray birch (*Betula populifolia*), black cherry (*Prunus serotina*), American beech (*Fagus grandifolia*), and trembling aspen (*Populus tremuloides*). The shrub and sapling layer is typically composed of saplings of the dominant overstory tree species, along with several invasive shrubs. These include two non-native honeysuckles (*Lonicera morrow*ii and *L. tatarica*), autumn olive (*Elaeagnus umbellata*), and glossy buckthorn (*Frangula alnus*). The shrub and understory layer is more fully developed along the riverbank and at habitat edges throughout the area. In contrast, within the interior portions of the mixed upland forest, the shrub layer is generally less diverse and forms a noticeably sparser understory. Dominant herb and vine layer species include false Solomon's seal (*Maianthemum racemosum*), poison ivy (*Toxicodendron radicans*), Canada mayflower (*Maianthemum canadense*), partridge-berry (*Mitchella repens*), and Virginia creeper (*Parthenocissus quinquefolia*).

The utility rights-of way, agricultural edges, and residential edges are characterized by more open cover types. Dominant species include forbs such as Queen Anne's lace (*Daucus carota*), Canada goldenrod (*Solidago canadensis*), bracken fern (*Pteridium aquilinum*), milkweeds (*Asclepias* spp.), wild strawberry *(Fragaria virginiana*), yarrow (*Achillea millefolium*), and cinquefoil (*Potentilla simplex*.), as well as grasses such as timothy (*Phleum pratense*), red fescue (*Festuca rubra*), little bluestem (*Schizachyrium scoparium*), and bluejoint grass (*Calamagrostis canadensis*). Common woody species include staghorn sumac (*Rhus typhina*), multiflora rose (*Rosa multiflora*), smooth sumac (*Rhus glabra*), highbush blackberry (*Rubus allegheniensis*), raspberry (Rubus spp.), sweet fern (*Comptonia peregrina*), and trembling aspen, white pine, and black cherry saplings. Scattered apple trees (*Malus* spp.) are also present within edge habitats throughout the Project area.

Wetlands

The study area contains approximately 76 acres of palustrine wetland habitat including palustrine emergent (PEM), palustrine scrub-shrub (PSS), palustrine forested (PFO), and palustrine unconsolidated bottom (PUB) wetlands (Table 4-13):

Table 4-13 Field Verified Wetland

Wetland Type	Approximate Area (Acres)	Percent of Total Wetlands
Palustrine Emergent	15	20
Palustrine Scrub-Shrub	6	7
Palustrine Forested	54	72
Palustrine Unconsolidated Bottom	1	1
Total	**76**	**100**

The study area includes approximately 15 acres of emergent wetlands found along the shoreline of the river channel and perennial streams. They are also part of larger wetland complexes where woody vegetation is managed, such as in transmission rights-of-way. Common species include sensitive fern (*Onoclea sensibilis*), woolgrass (*Scirpus cyperinus*), fringed sedge (*Carex crinita*), and upright sedge (*Carex stricta*). The wetlands associated with streams showed signs of water marks and sediment staining related to seasonal high water. The PEM wetlands within the study area provide several functions including wildlife

habitat, flood flow alteration, sediment and shoreline stabilization, nutrient removal, and sediment and toxicant retention.

PSS wetlands comprise approximately 6 acres of the study area. This wetland type is found on a small island within the Saco River or associated with larger, forested, wetland complexes. Dominant shrub vegetation includes speckled alder (*Alnus incana*), common buttonbush (*Cephalanthus occidentalis*), red osier dogwood (*Cornus sericea*), and white meadowsweet (*Spiraea alba*). Herbaceous vegetation varies depending on light penetration, but often includes sensitive fern, royal fern (*Osmunda regalis*), and Joe Pye weed (*Eutrochium maculatum*). Common hydrologic indicators include surface water, saturation, and water-stained leaves. Functionally, these wetlands provide wildlife habitat, nutrient removal, and sediment and toxicant retention.

PFO wetlands are the most frequently occurring wetland type, covering approximately 54 acres of the study area. These wetlands occur along the shoreline, and as part of larger wetland complexes. The overstory is primarily dominated by deciduous hardwood species including silver maple, red maple (*Acer rubrum*), and yellow birch. The shrub layer in these wetlands is generally sparse, primarily composed of saplings from overstory species. White meadowsweet, winterberry (*Ilex verticillata*) and steeplebush (*Spiraea tomentosa*) occur occasionally. Herbaceous vegetation varies depending on canopy closure, but common species include sensitive fern, royal fern, and king of the meadow (*Thalictrum pubescens*). The swamp white oak (*Quercus bicolor*), which is a threatened species in the state of Maine (MNAP 2021), was observed in three forested wetlands along the eastern shore of the impoundment.

There were two freshwater ponds (i.e., PUB wetlands) comprising approximately 1 acre of the study area. These open water habitats are largely unvegetated; however, they provide several functions including wildlife habitat, flood flow alteration, and sediment and toxicant retention.

Invasive Botanical Species

Fifteen invasive botanical species were documented throughout the Project area (Table 4-14). Upstream of the Bar Mills Dam, most invasive species were found at trace amounts with low coverage. Downstream of the Bar Mills Dam, invasive species were found at moderate to high densities along the shore and on the island. The most common invasives were woody shrubs, including autumn olive, glossy buckthorn, and Morrow's honeysuckle, with lower densities of multiflora rose (*Rosa multiflora*) and Japanese

barberry (*Berberis thunbergia*). Oriental bittersweet (*Celastrus orbiculatus*), a woody vine species, was prevalent as well.

Japanese knotweed (*Fallopia japonica*) was also observed in the study area, appearing in trace amounts upstream of the Bar Mills Dam but forming dense thickets along the shoreline downstream of the dam. Although this species can be found in wetlands, it typically thrives in upland areas and at higher elevations along shorelines.

Curly pondweed (*Potamogeton crispus*), an aquatic invasive species, was observed in trace amounts at the lower end of the impoundment. This species was found as individual stems along the water's edge, with no other aquatic plant species found concurrently. The stems were hand-pulled by the field crew during the survey.

Table 4-14 Invasive Botanical Species Observed in the Project Area

Scientific Name	Common Name	Status[1,2]
Artemisia vulgaris	common mugwort	4
Berberis thunbergii	Japanese barberry	1
Celastrus orbiculatus	Oriental bittersweet	1
Centaurea stoebe	spotted knapweed	3
Cirsium arvense	Canada Thistle	1
Cynanchum louiseae	black swallowwort	1
Elaeagnus umbellata	autumn olive	2
Euonymus alatus	winged euonymous	1
Fallopia japonica	Japanese knotweed	1
Frangula alnus	glossy buckthorn	1
Lonicera morrowii	Morrow's honeysuckle	1
Lonicera tatarica	Tartarian honeysuckle	1
Phalaris arundinacea	reed canary grass	1
Potamogeton crispus	curly pondweed	1
Rosa multiflora	multiflora rose	2

[1] Source: Maine Department of Agriculture, Conservation and Forestry, 2019

[2] Status rankings from Maine Advisory List of Invasive Plants: 1 – Severely invasive; 2 – Very invasive; 3 – Invasive, habitat-specific threats; 4 – Potential to be invasive, monitor

4.9.2 Environmental Effects

BWPH anticipates the removal of the Bar Mills Project to have positive impacts on the botanical resources in the Project area. The restoration of natural hydrology and sediment transport processes is expected to facilitate the recovery of native botanical communities, enhance habitat quality, and support broader ecosystem functions within the project area.

Riparian Uplands

Post-removal conditions will expose previously inundated habitat, allowing for the natural colonization and succession of native riparian plant species. Over time, this process is expected to increase the diversity and structural complexity of plant communities along the restored channel and floodplain. Early successional species are likely to dominate initially, followed by the establishment of more mature riparian assemblages.

Wetlands

The removal of the Bar Mills Project is anticipated to benefit wetlands over the long term by restoring natural hydrologic regimes, increasing habitat diversity, and supporting the reestablishment of native wetland plant communities. Some existing wetlands may experience temporary disturbance during construction activities; however, these disturbances are expected to be localized and of limited duration. The drawdown of the impoundment will expose previously inundated soils, leading to a transition in wetland types and potential expansion of riverine and floodplain wetlands as the stream channel reestablishes.

One small freshwater pond adjacent to the lower impoundment is directly influenced by river water levels. Following the removal of the Bar Mills Project, the newly exposed soils are expected to quickly become vegetated with native herbaceous wetland species that currently occupy the emergent fringe. Consequently, the wetland is anticipated to transition from an open-water freshwater pond to an emergent wetland community.

The larger wetland complexes were found either at elevations several feet higher than the existing, normal Bar Mills impoundment level or in the floodplain. These wetlands are primarily fed by hydrologic inputs from the contributing watershed or are only affected by river water levels during seasonal flooding events. The removal of the Bar Mills project is not expected to affect these wetlands.

Emergent wetlands along shoreline primarily receive hydrologic input through periodic inundation from the river or stream. Water wicking through exposed alluvial sand and silt are expected to maintain saturation in the upper soil layers. The exposure of new substrate will likely enable emergent species to germinate from existing seed banks or to spread vegetatively. It is anticipated that these wetlands will reconfigure and shift towards the new water elevation. Wetlands formed as a result of artificial impoundments often exhibit poor water quality due to disruptions in physical, chemical, and biological processes caused by altered stream hydrology. With the restoration of more natural stream flows following the removal of the Bar Mills Project, it is expected that higher-quality wetlands will re-establish within the former impoundment footprint.

4.9.3 Unavoidable Adverse Effects

Construction activities and changes in hydrology may temporarily disturb wetland soils and vegetation. These effects are expected to be localized and of limited duration. The disturbance associated with the removal of the Bar Mills Project and sediment exposure may create opportunities for non-native invasive plant species to establish. Due to the prevalence of existing invasive species documented in 2024, BWPH is not specifically proposing invasive species management measures.

4.9.4 References

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4.10 Wildlife

4.10.1 Affected Environment

4.10.1.1 Habitat

Cover types along the Bar Mills impoundment and tailrace are predominantly mature mixed hardwood forest, agriculture, and utility right-of-way. Although not dominant, additional cover types include several types of wetlands and scattered areas of residential development. The habitat within and around the Project supports a diversity of wildlife species including mammals, reptiles, amphibians, waterfowl, and songbirds.

4.10.1.2 Wildlife Species

Wildlife species found in the Project vicinity in September 2001 included gray squirrel, red squirrel, eastern chipmunk, white-tailed deer, and striped skunk. Beaver dens were observed along the impoundment shorelines. Green-backed heron, great-blue heron, double-crested cormorant, and belted kingfisher were observed in emergent wetlands and open water sections. Painted turtle were observed along the river margins and snapping turtle were observed below the water surface. Wood duck were observed in forested wetlands and black duck were observed on the impoundment. Wild turkey were seen in the floodplain forests. A variety of songbirds, including chickadee, blue jay, and red-breasted nuthatch were also observed (FLA 2003).

4.10.2 Environmental Effects

BWPH anticipates the removal of the Bar Mills Project to have positive impacts on local wildlife as the removal of man-made river impediments often restores natural ecosystem processes, enhances connectivity within the river corridor and improves overall river health[14]. The restoration of more natural stream flows will facilitate the reestablishment of floodplain connectivity and riparian vegetation. These changes are anticipated to enhance habitat quality and diversity for a variety of wildlife species, including macroinvertebrates, birds and mammals. The removal of the project is also anticipated to restore longitudinal connectivity of the river. While the Bar Mills Dam was constructed at a location that may have historically represented a natural obstacle to upstream diadromous fish migration, removal of the spillway is still expected to benefit amphibians,

[14] https://www.americanrivers.org/2019/06/twenty-years-of-dam-removal-successes-and-whats-up-next/

reptiles, and mammals that rely on unimpeded river corridors for migration, dispersal, and access to habitat.

4.10.3 Unavoidable Adverse Effects

Construction activities associated with the Bar Mill Project removal may result in temporary disturbance to wildlife due to noise, increase in human presence, and habitat alteration. These effects are expected to be localized and short-term, with wildlife returning to resorted habitat as conditions stabilize. No significant changes are expected downstream of the Project; therefore, existing habitat would not be adversely affected downstream.

4.10.4 References

FPL Energy Maine Hydro LLC (FPLE Maine). 2003. Bar Mills Hydroelectric Project, FERC No. 2194, Application for New License, Volume I – Application and Exhibits A, E, F, G and H and Appendix A.

4.11 Rare, Threatened, and Endangered Species

The Endangered Species Act (ESA) was passed in 1973 to protect those animals and plants and associated habitats that are in danger of becoming extinct. The US Fish and Wildlife Service (USFW)S classifies animals and plants into two categories: "endangered species" are in danger of extinction throughout the area in which they are usually found, and "threatened species" are those that could become endangered in the near future. The bald eagle was removed from the ESA list on June 28, 2007. However, bald eagles remain federally protected under the Bald and Golden Eagle Protection Act of 1940 and the Migratory Bird Treaty Act.

Wildlife species in Maine may also be protected under the Maine Endangered Species Act (MESA). Depending on their level of vulnerability to extinction, species may be listed as Endangered or Threatened. Under MESA, a species may also be identified as Special Concern if it does not meet the criteria of endangered or threatened but is particularly vulnerable and could easily become threatened or is suspected to be endangered or threatened but for which insufficient data exists (MDIFW 2010).

MESA includes the designation and protection of Essential Habitats, which are defined as "areas currently or historically providing physical or biological features essential to the conservation of endangered or threatened species in Maine and which may require species management considerations" (MDIFW 2010). The Natural Resources Protection Act (NRPA) provides protection to certain natural resources including Significant Wildlife Habitats and is administered by the MDEP.

4.11.1 Affected Environment

4.11.1.1 Endangered Fish Species

Atlantic salmon are listed as endangered under the Endangered Species Act (ESA). While there is no known historical documentation of shad or river herring occurring in the Saco River upstream of the falls at the head of tide (site of the Cataract Project FERC No. 2528), Atlantic salmon historically passed over the falls and utilized a large portion of the Saco River and its major tributaries, including the Project area. Critical habitat is designated by the National Marine Fisheries Service (NMFS) or the USFWS for the survival and recovery of species listed as threatened or endangered under the Federal Endangered Species Act (ESA). Essential fish habitat (EFH) is identified for species managed in Fishery Management Plans under the Magnuson-Stevens Fishery Conservation and Management Act and is defined as the habitat necessary for managed fish to complete their life cycle such that

the fishery can be harvested sustainably. NMFS designated the Saco River as Essential Fish Habitat (EFH) for Atlantic salmon but there is no designated critical habitat for Atlantic salmon within the Saco River watershed.

Upstream migrating Atlantic salmon can reach the Project area by passing upstream through dedicated fish passage facilities at the Cataract Project and Skelton Project. However, in the previous five years (2021 through 2025) staff at Skelton captured only seven upstream migrating Atlantic salmon, and they trucked all of them upstream of the Project area to the Big Ossipee River (a major tributary to the Saco River).

4.11.1.2 Mussels

As previously discussed, the triangle floater was observed in the lower bypass reach during a mussel survey in 2001 (FPLE 2003). The triangle floater was listed as a species of Special Concern in Maine when the study was conducted in 2001; however, the species status was removed from the list of species of Special Concern following changes to the criteria in 2007 and is now considered secure (Swartz and Nedeau 2007). Therefore, no RTE freshwater mussel species are known to occur in the Project area.

4.11.1.3 Wildlife Species

A USFWS Planning and Consultation (IPaC) report obtained in April 2026 (Appendix C) identified Tricolored Bat and the Monarch Butterfly, proposed for listing as endangered and threatened species, respectively, as potentially being affected by activities in the Project area. Although not included in the IPaC results it is assumed that the northern long-eared bat (NLEB) may also be present in the Project area. The IPaC report did not identify any critical habitats in the Project area.

No study requests or comments were provided by MDIFW in response to the Draft or Final Study Plan. Relicensing documents for the Bar Mills Project from 2003 and the upstream West Buxton Project from 2015 indicate there were no State threatened or endangered wildlife species documented in the vicinity of either project. The State of Maine's Natural Heritage Database and the MDIFW online database were reviewed for the presence of habitat for state-listed species. The MDIFW habitat mapping[15] also indicates no significant wildlife habitat in the vicinity of the Bar Mills Project. In recent MDIFW comments and study requests for the FERC relicensing of the downstream

[15] https://www.maine.gov/ifw/fish-wildlife/wildlife/beginning-with-habitat/maps/map-viewer.html

Cataract Project (FERC No. 2528)[16], MDIFW identified several State-listed species that could potentially be in the vicinity of the Cataract Project. Considering the Cataract Project is 13 river miles downstream, the same species are likely considered to potentially occur in the Bar Mills project area including little brown bat, northern long-eared bat, eastern small-footed bat, big brown bat, red bat, hoary bat, silver-haired bat, tri-colored bat, wood turtle, and golden eagle.

NORTHERN LONG-EARED BAT (FEDERALLY AND STATE LISTED)

The northern long-eared bat (NLEB) is listed as Endangered at the federal and state level. The NLEB was federally listed as threatened on April 2, 2015, with a final rule published in the Federal Register on January 14, 2016. On November 29, 2022, the USFWS reclassified the NLEB as endangered under the Endangered Species Act (ESA) due largely to impacts of white-nose syndrome throughout the bats range (USFWS n.d.a). On April 27, 2016, the USFWS determined that the designation of critical habitat for the species was not prudent; therefore, no critical habitat is established for the NLEB (USFWS 2024b).

The NLEB winters in underground caves and cave-like structures known as hibernacula, but summers singly or in small colonies in cavities, under bark, or in hollows of live and dead trees typically greater than 3 inches in diameter (USFWS n.d.a). Suitable roosting trees also include exfoliating bark, cavities, or cracks (USFWS n.d.a). Forested areas are important for the NLEB not only for roosting, but also for foraging, and for commuting between habitats, such as summer roosting locations and winter hibernation habitat (USFWS n.d.a).

MONARCH BUTTERFLY (FEDERALLY AND STATE LISTED)

The monarch butterfly (*Danaus plexippus*) is federally listed as a candidate insect species that has the potential to occur within the vicinity of the Bar Mills Project. Monarch butterflies breed by laying eggs on milkweed plants and larvae emerge after two to five days. Larvae develop through five phases over nine to eighteen days feeding on milkweed. Larvae then pupate into a chrysalis before emerging into an adult butterfly. Adult butterflies live approximately two to five weeks, and overwintering adults will enter a reproductive diapause and live six to nine months. Many monarchs will undergo a long-distance generational migration of distances over 3,000 km (USFWS 2023b).

[16] Accession Number 20241218-5258.

BATS

There are eight species of bats found in Maine, all of which are protected at some level (MDIFW 2022b). Two are state classified as endangered: NLEB (see Section 4.11.1.3 for details), and the little brown bat; two are state classified as threatened: the eastern small-footed bat, and the tri-colored bat; and the remaining four species are state listed as species of special concern: big brown bat, eastern red bat, hoary bat, and the silver-haired bat (MDIFW 2023, 2022a). Like the NLEB, the remaining seven species of bat found in Maine feed on night-flying insects such as moths, beetles, and mosquitoes, and primarily use echolocation to identify prey (MDIFW n.d.a).

White-nose syndrome affects hibernating bats, and spreads through bat-to-bat contact or by coming in contact with the fungal spores and transporting them to other sites (MDIFW n.d.b). The bats in Maine that are susceptible to white-nose syndrome include: big brown bat, little brown bat, NLEB, eastern small-footed bat, and the tri-colored bat (MDIFW n.d.b).

WOOD TURTLE

The wood turtle can be present throughout the entire State of Maine but is uncommon. The wood turtle hibernates during the winter and is often found in forested streams near their hibernation locations (USFWS n.d.c). They are semi-terrestrial and are affected by both aquatic and terrestrial habitat loss (USFWS n.d.c). The wood turtle inhabits slow-moving streams or rivers with sandy or silty substrate, often in areas with deep pools and woody debris, and is omnivorous, consuming leaves, grasses, berries, insects, worms, and more (MDIFW n.d.c). The woods turtle is long-lived and does not reach sexual maturity until 11 to 12 years old (MDIFW n.d.c).

GOLDEN EAGLE AND BALD EAGLE

The protection of birds is regulated by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)).

Bald eagles are no longer listed under the ESA but maintain federal protection under the Bald and Golden Eagle Protection Act. Bald eagles typically nest within 0.25 to 1 mile of large bodies of open water, such as lakes and large rivers. Eagles nest in large, super-canopy trees or snags often in late-successional forests. They prefer a nest site at the edge

of the forest, near foraging areas, unobstructed views, and with little human disturbance. Most eagles forage primarily on fish, with lesser quantities of waterfowl, carrion, and small mammals. The bald eagle often winters along large interior or coastal bodies of water that remain free of ice.

The golden eagle is Maine's rarest breeding bird and has been listed as a state endangered species since 1986 (MDIFW 2003a). Golden eagles traditionally inhabit places with open country that includes rangeland, tundra, and alpine areas, and places with more rugged topography, nesting on cliffs, or in trees if found in heavily forested areas (MDIFW 2003a). In Maine, golden eagles have primarily been found in the western and northwestern mountainous regions (MDIFW 2003a).

4.11.1.4 Migratory Birds

The 2026 IPaC report identifies 18 migratory bird species that may be present in the project area (Table 4-15). Of these species, 14 are identified as having breeding seasons ranging from mid-May to mid-October.

The bald eagle, while delisted federally on August 9, 2007, is still listed as endangered in the state of Maine and is also protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The bald eagle has a breeding season from mid-October through the end of August. There are no known bald eagle nests in the project area. USFWS bald eagle nest location data[17] identifies a nest location approximately five miles downstream of the Bar Mills dam. Bald eagles may transiently utilize the project area.

Table 4-15 Migratory bird species that may be present in the Project Area

Scientific Name	Common Name	Breeding Season
Haliaeetus leucocephalus	Bald Eagle	Oct 15 to Aug 31
Setophaga castanea	Bay-breasted Warbler	May 25 to Aug 1
Coccyzus erythropthalmus	Black-billed Cuckoo	May 15 to Oct 10
Vermivora cyanoptera	Blue-winged Warbler	May 1 to Jun 30
Dolichonyx oryzivorus	Bobolink	May 20 to Jul 31
Cardellina canadensis	Canada Warbler	May 20 to Aug 10
Setophaga tigrina	Cape May Warbler	Jun 1 to Jul 31
Chaetura pelagica	Chimney Swift	Mar 15 to Aug 25

[17] https://fws.maps.arcgis.com/apps/webappviewer/index.html?id=796b7baa18de43b49f911fe82dc4a0f1

Scientific Name	Common Name	Breeding Season
Coccothraustes vespertinus	Evening Grossbeak	May 15 to Aug 10
Contopus cooperi	Olive-sided Flycatcher	May 20 to Aug 31
Calidris melanotos	Pectoral Sandpiper	Breeds Elsewhere
Setophaga discolor	Prairie Warbler	May 1 to Jul 31
Pheucticus ludovicianus	Rose-breasted Grosbeak	May 15 to July 31
Euphagus carolinus	Rusty Blackbird	Breeds Elsewhere
Piranga olivacea	Scarlet Tanager	May 10 to Aug 10
Limnodromus griseus	Short-billed Dowitcher	Breeds Elsewhere
Catharus fuscescens fuscescens	Veery	May 15 to Jul 15
Hylocichla mustelina	Wood Thrush	May 10 to Aug 31

Source: USFWS IPaC Resource List, April 2026 (see Appendix C).

4.11.1.5 Botanical Species

No federally listed rare, threatened, or endangered (RTE) plant species were observed in the study area during the 2001 or 2024 terrestrial field surveys. One state-threatened species, swamp white oak (*Quercus bicolor*), was documented within the study area; however, it occurs outside of the Project's area of water level influence.

Several stands of swamp white oak were observed within the high-terrace hardwood floodplain wetlands located in the mid-impoundment area. Trees ranging in size for saplings to mature canopy-dominant individuals were observed in the wetlands. Associated species included red maple, silver maple, royal fern, sensitive fern, and cinnamon fern.

4.11.2 Environmental Effects

4.11.2.1 Endangered Fish Species

Upstream-migrating Atlantic salmon are currently trapped at the Skelton Project and trucked to the Big Ossipee River. Atlantic salmon runs in the Saco river are small and mainly consist of stray hatchery fish from other river systems and potentially some wild fish. In 2025, one Atlantic salmon was captured at the Cataract East Channel fishway and passed upstream, and no Atlantic salmon were captured at the Skelton fishway (BWPH 2026). It is unlikely that Atlantic salmon will encounter the Bar Mills Project area during upstream migration for the foreseeable future. With the existing trap and truck program for Atlantic salmon and because removal of the spillway will eliminate a structural

impediment to upstream and downstream migration, dam removal is not likely to adversely affect the species. Planned decommissioning and spillway removal will improve downstream passage for kelts by allowing downstream migration without obstruction.

4.11.2.2 Mussels

No threatened or endangered mussel species are known to occur in the project area, therefore no adverse effects are anticipated as a result of dam removal activities.

4.11.2.3 Wildlife

In the long term, the Bar Mills Project removal will restore natural riverine and riparian habitats. The reestablishment of native vegetation and the creation of more diverse riparian zones are anticipated to benefit RTE wildlife including bats, monarch butterfly, and wood turtle.

BATS

The reestablishment of native vegetation and the creation of more diverse riparian zones are anticipated to increase insect abundance and improve foraging opportunities for multiple bat species. Short-term impacts may include temporary disturbance from construction activities, such as increased noise, lighting, and human presence. These disturbances could cause bats to temporarily avoid the immediate project area during active construction periods. However, these effects are expected to be localized and of limited duration. For any activities requiring clearing of trees 3-inches-diameter or greater at base height, BWPH will abide by seasonal tree clearing restrictions and only clear trees between November 1 and March 31 for the protection of northern-long eared bat. Should tree clearing be required during the restricted time period (April 1 to October 31), BWPH will consult with the USFWS and MDIFW regarding removal needs for the protection of northern-long eared bat. Therefore, no adverse effects to bat species are anticipated.

MONARCH BUTTERFLY

Removal of the Bar Mills spillway is anticipated to have beneficial effects on monarch butterfly habitat by restoring native vegetation and potentially increasing the availability of milkweed and nectar plants within the project area. Short-term disturbance from construction activities may temporarily displace individual butterflies or reduce available nectar sources. However, these effects are expected to be localized and of limited duration. As the impoundment is drawn down and natural river processes are restored,

previously inundated areas will be exposed and subject to natural succession. This process is likely to support the establishment of native herbaceous vegetation, including milkweed, which serves as the primary larval host plant for monarch butterflies. Restoration of native plant communities in the former impoundment and along the river corridor is anticipated to enhance foraging and breeding habitat for monarch butterflies. Increased floral diversity and abundance will provide nectar resources for adult monarchs during migration and breeding periods. Therefore, no adverse effects to monarch butterfly are anticipated.

WOOD TURTLE

Wood turtle has not been documented in the project area. However, the restoration of natural hydrology and riparian vegetation is anticipated to improve habitat connectivity and support the long-term persistence of any wood turtle population that could exist within the project area. The restoration of natural stream flow, channel morphology and connectivity, which are beneficial for wood turtle movement, foraging and nesting, are anticipated to enhance the quality and availability of suitable habitat. Construction activities could temporarily disturb or displace wood turtles if present. Changes in water levels and the release and redistribution of impoundment sediments, which are limited, may temporarily alter the streambed conditions; however, as the river system stabilize and natural substrates develop, it is anticipated that any potential wood turtle habitat will be enhanced, including basking and nesting sites.

4.11.2.4 Migratory Birds

The conversion of the impounded area to a free-flowing river system will alter the composition and structure of available habitats. While open water habitats used by some waterfowl and wading birds may decrease, the restoration of riparian zones and floodplain forests is expected to benefit a broader diversity of migratory songbirds and other avian species. It is anticipated that the reestablishment of native vegetation and natural channel features will increase the availability of foraging and nesting sites for migratory birds. Enhanced riparian plant communities will provide food resources, cover, and nesting substrates, supporting a greater abundance and diversity of bird species over time. Construction activities associated with the Bar Mills Project removal may temporarily disturb migratory birds through increased noise, human presence, and habitat alteration. These effects are expected to be localized and of limited duration, with birds returning to the area as habitats recover and stabilize. As noted above, BWPH anticipates that any tree removal activities will be limited to the restricted time period associated with protective

measures for bats. This timeframe, November 1 and March 31 is outside the breeding season for all migratory bird species that have potential to inhabit the project area and therefore are unlikely to be adversely affected by the Proposed Action.

4.11.2.5 Botanical Species

Swamp white oak, listed as a threatened species in Maine, was identified during the terrestrial surveys. All observed individuals and populations of swamp white oak are located in a larger wetland complex fed by hydrologic inputs from the contributing watershed or is only affected by river water levels during seasonal flooding events. Therefore, the swamp white oak is outside the area of direct and indirect influence of the Project and no adverse effects to swamp white oak are anticipated from removal of Bar Mills dam.

4.11.3 Unavoidable Adverse Effects

No unavoidable adverse effects on state or federal listed or species of special concern are anticipated.

4.11.4 References

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FPL Energy Maine Hydro, LLC. 2003. Final License Application (FLA). 2007. FPL Energy Maine Hydro, LLC. Bar Mills Project, FERC No. 2194-020. Volume 1 of 3.

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U.S. Fish and Wildlife Service (USFWS). 2020. Monarch (*Danaus Plexippus*) species status assessment report, version 2.1, September 2020. [Online] URL: https://ecos.fws.gov/ServCat/DownloadFile/191345.

United States Fish and Wildlife Service (USFWS). N.d.a. Northern Long-eared Bat. [Online] URL: https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis. Accessed March 12, 2024.

United States Fish and Wildlife Service (USFWS). N.d.b. Listed animals. [Online] URL: https://ecos.fws.gov/ecp0/reports/ad-hoc-species-report?kingdom=V&kingdom=I&status=E&status=T&status=EmE&status=EmT&status=EXPE&status=EXPN&status=SAE&status=SAT&mapstatus=3&fcrithab=on&fstatus=on&fspecrule=on&finvpop=on&fgroup=on&header=Listed+Animals. Access March 14, 2024.

United States Fish and Wildlife Service (USFWS). N.d.c. Wood turtle. [Online] URL: https://www.fws.gov/species/wood-turtle-glyptemys-insculpta. Accessed March 14, 2024.

4.12 Cultural Resources

4.12.1 Affected Environment

Three archaeological sites were identified during the prior FERC relicensing as eligible for listing in the National Register of Historic Places (NRHP). As reported by then licensee NextEra Energy on February 13, 2013, all data recovery field work, analysis, and reporting were completed at the sites between 2011 and 2012, completing all archaeology mitigation under the Programmatic Agreement and Historic Properties Management Plan. No new measures are anticipated relative to significant historic archeological resources.

As part of the study phase for the surrender and decommissioning, BWPH contracted TRC to conduct an evaluation of historic structures associated with the Bar Mills Project. TRC confirmed the previously determined eligibility of the Bar Mills Hydroelectric Plant and Bar Mills Dam. Survey documentation was provided to the Maine Historic Preservation Commission (MHPC) for approval and concurrence. MHPC concurred with the determination that all the primary project structures are eligible for listing on the NRHP and recommended seeking ways to avoid, minimize, or mitigate any adverse effects on these structures.

4.12.2 Environmental Effects

As noted above, recovery efforts for previously identified archaeological resources have been completed. BWPH does not anticipate any adverse effects to archaeological resources.

However, removing the Bar Mills Dam and other structures will adversely affect historic resources that are eligible for listing on the NRHP. As mitigation for dam removal, BWPH intends to document the Bar Mills Project using Maine Historic Building Record photography in compliance with the Historic American Buildings Survey/Historic American Engineering Record standards (HABS/HAER). BWPH is in the process of developing a formal mitigation plan in consultation with the MHPC and anticipates development of a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO) and FERC to define necessary mitigation measures.

4.12.3 Unavoidable Adverse Effects

License surrender and dam removal will adversely affect historic resources that are eligible for listing in the NRHP which is anticipated to be mitigated through HABS/HAER documentation.

4.12.4 References

NextEra Energy. 2013. NextEra Energy Programmatic Agreement Compliance Actions for 2012 and Proposals for 2013 FERC Projects: Gulf Island-Deer Rips (FERC No. 2283), Weston (FERC No. 2325), Wyman (FERC No. 2329), North Gorham (FERC No. 2519), Bonny Eagle (FERC No. 2529), Skelton (FERC No. 2527), Fort Halifax (FERC No. 2552 (Surrendered)), Moosehead (FERC No. 2671), Upper and Middle Dam Storage Projects (FERC No. 11834), Bar Mills (FERC No. 2194) and Brassua (FERC No. 2615). February 12, 2013. FERC Accession Number: 20130213-0011

4.13 Recreation Resources

4.13.1 Affected Environment

The Saco River is used extensively for outdoor recreation and is recognized as an important recreational and natural resource (FERC 1996). The upstream reaches of the Saco River is Maine's most heavily used canoe-touring river due to easy navigation, clean water, variety of scenery, and easy access (Maine State Planning Office (MSPO) 1987; Hardy 1985). Between Fryeburg and Brownfield (approximately 40-60 river miles upstream of the Project) it is common to see rafts of canoes lashed together floating down the river and multiple parties camping along the shoreline.

In contrast, the river section in which the Bar Mills Project lies provides a vastly different recreation opportunity, supporting a quieter atmosphere with a substantially lower likelihood of encountering others while recreating. While canoe touring is not prominent in the lower section of the river, occasionally groups travel from the Saco headwaters in New Hampshire all the way down to the Atlantic Ocean. Other recreation opportunities along the river in general include swimming, camping, picnicking, power boating, and sightseeing (FERC 1996).

4.13.1.1 Bar Mills Project Recreation Resources

BWPH currently provides the following recreation sites at the Bar Mills Project: impoundment boat launch and parking area, canoe portage, tailwater canoe access, and Usher Island parking area and trails (Figure 4-17). At the impoundment boat launch, there is parking available for 4 single vehicles, 2 trailered vehicles, and one ADA space for a trailered vehicle (NextEra Energy 2010). At Usher Island, there is parking available for 2 single vehicles. Although formal recreational access is not provided at the Route 4A bridge, the area is frequently used for river access for inner tubing.

Although outside of the Project boundary, BWPH intends to develop a new recreational access area that will be constructed on lands currently owned by the Town of Hollis, located on the same property as the municipal office building. The access area will be developed by BWPH and owned and operated by the Town of Hollis. It will permit river access to the area of the current Bar Mills impoundment, approximately mid-way between Bar Mills Dam and West Buxton Dam. The new recreational area for the Town of Hollis is not included in BWPH's proposed action for license surrender and FERC approval but instead, will be implemented "off license."

Upstream of the Bar Mills Project, at the West Buxton Project, BWPH provides an impoundment boat launch with parking for 2 single vehicles, 2 trailered vehicles, and 1 ADA space (Figure 4-18). There is an angler access trail with parking for 3 single vehicles. On the east side of the river, there is a canoe portage and tailrace access site with parking for 2 single vehicles (BWPH 2018).

4.13.1.2 Recreation Use

4.13.1.3 Current Recreation Use Levels

BWPH conducted recreation use monitoring through use counts and visitor surveys in 2023 and 2024.

4.13.1.4 2023

Between July 1 and September 3, 2023, BWPH collected spot counts and visitor surveys at the Bar Mills impoundment boat launch on a mix of weekdays, weekends, and holidays between 8 AM and 7 PM. During each spot count, the field clerk recorded the date, time, weather, number of vehicles with and without trailers parked in the parking lot, and the number of individuals that could be seen boating, fishing, walking/hiking/running, picnicking, sightseeing or other activity from the parking area. Although significant levels of tubing occur downstream of the Bar Mills dam, this type of use was not monitored because this area would not be affected by partial or full spillway removal because minimum flow releases from upstream facilities would continue to provide existing flow conditions in the reach.

The visitor survey collected information on group size, length of stay on site, recreation activities, ratings of crowdedness and site condition, site recommendations, and visits during the non-recreation season (September through May).

A total of 13 vehicles were observed during the spot counts conducted between July 1 and September 3, 2023, at the Bar Mills impoundment boat launch; none of the vehicles had a boat trailer. A total of 9 people were observed during the spot counts; 2 people were walking/hiking/running, 2 people were swimming, and 5 people were doing other activities. Zero people were seen boating, fishing, picnicking, or sightseeing (BWPH 2025).

The average number of vehicles ranged from 0.25 vehicles on weekdays to 0.63 vehicles on holidays. Based on the 4 single parking spaces available, the parking was under-utilized ranging from 6 percent occupied on weekdays to 16 percent on holidays (BWPH 2025).

Members of the Decommissioning Committee indicated that the high river flows experienced in 2023 likely affected recreational activity, particularly boating. As a result, the recreational use data recorded during the spot surveys are likely not representative of typical use levels.

Throughout the 2023 study season, 18 visitor surveys were completed. The group sizes of the 18 survey respondents ranged from 1 to 3 people with an average of 1.8 people (BWPH 2025). The recreation activities participated in by the respondents are shown in Table 9-4 of the Draft Study Report[18]. Swimming was the most common activity with 11 respondents (61 percent) stating they participated in that activity. Other popular activities were canoeing/kayaking and sightseeing. Other reported activities were boating, fishing, relaxing, tubing, wading, and walking (BWPH 2025).

All survey respondents rated the crowdedness at the impoundment boat launch between light and moderate; 15 of the respondents (83 percent) gave a rating of light (Table 9-5 Final Study Report). The average rating was 1.2. All respondents rated the condition of the site between good and excellent with an average rating of 3.9 (BWPH 2025).

4.13.1.5 2024 Spot Counts

During the spot counts completed during the 2024 recreation season, a total of 21 vehicles were observed at the Bar Mills impoundment boat launch parking area and 12 vehicles were observed at the Usher Island parking area. Of the 33 total vehicles, 25 did not have trailers and 8 did have trailers. Most vehicles at both recreation sites were seen on weekends. Parking at the Bar Mills impoundment boat launch and at Usher Island was underutilized with ample parking available (BWPH 2025).

During the spot counts, a total of 8 vehicles were seen at the West Buxton recreation sites; 6 were at the impoundment boat launch, 2 at the canoe portage/tailrace access, and 0 were at the angler access trail. Parking was well under capacity at the West Buxton recreation sites. A total of 28 people were observed at the Bar Mills recreation sites participating in boating, fishing, walking/running, picnicking, sightseeing, and swimming (BWPH 2025).

Recreation use monitoring completed in 2023 at the Bar Mills impoundment boat launch and in 2024 at Bar Mills recreation sites demonstrated that use levels were low and under capacity. The spot counts and survey results did not indicate that motor boating was a common activity.

[18] Issued for agency and public comment in October 2025.



Figure 4-17 Bar Mills Project Recreation Sites



Figure 4-18 West Buxton Project Recreation Sites

4.13.2 Environmental Effects

BWPH will maintain current recreation sites at the Bar Mills Project including the canoe portage take-out and canoe portage put-in and the trails on Usher Island. The impoundment boat launch will be reverted back to a natural state and the shoreline will be stabilized. Access to the other Bar Mills recreation sites and the West Buxton recreation sites will remain unchanged after license surrender and dam decommissioning.

Due to the reduction in water level at the Bar Mills boat launch, BWPH anticipates a loss of this access point to the Saco River. This loss of access is expected to be offset by development of the new access area behind the Hollis municipal facilities.

4.13.3 Unavoidable Adverse Effects

After the dam is removed and the project impoundment no longer exists, the existing trailered boat launch will be unusable and therefore closed. This site will reverted to a natural state and the shoreline will be stabilized.

4.13.4 References

Brookfield White Pine Hydro LLC (BWPH). 2018. Final Recreation Management Plan. Accession number 20181116-5219. Available online: https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20181116-5219&optimized=false.

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NextEra Energy. 2010. Bar Mill Project Recreation Plan Facility Enhancements (FERC 2194). Accession number 20100105-5029. Available online: https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20100105-5029&optimized=false.

4.14 Land Use and Aesthetics

4.14.1 Affected Environment

The Project boundary encompasses lands and water necessary for the operation of the hydro facility, this includes lands and flowage rights up to elevation 148.5 feet NGVD around the impoundment that may or may not be owned in fee by BWPH, as well as several BWPH-owned parcels containing the powerhouse, recreation sites, and appurtenant facilities. Under the proposed action, the impoundment will be lost, extending the shoreland toward the original historic river channel creating additional lands between the current Project boundary and the reestablished river.

4.14.1.1 Land Use

Land use in any area is influenced by various combinations of topography, soil characteristics, historic demographics, and ownership patterns. Other factors affecting land use are prior use patterns, access, proximity to population centers or significant resources, and zoning regulations. In the Project area, current land use is most influenced by a long history of agriculture and by the Project's vicinity to Portland, Maine, the state's largest population center.

The Project is in the southern portion of the Saco River Basin. The Saco River meanders 120 miles from its headwaters in New Hampshire through southern Maine to the City of Saco, where it empties into the Atlantic Ocean. The foothills and flat plains region of southern Maine are relatively undeveloped, with most of the water frontage being privately owned and the dominant land uses being forestry and agriculture (FERC 1996). Eighty-five percent of the Saco River Basin is forested and another ten percent used for agriculture (FERC 1996) (Figure 4-19). Figure 4-20 focuses on land use within the Project vicinity, between the Bar Mills Project and the West Buxton Project.

The Project area lies within the flat plain region of York County, one of Maine's fastest growing areas. According to the 2020 census, the Town of Buxton had a population of 8,376 and the Town of Hollis had a population of 4,745 (U.S. Census Bureau 2020).

Residential development along the Project shoreline is limited. The existing light residential development is concentrated at either end of the impoundment, in the village of Bar Mills, at the downstream end where the Project structures are located, and in West Buxton at the upstream end of the impoundment. Land use in the vicinity of the Project

consists primarily of small private woodlots, agricultural, and light residential development. The immediate shoreline is primarily forested.

Land use around the Project is governed by local zoning ordinances, Maine's Shoreland Protection Act, the National Flood Insurance Program, and the Saco River Corridor Act. In June of 2025, the Town of Hollis amended its Shoreland Zone and Rural Residential Three-Acre zoning ordinances.

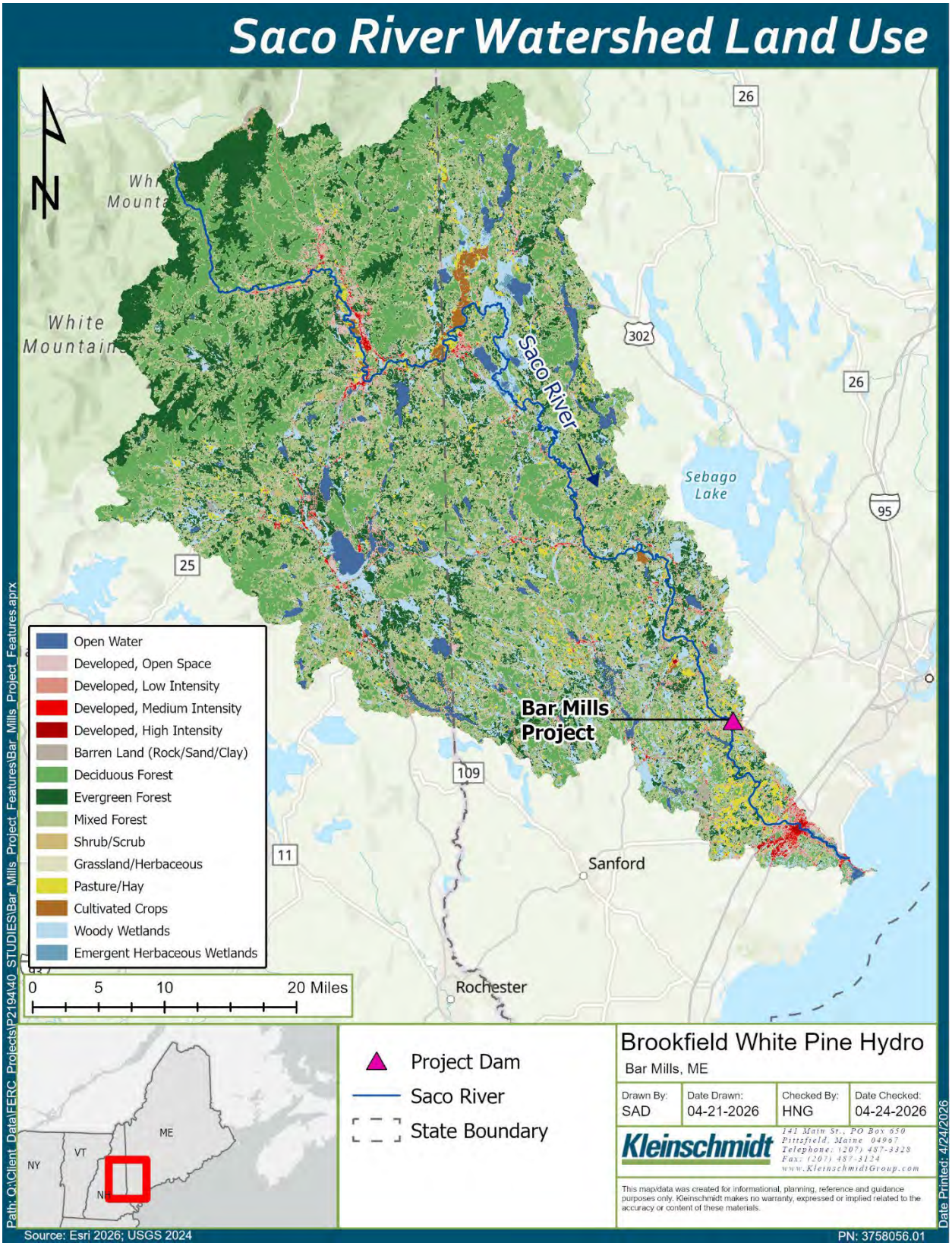


Figure 4-19 Saco River Watershed Land Use

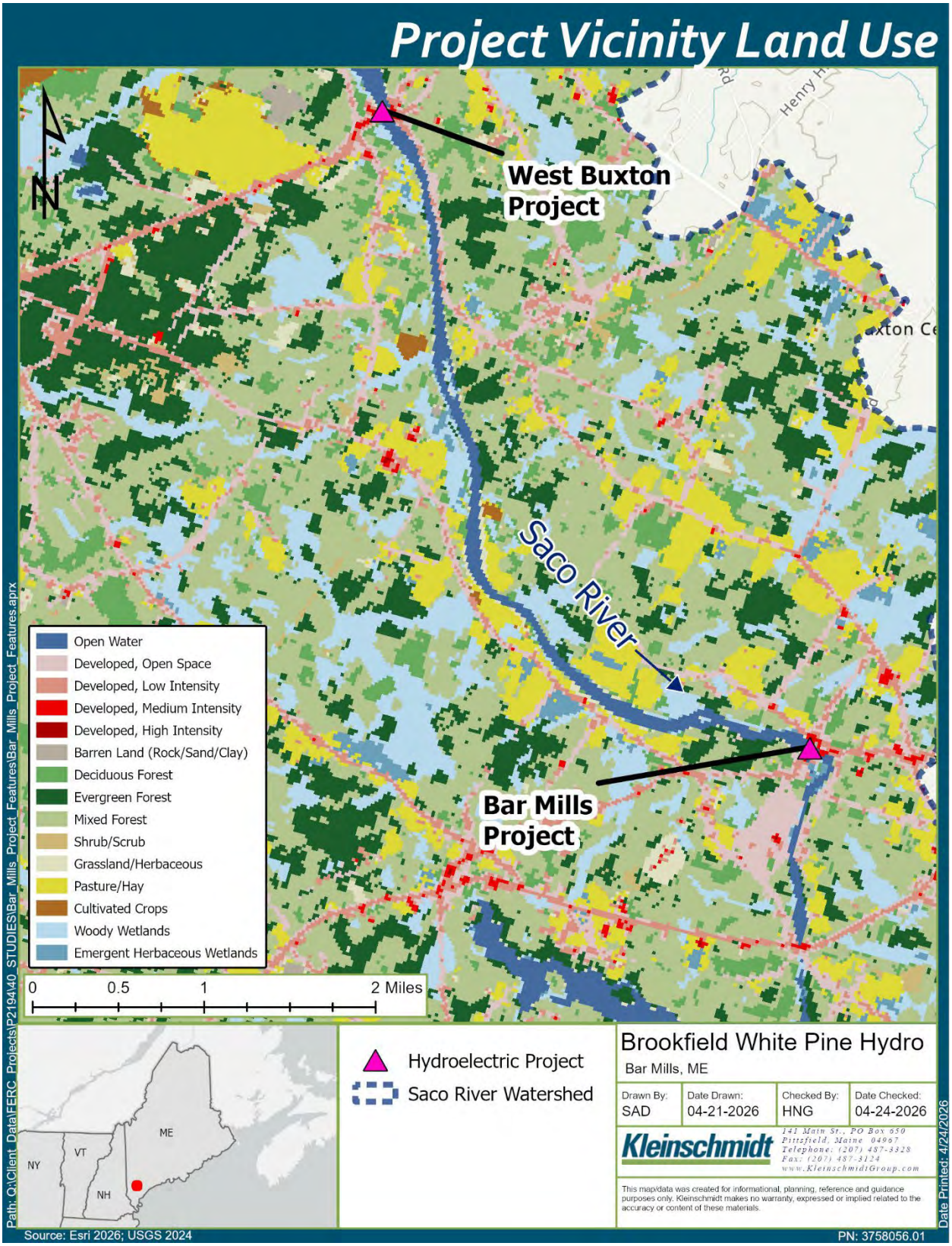


Figure 4-20 Land Use within Project Vicinity

4.14.1.2 Aesthetic Resources

The upper Saco River is well known regionally as a canoeing river and is heavily used by boaters on both single- and multiple-day camping trips. Within Maine, in its upstream reaches between Fryeburg and Hiram, the river is wide and slow moving, with large stretches of sandy beaches on which boaters camp. The scenic nature of the upper reaches of the Saco and easy paddling attracts thousands of boaters each summer, many of whom travel in large parties.

The lower portion of the Saco River, south of Hiram and through the Project area, is narrower and less attractive to boaters, though the downstream reach is popular for tubing. In the Project area, the shoreline is relatively steep, and the impoundment is narrow, relatively shallow, and riverine in character. Two small, wooded islands are located in the Project impoundment.

Within the Project area, few structures are visible from the river and there are limited areas where the impoundment is visible from roadways. Views of the Saco River are provided from State Route 4 in Hollis and Buxton, and from Route 112 in Buxton. Existing state and local regulations and the oversight of the SRCC serve to maintain visual buffers and guide development along the shorelines to maintain the character of the Saco River for the entire Saco River Basin, including the Project area.

4.14.2 Environmental Effects

Land use in the Project area is not expected to change significantly, and BWPH is not proposing any specific measures related to land use. Land within the existing Project that is currently impounded would become exposed following dam removal and over time would return to a free-flowing floodplain and riparian condition.

The powerhouse was not specifically evaluated relative to aesthetics because FERC considers the existence of the powerhouse as the baseline condition in conducting an environmental assessment. The powerhouse will remain in its current configuration with minor modifications. Turbine generator equipment and other mechanical and electric equipment will remain in-place. The derrick crane on the roof of the powerhouse will be removed along with its associated operating building. The material will all be disposed of offsite at an approved landfill. The existing headgate slots will be closed off and the trashracks removed. The trashracks will be disposed of offsite. The headgate slots will receive a concrete bulkhead to retain the small amount of fill in the canal needed to regrade the downstream end of the canal for proper drainage. The existing headgates will

be utilized to further cover the headgate openings. An old steel transmission tower to the west of the powerhouse will be removed and disposed of offsite.

BWPH intends to develop a planting plan to add vegetation in the immediate area of the powerhouse. The purpose of this plan is to improve the aesthetics of the powerhouse after all decommissioning work has been completed. This plan will improve the aesthetics of the powerhouse post-license surrender.

Removing the Bar Mills spillway, the submerged timber crib dam upstream of the Bar Mills dam, and the canal spillway and headworks, and demolition of the Rogers Fibre Mill foundation will return this section of the Saco River to a more natural, aesthetic condition.

4.14.3 Unavoidable Adverse Effects

Certain project features including the canal and powerhouse will remain after all decommissioning work is completed and the license surrender is effective. However, keeping these facilities in place will not adversely affect the project's aesthetics compared to existing conditions, which FERC considers the baseline in developing an environmental assessment.

4.14.4 References

Federal Energy Regulatory Commission (FERC). 1996. Final Environmental Impact Statement for Saco River Projects. FERC/FEIS-0077.

United States Census Bureau. 2020. P1: Race, Total Population. Available Online: population - Census Bureau Tables. Accessed March 29, 2026.

4.15 Socioeconomics

4.15.1 Affected Environment

4.15.1.1 Town of Buxton

The population of the Town of Buxton, based on 2024 census data, is 8,512. The average age is 45.5 years, the average income is $46,000, and the average person per household is 2.5 (Census Report 2024a). The Town of Buxton population in 2020 was 8,376, equaling a 2.5 percent increase in population in 4 years. The percentage of civilian labor force over 16 years of age was 70.4% (QuickFacts 2024a). The four largest employers are manufacturing, retail trade, health care, and social assistance (City-Data 2023).

4.15.1.2 Town of Hollis

The population of the Town of Hollis, based on 2024 census data, is 4,872. The average age is 43.8 years, the average income is $41,000, and the average person per household is 2.7. The Town of Hollis population in 2020 was 4,745, equaling a 2.5 percent increase in population in 4 years (Census Report 2024b).

Table 4-16 Population by Age: York County, Maine, and United States

	York County	Maine	U.S.
Total	220,143	1,405,012	340,110,990
5-17	28,379	186,110	54,564,265
18-29	28,810	191,268	53,594,910
30-39	28,551	179,032	23,279,730
40-49	25,987	167,105	43,049,230
50-59	28,698	108,591	40,433,480
60-69	35,293	213,995	41,085,348
70+	35,262	228,342	41,979,400

Source: U.S. Census 2024c

4.15.1.3 Employment and Income

The median household income for the Town of Buxton and the Town of Hollis was $100,144 and $95,950 in 2024, respectively (Census Report 2024a, 2024b). The median household income for York County was $88,333 in 2024, while the median income for Maine was $74,733 in 2024 (QuickFacts 2024b).

Table 4-17 2024 Poverty Rates

Location	Poverty Percentage (%)
Town of Buxton	2.3%
Town of Hollis	5.7%
York County	7.5%
State of Maine	10.6%
U.S.	10.6%

Source: QuickFacts 2024c

Poverty rates among the Town of Buxton are lower in comparison to the Town of Hollis, York County, and the State of Maine. Maine and the U.S. poverty rate are the same at 10.6 percent.

4.15.2 Environmental Effects

The Project was taken offline in 2017 and has not generated any power since that year. Today, the Project remains permanently disabled due to AAR conditions. Surrendering the license and removing the spillway is not expected to have any significant socioeconomic impacts. BWPH expects a temporary increase in employment via its contractors needed to decommission and remove project facilities. However, this additional employment is not expected to be significant.

4.15.3 Unavoidable Adverse Effects

No unavoidable adverse effects have been identified.

4.15.4 References

City-Data. 2023. Work and Jobs in Buxton, Maine Detailed Stats. Available online: Work and Jobs in Buxton, Maine (ME) Detailed Stats: Occupations, Industries, Unemployment, Workers, Commute. Accessed: March 30, 2026.

U.S. Census Bureau (Census Report). 2024a. American Community Survey 5-year estimates. Retrieved from Census Reporter Profile page for Buxton town, York County, ME http://censusreporter.org/profiles/06000US2303109410-buxton-town-york-county-me/

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United States Census Bureau. 2024c. S0101 l Age and Sex. Available online: S0101: Age and Sex - Census Bureau Table. Accessed: March 30, 2026.

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United States Census Bureau (Quick Facts). 2024c. QuickFacts: Maine. Available online: U.S. Census Bureau QuickFacts: Maine. Accessed: March 30, 2026.

APPENDIX A

DECOMMISSIONING PLAN

Decommissioning Plan

Bar Mills Hydroelectric Project

FERC No. 2194



Prepared for:

Brookfield White Pine Hydro LLC

Prepared by:

Kleinschmidt Associates

October 2026

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GLOSSARY OF TERMS

Abutment – The portion of a dam which is in direct contact with and supported by foundation rock, designed to resist structural forces generated by the dam and the impounded water.

Bypassed Reach – The stretch of river between a hydropower intake and tailrace where flow is reduced because water is diverted for power generation.

Dam – A structure built to store, divert, or control water flow.

Derrick Crane – A crane with a vertical mast and pivoting boom, supported by guys or struts, used for lifting and positioning heavy loads in construction and industrial applications.

Draft Tube – A conduit that carries water from the turbine runner to the tailrace while recovering pressure.

Fish Passage – Facilities that allow fish to migrate upstream or downstream past a dam.

Generator – Device that converts mechanical energy from the turbine into electrical energy.

Flashboard – A removable panel installed on a dam or spillway crest to temporarily raise the upstream water level and increase storage or head.

Head – Vertical distance between water intake and turbine outlet.

Headgate – A gate installed at the intake of a hydropower system to control or stop water flow into the power conveyance and turbine units.

Headworks – The intake and associated control and protection structures at the upstream end of a hydropower project that regulate and divert water into the conveyance system.

Hydropower – Electricity generated from the energy of flowing or falling water.

Impoundment – Water stored behind a dam in a reservoir.

Installed Capacity – Maximum rated electrical output of a plant, expressed in MW.

Intake – Structure where water enters the hydropower system.

Log Sluice – A controlled opening in a dam or intake used to pass logs and floating debris downstream, preventing accumulation and protecting hydropower facilities.

Minimum Flow – Minimum flow released downstream to maintain ecological health.

Pier – A vertical structural support between openings in a dam or spillway that carries loads and separates water passages.

Power Canal – An open channel that conveys water from a river, reservoir, or diversion structure to a hydropower plant intake, using gravity flow.

Powerhouse – Building housing turbines, generators, and electrical equipment.

Reservoir – Artificial or natural lake used to store water for power generation.

Run-of-River – Hydropower system using natural river flow with little or no storage.

Sedimentation – Deposition of sediments in reservoirs.

Spillway – A structure built into or adjacent to a dam that releases excess water from a reservoir to the river downstream when reservoir levels exceed the normal operating range.

Substation – Facility that transforms voltage levels for power transmission.

Tailrace – Channel carrying water from the turbine back to the river.

Trashrack – A bar screen to prevent debris from entering the turbine and water conveyance system.

Turbine – Rotating machine that converts water energy into mechanical energy.

Water Rights – Legal rights governing the use of water resources.

1.0 INTRODUCTION

The Bar Mills Project has significant operational challenges that have prevented the Project's two generating units (Units 1 and 2) from running since 2017. These challenges are associated with an unavoidable condition called Alkali Aggregate Reactivity (AAR) which occurs when certain aggregates used in the concrete for the dam and/or powerhouse absorb water and cause expansion and cracking over a period of many years. There is no long-term remedy for AAR at the Bar Mills Project except full reconstruction.

Without an economically viable solution to return the generating units to an operable condition, Bar Mills is uniquely suited for the surrender of its license and a pathway to decommissioning. Brookfield White Pine Hydro (BWPH) determined that surrendering the Federal Energy Regulatory Commission (FERC) Project license and decommissioning the Project through a full removal of the Project headworks, and spillway is the most viable solution in balancing operational, environmental, and future dam safety needs. Although the dam may be constructed on ledge outcropping that could have been an impediment to upstream fish migration under certain river flow conditions, removal of the spillway structure will return this segment of the river to a free-flowing condition, providing migratory fish passage. As discussed in more detail below, BWPH will remove the spillway and former timber crib dam, eliminating the structures from being a barrier to migratory fish. Other features of the project will be removed or modified.

BWPH conducted an evaluation of removal alternatives in consultation with state and federal agencies and the public, including formation of a Decommissioning Committee consisting of representatives from BWPH and the towns of Buxton and Hollis. The Decommissioning Plan is intended to identify components of the surrender and dam removal[1] and how issues raised by stakeholders will be addressed through the license surrender and decommissioning process. The Decommissioning Plan also identifies commitments by BWPH to address issues raised by stakeholders, although certain commitments associated with the decommissioning would likely be outside FERC's authority to enforce and are not formally part of the surrender proposal. This includes monitoring and potential mitigation of effects on groundwater wells, fire suppression facilities, and new recreational access upstream of the current dam location, all located

[1] Design drawings are considered Critical Energy Infrastructure Information (CEII) and are therefore not being publicly distributed.

outside of the existing FERC Project Boundary. BWPH is also voluntarily proposing to demolish the former Rogers Fibre Mill foundation, even though this action appears unlikely to be required by FERC due to the lack of direct nexus to the proposed action.

A draft of the Decommissioning Plan and Surrender Application was distributed for agency and public review in June 2026. Written comments (Appendix A) specific to the Decommissioning Plan have been addressed in this final Decommissioning Plan and Surrender Application, as appropriate.

1.1 Project Description

The Bar Mills Project, owned and operated by BWPH, is located on the Saco River and consists of a dam structure, an impoundment, a powerhouse, and appurtenant features. The entire project, including the impoundment and upstream flowage easements, extends approximately 5.3 miles along the Saco River from river mile 19 to river mile 24.3 where the West Buxton Project tailrace flows. A project location map is provided in Exhibit E of the Surrender Application.

1.2 Overview of Project Features

The Project structures include a concrete dam that spans the river, a granite headwork structure located at the entrance to the intake canal, a canal that conveys flow to the powerhouse, a downstream fish passage facility, a powerhouse, and appurtenant equipment. An aerial view of these Project structures is included below. A graphical representation of project features is provided in Exhibit E of the Surrender Application.

The last dam safety inspection of the Bar Mills Project was conducted on June 20, 2023. On June 30, 2023, FERC determined that the project structures were found to be in satisfactory condition, and no dam safety deficiencies were observed that required remedial action[2].

1.2.1 Dam

The Project dam extends from the east side of the Saco River adjacent to the site of the former Rogers Mill in Buxton to the Project canal headworks on the Hollis (west) shore of the river. The main dam is founded on bedrock, with a maximum height of approximately 21 feet and an average height of approximately 15 feet. The permanent spillway crest is

[2] FERC Accession number 20230630-3046

at Elevation 141.75 feet and is topped with 6.75-foot-high hinged steel flashboard panels. The project includes the remnants of the Rogers Fibre Mill foundation, consisting of an approximately 100-foot long concrete structure on the east side connected to a 14-foot wide spillway abutment. The concrete spillway is approximately 264 feet long including a 14-foot wide low flow gate structure located in the center of the spillway. An approximately 14-foot wide concrete abutment is located on the western end of the spillway and joins the spillway to the canal headworks structure and canal wall/auxiliary spillway. An operating bridge spans the entire length of the spillway with an electric hoist located on the bridge used for operating the hinged flashboard panels. Beyond the canal headworks (discussed below) the dam includes an earthen embankment containing a buried concrete cut-off wall, approximately 50 feet in length. The Project dam develops a head of 21 feet between the normal full headpond elevation (148.5') and normal tailwater elevation (127.5').



Photo 1-1 Downstream View of Spillway

1.2.2 Intake Canal

An approximately 94-foot long headworks structure is located at the entrance to the canal. The headworks structure consists of four stone masonry piers and two concrete abutments which can be fitted with stoplogs to allow for the dewatering of the canal for maintenance. There are no gates at the headworks structure, and the structure is not used to control flow into the canal. A steel walkway extends across the headworks structure to provide access from the west end of the dam to the spillway abutment and operating bridge.



Photo 1-2 Headworks Structure



Photo 1-3 Canal Spillway

The canal extends approximately 735 feet from the headworks structure to the powerhouse. The minimum width of the canal is approximately 75 feet, near the headworks. The maximum width of the canal is approximately 180 feet, about mid-way in its length. The canal was excavated into soil and bedrock and includes concrete saddle dikes to maintain the normal operating levels. The west side of the canal is primarily earth slope. At the top of the slope is the powerhouse access road. The east side of the canal is formed by the canal spillway composed of a 90-foot long masonry/concrete overflow section adjacent to the spillway, excavated bedrock slopes and various masonry and concrete non-overflow saddle dams approximately 311 feet long, and a 175-foot long concrete overflow section near the powerhouse, referred to as the powerhouse spillway. The overflow portions of the canal wall have a crest elevation of 148.5', matching the normal full impoundment elevation. Non-overflow sections have crest elevations ranging from 149.5' to greater than 155.0'.



Photo 1-4 Canal Looking from Bridge Towards Powerhouse Under Drawdown

The powerhouse spillway includes a 7-foot-wide surface gate and sluice for downstream fish passage immediately adjacent to the powerhouse. There is a 6-foot by 6-foot opening located at the base of the powerhouse spillway used for draining the canal with stoplogs that can be removed manually.



Photo 1-5 Downstream Side of Powerhouse Spillway and Canal Drain Gate

1.2.3 Powerhouse

The Project powerhouse substructure and a large part of the 40-foot-wide by 80-foot-long super-structure are constructed of reinforced concrete. The majority of the powerhouse is located below grade level and is not readily visible from the access road. The powerhouse roof is built of waterproof membrane overlaying wood planks and supported by structural steel framing. Roof hatches are provided over each of the two units. A stiff leg 25-ton outdoor derrick crane is provided at the west end of the powerhouse. The crane house is mounted on concrete piers and is steel framed and covered with corrugated aluminum siding. Equipment contained within the powerhouse is discussed in Section 2.2. The powerhouse substructure includes the two turbine water intakes and draft tubes, two headgates, and trashracks. The powerhouse has two turbine units with an installed capacity of 4.0 MW.



Photo 1-6 Aerial Image of Powerhouse

1.2.4 Tailrace

The tailrace consists of an excavated channel extending from the powerhouse to the river and is approximately 200 feet long, with a normal water elevation of 127.5’. The Project tailwater is influenced by the downstream Skelton Project headpond which, at a full pond of 127.5', backwaters into the Bar Mills tailrace.



Photo 1-7 View of Powerhouse from Downstream

1.2.5 Appurtenant Facilities and Equipment

Transmission Facilities

The Project related transmission facilities include the generator leads, generator breakers, a 2.4 kV bus, a 2.4 kV breaker, transformer bank No. 1, and high side switch T1H. The transformer bank is a three phase unit (rated 5,000 kVA, 34/2.4 kV). The line that transmits energy from the transformer bank to the local utility is not part of the licensed Project.

1.3 Existing Project Operations Description

Licensed operation of the Bar Mills Project is as a run of river facility. Units 1 and 2 are considered out-of-service indefinitely as of May and Dec. 2017, respectively, as a result of concrete growth from AAR impeding the operation of the turbine/generator equipment. Prior to the station shutdown, the Bar Mills impoundment levels would generally fluctuate once or twice daily up to 2-feet below normal full pond elevation of 148.5 USGS datum to accommodate flow releases from the Bonny Eagle Project, located upstream of the Bar Mills Project.

Because the powerhouse is no longer operational, all flows pass over the spillway and through the bypass channel. The hinged flashboards are manipulated to maintain impoundment water levels.

1.4 Land Ownership

Brookfield either owns or has flowage rights to all Project lands. There are no federal lands with the Projects' boundaries. BWPH will access the removal area from property owned

by BWPH and from an area owned by the Town of Buxton, which includes deeded access for dam related activities.

1.5 Existing FERC License Requirements

Under Article 401(A) of the August 2008 FERC license (which references Conditions 3A, 3B, and 3E of the Maine WQC), the following minimum flow conditions must be met at all times:

Except as temporarily modified by (1) approved maintenance activities, (2) extreme hydrologic conditions, as defined below, (3) emergency electrical system conditions, as defined below, (4) flashboard failure or maintenance, or (5) agreement between the applicant, the Department, and appropriate state and/or federal agencies, and in accordance with the 1997 Instream Flow Agreement[3] for Hydroelectric Projects on the Saco River, the following minimum flows shall be released from the project:

- *From April 1 through June 30 annually, outflow approximately equal to inflow (run-of-river operations);*
- *From July 1 through September 30 annually, an instantaneous minimum flow of 400 cfs or inflow, whichever is less;*
- *From October 1 through November 15 annually, or for such alternative six week period as may be mutually agreed to by BWPH and state and federal fisheries agencies, an instantaneous minimum flow of 600 cfs or inflow, whichever is less; and*
- *From November 16 through March 31 annually, an instantaneous minimum flow of 250 cfs or inflow, whichever is less.*

Except as temporarily modified by (1) approved maintenance activities, (2) extreme hydrologic conditions, (3) emergency electrical system conditions, (4) flashboard failure or maintenance, or (5) agreement between the applicant, the Department, and appropriate state and/or federal agencies, instantaneous minimum flows of 100 cfs from April 1 to October 31 and 50 cfs from November 1 to March 31 shall be released to the bypassed river reach below the project dam. This bypassed river reach flow shall be counted as part of the overall project minimum flow releases specified in Part A of this condition.

[3] Instream Flow Agreement for Hydroelectric Projects on the Saco River (April 30, 1997)

1.6 Fish Passage Requirements

By Order dated July 17, 2019[4], FERC approved a Revised Fish Passage Assessment and Fish Passage Installation Schedule which sets the operational date for upstream fish passage facilities at the Project, under the terms of the 2007 Saco River Fisheries Assessment Agreement, to be May 1, 2025. Downstream fish passage occurs via spill due to the powerhouse units being permanently offline.

1.7 Other Relevant License Requirements

Currently BWPH maintains recreational access, consisting of a boat launch, canoe take-out, portage, and put-in, and trails on Usher Island. BWPH is currently proposing to continue to maintain recreational access, although the facilities will no longer be under FERC jurisdiction.

1.8 Project Removal Description

The Bar Mills Project has significant operational challenges that have prevented the generating units from running. Units 1 and 2 are considered out-of-service indefinitely as of May and December 2017, respectively. These challenges are associated with AAR as previously described. The only long-term remedy for AAR at the Bar Mills Project is full reconstruction, which when combined with fish passage requirements is not an economically viable alternative.

BWPH determined that surrendering the FERC Project license and decommissioning the Project through a full spillway removal is the best adapted alternative for balancing operational, environmental, and future dam safety needs. This action will return the Saco River at this location to a free-flowing condition.

In order to address fish passage requirements as part of the decommissioning, BWPH has consulted with state and federal agencies to evaluate removal alternatives. BWPH proposes full removal of the spillway to include the canal headworks structure on the west side of the river and former Rogers Fibre mill intake on the east side of the river. This includes removal of the canal spillway adjacent to the headgate structure and construction of a flow diversion weir to restrict flows from entering the canal with the exception of high flow events that would likely occur one to two times per year. Restoring a free-flowing

[4] 168 FERC ¶ 62,035

condition will allow upstream and downstream fish passage, unimpeded by the presence of the dam.

BWPH will also demolish and cap the remains of the mill foundation structure in a manner to prevent erosion of existing shoreline materials and cover with loam and seed. A study was performed to quantify sediment in the impoundment within approximately one-half mile upstream of the dam. It was found that the channel bottom is primarily hard materials and not comprised of significant deposits of soft sediment. There was some soft sediment observed immediately adjacent to the impoundment shoreline that will become exposed post dam removal. This material is expected to revegetate rapidly. Because of the conditions found as part of this study, BWPH is not anticipating any dredging of materials from the river.

Under the proposed action, BWPH intends to remove the following project features:

- Spillway and log sluice;
- remanent timber crib dam;
- canal headworks structure;
- crane, crane house, transmission tower; and
- canal spillway

The following project structures may be modified but will generally be left in place:

- canal and associated structures;
- powerhouse spillway;
- powerhouse and two generating units; and
- certain project recreation facilities.

BWPH intends to remove the dam in three phases using two cofferdams/work pads, one in Phase II and one in Phase III. The cofferdams will consist of shotrock and earthen fill.

Once all decommissioning work has been completed, BWPH intends to continue to own lands within the current project boundary and maintain remaining structures, including periodic safety inspections. These lands and structures will no longer be under FERC jurisdiction.

BWPH intends to implement the following protection, mitigation, and enhancement measures as part of its proposed action to surrender the license and decommission the project. Several of these measures are more fully discussed later in this application.

- Continue to maintain the powerhouse and existing recreational access (canoe portage and trails on Usher Island);
- Implement a slow drawdown of the reservoir to protect resident fish, catadromous American eels, and mussels;
- If directed by the Maine Historic Preservation Commission, document the Bar Mills Project using Maine Historic Building Record photography in compliance with Historic American Buildings Survey/Historic American Engineering Record standards;
- Limit tree clearing to the USFWS restriction timeframe for protection of listed bat species; and
- Develop a planting plan to add vegetation in the immediate area of the powerhouse. The purpose of this plan is to improve the aesthetics of the powerhouse after all decommissioning work has been completed.
- Implement a seeding plan for all exposed erodible soils within an estimated approximately 20-foot-wide shoreline restoration corridor along both sides of the approximately 5-mile-long reach, including suitable portions of islands exposed by project-related water-level changes, will be stabilized and revegetated as soon as practicable. A copy of the plan is included as an appendix to the Surrender and Decommissioning Plan. To further combat the spread of invasive plant species BWPH will plant a native mix as a preventative measure for invasive species control.

BWPH will continue to monitor and maintain the retained Bar Mills structures following decommissioning to ensure the site remains safe, secure, and in good condition. This will include routine inspections and maintenance of the powerhouse and spillway areas, as well as fencing, signage, security measures, and landscaping, as appropriate.

Existing facility plans and programs will also be reviewed following decommissioning and updated as necessary based on the final site configuration and applicable regulatory requirements. Inspection and maintenance frequency will be established based on site conditions, retained structures, and ongoing regulatory obligations rather than through a separate Bar Mills-specific maintenance plan.

1.9 Additional Measures Proposed Outside of the Surrender Proposal

Though anticipated to be outside of FERC's jurisdiction under the license surrender process, BWPH also proposes and is committed to additional measures based upon issues raised by stakeholders and discussed with the Decommissioning Committee, during the pre-application filing process including:

- development of new hand-carry boat and recreational access behind the Hollis administrative building;
- remove concrete planking at the existing hand-carry boat and recreational access and revert back to natural state and shoreline stabilized;
- identification of and monitoring groundwater wells that may be adversely affected by permanent reduction of water levels along the impoundment;
- mitigation measures as determined necessary to address adverse effects on groundwater wells;
- construct new fire suppression facilities to mitigate effects on existing dry hydrants in Buxton and Hollis; and
- continue to operate and maintain existing recreational access on Usher Island and parking adjacent to the existing boat launch.

Additional details for these measures are provided in Section 2.0.



Figure 1-1 Project Features to be Removed

2.0 DECOMMISSIONING PLAN

2.1 Pre-Removal Phase

2.1.1 Preconstruction Permitting

In addition to FERC approval of the surrender and associated construction plans, BWPH will also be required to submit state and federal permit applications [e.g., Maine Department of Environmental Projection's (MDEP) Maine Waterway Development and Conservation Act (MWDCA), US Army Corps of Engineers (USACE) Section 401, and Saco River Corridor Commission (SRCC) permit applications]. FERC also requires licensees that surrender the license to obtain water quality certification (WQC) under Section 401 on the Clean Water Act (CWA). BWPH will submit permit application packages to regulating agencies on in October/November 2026.

2.1.2 Mitigation Measures

2.1.2.1 Historic Resources

No new measures are anticipated relative to significant historic archeological resources. Three archaeological sites were identified during the prior FERC relicensing as eligible for listing in the National Register of Historic Places (NRHP). As reported by then licensee NextEra Energy on February 13, 2013[5], all data recovery field work, analysis, and reporting was completed at the sites between 2011 and 2012, completing all archaeology mitigation under the Programmatic Agreement (PA) and Historic Properties Management Plan (HPMP).

As part of the study phase for the surrender and decommissioning, BWPH contracted TRC Companies (TRC) to conduct an evaluation of historic structures associated with the Bar Mills Project. TRC confirmed the previously determined eligibility of Bar Mills Hydroelectric Plan and Bar Mills Dam. Survey documentation was provided to Maine Historic Preservation Commission (MHPC) for approval and concurrence. MHPC concurred with eligibility of the facilities for listing on the National Register of Historic Places and recommended seeking ways to avoid, minimize, or mitigate any adverse effects on these structures. TRC anticipates that mitigation will include a documentation submittal of Bar Mills for the Maine Historic Building Record photography in compliance

[5] https://elibrary.ferc.gov/eLibrary/filedownload?fileid=01ABF89B-66E2-5005-8110-C31FAFC91712

with the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) standards. TRC is in the process of developing a formal mitigation plan in consultation with the SHPO. Due to FERC and Advisory Council on Historic Preservation consultation requirements, BWPH assumes any mitigative measures will be reviewed and approved by FERC in a surrender approval order.

2.1.2.2 Groundwater Wells

BWPH recognizes the potential that a limited number of local private wells may be affected by permanently lowered water levels upstream of the Bar Mills dam. Because local groundwater wells that could be affected by lower water levels are outside of the FERC boundary, BWPH assumes that any associated mitigation program will not specifically be approved by FERC.

BWPH has gathered well data to be used to develop a monitoring and mitigation process, which may include enhancement of existing wells or drilling new wells, depending on the extent of effects. BWPH has developed a baseline GIS dataset consisting of existing well data (e.g., type and depth) from Maine Geological Survey (MGS). To supplement the MGS data, BWPH has consulted with representatives from Buxton and Hollis to identify an approach to survey landowners. The Committee determined that it would be appropriate to survey landowners with properties adjacent to the river. BWPH gathered landowner information from the Towns' tax maps and tax commitment data to develop and distribute a survey enabling landowners to provide responses through an online survey or by hardcopy. Responses received to date have been added to the GIS dataset. BWPH will utilize the data to develop a post-removal monitoring program and mitigation process. The details of well mitigation is undetermined at this time and will likely not be fully known until the dam is removed and potential changes in local groundwater levels have stabilized. BWPH understands that there is potential for a post-removal monitoring plan is a result of the active data collection efforts. BWPH is committed to mitigating adverse impacts to wells affected by the dam removal.

2.1.2.3 Dry Hydrants

In comments received from the Towns during initial phases of the surrender process, two dry hydrants, located on Canal Street in Hollis and Depot Street in Buxton, were identified as likely to be adversely affected by permanently lowered water levels upstream of Bar

Mills dam. Because the dry hydrants are outside of the FERC boundary, BWPH assumes that any associated mitigation program will not specifically be approved by FERC.

BWPH has consulted with the town Fire Chiefs to review potential alternatives, and at the recommendation of the Chiefs, has hired a specialty consultant to assist in developing plans to mitigate effects on the existing hydrants. It is anticipated that the mitigation plan will be developed over the course of 2026 and will be implemented prior to dam removal construction. BWPH is committed to mitigating adverse impacts to the towns from changes in fire suppression water supplies.

2.1.3 Pre-Removal Site Preparation

Construction Contractor Mobilization

Within approximately one month prior to commencing dam removal activities, the construction contractor will begin mobilizing to site. Mobilization activities will include setup of a primary laydown area at the location of the existing boat launch parking area on the west end of the dam. Development of this laydown area will include vegetation removal, tree removal, and minor site grading and material placement to facilitate use of the site by construction crews. Because there are no major construction materials necessary to remove the dam, with the exception of cofferdam materials, there will not be significant material laydown occurring prior to dam removal activities. Most of the mobilization activities will include equipment mobilization and setup of contractor administration facilities. The cofferdam materials will be transported to site and directly put into place without the need for substantial stockpiles.

A secondary laydown area will be prepared on the east end of the dam at the location of the former Rogers Fibre Mill site. Most of the area to be used as laydown will occur on an existing concrete slab and gravel parking area that exists at that location. There are no significant ground disturbing activities planned at the secondary laydown area in order to avoid further disturbance of the environmentally sensitive location. BWPH will conduct limited tree removal at this laydown area.

Sediment Testing

A study was performed to quantify sediment in the impoundment within approximately one-half mile upstream of the dam. It was found that the channel bottom is primarily hard materials and not comprised of significant deposits of soft sediment. There was some soft

sediment observed immediately adjacent to the impoundment shoreline that will become exposed post dam removal. Sampling and testing of sediment was conducted for material exposed along the shoreline during an approximately 6-foot drawdown of the impoundment as well as testing of sediment in the existing power canal. Although testing indicated the presence of some unfavorable materials, only a very small amount are anticipated to be removed as part of the dam removal activities, if any. Removed materials will require disposal off-site at an approved landfill facility. Maine Department of Environmental Protection (MEDEP) regulations require that the material be tested within a short duration prior to disposal. Therefore, these materials will require testing prior to removal from the site.

Traffic Management

The dam removal activities will be performed within the river channel and away from public access roadways. During mobilization and demobilization, and occasionally over the duration of the project, heavy equipment will be moved to and from the site. This will be an occasional activity and is not anticipated to require special traffic management. During cofferdam construction and removal, there will be increased traffic in the immediate vicinity of the site, in the form of over-the-road dump trucks entering and leaving the site. If required as part of MEDEP permit approvals, occasional traffic control, in the form of flaggers, will be utilized to assist in managing traffic on the public roads. On the east end of the dam, during Removal Phase II, traffic entering and exiting the dam site for cofferdam construction and removal will do so via Depot Street. Depot Street is a public way in the Town of Buxton and is lightly traveled. There is good visibility in both directions and will not likely require traffic management. On the west end of the dam, traffic entering and exiting the dam site will do so via State Route 4A in the Town of Hollis. This public roadway has significantly more traffic and has limited site distance to the south with a hill present that somewhat limits visibility. During times of heavy truck traffic entering or exiting the laydown yard, there may need to be periodic flagging operations to safely manage traffic. The final determination of this requirement will occur as part of MEDEP permitting.

Public Safety Signage

There is existing signage adjacent to the Bar Mills Hydroelectric facility warning the public about the hazards of recreating adjacent to the dam. Construction entrance signs will be placed adjacent to the entrance of the construction laydown areas. The facility boat barrier

and signage will be installed upstream of the dam, as typical, for the duration of construction activities. Public access to the impoundment boat launch will be prohibited during construction as a public safety precaution. It is anticipated that downstream access will remain open during construction.

Minimum Flows During Construction

Because there will be no means to stop or otherwise impound inflows, minimum flow requirements will always be met. Currently, all flows pass over the spillway and into the bypass reach downstream of the dam. During dam removal activities, the flow over the spillway will be constricted to one side of the river or the other; however, minimum flows will continue to be passed over the spillway. There are three primary dam removal phases, further described in Section 2.2.

During Removal Phase I, flashboards on the west side of the spillway will be lowered and inflow will pass over the entire spillway length while removal work takes place within the canal, downstream of the headworks structure.

During Removal Phase II, a cofferdam will be installed to dewater the eastern portion of the spillway and inflow will be passed through the canal headworks and removed canal spillway as well as over the western portion of the spillway.

During Removal Phase III, the Removal Phase II cofferdam will be removed and a cofferdam will be constructed to dewater the western portion of the spillway while flows are passed through the eastern portion of the channel where the spillway was removed in Removal Phase II. After removal of the eastern portion of the spillway, the Removal Phase III cofferdam will be removed and flow will spread across the entire river channel.

During each phase, including during transitions between phases, inflow will be passed into the bypass reach, thereby always meeting minimum flow requirements. In the unexpected event that minimum flows are anticipated to not be met, BWPH will notify resource agencies and make provisions to protect resources, as necessary.

2.2 Dam Removal Phase

The Bar Mills Dam removal will include a complete removal of the spillway to return the Saco River to a free-flowing condition, unimpeded by the dam structure. Other features of the hydroelectric project will be removed or modified to complete the

decommissioning of the hydroelectric facility. The final configuration of each primary project feature is described below.

- *Spillway –* The concrete spillway will be removed in its entirety to the bedrock channel bottom. Removal of the spillway will include removal of the steel trestle operating bridge, flashboards and low flow gate at the center of the spillway. Both east and west spillway abutments will also be removed to bedrock. The concrete material will be disposed of at either the east end of the dam in the area of the former Rogers Fibre Mill foundation or in a designated area in the canal. Rubble will be capped with a layer of filter material to cover the large concrete debris and then covered with loam and seed on the Buxton shoreline and rip-rap in the canal. It will be demolished into pieces that are manageable by the contractor's equipment with exposed rebar removed and disposed of offsite. The steel trestle operating bridge has a lead paint coating that will require it to be disposed of at an appropriate landfill site. The steel flashboards and low flow crest gate will be either salvaged or disposed of offsite. The small building on the center pier of the spillway between the two trestle bridge sections has an asbestos siding material. The small building will be appropriately disposed of at an approved landfill.
- *Remnant Timber Crib Dam –* The timber crib dam that preceded the existing Bar Mills Dam was previously demolished to an elevation just below the permanent concrete crest of the current concrete dam. The timber crib extends from the east side of the river upstream of the current concrete dam and joins the current dam at the west spillway abutment at the interface of the spillway and headworks structure. The remnants of the timber crib dam will be removed to the bottom of the remaining structure. It is not known if the timber crib dam is founded on bedrock or alluvial material; however, the extent of removal is to the bottom of the crib structure, as can be best determined at the time of removal. The timber material will be removed from site and disposed of at an approved landfill facility. Stone ballast or other infill material may be disposed of onsite depending on the viability of separating the materials.
- *Headworks Structure –* The headworks structure will be removed to bedrock. The concrete and stone materials will be disposed of in the canal. Steel components will be disposed of off site.
- *Canal Spillway –* The canal spillway will be demolished to bedrock. The material will be disposed of at designated areas within the canal.
- *Canal and Associated Structures –* The canal will remain mostly unchanged and will not be filled with soil materials. It will normally remain dry except for occasional high flows. The canal will have a designated area for disposal of concrete and stone materials. There are several small concrete saddle dams and short walls and former

bridge abutments that will remain in their current condition. The bottom of the canal at the downstream end drops in elevation as it enters the powerhouse intake. This area will receive fill to allow appropriate drainage and avoid ponding of water. Water entering the canal, either from normal runoff or high flows will exist the canal through an existing gate opening within the powerhouse spillway at the left side on the downstream end of the canal. The slope of the canal provides natural drainage to the downstream end of the canal which will facilitate drainage within the canal. Minor grading of soft sediment within the canal may be necessary to avoid small areas of ponding. The soil covered areas within the canal will be allowed to naturally revegetate. Areas of exposed rock will remain exposed.



Photo 2-1 Typical Saddle Dam in Canal to Remain

- *Powerhouse Spillway* – The powerhouse spillway at the downstream end of the canal will remain in its current configuration. The existing canal drain gate opening has timber stoplogs on the upstream face of the spillway. Those stoplogs will be removed to allow drainage of the canal.
- *Powerhouse* – The powerhouse will remain in its current configuration with minor modifications. Turbine generator equipment and other mechanical and electric equipment will remain in-place. The derrick crane on the roof of the powerhouse will be removed along with its associated operating building. The material will all be disposed of offsite at an approved landfill. The existing headgate slots will be closed off and the trashracks removed. The trashracks will be disposed of offsite.

The headgate slots will receive a concrete bulkhead to retain the small amount of fill in the canal needed to regrade the downstream end of the canal for proper drainage. The existing headgates will be utilized to further cover the headgate openings. An old steel transmission tower to the west of the powerhouse will be removed and disposed of offsite. It is anticipated that the transformer on the powerhouse roof will be drained and removed.

- *Former Rogers Fibre Mill Foundation* – The foundation of the former mill building serves as a water retaining structure that spans between the east spillway abutment and east bank of the channel. The superstructure was removed in the 1990's and the concrete foundation remains. The foundation is believed to be founded on bedrock. BWPH intends to demolish the concrete foundation in a manner similar to the concrete spillway and dispose of the concrete material within the footprint of the foundation. This disposal area would also receive the concrete debris from the east end of the spillway. The disposal area will be capped with a layer of filter material to cover the large concrete debris and then covered with loam and seed. The area will be graded to match into the surrounding area on the river bank to extend the park area owned by the Town of Buxton.



Photo 2-2 Former Roger Fibre Mill Foundation

- *Recreation Facilities* – The recreation facilities associated with the hydropower project include a canoe portage from the tailrace to the boat launch at the end of the dam, a trailered boat launch and parking area and trails on Usher Island which separates the canal from the bypass reach. The canoe portage and Usher Island trails are intended to remain in place for future public access. The boat launch concrete planking will be removed and the boat launch will revert back to natural state and shoreline stabilized. The boat launch parking area will remain available for public use and provide a location for river access. BWPH will continue to collaborate with the Town of Hollis to develop new boater access behind the municipal facility (See Section 3.1).



Photo 2-3 Existing Boat Launch

- *Fire Protection* – There are currently two dry hydrants on the Bar Mills impoundment that allow the local fire departments to draw water from the impoundment in the event of a fire. One hydrant is in the canal and owned by the Town of Hollis. The second hydrant, owned by the Town of Buxton on Depot Street, is immediately upstream of the dam. Both hydrants will no longer be serviceable because of lower water levels after removal of the dam. BWPH has been working with both towns to reach a solution for continued provisions of fire protection

water supply. Potential solutions include new dry hydrants located to be operable with the lower water levels and a new fire protection storage tank that would be shared between the two towns. BWPH is committed to reaching a solution that works for both towns to be implemented as part of the dam removal.



Photo 2-4 Existing Dry Hydrant on Depot Street in Buxton

3.0 DAM REMOVAL SEQUENCING

The removal of Bar Mills Dam will be completed in three removal phases, preceded by a mobilization phase and followed by a site restoration/demobilization phase. The intended dam removal sequencing is described below.

Mobilization Phase

1. Install upland erosion and sediment controls necessary for the pre-removal phase.
2. Install upland temporary facilities (e.g., construction access roads, laydown areas, and work trailer(s).

Phase I

1. Install bulkhead panels in canal headworks slots.
2. Remove gate in powerhouse spillway and dewater canal. Spillway drain gate will not allow all water to be removed from canal in the area adjacent to the powerhouse. Pumping will be required to remove the water adjacent the powerhouse intake.
3. Install haybales at powerhouse spillway gate for sediment control.
4. Place temporary fill in canal to provide access to canal spillway from west laydown area. Access fill in canal shall include material to buttress headworks piers for stability in the dewatered condition.
5. Place temporary fill and provide any necessary improvements in canal for access to fill placement areas south of Route 4a (Main Street). Confirm clearance under low chord of bridge.
6. Install turbidity curtain to contain the canal spillway work area. Demolish canal spillway. Place acceptable rubble in the fill placement areas at the powerhouse and along canal and cap with rip-rap such that large chunks of concrete will not be visible. Remove turbidity curtain once demolition is complete.
7. Remove temporary fill for access to the canal spillway demolition. Stabilize any other temporary fill in the canal. Remove turbidity.

Phase II

1. Remove headworks bulkhead panels.

2. Contractor will need to coordinate with owner to manipulate existing hinged flashboards on spillway to divert flow away from immediate work area. Flashboards on east spillway will be in raised position for phase II cofferdam installation.
3. Construct temporary access routes from the east staging area to the Phase II downstream work area and to the Phase II upstream work area. Contractor may opt to prepare staging area as part of Phase I.
4. Install turbidity curtain to contain Phase II upstream work area. Install Phase II upstream earthen cofferdam and work pad from east bank.
5. Install turbidity curtain to contain Phase II downstream work area. Install Phase II downstream earthen cofferdam and work pad from east bank to center of spillway.
6. Demolish east steel walkway, timber crib and concrete spillway down to bedrock/design grade. Demolish east abutment and former mill foundations. Place concrete rubble in the east fill placement area. Top with a layer of filter material to cover the large concrete debris and cover with loam and seed. Dispose of all other material offsite.
7. Remove Phase II downstream earthen cofferdam and work pad. Remove turbidity curtain once cofferdam has been removed.
8. Remove Phase II upstream earthen cofferdam and work pad. Remove turbidity curtain once cofferdam has been removed.
9. Remove temporary access routes from the east staging area to the Phase II downstream work area and east staging area to the Phase II upstream work area.
10. Stabilize east fill placement area.

Phase III

1. Install bulkhead panels in canal headworks slots.
2. Install turbidity curtain to contain Phase III upstream work area. Install Phase III upstream earthen cofferdam and work pad from west bank to center of spillway.
3. Install turbidity curtain to contain Phase III downstream work area. Install Phase III downstream earthen cofferdam.
4. Remove west steel walkway, spillway section, and headworks structure. Dispose of concrete rubble in disposal areas within the canal which will be capped with rip-rap such that large chunks of concrete will not be visible.
5. Construct diversion weir at canal entrance.
6. Install riprap on the canal fill placement area side slopes.
7. Grade the bottom to canal to provide positive drainage to the outlet sluice invert.

8. Remove Phase III downstream earthen cofferdam. Remove turbidity curtain once cofferdam has been removed.
9. Remove Phase III upstream earthen cofferdam and work pad. Remove turbidity curtain once cofferdam has been removed.

Site Restoration/Demobilization Phase

1. Remove temporary facilities and then seed and mulch all disturbed areas as final grades are achieved and per erosion and sediment control plan.
2. Follow Planting Plan for newly exposed shorelines.
3. Restore site to owner's approval and permit conditions.

3.1 Post Removal Phase

BWPH is currently working with the Town of Hollis to consider the construction of a new recreation site upstream of the Bar Mills Dam on the Hollis side of the river. A location has been found that is currently owned by the Town of Hollis, located on the same property as the municipal office building. The access facility would be developed by BWPH upon completion of dam removal activities and the facility will be owned, operated, and maintained by the Town of Hollis. It would allow for river access to the area of the current Bar Mills impoundment, approximately mid-way between Bar Mills Dam and West Buxton Dam. BWPH notes that this area is outside of the FERC Project Boundary.

After decommissioning of the Bar Mills Hydroelectric Project, BWPH will continue to maintain the powerhouse structure.

After decommissioning the canal will normally be dry except for high flow events which will enter the canal as river levels rise and drain after river levels recede. The existing canal drain gate will be completely removed to allow for continuous drainage of the canal. BWPH will perform occasional monitoring of the canal to observe if debris is impeding the ability of the gate to drain the canal. BWPH will maintain the opening in the powerhouse spillway to facilitate drainage of the canal to avoid impounding water within the canal.

Should permitting agencies (i.e., MDEP or USACE) require any post-removal monitoring plans (e.g., revegetation or shoreline erosion), BWPH will develop such plans in consultation with the appropriate agencies and implement those plans as directed by those agencies.

3.1.1 Site Restoration

Removal of the Bar Mills Dam will restore the section of the Saco River to a free-flowing stretch of river. Areas of upland disturbed as part of the construction activities will be restored and stabilized to prevent erosion. BWPH does not propose any river restoration activities above and beyond dam removal.

3.1.2 Anticipated Post-Removal Monitoring

Post-removal monitoring will include monitoring of potential impacts to private groundwater wells surrounding the impoundment. Data on the surrounding wells continues to be collected from adjacent landowners and will be used to develop a post-removal monitoring plan. Because a monitoring plan has not yet been developed and would be developed outside of the surrender process, BWPH assumes that a surrender approval will not be contingent upon any well monitoring being completed.

No other post-removal monitoring is currently planned.

3.2 Construction Management Plans

Prior to construction activities, BWPH will prepare multiple plans specific to state and location permitting, as well as those required by FERC in the license surrender order. BWPH will prepare all plans and specifications required by FERC's New York Regional Office (NYRO) and will not begin construction until NYRO has formally approved design plans and specifications. Once FERC approves the proposed decommissioning and removal, BWPH will prepare, in consultation with appropriate agencies, the plans required by the license surrender order which may include but not be limited to the following construction related plans.

- Plans and Specifications for Dam Removal
- Quality Control and Inspection Plan
- Temporary Construction Emergency Action Plan
- Cofferdam Plan
- Spill Prevention Control and Countermeasure Plan
- Material Disposal Plan

3.2.1 Erosion and Sediment Control Plan

Introduction

As part of the proposed license surrender and dam removal, BWPH will implement erosion and sediment control (ESC) measures designed to avoid, minimize, and mitigate erosion, sedimentation, and turbidity impacts to the Saco River and adjacent resources during dam removal activities. Approximate locations of ESC measures will be identified on construction design plans.

ESC measures will be implemented in accordance with:

- Maine Department of Environmental Protection (DEP) *Erosion and Sediment Control Best Management Practices*
- Conditions of the Clean Water Act Section 401 Water Quality Certification
- Natural Resources Protection Act (NRPA)
- Any applicable U.S. Army Corps of Engineers authorizations

The measures described below will be implemented during all phases of dam removal.

Overview of Dam Removal Phasing

Dam removal will be conducted in three sequential phases to maintain river continuity while minimizing sediment mobilization and downstream water quality impacts:

- **Phase I:** Canal Spillway Removal (No Cofferdams)
- **Phase II:** East Spillway Removal (Upstream and Downstream Cofferdams)
- **Phase III:** West Spillway Removal (Upstream and Downstream Cofferdams)

Construction sequencing will be adjusted as necessary to respond to river flows and site conditions.

General Erosion and Sediment Control Commitments

During all phases of dam removal, BWPH will:

- Minimize the extent and duration of exposed soils
- Implement ESC measures prior to the initiation of ground-disturbing activities
- Limit in-water work to approved seasonal work windows

- Take measures to minimize visibly turbid discharges from entering the Saco River
- Stabilize disturbed areas as soon as practicable following construction
- Inspect ESC measures regularly and maintain them until final stabilization is achieved

Phase-Specific Environmental Protection Measures

Phase I: Canal Spillway Removal (No Cofferdam)

The canal spillway will be removed without isolating the river channel.

Environmental Commitments:

- Canal spillway removal will be conducted incrementally to avoid sudden sediment release.
- Work will be performed during periods of low to moderate river flow, consistent with state and federal in-water work timing restrictions.
- Turbidity will be monitored visually downstream of the work area.
- Turbidity curtains will be installed downstream of active work areas as warranted by site conditions.
- Demolition debris and exposed sediment will be removed from the river channel immediately upon generation.
- Disturbed banks will be temporarily stabilized following spillway removal to reduce erosion.

Phase II: East Spillway Removal

(Upstream and Downstream Cofferdams)

The east spillway will be removed under isolated conditions using cofferdams.

Environmental Commitments:

- Upstream and downstream cofferdams will be installed to isolate the east spillway from active river flows.
- Cofferdams will be constructed of erosion resistant materials and constructed to prevent underseepage and scour.
- River flows will be maintained around the isolated work area to protect downstream resources.

- The isolated area will be dewatered in a controlled manner.
- All dewatering discharges will be filtered prior to entering surface waters and managed to prevent erosion at discharge points.
- Secondary turbidity control measures will be maintained downstream of the cofferdams.
- Excavated materials will be stored in upland areas protected by perimeter erosion and sediment controls.

Phase III: West Spillway Removal

(Upstream and Downstream Cofferdams)

The west spillway will be removed following completion of the east spillway.

Environmental Commitments:

- Cofferdams will be installed and maintained consistent with Phase II commitments.
- Removal activities will be sequenced to minimize sediment mobilization.
- Cofferdams will be removed gradually to allow controlled reintroduction of flow.
- Banks disturbed during construction will be stabilized using biodegradable erosion control materials and native vegetation.

Dewatering and Water Quality Protection

For all phases requiring dewatering:

- Pumps will be equipped with intake screens to protect aquatic organisms.
- Discharges will be filtered or settled prior to entering the Saco River.
- Discharge locations will be stabilized to prevent erosion.
- Construction activities will be modified or suspended if unacceptable turbidity is observed downstream.

Inspection, Maintenance, and Adaptive Management

BWPH will implement the following:

- Daily inspections of ESC measures during active construction.
- Additional inspections following rainfall events.

- Prompt repair or replacement of deficient ESC measures.
- Adaptive management in coordination with Maine DEP, FERC staff, and other agencies if unforeseen sediment or turbidity issues arise.

Final Stabilization and Site Restoration

Following dam removal:

- All disturbed areas will be permanently stabilized as soon as practicable.
- Native riparian vegetation will be established consistent with regional conditions.
- Temporary ESC measures will remain in place until stabilization is achieved.
- Final site conditions of the construction area will promote long-term bank stability and river function.

Summary of Environmental Commitments

Implementation of this ESC Plan will ensure that dam removal activities conducted as part of the license surrender:

- Protect water quality
- Minimize sediment transport
- Prevent erosion
- Support successful return of the river to a free-flowing state.

4.0 SCHEDULE

BWPH will remove the Bar Mills Dam in the sequence discussed in Section 3.0 above during one summer/fall construction season. Table 4-1 below includes the anticipated schedule leading up to the dam removal construction. Should approvals not be received in time to allow for a 2027 construction season, dam removal activities will begin in 2028.

Table 4-1 Bar Mills Estimated Decommissioning Schedule

Responsible Party	Pre-Filing Milestone	Date/Time Frame
BWPH	Release of Draft Study Report	October 2025
All Stakeholders	Informational Meeting (6pm, Hollis Town Hall Meeting Room)	October 30, 2025
All Stakeholders	Draft Study Reports Comments Due	December 6, 2025
BWPH	Issue Draft License Surrender Application	June 2026
All Stakeholders	Draft Surrender Application Comments Due	September 2026
BWPH	File Final License Surrender Application w/ FERC	October 2026
BWPH	File Federal and State Permit Applications	October/November 2026
	File Local Permit Applications	Q1 2027
State and Federal Agencies	Anticipate Federal, State and Local Permits and Water Quality Certification – Dependent on Timing of Agency Issuances	October 2027
FERC	Anticipate Surrender Order	December 2027
BWPH	Begin Mobilization	Spring 2028
BWPH	Commence Removal Activities	July 2028
BWPH	Complete Removal	December 2028
BWPH	Site Restoration	May 2029

5.0 TOTAL COST FOR PROJECT DECOMMISSIONING AND SITE IMPROVEMENTS

BWPH estimates that the total cost of the decommissioning of the Bar Mills Hydroelectric Project and planned removal of various dam and spillway features is between $7-12 million in present day costs. Delays in the construction timeline pose the risk of increasing these costs in future years.

Planning, Studies, and Outreach to Date

The Bar Mills Decommissioning project has required several years of sustained effort and significant financial investment before any physical dam removal activity has begun. To date, BWPH has spent approximately $1 million on engineering, environmental field studies, sediment sampling, community engagement, regulatory coordination, and preparation of the license surrender and Decommissioning Plan required by FERC. In addition to these early-phase efforts, additional consulting, engineering, and permitting support will continue into 2026 as part of the formal surrender process. This work reflects the complexity of responsibly evaluating dam removal at a site with shared infrastructure, historic industrial use, and close proximity to homes, public safety assets, and recreational resources.

Dam Removal and Site Restoration

BWPH estimates that dam removal and primary site restoration will cost between approximately $5.5 million and $7.5 million, depending on final scope, construction sequencing, and regulatory requirements. These estimates include mechanical contractor work, demolition activities, temporary facilities, engineering and construction oversight, project management, and contingency allowances. The upper end of the estimate reflects scenarios where additional structures are removed or where permitting and construction challenges increase complexity. These figures are planning-level estimates, not fixed prices, and will be refined as the Decommissioning Plan is finalized and reviewed by agencies.

Future Unknown Costs

In addition to the estimated dam removal costs, several potential future obligations remain unknown or difficult to quantify at this time. These include possible well mitigation

measures for nearby private drinking water wells if impacts are identified; fire suppression alternatives for dry hydrants that will be affected once the dam is removed; recreational enhancements or public access improvements; and long-term fish passage and river restoration considerations following dam removal. Each of these items will require further evaluation, agency review, and coordination with the Towns of Buxton and Hollis before costs can be defined.

As such, no reliable dollar estimates can yet be assigned, but BWPH is conservatively estimating that these measures may cost anywhere from $1-4 million.

APPENDIX A

AGENCY AND PUBLIC COMMENTS AND RESPONSES

Comments on Bar Mills Draft Surrender Application and Decommissioning Plan

	Entity	Application Section	Comment	Response
1	Town of Hollis and Archipelago	Powerhouse	• Structural Condition and the Post-Decommissioning Environment • Powerhouse-Specific Environmental Characterization • Powerhouse Related Costs are Not Addressed in the Draft Application • Long-Term Disposition, Successor Ownership, and Financial Assurance. • Local Land-Use Authority is Not Resolved by Characterizing the Powerhouse as • "Grandfathered"	BWPH acknowledges the Town's continued concerns regarding the retained powerhouse. The proposed action is to retain the powerhouse as a BWPH-owned structure while removing the crane, crane house or tower, gate house and specified appurtenances; securing and decommissioning the intakes; improving drainage, safety, security, and visual screening; and continuing to maintain and monitor the retained structure after decommissioning. Removal of the powerhouse is not part of the proposed action. BWPH does not propose transferring the powerhouse to either municipality (Hollis or Buxton) and surrender of the FERC license would not transfer ownership or ordinary private-property responsibilities to the Towns. As future work or land use activities are identified, BWPH will coordinate with the applicable municipalities and obtain required approvals through the appropriate zoning and permitting processes. BWPH does not agree that the surrender application must establish a successor owner, successor regulator, perpetual maintenance agreement, or financial assurance mechanism for a privately owned retained structure. Following the decommissioning of the Bar Mills Project, BWPH will continue to operate hydroelectric projects in other parts of both the Town of Buxton and the Town of Hollis, in addition to hosting its Saco River HQ in the Town of Hollis.

	Entity	Application Section	Comment	Response
				BWPH will continue to monitor and maintain the retained Bar Mills structures following decommissioning to ensure the site remains safe, secure, and in good condition. This will include routine inspections and maintenance of the powerhouse and spillway areas, as well as fencing, signage, security measures, and landscaping, as appropriate. Existing facility plans and programs will also be reviewed following decommissioning and updated as necessary based on the final site configuration and applicable regulatory requirements. Inspection and maintenance frequency will be established based on site conditions, retained structures, and ongoing regulatory obligations rather than through a separate Bar Mills-specific maintenance plan.
2		Powerhouse and Powerhouse Spillway	Clearly determine whether the powerhouse and powerhouse spillway will: • Be fully removed. • Be partially removed. • Be retained.	BWPH proposes to retain the powerhouse and the powerhouse spillway.
3			If Retained • Financial assurance mechanism for future maintenance/removal. • Identification of successor regulatory authority.	Please see above answer in row 1.

	Entity	Application Section	Comment	Response
			• Written confirmation that the successor regulator agrees to assume oversight. • Long-term inspection, maintenance, and funding responsibilities.	
4			Complete a Phase I Environmental Site Assessment (ESA), or equivalent review.	A conventional Phase I ESA is not proposed because the powerhouse is not being transferred, demolished, or abandoned.
5			Evaluate potential contamination risks including: • PCBs • Transformer oil • Hydraulic fluids • Asbestos • Lead paint • Historic fuel storage concerns	A conventional Phase I ESA is not proposed because the powerhouse is not being transferred, demolished, or abandoned. The proposed decommissioning activities are limited to removal of the crane, crane house/tower, gate house, and select appurtenant facilities; securing and decommissioning the intakes; and implementing drainage, safety, security, and visual screening improvements. As a result, the potential for contamination is expected to be low and primarily associated with the removal of existing infrastructure. BWPH will continue to maintain and monitor the retained structure after decommissioning. If BWPH finds contaminates during or after construction, BWPH will work with the appropriate agencies regarding treatment of contaminated materials.

	Entity	Application Section	Comment	Response
6			Current structural inspection of powerhouse and spillway. • Address observed structural defects. • Identify: • Required repairs • Inspection frequency • Estimated costs • Responsible party for future work	A structural inspection is not proposed because the powerhouse is not being transferred, demolished, or abandoned. The last dam safety inspection of the Bar Mills Project was conducted on June 20, 2023. FERC determined that the project structures were found to be in satisfactory condition, and no dam safety deficiencies were observed that required immediate remedial action.
7			Future Use • Identify proposed future use of retained structures. • Demonstrate consistency with Town of Hollis zoning requirements.	Please see above answer in row 1.
			Aesthetics - Include photographs and visual assessment from: • Saco River downstream • Usher Island • Canal Road • Salmon Falls Road properties opposite the powerhouse	BWPH has included photographs and conceptual renderings in the Decommissioning Plan from key vantage points that are sufficient to assess potential visual and aesthetic impacts of the project components proposed for modification, specifically the spillway, canal gate structure, and canal spillway.
		Rogers Fibre Mill Foundation	Removal • Include commitment to full demolition and removal. Remove language	BWPH is committed to working with the Town of Buxton to coordinate construction access for the demolition of the former Fibre Mill foundation.

	Entity	Application Section	Comment	Response
			suggesting FERC lacks authority over the structure. • Recognize foundation as a project work under FERC jurisdiction.	The FERC project boundary contains the water containing structure along the upstream wall of the foundation, the remaining foundation is not within the boundary. FERC jurisdiction is accurately described in the surrender application.
			Restoration Recommendations • Regrade site. • Stabilize shoreline. • Incorporate recommendations from hydraulic modeling and erosion studies.	BWPH has addressed the comment in the surrender application. BWPH and its contractor are committed to stabilizing all areas that will be disturbed by construction. BWPH will continue to work with Buxton as owner of the property to address regrading and stabilization.
		Contamination Sampling and Analysis Plan	Develop Detailed Sampling Plan • Coordinate with Maine DEP and U.S. Army Corps of Engineers • Sample: o Upstream of Rogers Fibre Mill foundation. o CERCLA drainage channel. o Downstream shoreline area near sample location SS-1. o Sediments o Soil o Porewater o Surface water	BWPH will coordinate with MDEP and USACE to comply with sampling requirements as part of permitting. BWPH has hired TRC to sample the concrete dam spillway for asbestos, in accordance with MDEP requirements.

	Entity	Application Section	Comment	Response
		Canal and Invasive Species Management	• Include post-removal monitoring program. • Begin monitoring shortly after flashboard removal. • Provide management and treatment commitments.	BWPH is committed to reseeding exposed shorelines with a native seed mix. Reseeding is intended to reduce the spread of invasive botanical species and stabilize exposed shoreline area upstream of the spillway. All exposed erodible soils within an estimated average of a 20-foot-wide shoreline restoration corridor along both sides of the approximately 5-mile-long reach, including suitable portions of islands exposed by project-related water-level changes, will be stabilized and revegetated as soon as practicable.
		Recreation and Public Access	Preserve Existing Recreation Features • Canoe portage take-out. • Canoe portage put-in. • Usher Island trails. • Parking facilities. New Hollis Recreation Access • Incorporate hand-carry boat launch plan. • Formal partnership agreement with Town of Hollis. • Include design, construction, and maintenance commitments. Canoe Portage Safety • Maintain upstream take-out at current impoundment boat launch.	BWPH is committed to preserving the existing recreational features: • Canoe portage take-out. • Canoe portage put-in. • Usher Island trails. • Parking facilities. As identified in the Surrender Application in section 2.2 Dam Removal Phase, *Recreation Facilities*. The boat launch concrete planking will be removed and the boat launch will revert back to natural state and shoreline stabilized. BWPH is committed to working with the Town of Hollis to continue discussions about a new recreation access site.

	Entity	Application Section	Comment	Response
			• Avoid allowing the area to simply revert to natural conditions. • Include long-term maintenance obligations.	
		Long-Term Maintenance Agreement	Binding Agreement Before FERC Jurisdiction Ends • Financial assurance funding mechanism. • List of all retained structures and features. • Maintenance plans. • Safety inspection requirements. • Responsible parties. • Current surveyed property boundaries. • Long-term maintenance cost estimates and funding source.	On the Saco River, BWPH owns and operates the Bar Mills Project (Hollis and Buxton), the West Buxton Project (Buxton and Hollis), the Bonny Eagle Project (Hollis and Standish), the Skelton Project (Buxton and Dayton), the Cataract Project (Saco and Biddeford), and the Hiram Project (Hiram) and maintains a local office (Hollis) to support all of its Saco River operations. The Cataract Project is beginning its federal relicensing, while the Hiram Project received its latest 40-year license in 2023. BWPH will continue to maintain these facilities, including the future decommissioned Bar Mills site, from its Hollis office--as it has for the last several decades--and a long-term maintenance plan specific to Bar Mills is neither necessary nor appropriate. BWPH will continue to monitor and maintain the retained Bar Mills structures following decommissioning to ensure the site remains safe, secure, and in good condition. This will include routine inspections and maintenance of the powerhouse and spillway areas, as well as fencing, signage, security measures, and landscaping, as appropriate.

	Entity	Application Section	Comment	Response
				Existing facility plans and programs will also be reviewed following decommissioning and updated as necessary based on the final site configuration and applicable regulatory requirements. Inspection and maintenance frequency will be established based on site conditions, retained structures, and ongoing regulatory obligations rather than through a separate Bar Mills-specific maintenance plan.
		Water Supply Wells	Monitoring Program • Baseline groundwater quantity and quality data before drawdown. • Post-removal monitoring program. • Clear impact determination criteria. • Defined mitigation measures. • Binding agreement protecting affected well owners.	BWPH is committed to working with the Town of Hollis and the Town of Buxton to identify, monitor, and mitigate private wells that may become adversely affected by the loss of Projects impoundment. At this time, details for the monitoring program and potential mitigation have been identified below. - Section 4.7.2.2 of SA provides methods of data collection and next anticipated steps - Based upon data collected at this time, a limited number of wells are anticipated to potentially be affected. - Further process survey data with hydrologic/water table model (TRC) - Plan to be developed for monitoring those that may be affected. - Mitigation plan to be developed based upon monitoring.

	Entity	Application Section	Comment	Response
		Dry Hydrant Replacement	Mitigation Plan • Detailed design and specifications. • Construction schedule. • Maintenance requirements. • Binding agreement prior to surrender completion.	BWPH is committed to working with the Town of Hollis and the Town of Buxton to design and implement mitigative measures for fire suppression. BWPH will evaluate the feasibility of installing a water storage tank in the vicinity of the Rogers Fibre Mill site as an off-license measure. Agreement will be done outside of decommissioning and likely to be resolved before FERC approval of the decommissioning plan but not prior to surrender application being filed with FERC.
		Shoreline Erosion	Site-Specific Evaluation • Review high-risk erosion areas. • Identify locations where infrastructure or property may be vulnerable. • Include stabilization and corrective actions where necessary.	BWPH conducted a shoreline survey in 2024 and results were published in the Draft Study Report that was made available at https://barmills.brookfieldusprojects.com/documents/.
		Partnership and Governance	Public Improvement Prioritization • Revise language so improvement priorities are developed: o By BWPH in partnership with Buxton and Hollis.	BWPH appreciates the towns' participation in the Decommissioning Committee. BWPH will continue to collaborate in a productive consultation process and is committed to ongoing discussions.

	Entity	Application Section	Comment	Response
			• Reflect ongoing municipal engagement in project decisions.	
		Project Description Consistency	• Provide a single, consistent list of all project features proposed for removal. • Use consistent terminology throughout all exhibits and plans.	BWPH provided a list of project features proposed for removal in Section 3.5 of the Surrender Application and Decommissioning Plan[1].
			Proposed Removals Should Specifically Include • Dam and abutments. • Log sluice. • Timber crib dam. • Canal headworks. • Rogers Fibre Mill foundation. • Canal spillway. • Crane and crane house. • Trashracks. • Transmission tower. • Roof transformer.	BWPH provided a list of project features proposed for removal in Section 3.5 of the Surrender Application and Decommissioning Plan.

[1] Accession #20260603-5218

	Entity	Application Section	Comment	Response
		Design and Property Information	Design Drawings • Make relevant design drawings available for municipal permitting review. Land Ownership • Provide deed references and registry information for access areas. Boundary Survey • Include a current survey certified by a Maine licensed land surveyor.	BWPH will provide a design drawing package for with permit application packages that will be submitted to MDEP and USACE. BWPH will provide property deeds and access agreements with permitting applications, as required. BWPH is not proposing a land survey at this time.
		Sediment and Geology Information	Sediment Characterization • Reconcile sediment descriptions with the Ocean Surveys subbottom profiling results. • Correct inconsistencies regarding sediment distribution in the impoundment.	The Surrender Application and Oceans Survey's subbottom profiling accurately characterize the limited sedimentation in the impoundment, primarily located along the shoreline margins.
			Hydraulic Modeling Results Include discussion of: • Wetland flooding impacts after dam removal. • Effects on low-flow river depths. • Boat launch functionality.	The hydraulic modeling results show that the river will revert to free-flowing river conditions after dam removal. BWPH will implement a seeding plan for shoreline stabilization and the existing boat launch will revert back to natural conditions.

	Entity	Application Section	Comment	Response
			• Shoreline stabilization recommendations from Base Flow LLC.	
	MDMR	Fish Passage	Address missed fish passage commitments • Convene a meeting with licensee and settlement agreement signatories to discuss the missed May 1, 2025 fish passage implementation deadline and evaluate mitigation measures for the delay. Develop a formal adaptive management framework • Include a detailed post-removal adaptive management plan with clear objectives, monitoring requirements, decision triggers, and corrective actions if fish passage targets are not achieved. Commit to safe, timely, and effective fish passage • Add an explicit environmental commitment in the decommissioning plan to ensure effective passage	BWPH acknowledges MDMR's concern regarding the May 1, 2025 date in the Saco River fisheries agreement. The proposed full spillway removal is intended to restore a free-flowing river condition and support migratory fish passage. BWPH does not intend to engineer passage conditions beyond the natural post-removal river without evidence that the approved removal work created an avoidable barrier. BWPH is committed to creating fish passage via dam removal while limiting impacts below the ordinary high water mark (OWHM) of the Saco River. Dam removal should restore the river's free flowing condition. If post-removal monitoring demonstrates that fish passage is consistent with the naturally occurring bedrock channel and hydraulic conditions that existed prior to dam construction, then the BWPH should not be required to further engineer the river to create passage conditions that never existed naturally. BWPH's objective is to restore a free-flowing Saco River and provide fish access consistent with the river's natural

	Entity	Application Section	Comment	Response
			for all target migratory fish species following dam removal. Define contingency measures • Establish specific corrective measures that could be implemented if monitoring identifies passage limitations, such as channel regrading, engineered thalwegs, nature-like channels, or other hydraulic improvements.	condition. BWPH is not proposing fish passage effectiveness testing, post removal.
		Biological Resource	Update species inventory • Revise the fisheries section to recognize all historically documented diadromous species in the Saco River, including sea-run brook trout, Atlantic tomcod, sea lamprey, Atlantic sturgeon, and shortnose sturgeon. Expand target species considerations • Include American shad as a primary passage target species rather than limiting consideration to species currently passing upstream.	BWPH has made these changes in the Final Surrender Application (Section 4.8.2.2).

	Entity	Application Section	Comment	Response
			Improve historical habitat characterization • Revise statements regarding historical fish distribution to recognize evidence supporting upstream use of the watershed by alewife, blueback herring, American shad, and other migratory species.	
		Technical Studies	Complete passage modeling documentation • Include all swim performance model results for every species and flow scenario evaluated. Correct figure labeling errors • Revise Figures 4-11 through 4-16 to accurately reflect moderate-flow and high-flow conditions. Clarify post-removal restoration commitments • Replace vague references to "long-term fish passage and river restoration considerations" with specific commitments,	BWPH believes the modeling documentation provided is sufficient to analyze anticipated effects on migratory fish passage, considering the significant level of unknown characteristics of the riverbed beneath the Bar Mills dam and former timber crib dam. BWPH has made revisions and corrections in the Surrender Application, as appropriate.

	Entity	Application Section	Comment	Response
			responsibilities, and performance criteria.	
		River Restoration	Evaluate alternative passage corridors • Assess whether the former canal and powerhouse area could be converted into a nature-like fish passage channel following infrastructure removal. Acknowledge historical site modifications • Revise descriptions of post-removal conditions to recognize that historical dam and channel modifications may continue to influence fish passage and may require restoration actions.	BWPH will address the power canal alternative in the Alternatives Analysis provided in the US Army Corps of Engineers permit application package. The power canal fish passage alternative does not achieve the goal of returning this section of the Saco River to a free-flowing corridor. BWPH is not proposing restorative actions beyond the proposed dam removal actions.
		Scheduling	Resolve schedule inconsistencies • Reconcile conflicting references regarding the anticipated construction start year (2027 versus 2028) and provide a definitive project schedule.	BWPH has updated the construction date to be consistent throughout the Surrender and Decommissioning Application. BWPH is committed to continued consultation with agencies for the dam removal plan.

	Entity	Application Section	Comment	Response
			Establish performance monitoring requirements • Define post-removal monitoring duration, passage performance metrics, reporting requirements, and agency consultation procedures.	Post-removal monitoring will include monitoring of potential impacts to private groundwater wells surrounding the impoundment. Data on the surrounding wells continues to be collected from adjacent landowners and will be used to develop a post-removal monitoring plan. Because a monitoring plan has not yet been developed and would be developed outside of the surrender process, BWPH assumes that a surrender approval will not be contingent upon any well monitoring being completed.
	MDIFW	Canal	Recommends completely filling the canal rather than leaving it mostly dry. Requests additional details on: • Concrete and stone disposal locations. • Final grading elevations. • Whether finer materials will be used to fill voids among rock and concrete.	BWPH will provide these details in design drawings that will be included in the US Army Corps of Engineers and the Maine Department of Environmental Protection permit applications.
		Planting and Habitat Restoration	All restoration plantings should use native species.	As described in the Surrender and Decommissioning Plan, Section 4.6 all exposed erodible soils within an estimated approximately 20-foot-wide shoreline restoration corridor

	Entity	Application Section	Comment	Response
			Preference should be given to trees and shrubs to improve riparian habitat conditions.	along both sides of the approximately 5-mile-long reach, including suitable portions of islands exposed by project-related water-level changes, will be stabilized and revegetated as soon as practicable.
		Spillway Removal	Supports proposed full removal.	Comment acknowledged.
		Fish and Mussel Protection	A slow, staged reservoir drawdown to reduce impacts on fish, eels, and mussels • A freshwater mussel salvage and relocation plan with MDIFW. • Contingency measures to recover stranded fish if strandings occur.	BWPH anticipates implementing a slow stage level drawdown. This will minimize the potential for adverse effects on mussels or potential for fish stranding. BWPH does not anticipate having to relocate species due to the slow drawdown. The Saco River, at the Bar Mills site, will no longer be controlled by a dam, flashboards, or gates following the decommissioning and demolition of the existing spillway. As such, BWPH will be limited in its ability to control the reduction in water levels of the former Saco River reservoir while demobilizing from the site.
		Invasive Species Control	• All construction equipment should be cleaned of visible soil and plant debris before entering the project area. • Removed invasive plants should be properly disposed of to prevent further spread.	BWPH will work with its contractor to limit the spread of invasive species and disposal of existing species that will be disturbed during construction. A Seeding Plan is proposed for implementation during construction. To further combat the spread of invasive plant species BWPH will plant a native mix as a preventative measure for invasive species control.

	Entity	Application Section	Comment	Response
		Rare Plant Protection	Survey data for the state-threatened Swamp White Oak (Quercus bicolor) should be submitted to MDIFW if not already provided to the Maine Natural Areas Program.	BWPH distributed the study report and Surrender Application and Decommissioning Plan to MDIFW as a stakeholder on the distribution list. An MNAP representative is included in the final surrender application distribution.
		Bat Protection	MDIFW concurs with proposed seasonal tree-clearing restrictions to protect listed bat species, including the northern long-eared bat.	Comment acknowledged.
		Turtle Protection	If wood turtles or other turtles are encountered during project activities: • Relocate them outside construction areas. • Report observations to MDIFW within 72 hours.	BWPH will include this requirement to the contractor's notes on construction drawings and have a BWPH biologist on call for any necessary relocation and reporting.
		Recreation and Public Access	• A post-removal agency site visit to evaluate opportunities for continued river access at the existing Bar Mills launch area. • Coordination with the Town of Hollis and MDIFW on development of the new	BWPH proposes to remove the concrete planking and allow the existing boat launch to revegetate. BWPH plans to continue to work with the Town of Hollis and MDIFW to create a new public river access area behind Town Hall.

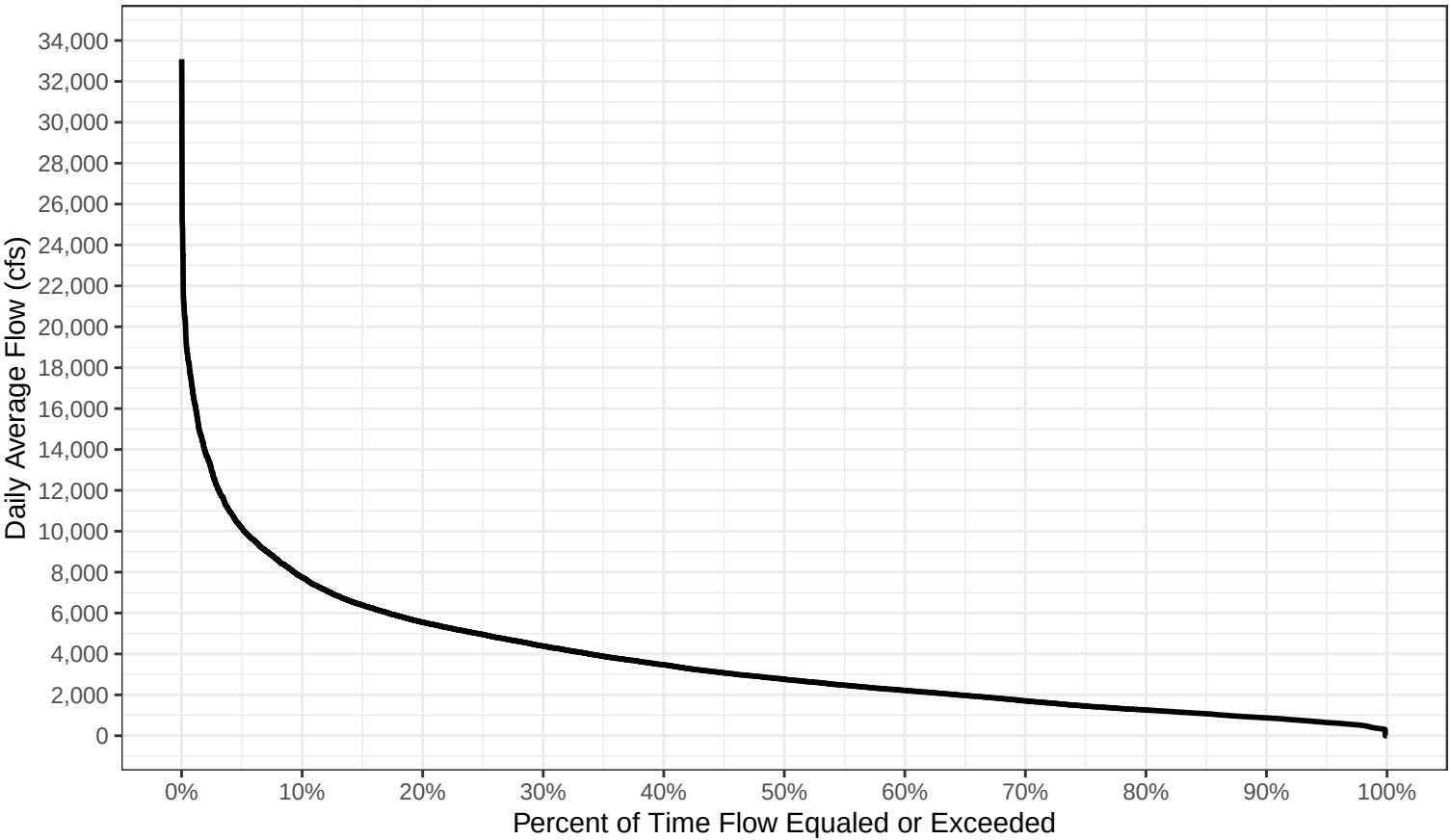
	Entity	Application Section	Comment	Response
			public access area behind the Hollis municipal facilities.	
	TU		TU urges FERC to require Brookfield White Pine Hydro LLC to incorporate the Towns' recommendations into the final surrender application	BWPH will continue to work with the Town of Hollis during the dam removal process.

APPENDIX B

FLOW DURATION CURVES

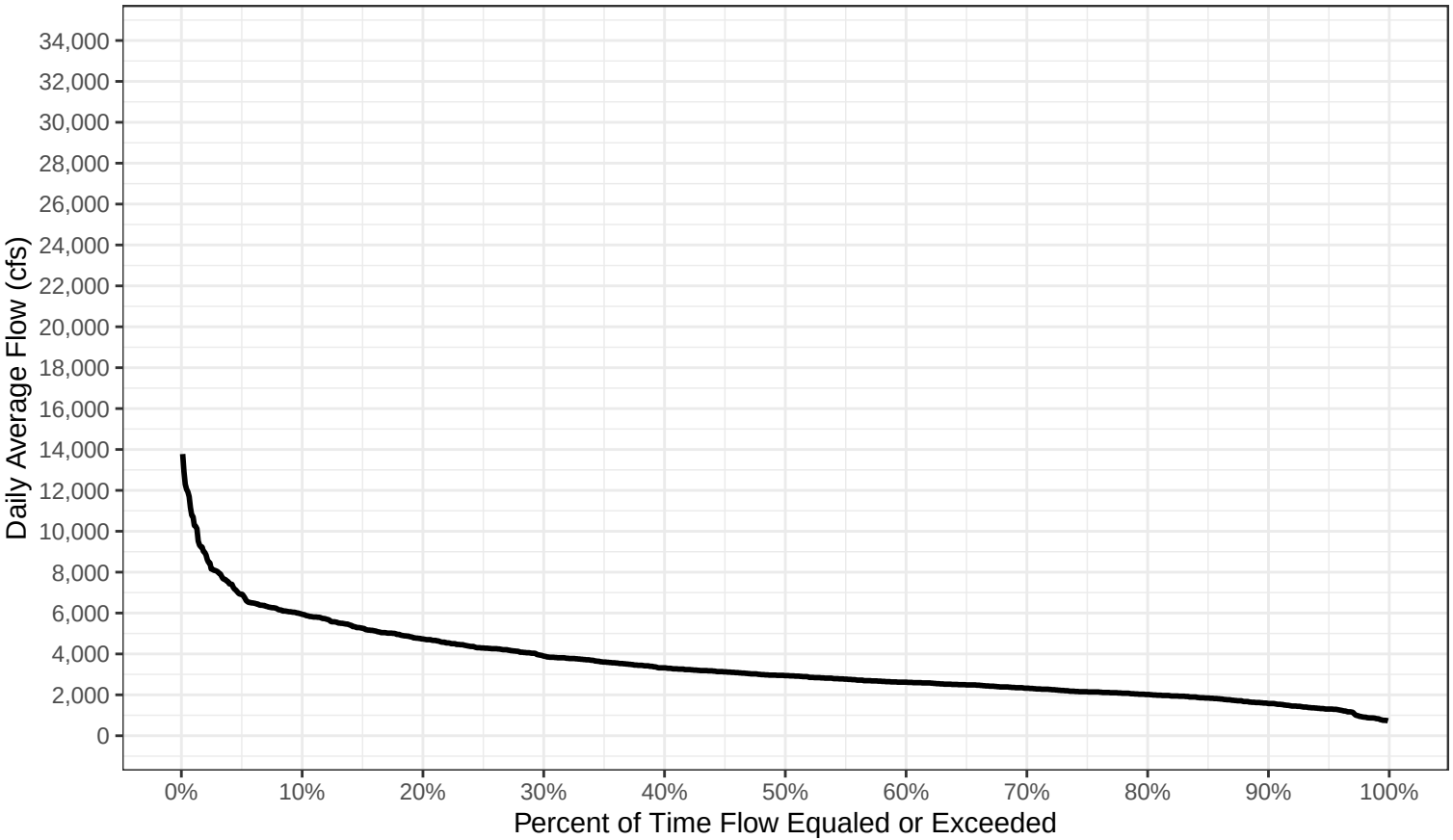
Bar Mills Project Annual Flow Duration Curve

Prorated from USGS Gage No. 01066000 Saco River at Cornish, ME
Period of Record: January 1996 to December 2025



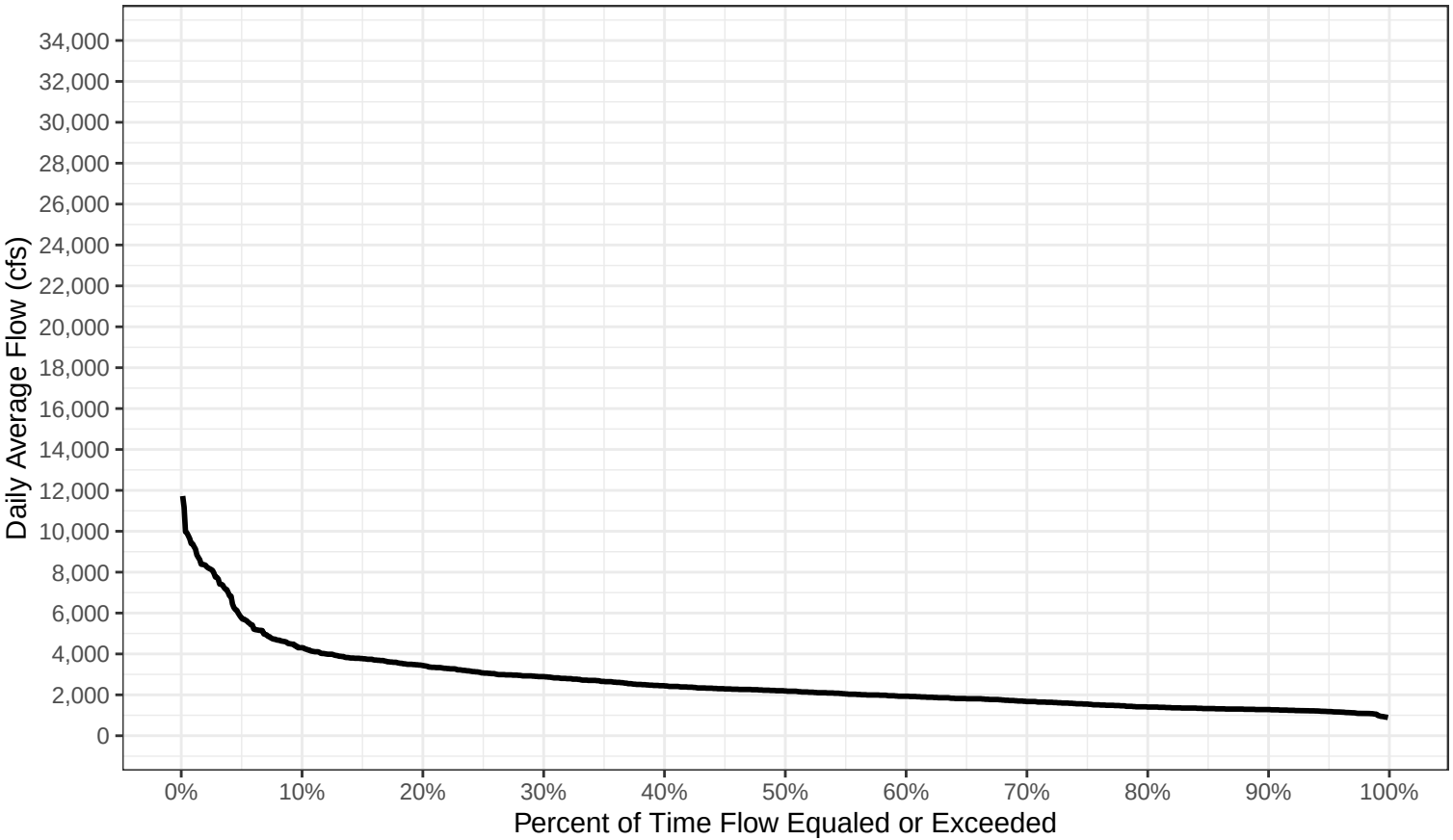
Bar Mills Project January Flow Duration Curve

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Period of Record: January 1996 to December 2025



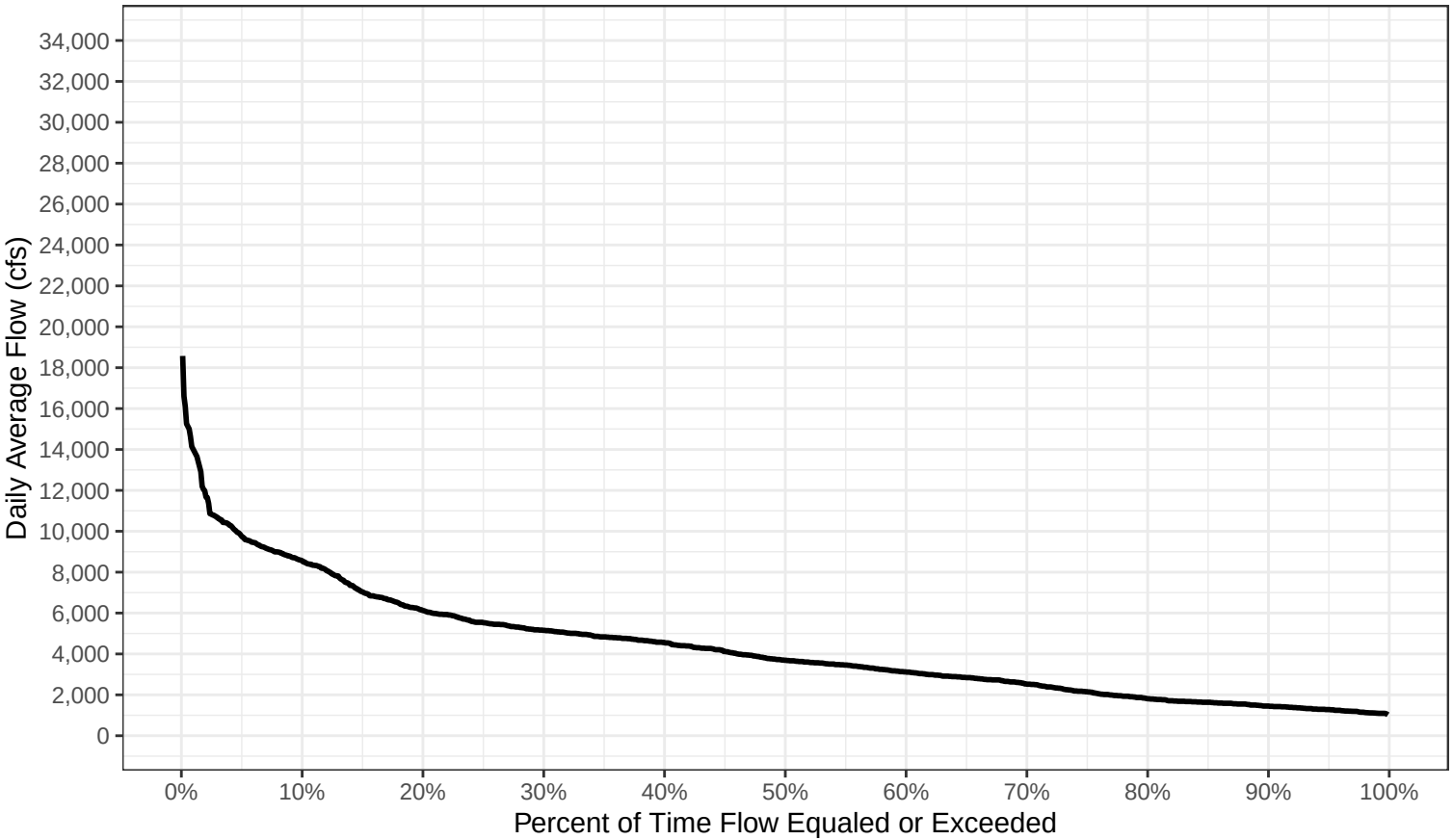
Bar Mills Project February Flow Duration Curve

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Period of Record: January 1996 to December 2025



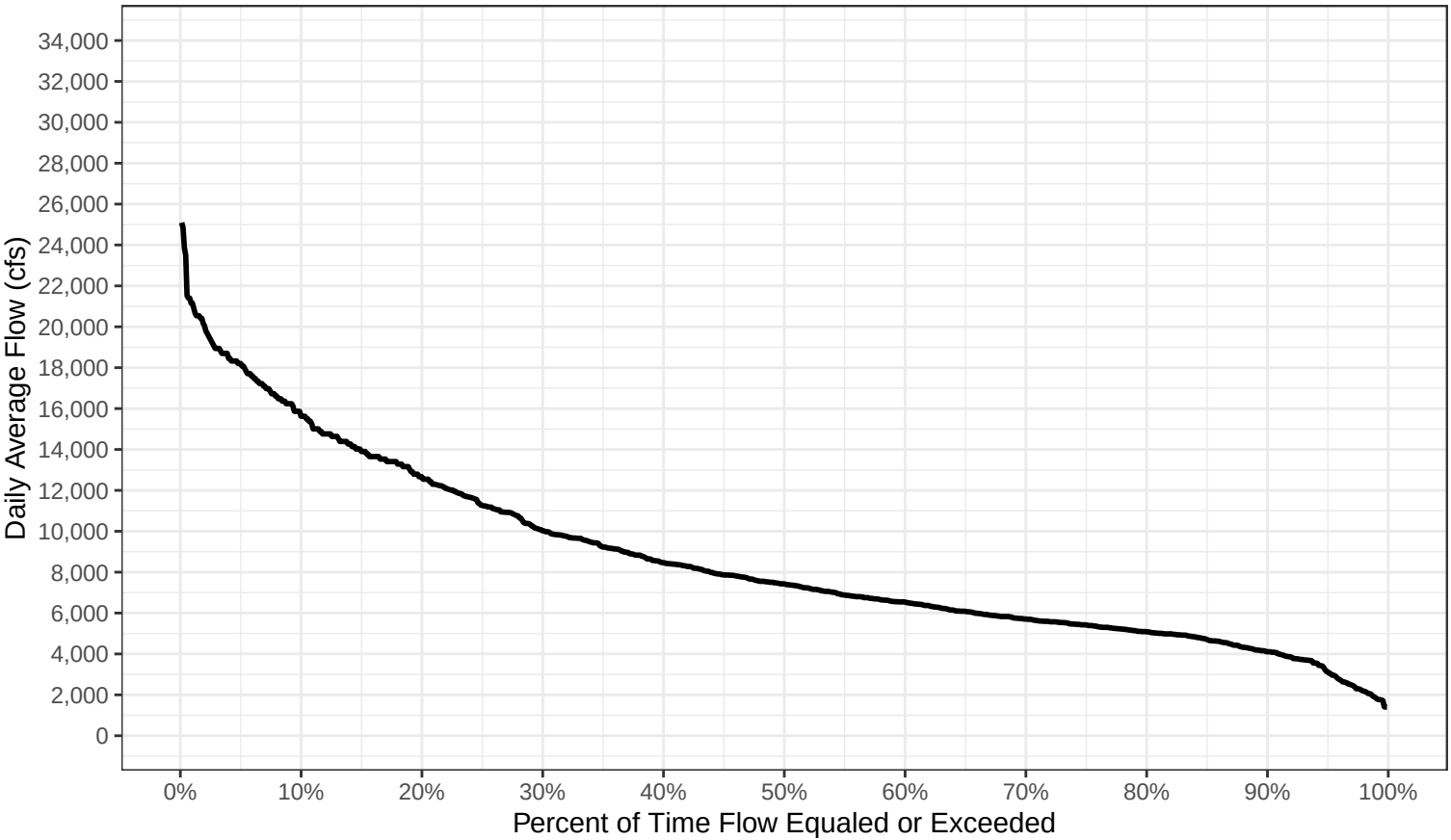
Bar Mills Project March Flow Duration Curve

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Period of Record: January 1996 to December 2025



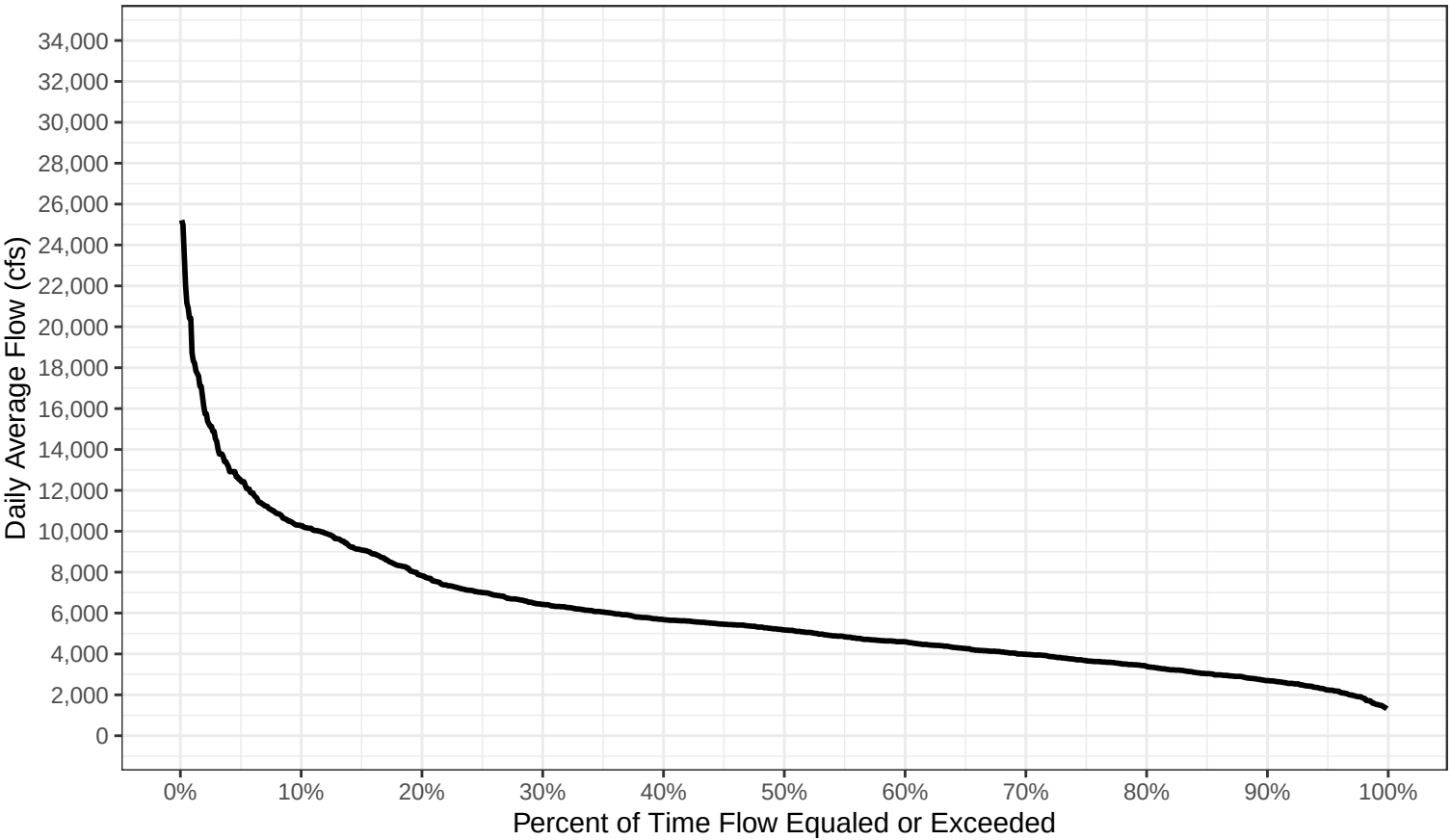
Bar Mills Project April Flow Duration Curve

Prorated from USGS Gage No. 01066000 Saco River at Cornish, ME
Period of Record: January 1996 to December 2025



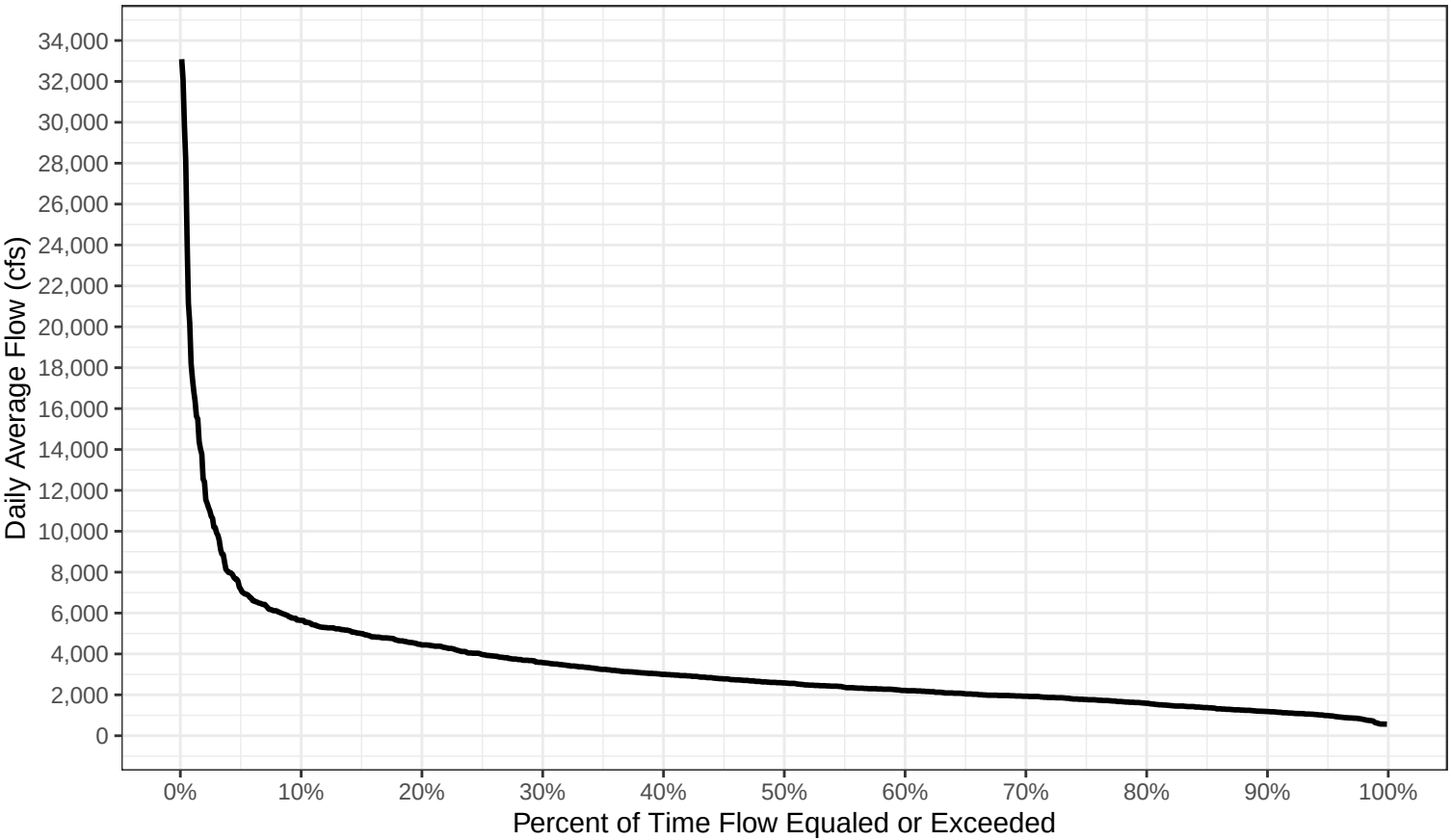
Bar Mills Project May Flow Duration Curve

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Period of Record: January 1996 to December 2025



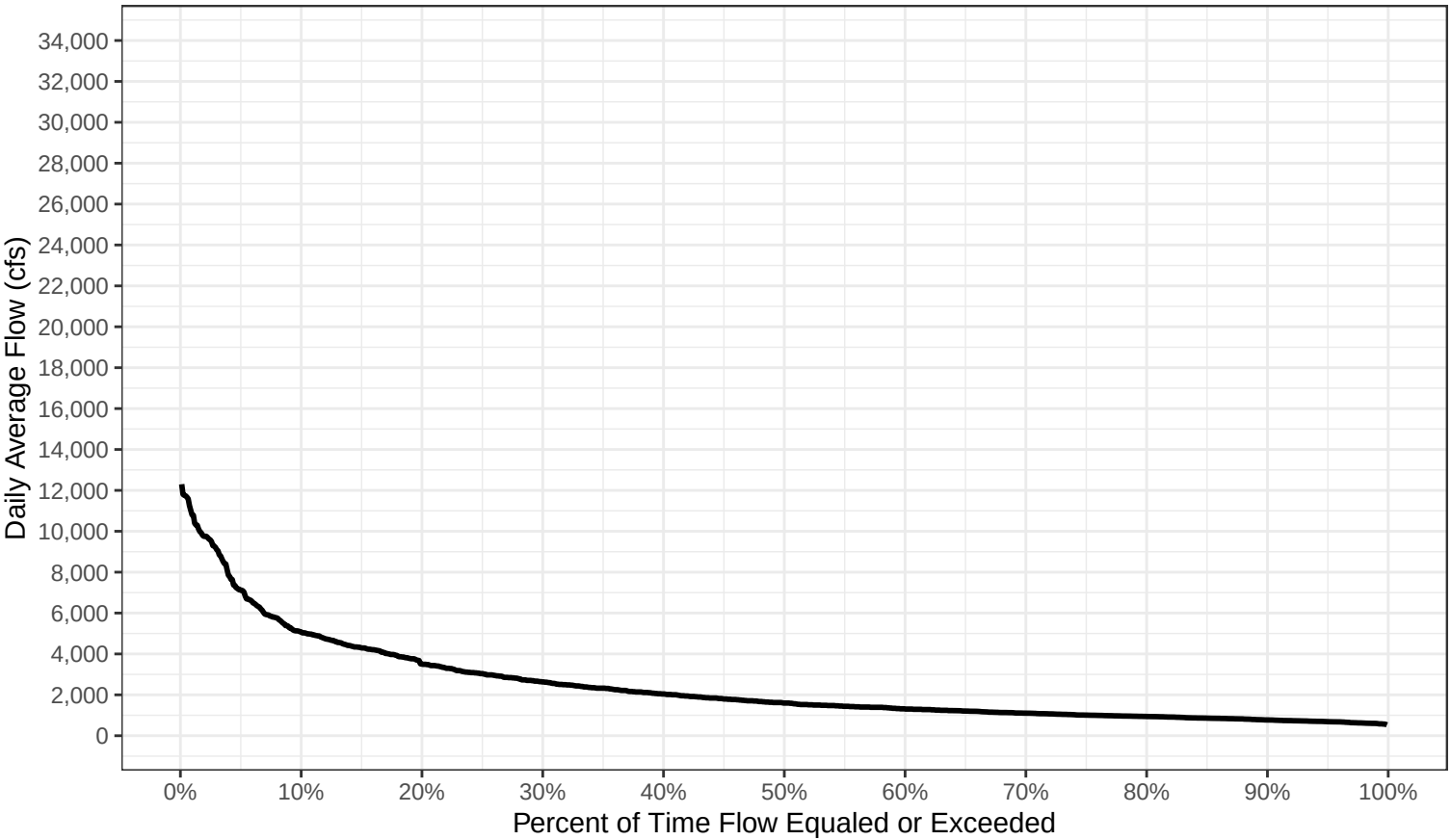
Bar Mills Project June Flow Duration Curve

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Period of Record: January 1996 to December 2025



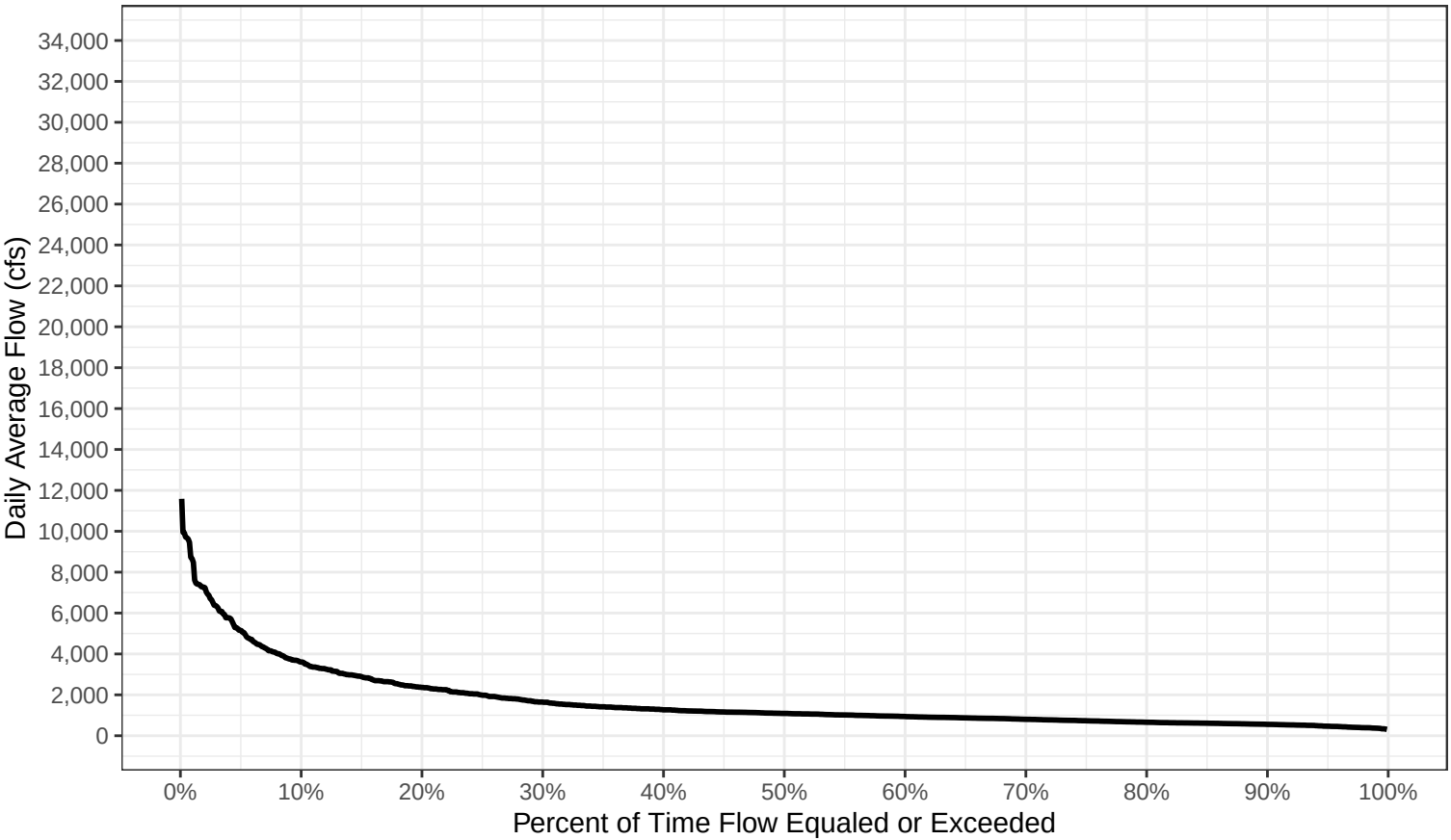
Bar Mills Project July Flow Duration Curve

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Period of Record: January 1996 to December 2025



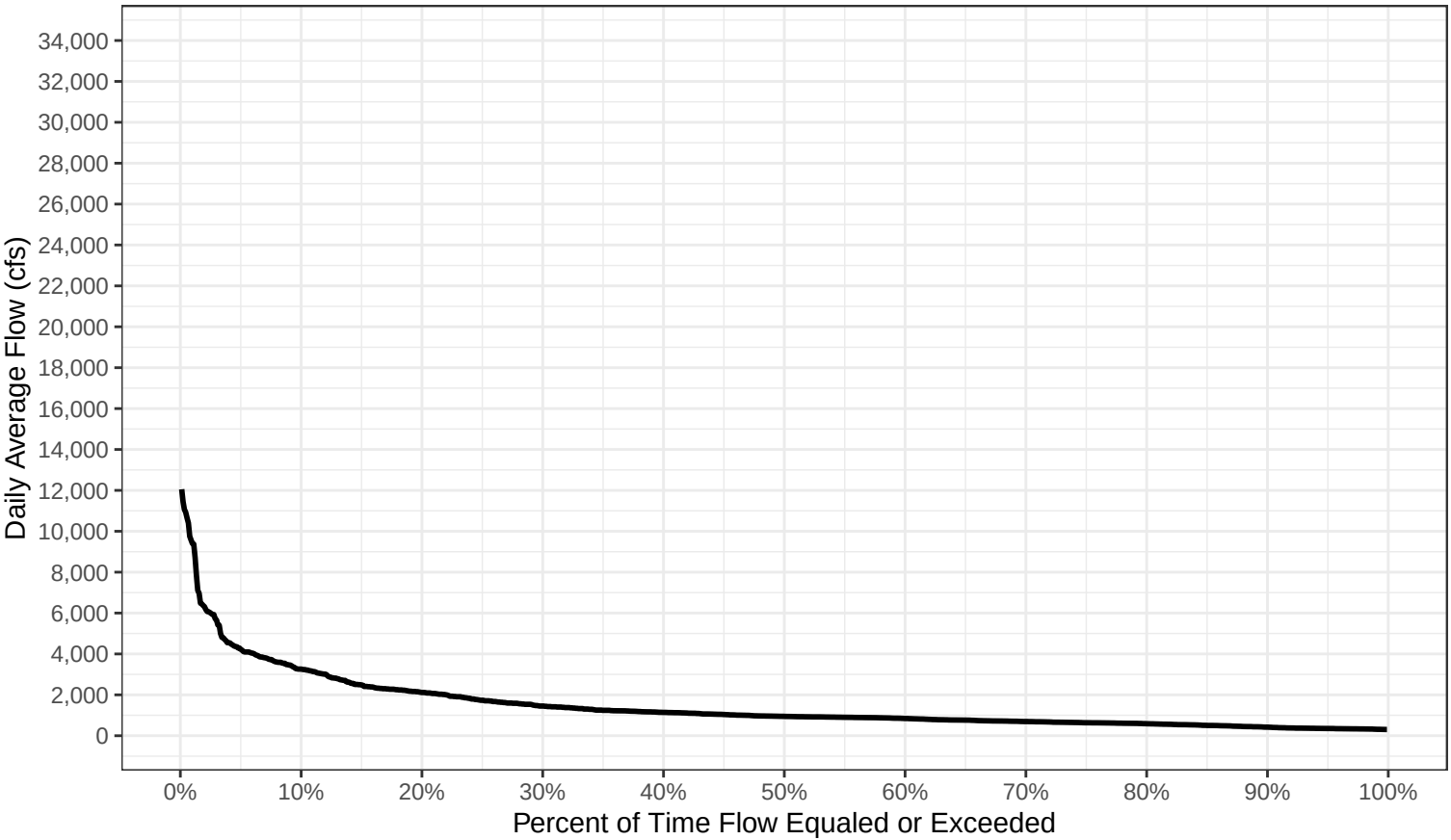
Bar Mills Project August Flow Duration Curve

Prorated from USGS Gage No. 01066000 Saco River at Cornish, ME
Period of Record: January 1996 to December 2025



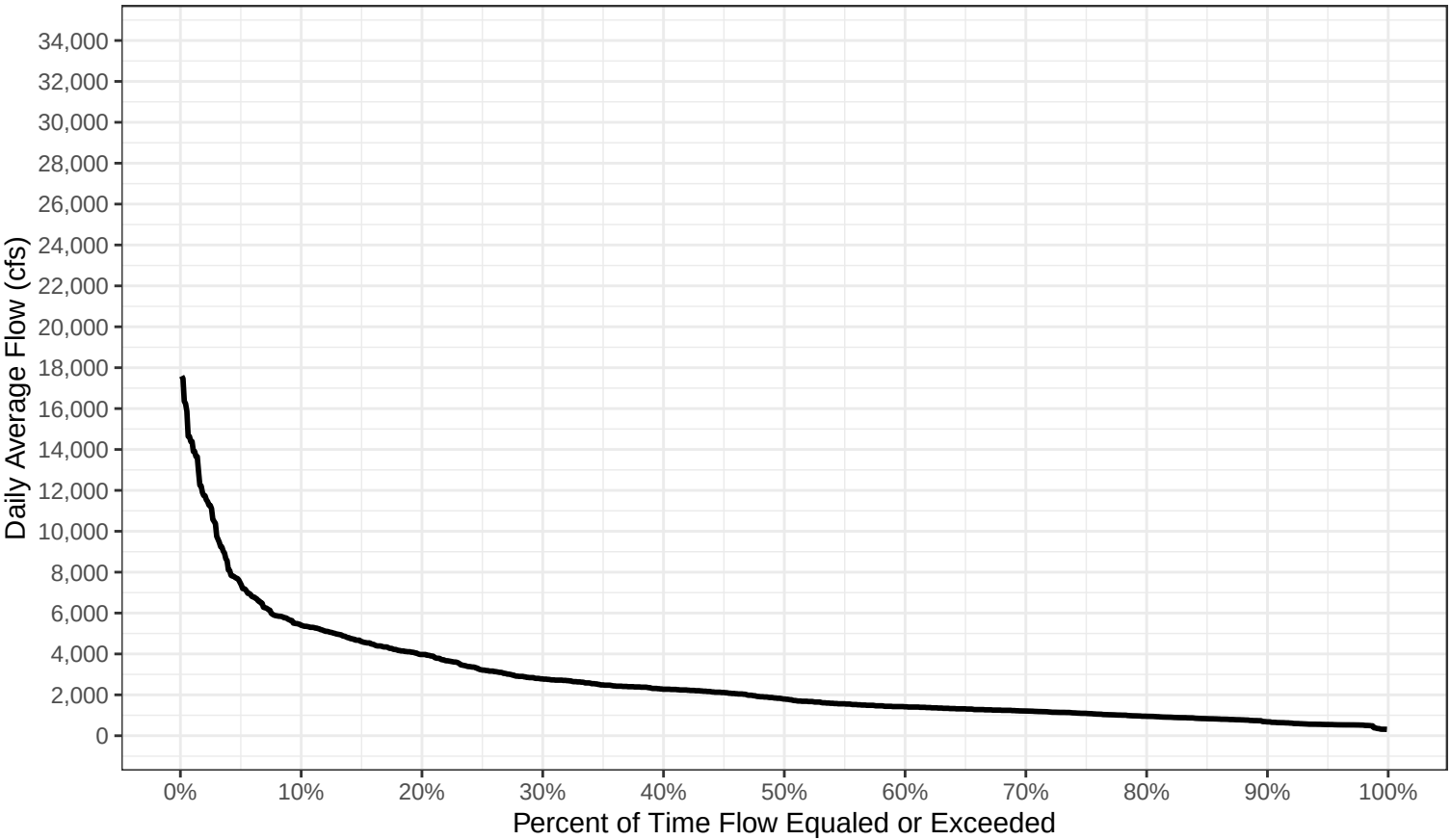
Bar Mills Project September Flow Duration Curve

Prorated from USGS Gage No. 01066000 Saco River at Cornish, ME
Period of Record: January 1996 to December 2025



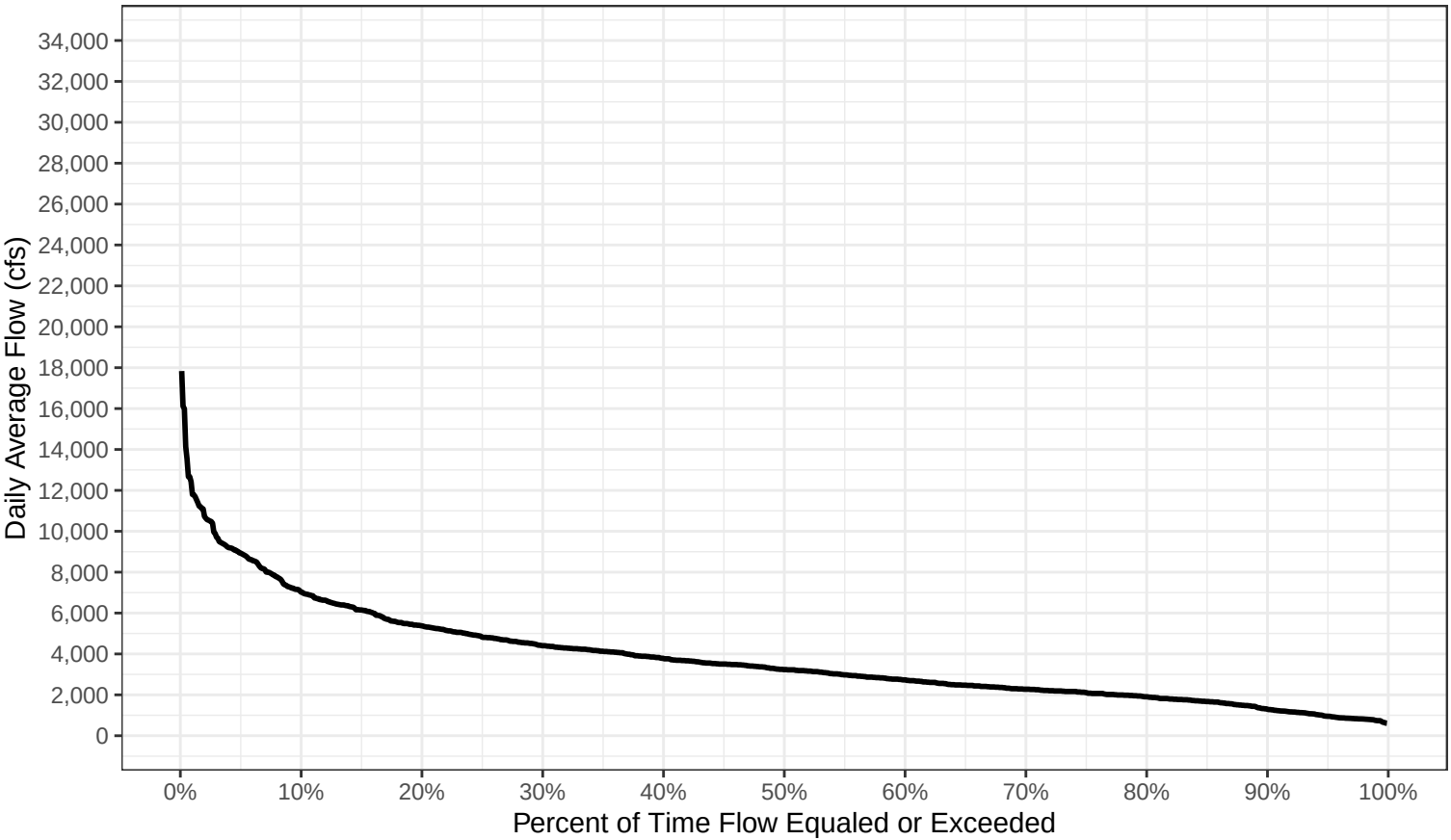
Bar Mills Project October Flow Duration Curve

Prorated from USGS Gage No. 01066000 Saco River at Cornish, ME
Period of Record: January 1996 to December 2025



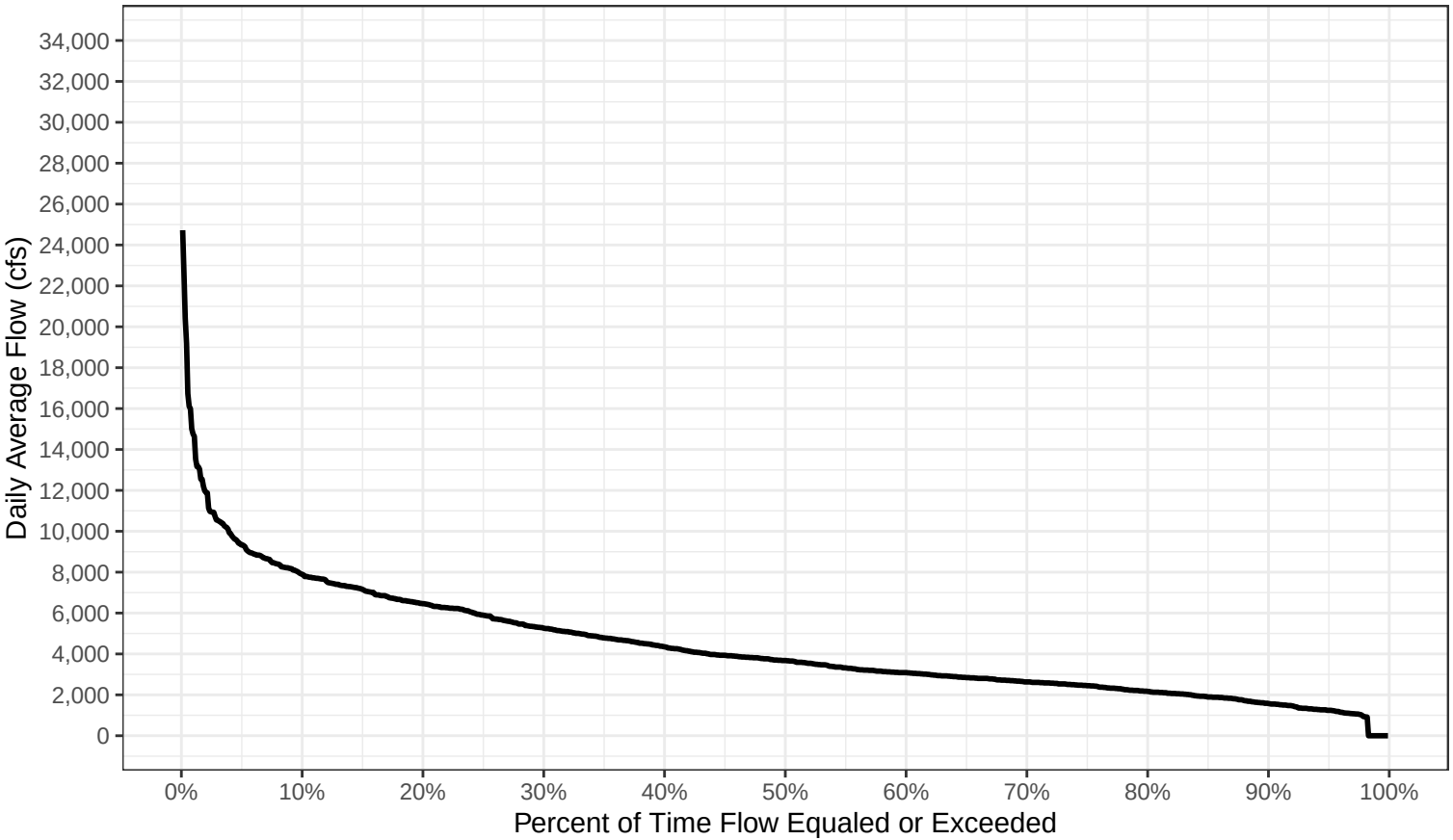
Bar Mills Project November Flow Duration Curve

Prorated from USGS Gage No. 01066000 Saco River at Cornish, ME
Period of Record: January 1996 to December 2025



Bar Mills Project December Flow Duration Curve

Prorated from USGS Gage No. 01066000 Saco River at Cornish, ME
Period of Record: January 1996 to December 2025



APPENDIX C

IPAC REPORT

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

York County, Maine



Local office

Maine Ecological Services Field Office

306 Hatchery Road
Orland, ME 04472

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Tricolored bat Perimyotis subflavus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Insects

NAME	STATUS
Monarch butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Flowering Plants

NAME	STATUS
Small whorled pogonia Isotria medeoloides No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1890	Threatened

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your

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Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

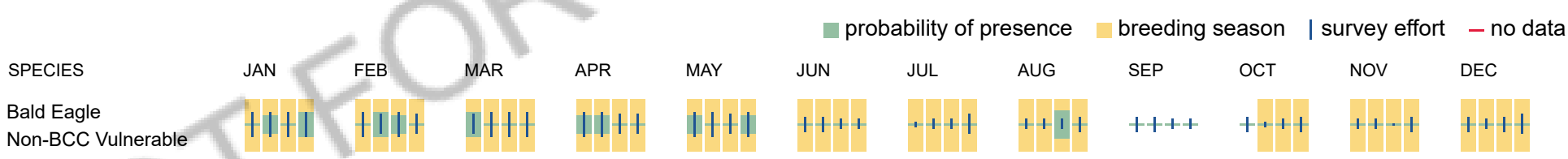
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31

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Bay-breasted Warbler Setophaga castanea This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 25 to Aug 1
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Blue-winged Warbler Vermivora cyanoptera This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30
Bobolink Dolichonyx oryzivorus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler Cardellina canadensis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cape May Warbler Setophaga tigrina This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Jun 1 to Jul 31
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will Antrostomus vociferus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Evening Grosbeak Coccothraustes vespertinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Olive-sided Flycatcher Contopus cooperi This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pectoral Sandpiper Calidris melanotos This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Prairie Warbler Setophaga discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Rose-breasted Grosbeak Pheucticus ludovicianus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 15 to Jul 31
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Scarlet Tanager Piranga olivacea This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 10 to Aug 10

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Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Veery Catharus fuscescens fuscescens This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 15 to Jul 15
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▀)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

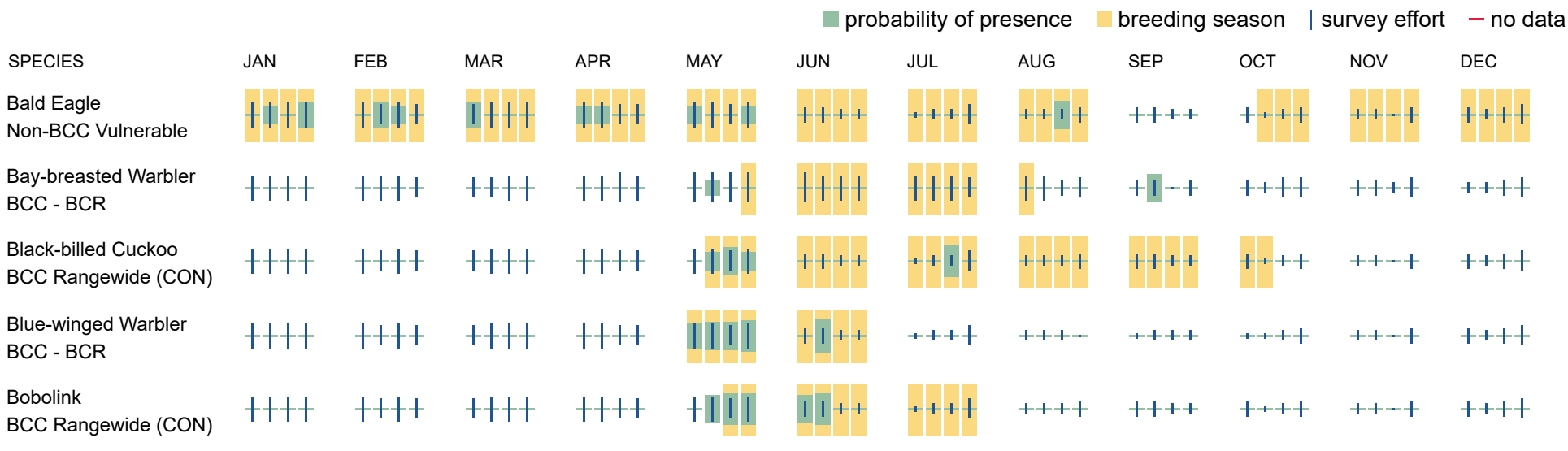
Breeding Season (▀)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

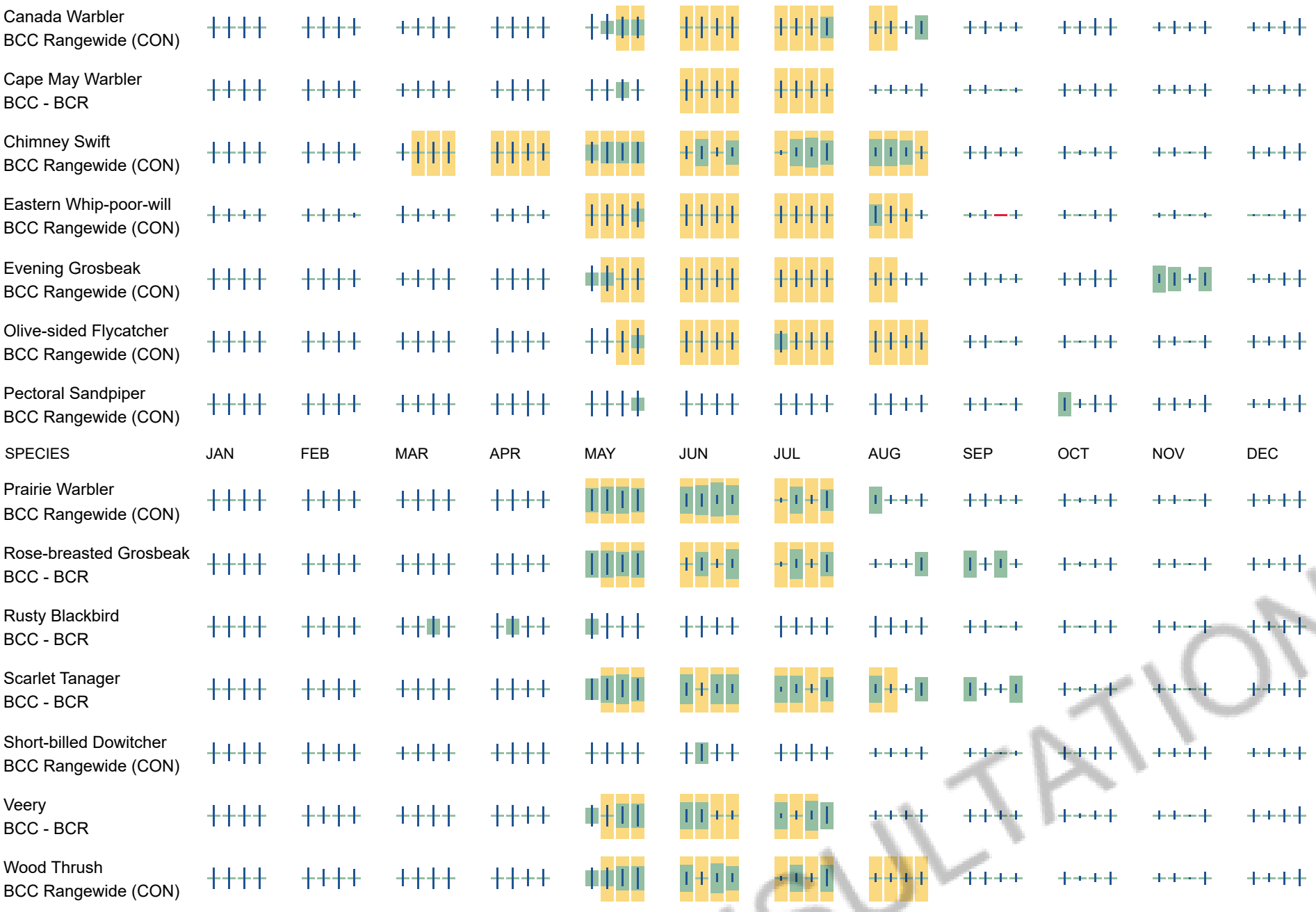
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

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To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND
- PEM1E

FRESHWATER FORESTED/SHRUB WETLAND
- PFO1E
- PFO1C
- PSS1E

FRESHWATER POND
- PUBHh

RIVERINE
- R2UBH
- R4SBC
- R3UBH
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

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Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

APPENDIX D

STUDY REPORT

Study Report

Bar Mills Hydroelectric Project

FERC No. 2194



Prepared for:

Brookfield White Pine Hydro LLC

Prepared by:

Kleinschmidt Associates

October 2026

EXECUTIVE SUMMARY

The purpose of this Study Report is to summarize baseline data at the Bar Mills Hydroelectric Project on geology and soils, water quality and quantity, fish and aquatics, wildlife and botanical resources, recreation, land use, aesthetics, and historical structures. Brookfield White Pine Hydro (BWPH) is proposing (proposed action) to surrender the Federal Energy Regulatory Commission (FERC) license at Bar Mills Hydroelectric Project on the Saco River, between Hollis and Buxton, Maine.

Information contained in this Study Report has been used to develop the Decommissioning Plan which provides additional details on decommissioning, including details on the removal of specific project features and proposed mitigation measures.

In response to public and agency comments received during study planning, this Study Report provides information regarding both a partial and full spillway removal as possible alternatives to satisfy current license requirements for upstream and downstream migratory fish passage. Partial spillway removal refers to removal of the western half of the dam from the canal gates to the log sluice located in the middle of the dam. Full spillway removal refers to the removal of the entire spillway structure from the canal headgates to the old Fibre Mill foundation. Both alternatives include removal of the canal spillway adjacent to the headgate structure and construction of a flow diversion weir to a height that inflows will be excluded from the canal with the exception of extreme high flow events that would likely occur one to two times per year. BWPH does not intend to dredge or otherwise disturb sediments in the canal and if acceptable under MDEP and USACE permitting, fill portions of the canal with spillway demolition materials.

BWPH worked with the Towns to form a Decommissioning Committee (Committee) to review an initial draft of the Study Report and to discuss issues of concern regarding decommissioning. A summary of the Committee process and discussions are provided in Appendix A of the Study Report. BWPH will continue to work with Committee members and Town representatives to identify and evaluate post-removal fire suppression options, wells that could potentially be affected by lower water levels and alternative public access sites for flatwater boating opportunities. FERC processes applications to surrender licensed hydropower projects to ensure that safety and environmental concerns are addressed before allowing a project to be removed from federal jurisdiction. Results presented in this Study Report, along with an Environmental Assessment (EA) that will be

performed by FERC, aid in the determination of conditions of an order approving license surrender. Below is an overview of the findings in this report.

Sediments - Subbottom profiling and probe interpretations below the water surface at and in the reach immediately upstream of the dam determined that little sediment exists and that preconstruction removal of sediments is likely unnecessary. A shoreline erosion study suggests sandy banks would quickly adjust to the new water elevation and revegetate rapidly. The presence of a cobble and bedrock dominated riverbed in the upper reach and downstream of the Bar Mills Dam indicates that the channel bed is relatively stable and the river will settle back into its historical, pre-dam channel form. Though BWPH has no plans to disturb the former Rogers Fibre Mill property, the Study Report also examines sediments at and in the vicinity of the former mill for contaminants.

Water Quality - The Saco River at the Bar Mills Project is classified as Class A waters. The study report includes hydrology figures, water quality data, and provides a summary of water supply wells and dry hydrant information relevant to the proposed action.

Migratory Fish Passage - Modeling of the zone of passage for migratory fish species at the breached dam indicates that a partial breach or full removal of the spillway will provide similar depth and velocities relative to fish passage. It is recognized that under low river flow conditions water depth may be limiting to fish passing upstream, however, BWPH will have no control of water levels post-decommissioning.

Wetlands - Of the 20 wetlands investigated, 13 are expected to have no substantive change. The remaining seven wetlands are anticipated to remain hydric or saturated. While wetland area may change, either increasing or decreasing in area, the overall quality of wetlands is expected to remain the same, or in some cases, improve. Restoring the more natural hydrologic conditions supports the physical, chemical, and biological processes characteristic of higher quality wetlands. Following dam breach or full spillway removal, shoreline monitoring may be necessary for invasive botanical species.

Recreation - Monitoring conducted in 2023 at the Bar Mills impoundment boat launch and in 2024 at all the Bar Mills recreation sites found relatively low levels of recreational use. However, high water levels at the time of the surveys in 2023 may have impacted use levels. Water Levels – The largest impact to water levels will occur in the reach between the existing dam and the old railroad crossing located approximately 2,200 feet upstream where there is a bedrock ledge that will serve as a hydraulic control post-dam removal. Water levels in this reach are expected to be approximately 6 feet lower after dam

removal. Water levels upstream of the hydraulic control are anticipated to be reduced by approximately 2.5 feet. Based upon water level modeling, it is anticipated that the area between the hydraulic control and the existing dam will largely return to a riverine reach, following the historic main channel through the area currently occupied by the western portion of the spillway.

Historic Resources - BWPH will consult with Maine Historic Preservation Commission to develop any potential recommendations for protective or mitigative measures that may be necessary to address effects on the eight historical resources eligible for listing on the National Register of Historic Places, as applicable.

In summary, the Study Report provides BWPH, regulating agencies, and the public, a collection of field and desktop data relative to the proposed surrender and decommissioning of the Bar Mills Project. The data and information herein aids in the effects analysis and decision-making process for protection, mitigation and enhancement measures for the proposed actions that are contained in the License Surrender Application and Decommissioning Plan.

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1.0 INTRODUCTION

The Bar Mills Project (Project) is a run-of-river facility located on the Saco River in Hollis, York County, Maine. It is downstream of the West Buxton Dam and upstream of the Skelton Dam (Figure 1-1). The Bar Mills Dam is one of six hydroelectric projects on the Saco River that are owned and operated by Brookfield White Pine Hydro (BWPH), LLC, a Brookfield Renewable company. BWPH holds a license to operate the Bar Mills Project issued by the FERC on August 26, 2008, which expires on July 31, 2048. On November 30, 2020, BWPH notified the Federal Energy Regulatory Commission (FERC) of its intent to surrender the FERC license (P-2194).

The FERC license requires run-of-river operations and seasonal minimum bypass and downstream flows from the Project, consistent with the 1997 Flow Agreement[1], and the FERC approved Minimum Flow Monitoring Plan (2011)[2]. The Project is also subject to the 2007 Saco River Fisheries Assessment Agreement[3], amended in 2019[4], which sets the operational date for upstream fish passage facilities at the Project (or an alternative developed in consultation with fisheries agencies) to be May 1, 2025. On November 30, 2020, in accordance with the fish passage alternative specified in the 2019 Amendment, BWPH filed a letter with FERC indicating its intent to surrender the license for the Bar Mills Project.

[1] The April 30, 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River was incorporated as appropriate into the individual project licenses for the Hiram, Bonny Eagle, and Skelton projects.
[2] FERC. 2011. Order Amending Flow Monitoring Plan. Issued January 4, 2011. Accession No.: 20110104-3002.
[3] FERC 2007. Order Modifying and Approving Fish Passage Assessment Report and Recommendations for Fish Passage and Fisheries Management. 120 FERC ¶ 62,050
[4] FERC 2019. Order Approving Revised Fish Passage Assessment and Fish Passage Installation Schedule. 168 FERC ¶ 62,035

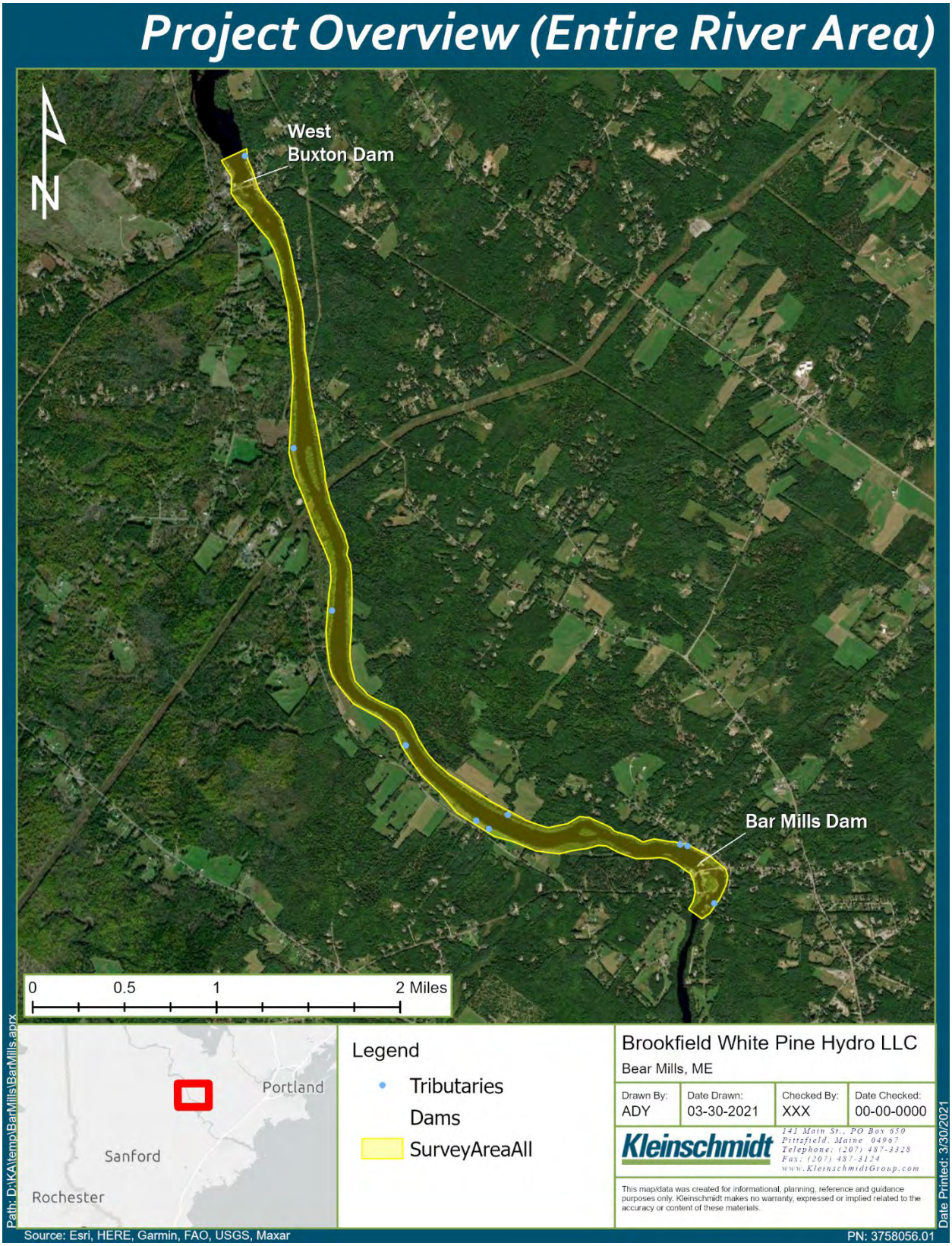


Figure 1-1 Bar Mills Project Overview

2.0 STUDY PLANNING PROCESS

Following consultation with the resource agencies on dam breach and removal options[5], BWPH issued a Preliminary Scoping Document (PSD) on August 1, 2022, describing the Project, and the proposed action for surrender of the FERC license and decommissioning of the project, including partial dam removal. Comments were requested to be submitted by September 1, 2022.

BWPH held a public informational meeting for the license surrender and decommissioning process, including presentation of plans for partial dam removal, for the Project at the Town of Buxton municipal office on August 2, 2022.

BWPH compiled a list of resource issues and studies to be conducted in 2022 and 2023, partially informed through public outreach, which was posted to the project website and distributed to stakeholders on December 5, 2022. BWPH requested that comments and additional study requests be submitted by January 6, 2023. Study requests received were used to inform development of the Proposed Study Plan.

BWPH issued a Draft Study Plan on May 31, 2023, to provide the federal and state agencies, stakeholders and the general public with a description of studies and methodologies that BWPH intended to conduct in support of the Application for License Surrender and Decommissioning Plant.

BWPH issued the Draft Study plan for 30-day agency and public comment and requested any comments be submitted in writing by June 30, 2023. A summary of comments on the Draft Study Plan was provided in Section 4.0 of the Final Study Plan, issued on August 28, 2023. BWPH also held a stakeholder and public meeting on June 14, 2023. Written questions were collected at the meeting, responded to at the meeting to the extent possible, and are summarized with responses in Appendix B of the Final Study Plan. Written comments were provided on the Draft Study Plan by:

- MDEP – June 28, 2023
- Town of Buxton, Board of Selectmen – June 29, 2023

[5] Meetings were held with the US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Maine Department of Marine Resources (MDMR), and Maine Department of Inland Fisheries and Wildlife (MDIFW) on December 17, 2021 and May 19, 2022 to discuss fish passage outcomes for various breach alternatives.

- MDMR – June 30, 2023
- Town of Hollis, Office of the Selectboard – June 30, 2023

The final study plan was issued on August 28, 2023, which included a matrix of comments and BWPH responses. BWPH had intended to conduct proposed field studies during the summer and fall of 2023, with study results provided in a Draft Study Report to be issued for agency, stakeholder and public review in late 2023. However, abnormally high levels of precipitation in Maine and New England during the summer of 2023 resulting in river flows of six to eight times normal average (5,000-6,500 cfs vs. 800 cfs) making field and river access conditions unsafe. Therefore, BWPH postponed field dependent studies until 2024.

In response to feedback from the Towns of Hollis and Buxton during the study planning process, BWPH formed a Decommissioning Committee of ten representatives selected by the Towns to review a preliminary draft of the Study Report, to identify primary issues of concern, and to form subcommittees to evaluate alternatives to address recreational access, water supply under lower water levels associated with groundwater wells and fire suppression, and other concerns identified by the committee members. A series of three meetings were held in August and September 2025, including a site visit. Summaries from the meetings are provided in Appendix A of this Study Report.

In October 2025, BWPH provided agencies and stakeholders the DSR. BWPH held a public meeting on October 30, 2025 to present an overview of DSR results, process steps going forward, and to identify upcoming opportunities for public input over the course of the surrender and decommissioning process. Comments on the DSR are provided in Appendix B of this Study Report.

BWPH developed the Decommissioning Plan, which will include specific proposed protection, mitigation, and enhancement measures that are being considered (e.g., partial or full spillway removal) based on the study comments and study results. A draft of the Surrender Application and Decommissioning Plan was filed with FERC on June 3, 2026.

3.0 STUDY REPORT

This Study Report includes the results of the Bar Mills Project studies conducted leading up to and during the 2024 season in support of the license surrender application. Resource areas for which studies were conducted included:

- Geology and Soils
- Water Quality and Quantity
- Fish and Aquatics
- Wildlife and Botanical Resources
- Recreation
- Land Use
- Aesthetics
- Historic Structures

Section 4.0 of this Study Report includes a brief description of the Project facilities. Individual resource sections provide a description of the study objectives, methodologies, and results, as applicable.

The Project Scoping document, issued in August 2022, identified the proposed action for surrender of the FERC license and decommissioning of the project, including partial dam removal. Based on stakeholder feedback during the scoping and planning process, BWPH has expanded its evaluation of decommissioning alternatives to include the full removal of the spillway. This expanded alternative covers the section from the west side of the log sluice—including the sluice itself—to the abutment on the river side of the former mill intake. This would be in addition to the previously considered partial removal, which included only the western portion of the spillway from the canal to the log sluice. Both alternatives include removal of the canal spillway adjacent to the headgate structure and construction of a flow diversion weir to a height that inflows will be excluded from the canal with the exception of extreme high flow events that would likely occur one to two times per year. BWPH does not intend to dredge or otherwise disturb sediments in the canal and if acceptable under MDEP and USACE permitting, fill portions of the canal with spillway demolition materials.

4.0 PROJECT DESCRIPTION

The Bar Mills Project includes an existing concrete dam that spans the Saco River to the former mill intake structure[6], a granite headwork structure at the entrance to the intake canal, a canal that conveys flow to the powerhouse, a downstream fish passage facility, a powerhouse, appurtenant equipment, and an approximately 5.3-mile-long, 263-acre impoundment (Figure 4-1). A detailed description of the Bar Mills Project is contained in the Preliminary Scoping Document (BWPH 2022). The Bar Mills Project has two generating units with a total rated generating capacity of 4.0 megawatts and a maximum hydraulic capacity (total turbine capacity) of 3,120 cubic feet per second (cfs) (FPL Energy, 2003). The normal pond elevation of the dam is 148.5 feet (NGVD29). The project is not currently operating.

The Bar Mills Project is authorized by the FERC license for run of river operations. Generally, the Bar Mills impoundment levels will fluctuate once or twice daily up to 2-feet below normal full pond elevation of 148.5 ft (NGVD 29) to accommodate flow releases from the Bonny Eagle Project, located upstream of the Bar Mills Project. According to the Project license and Minimum Flow Monitoring Plan[7], the flow requirements at Bar Mills, which are determined by flow releases made at the upstream Bonny Eagle Project, are:

- from April 1 through June 30, the impoundment will be maintained within 1 foot of the full pond elevation (run of river); outflow approximately equal to inflow (run-of-river operations) and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
- from July 1 through September 30, the impoundment will be maintained within 2 feet of the full pond elevation; a Project minimum flow of 400 cfs or inflow, whichever is less and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;
- from October 1 through October 31, the impoundment will be maintained within 2 feet of the full pond elevation and a Project minimum flow of 600 cfs or inflow, whichever is less and a minimum bypass reach flow of 100 cfs, or inflow, whichever is less, will be maintained;

[6] Because the concrete foundation of the demolished Roger Fiber Mill Building built adjacent to the east end of Bar Mills dam is a water retaining structure, FERC required that this structure be included within the project boundary and project drawings pursuant to Article 205 and 304, respectively, of the August 26, 2008 Order Issuing License. The adjacent property is owned by the Town of Buxton.
[7] Approved by FERC on January 4, 2011.

- from November 1 to November 15, the impoundment will be maintained within 2 feet of the full pond elevation; and a Project minimum flow of 600 cfs or inflow, whichever is less and a minimum bypass reach flow of 50 cfs, or inflow, whichever is less, will be maintained; and
- from November 16 through March 31, the impoundment will be maintained within 2 feet of the full pond elevation; and a Project minimum flow of 250 cfs or inflow, whichever is less and a minimum bypass reach flow of 50 cfs or inflow, whichever is less.

Minimum flows, other than those specifically required for the bypass reach, historically were generally conveyed through the powerhouse via generation. During time of unit outage, or during times of inflows in excess of station capacity, flows were conveyed to the bypass reach via the spillway.

Due to alkali-aggregate reaction (AAR) conditions observed in the powerhouse caused by construction materials utilized in the 1950s, prior to current ownership, Units 1 and 2 were considered out-of-service indefinitely as of May and December 2017, respectively. Since that time, all inflow to the Bar Mills Project has been passed via the spillway and bypass reach and the headpond has been maintained at 148.5 feet (NGVD) except for brief periods when flashboards are lowered in anticipation of high flow events.

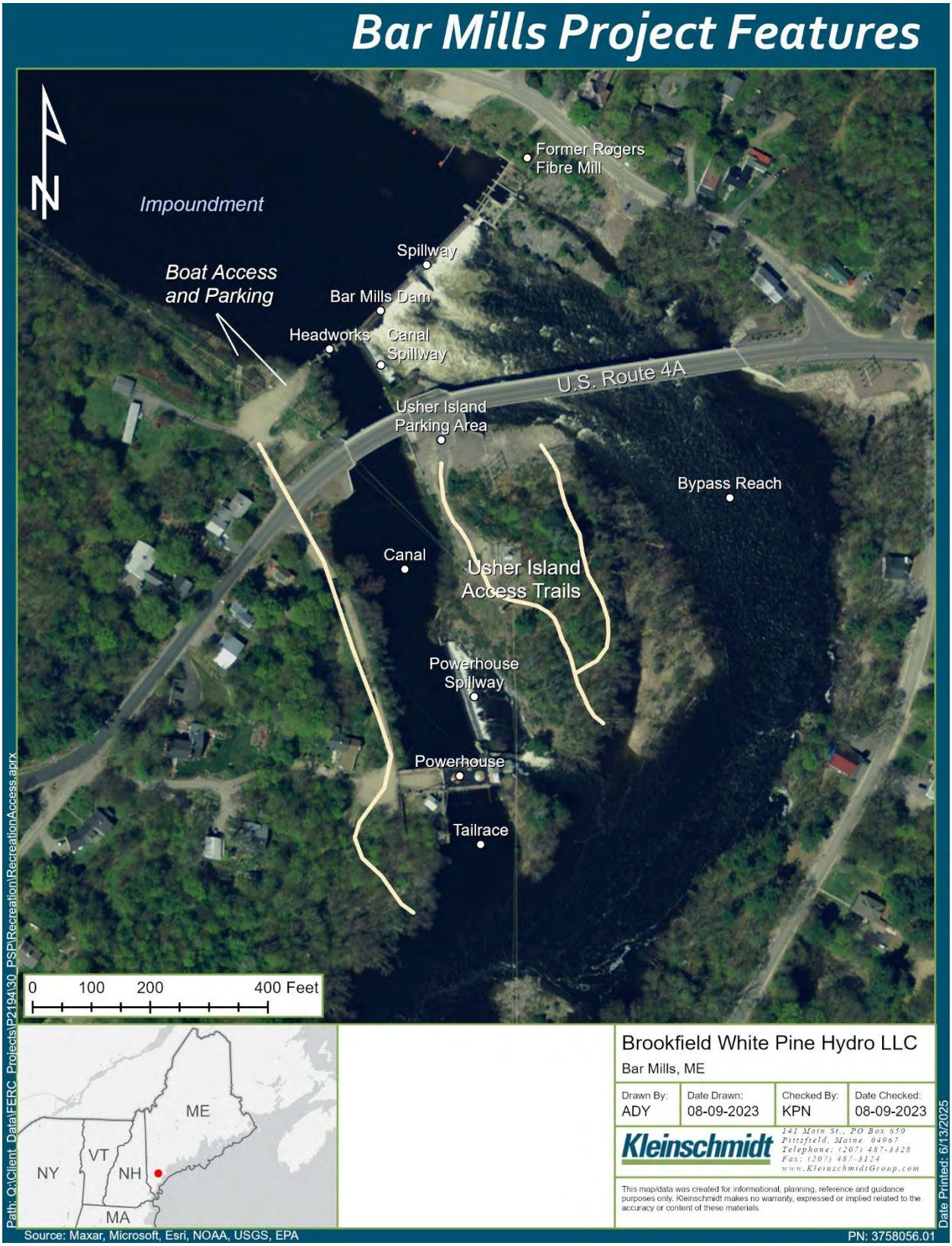


Figure 4-1 Bar Mills Project Features

5.0 GEOLOGY AND SOILS

5.1 Introduction

In response to stakeholder issues raised during scoping with regard to sediments behind Bar Mills Dam, potential for shoreline erosion, and requests for The Towns of Hollis and Buxton requested a Phase I Environmental Site Assessment (ESA), BWPH evaluated three primary aspects of ground disturbance and potential erosion and sediment issues:

- Risk assessment of BWPH properties and remaining structures
- Quantification and composition of sediment behind the Bar Mills Dam and the submerged timber crib dam immediately upstream and
- Identification of potential areas of shoreline bank erosion

Environmental Risk Assessment

For the risk assessment component of this study, BWPH contracted TRC Environmental Corporation (TRC) to conduct an environmental review to evaluate potential environmental concerns on the Bar Mills property (See *Bar Mills Decommissioning Planning Environmental Review* in Appendix C). In conducting this review, TRC used the general principles of a Phase I Environmental Site Assessment (Phase I ESA) as the basis for its review. Phase I ESAs are performed in accordance with the ASTM E 1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and are typically conducted for the sale or transfer of ownership of property, which is not planned for the Bar Mills Project. The purpose of a Phase I ESA is to identify Recognized Environmental Conditions (RECs) at a subject property, as defined by the ASTM E 1527-21 Standard: *"(1) the presence of hazardous substances or petroleum products in, on or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on or at the subject property under conditions that pose a material threat of a future release to the environment."*

Quantification and Composition of Sediments

BWPH collected detailed bathymetry data upstream of Bar Mills dam in 2021 to develop modeling of partial and full spillway removal conditions and potentially quantify potential

sedimentation in the reach upstream of Bar Mills dam. Because this information was insufficient to inform the extent of sedimentation upstream of the dam, BWPH conducted a stepwise approach to employ additional methodologies to characterize the extent of sedimentation and potential sediment sampling locations. This approach consisted of utilizing a boat outfitted with high resolution depth sounding equipment to conduct sonar based subbottom profiling of the approximately 2,200-foot-long reach extending upstream from the Bar Mills dam boater safety barrier to the first hydraulic control. Underwater imagery was collected from the dam by a dive contractor to qualitatively assess sedimentation in the area immediately upstream of the dam that could not be safely accessed by boat.

Shoreline Erosion

Potential for shoreline bank erosion along the impoundment was conducted through field surveys conducted by Kleinschmidt Associates in September 2024, in concert with wetlands, tributary access, and invasive species surveys. The report on study area, methods, and results of these field studies are contained in the report on *Wetland, Botanical, and Shoreline Erosion Study Bar Mills Project FERC NO. 2194* (Draft January 2025), which is contained in Appendix D of this Study Report.

5.2 Environmental Risk Assessment

5.2.1 Background

Cumberland County Power and Light originally constructed the Bar Mills Project in 1919. The Project was completely rebuilt in the 1950's (the dam was rebuilt in 1949-50 and the powerhouse in 1955-56). The Project, as rebuilt, consists of the same primary structures that exist today: a concrete powerhouse, concrete and masonry canal walls, masonry headworks, and concrete dam with hinged steel flashboards. Downstream fish passage facilities were constructed in 1999-2000 and became operational in 2001. Due to alkali-aggregate reaction (AAR) issues which caused misalignment of the operating components of the generating units, among other issues, BWPH ceased operation of the units in 2017. Lands within the project boundary owned by BWPH include the land immediately adjacent to the powerhouse (access road and parking area), lands immediately adjacent to, within, and upstream of the canal and headworks (including the existing trailered boat launch) and Usher Island.

The former Rogers Fibre Mill at the east end of the Bar Mills dam is a United States Environmental Protection Agency (EPA) Superfund Site located on lands owned by the Town of Buxton which are adjacent to and downstream of the Bar Mills Dam. The EPA undertook remediation measures in the late 1990s, including an inventory, sampling and analysis of tanks, vats and/or drums stored onsite; overpacking and staging of any identified hazardous substances; demolition of the structurally unsafe contaminated building; removal of asbestos-contaminated materials; and disposal of any identified hazardous substances and contaminated materials at EPA-approved disposal facilities.

5.2.2 Goals and Objectives

The objective of the Phase I ESA based environmental due diligence assessment is to evaluate past land uses in areas of proposed ground disturbance during construction. The purpose of the study was to assess the potential for contaminated soils and sediments in the areas of construction disturbance to inform the scope of soil and sediment testing and removal and/or potential use of material for regrading the canal. The assessment was intended to identify potential environmental concerns associated with partial or full spillway removal activities and identify protection and/or mitigation measures to be included in the surrender application and decommissioning plan.

5.2.3 Study Area

The Phase 1A (see *Bar Mills Decommissioning Planning Environmental Review* in Appendix C) assessment reviewed what ground disturbing construction activities will be conducted to identify what impacts activities will have on the potential for the release of contaminants. BWPH is not proposing removal of any remnant structures on the property adjacent to the eastern terminus of the spillway. Ground disturbing activities are anticipated to be limited to the:

- All or a portion of the spillway
- All or a portion of the former timber crib dam (currently submerged upstream of the Bar Mills spillway)
- canal headworks and canal
- west shoreline access areas, including the existing boat launch

The property that is delineated on tax maps and survey mapping as owned by the Town of Buxton containing the former Rogers Fibre Mill site was reviewed for existing, publicly

available information regarding the potential for release of contaminants under the partial or full spillway removal scenarios (based on evaluation of hydraulic modelling and erosion potential).

Sediment sampling was anticipated to be conducted upstream of the Bar Mills dam between the dam and hydraulic control approximately 2,200 feet upstream and within the intake canal, depending on results of investigations to assess the location and extent of sedimentation in these areas (See Section 5.3).

5.2.4 Methods

BWPH conducted an environmental due diligence assessment (See Appendix C) in general conformance with the ASTM E 152—21 Standard in the areas where ground disturbing activities will occur to facilitate construction.

The following standard Phase I ESA tasks were conducted as part of the Phase I based due diligence evaluation:

- Perform a site and vicinity reconnaissance, primarily limited to proposed locations for ground/building disturbing construction activities;
- Conduct a historical source review, including review of current, readily available government regulatory databases provided by Environmental Data Resources (EDR) for the Project Area and provide a description of historical site conditions for areas that have the potential for the release of contaminants through ground disturbance, etc.;
- Conduct a review of environmental database and regulatory agency records; and
- Conduct a review of previous environmental reports/documentation.
- Identify the need and extent of sediment sampling for material that will be excavated during construction for contaminant testing.

The findings, opinions, conclusions, and any recommendations for further investigations were compiled which were used to inform final design and construction planning and any enhancement and mitigation measures BWPH are including in the Surrender Application and Decommissioning Plan.

5.2.5 Results

TRC performed an environmental due diligence review (Appendix C) using the general principles of a Phase I ESA per ASTM Practice E1527-21 for the proposed decommissioning of the Bar Mills Project in Hollis and Buxton, York County, Maine. TRC also conducted field inspections of the former Rogers Fibre Mill site and the Bar Mills powerhouse structures.

Based on the documented asbestos-containing materials, volatile organic compounds (VOC), polycyclic aromatic hydrocarbons (PAH), and heavy metals associated with the former mill, and potential petroleum impacts related to the property, TRC determined that it is possible that soil/sediments at and in the vicinity of the mill property have been impacted by these contaminants, including both surficial and shallow soils, as well as deeper soils on the property. This finding is classified as Recognized Environmental Conditions (RECs) for the former mill property that should be further evaluated prior to the disturbance of soil/sediment during the planned decommissioning project. Should the disturbance of soil on the former Rogers Fibre Mill property be required during the planned decommissioning project, the extent of the disturbances should be determined and evaluated prior to the project and/or minimized to the extent feasible during decommissioning of Bar Mills. However, BWPH has no plans to disturb the former mill property.

Portions of a former timber crib dam exist within a few hundred feet upstream of, and parallel with, the current dam and are anticipated to be removed during the planned decommissioning project. TRC determined that the potential exists for the timber used in the former dam to be treated with creosote, a wood preservative derived from the distillation of tar from wood or coal that has been used since the mid-1800s. This finding is considered a REC for the former dam that should be evaluated prior to the disturbance of the timber crib dam to ensure proper management and disposal during the planned decommissioning project.

TRC also evaluated the powerhouse structures with specific focus on the crane building that may be removed during the planned decommissioning project, which contains three motor-driven winch systems. Due to the vintage of one of the three motors (pre-1979) there is potential for presence of polychlorinated biphenyls (PCB). This was considered to be a negligible condition that should be further evaluated should the winch system or crane building be removed as part of the decommissioning.

5.3 Sediment Volume Assessment and Sampling

There was limited information available about the extent of sedimentation upstream of Bar Mills dam and canal headworks, upstream of the submerged timber crib dam, and within the canal, therefore BWPH conducted step-wise field investigations to assess the extent of sediments that may be removed as part of the partial or full spillway removal. BWPH's preliminary site restoration strategy involves the "beneficial use of dewatered excavated material as construction fill" in the decommissioned canal in accordance with Maine's Solid Waste Management Rules Chapter 418, Section 7.A. Therefore, based upon results of bathymetry data analysis, subbottom profiling, and underwater imagery, sediment sampling and testing was conducted along the shoreline margins immediately upstream of the dam and in the canal.

5.3.1 Background

BWPH collected detailed bathymetry data upstream of Bar Mills dam in 2021 to develop modeling of partial and full spillway removal conditions and potentially quantify potential sedimentation upstream of Bar Mills dam. Because this information did not provide information sufficient to inform the extent of sedimentation upstream of the dam, BWPH conducted additional methodologies to characterize the extent of sedimentation and potential sediment sampling locations.

5.3.2 Goals and Objectives

The goal of this study was to estimate the volume and extent of sediment upstream of structures proposed for removal (western portion of Bar Mills dam and submerged timber crib dam, upstream of the canal headgate structure) and within the canal. The objective was to use this data to inform the extent of sediment sampling for testing, including development of removal, treatment, and disposal plans associated with final construction design.

5.3.3 Study Area

Based upon hydraulic modeling of water depths developed from field collection of bathymetry data in 2021, it was determined that under partial and full spillway removal conditions, the presence of a hydraulic control approximately 2,200 feet upstream of the Bar Mills Dam is likely to limit the most significant change in water surface elevations to

the area between the dam and the hydraulic control (Photo 5-1), which was determined to be an appropriate area of study relative to sedimentation.

The area was surveyed utilizing a boat outfitted with high resolution depth sounding equipment to conduct sonar based subbottom profiling of the reach extending upstream from the Bar Mills dam boater safety barrier along 500 foot spaced tracks (Photo 5-2). Manual push probing was conducted in shallow locations (depths of less than 10 feet) as a ground truthing technique. Due to safety constraints, subbottom profiling could not be conducted in the area between the boater safety barrier and the dam but the barrier was slacked to maximize the profiling coverage area to within approximately 50-100 feet of the upstream face of the dam. Underwater imagery was collected from the dam to qualitatively assess the sedimentation immediately upstream of the dam.



Photo 5-1 Reach Between Bar Mills Dam and Upstream Hydraulic Control

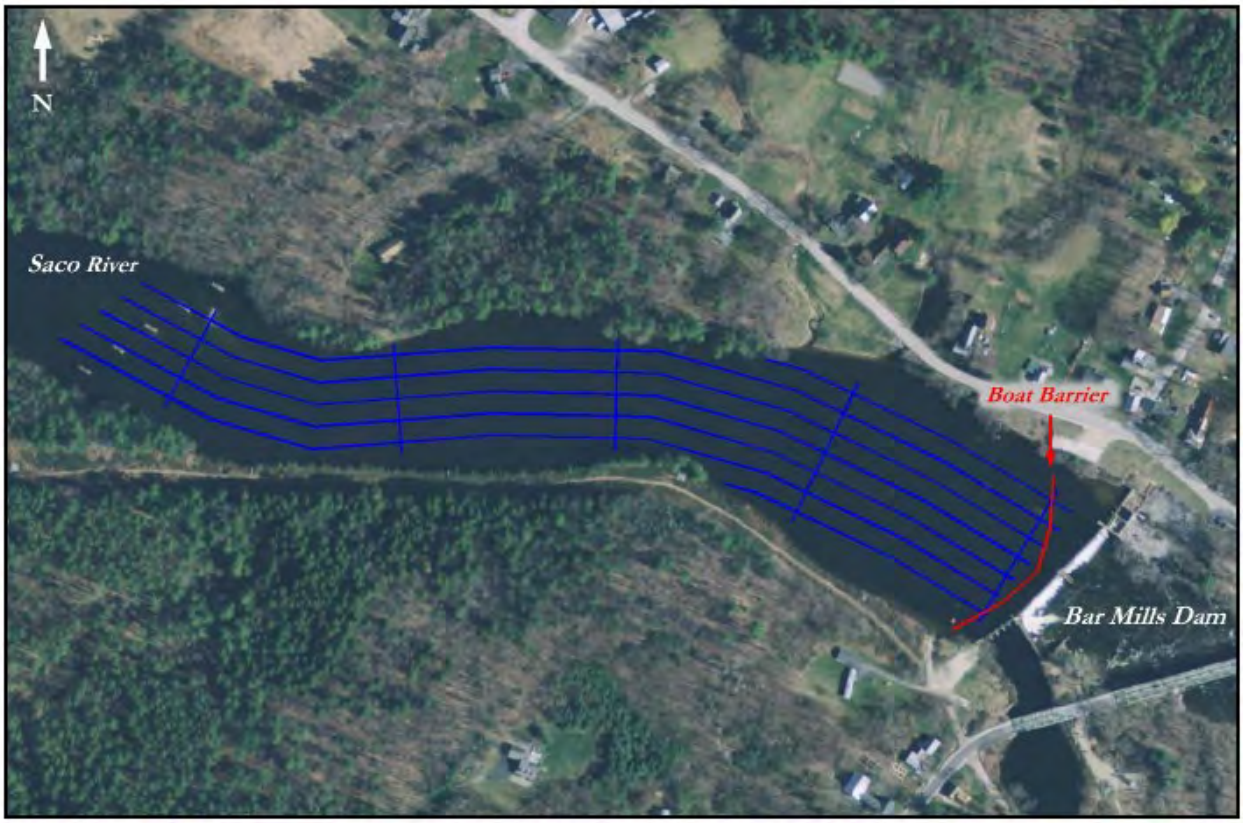


Photo 5-2 Subbottom Profiling Tracks

Underwater imagery immediately upstream of the face of Bar Mills dam showed that very little sediment is accumulated in this area, which is dominated by large boulders, cobble, and woody debris (Photo 5-3 and Photo 5-4). Due to the limited sedimentation found through subbottom profiling and underwater imagery at the face of the dam, TRC conducted limited sampling on the impoundment shoreline margins upstream of the dam, in the canal, and downstream of the former Fibre Mill intake structure (Figure 5-1). This included a sediment sample in the area near the entrance to the former penstocks of the mill dam in consideration of comments provided by the Town of Buxton in a letter dated July 11, 2024.

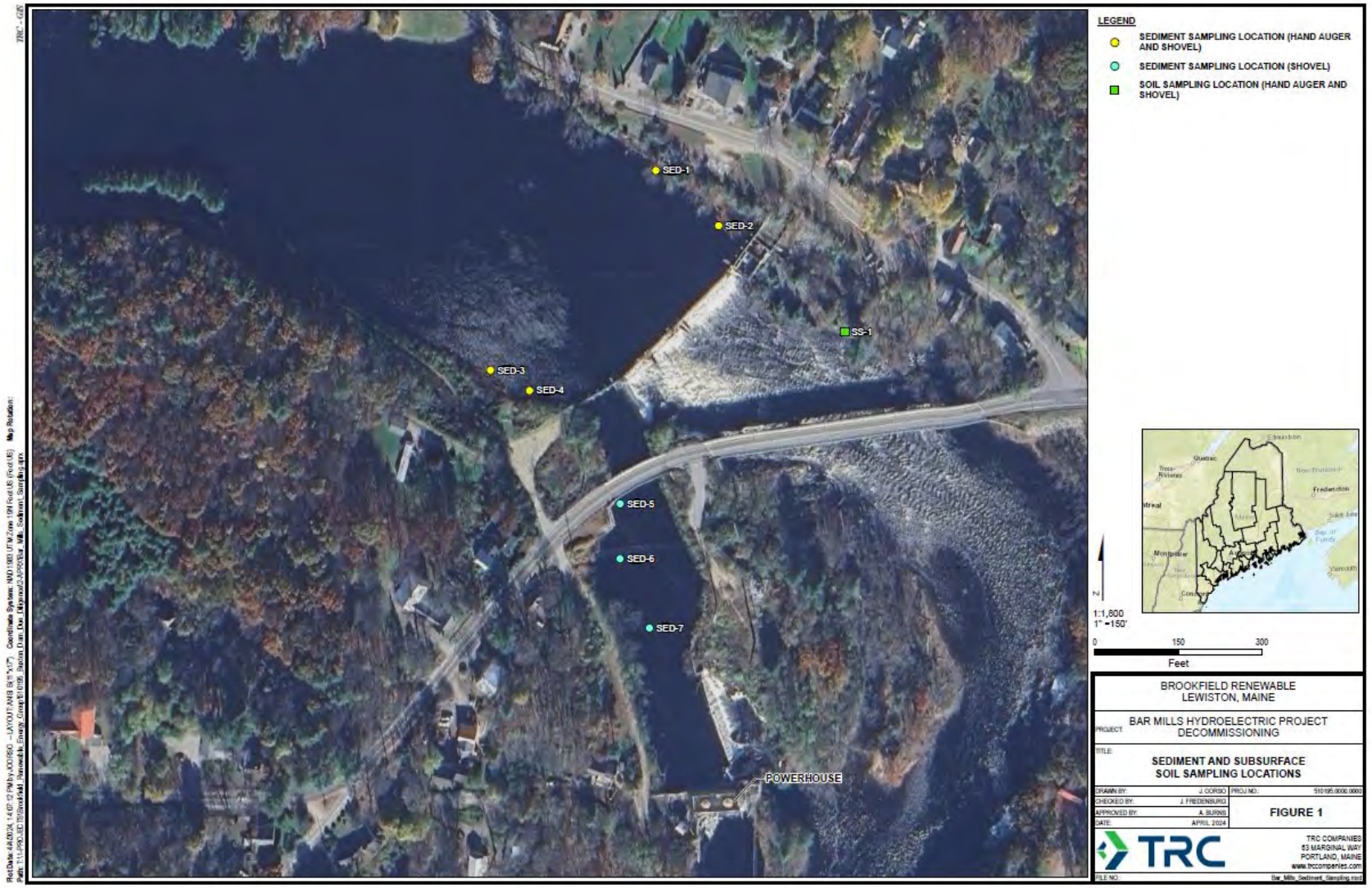


Figure 5-1 Sampling Locations

In addition to sediment and soil sampling and to address an issue raised by the Town of Buxton, TRC also reviewed historic documentation regarding the modified 12-inch diameter pipe and stream channel downstream of the remaining mill dam/foundation. The disposition of the pipe under post-surrender conditions is not a subject intended to be addressed as part of the Study Report but will be discussed with the USEPA and MDEP, as appropriate. EPA correspondence confirms that the purpose of the pipe and stream channel was to increase dissolved oxygen (DO) in the channel, not to minimize migration of contamination from the tailrace (TRC 2025). Prior correspondence from EPA and USACE identifies that the selected alternative to removal of the contaminated sediment was to stabilize the contaminated area with rock to prevent migration to the Saco River and to separately "re-contour the channel in order to have a narrow stream of water to flow and improve the DO content." TRC (2025) concludes that if water levels are likely to drop below the level of the existing channel In the former tailrace area, the channel would likely no longer serve its intended purpose of providing flow for DO enhancement and would no longer be necessary. TRC concurs with the Town of Buxton's recommendation that BWPH present this information to EPA and MDEP to confirm flow through the pipe and engineered channel would not be necessary, post-partial or -full spillway removal. It is anticipated that further consultation with EPA and MDEP will occur as part of permit application development later in the decommissioning process.

5.3.4 Methodology

Sediment Quantity

In an initial phase to estimate the volume of sediment behind the Bar Mills Dam, a series of depth probes were completed in areas with anticipated sediment deposition, to the extent safe access allowed, as inferred from the longitudinal profiles of the bathymetry data collected in 2021. Along this reach BWPH conducted probing of the riverbed in a grid to classify substrate (sand, gravel, cobble, bedrock) and depth to refusal.

Surveying occurred under drawdown conditions and sediment depth was determined by driving a 1-inch steel rod to the point of refusal at selected locations in the impoundment.

The one-dimensional (1D model) and two-dimensional hydraulic model (2D model) developed for the Project used a surface that was developed using bathymetric data collected in 2021. The sediment depths from the probes were used to generate a new bathymetry of potential post-partial and -full spillway removal conditions by lowering the existing bathymetry by the depth of the sediment found in that area. A subset of these

samples had a sample collected to perform a grain size analysis to inform the particle size distribution. Results indicated limited sedimentation but could not sufficiently quantify sedimentation or extents so additional methods were considered for a more comprehensive assessment of sedimentation.

Subbottom Profiling

Because the modeling and depth probing could not sufficiently characterize sedimentation in the study area (from Bar Mills dam upstream to the remnant bridge piers, approximately 2,200 feet upstream of the dam), Ocean Surveys, Inc. (OSI) was contracted to conduct a subbottom profiling survey in June 2024. OSI utilized a dual frequency depth sounder (24 -200kHz), high-resolution Chirp (2-16kHz), and a lower frequency Boomer type (0.5-8kHz) subbottom profiler to acquire data (OSI 2024). The intent of deploying the three subbottom profilers was that the instruments would provide a broad range of energy and frequency to investigate the variable sequence of sediments expected in the survey area (OSI 2024).

Sediment and Soil Testing

Because minimal sedimentation was documented through subbottom profiling and probing in the reach upstream of the Bar Mills boater safety barrier, and underwater imagery at the face of the Bar Mills dam, TRC conducted limited sampling in the western and eastern impoundment shoreline margins upstream of the dam, at three locations in the canal, and downstream of the former Fibre Mill intake structure.

On July 18, 2024, following the lowering of the water level in the impoundment area upstream of the dam, TRC collected a total of four sediment samples from the western and eastern banks of the river upstream of the dam and one soil sample from the "island" downstream from and contiguous with the former Rogers Fibre Mill. On September 23, 2024, following the dewatering of the power canal, TRC collected an additional three surficial sediment samples from the intake canal (Figure 5-1).

Both the sediment and soil samples were collected using hand tools (a combination of hand auger and shovel) from depths ranging between 0 to 0.5 feet and 0 to 2 feet below ground surface (bgs). The samples were submitted to Alpha Analytical in Westborough, Massachusetts (a Pace Analytical Services company) for laboratory analysis of the following parameters based upon Maine Department of Environmental Protection (MDEP) standards (TRC 2025):

- Volatile organic compounds (VOCs) via EPA Method 8260C;
- Semi-volatile organic compounds (SVOCs) via EPA Method 8270C-Selective Ion
- Monitoring (SIM);
- Polychlorinated biphenyl (PCB) Aroclors via EPA Method 8082A;
- Total Petroleum Hydrocarbons via EPA Method 8015D(M);
- Priority Pollutant 13 Metals via EPA Method 6010B;
- Pesticides via EPA Method 8081B;
- Herbicides via EPA Method 8151A;
- Reactive Cyanide and Sulfur via EPA Method 7.3;
- Conductivity via EPA Method 120.1;
- Corrosivity via EPA Method 9045D;
- pH via EPA Method 9045;
- Ignitability via EPA Method 1030;
- Total Cyanide via EPA Method 9010; and
- Sulfate via EPA Method 9038.

As described in TRC ((2025) see Appendix F)Three of the seven sediment samples were analyzed for supplemental analytical parameters of:

- Hexavalent Chromium via EPA Method 7196A;
- Total organic carbon (TOC) via Lloyd Kahn Method; and
- Grain Size (Sieve) via ASTM Method D422.

In addition, each sample was submitted to TRC's Industrial Hygiene Laboratory in Windsor, Connecticut for analysis of asbestos via Polarized Light Microscopy (PLM). TRC did not analyze contaminants such as Dioxans/Furans and Per- and Polyfluoroalkyl

Substances (PFAS) because they are not known to be contaminants of concern for the operations at Project (TRC 2025).

5.3.5 Results

Detailed information regarding sampling and analytical results are contained in a memorandum from TRC titled *Preliminary Limited Sediment/Soil Characterization and Response to Town of Buxton July 11, 2024 Request Brookfield White Pine Hydro Bar Mills Dam – Saco River Buxton and Hollis, Maine*, dated January 7, 2025 (Appendix F of this Study Report (TRC 2025)). A general summary is provided herein.

Sediment Quantity

Subbottom profiling and probe interpretations determined that the survey area investigated is underlain by surficial hardbottom (bedrock/glacial till) throughout the river, with the exception of small portions of sand/gravel and silt/clay along the western and eastern shorelines, respectively (OSI 2024). Results indicate that little sediment exists within the survey area and that preconstruction removal is likely unnecessary. Sixty-six push probes were conducted, of which fifty-four documented hardbottom, interpreted as bedrock or glacial till (OSI 2024). The remaining twelve probes were interpreted as gravel and sand or silt/clay and only appear on the western and eastern, respectively (OSI 2024). Detailed results of the profiling survey are contained in OSI's *Survey Report (OSI Report No. 24ES011) Subbottom Profiling Survey* (See Appendix E).

Due to access safety constraints, OSI was unable to access the area immediately upstream of the Bar Mills spillway. In order to characterize sediment accumulation and composition in this area, BPHA collected underwater video/imagery utilizing a pole mounted video camera to access the area at the upstream face of the dam. Imagery documented little to no sediment accumulation at the upstream face of the dam with primarily cobble/boulder substrate and woody debris (Photo 5-3 and Photo 5-4).



Photo 5-3 Underwater Imagery Immediately Upstream of Bar Mills Dam



Photo 5-4 Boulders and Debris Observed Underwater at the Upstream Face of Bar Mills Dam

Sediment Analysis

The sediment analytical results were compared to the EPA Region 3[8] Biological Technical Assistance Group (BTAG) Freshwater Sediment Screening Benchmarks (August 2006). These benchmarks are generally more stringent relative to MDEP recreator sediment scenarios. Based upon these comparisons, The following polycyclic aromatic hydrocarbons (PAHs) and metals were detected: Acenaphthene (SED-1), Benzo(a)anthracene (SED-1), Benzo(b)fluoranthene (SED-1 and SED-3), Acenaphthylene (SED-1), Indeno(1,2,3-cd)Pyrene (SED-1), Pyrene (SED-1), High Molecular Weight PAHs (SED-1 and SED-5), Low Molecular Weight PAHs (SED-1), and Selenium (All sediment samples) (TRC 2025).

The laboratory reporting limits (RLs) for the sediment samples were also compared to reporting limits established in the USACE *Regional Implementation Manual (RIM) for the Evaluation of Dredged Material Proposed for Disposal in New England Waters* (April 2004). Based upon comparison results TRC (2025) indicated that additional assessment work would be necessary associated with USACE permitting, which will occur later in the decommissioning process.

TRC (2025) indicates that sediment testing results found some Polycyclic Aromatic Hydrocarbons (PAH) and in anticipation that future water levels will be lowered following decommissioning of the Bar Mills Dam, the sampled areas of sediment will likely be exposed. TRC (2025) states that the sampling results, while limited in overall extent, suggest that human exposure is not likely to be a significant pathway of concern in the sampled areas. This includes the area sampled near the entrance to the former penstocks of the former mill intake.

Soil Analysis

Results of the preliminary limited soil sampling investigation do not indicate that soil sampled from the "island" downstream from and contiguous with the former Rogers Fibre Mill contain concentrations of the above-listed analytes at concentrations exceeding the

[8] EPA Region 1 has not established a set of sediment screening criterion for New England and promotes the use of the Region 3 BTAG benchmarks. The Region 3 BTAG benchmarks are generally among the more conservative screening values available. The sediment sampling for this project was intended as a preliminary screening-level evaluation; therefore, Region 3 BTAG benchmarks are appropriate.

MEDEP Remedial Action Guidelines (RAGs) for either the Residential, Commercial Worker, or Construction Worker exposure scenarios. Sampled soil did not contain detectable

amounts asbestos (TRC 2025). There were no exceedances of MEDEP RAGs. TRC (2025) notes that concentration of total chromium detected in sample SS-1 exceeds the Residential RAG for hexavalent chromium. Subsequent hexavalent chromium analysis was conducted for the soil sample (and certain sediment samples) which did not identify detectable concentrations of chromium in this valence state. However, cobble and boulder material used to stabilize the area prevented sampling below six inches so TRC (2025) is uncertain whether potentially impacted soils are present below the stabilizing material. The concentration of total chromium detected in the sample downstream from and contiguous with the former Rogers Fibre Mill exceeds the Residential RAG for hexavalent chromium; however, as subsequent hexavalent chromium analysis of the soil sample (and certain sediment samples) did not identify detectable concentrations of chromium in this valence state, the total chromium results were compared to the RAGs for the less toxic trivalent chromium.

TRC (2025) recommends development of a Sampling and Analysis Plan outlining activities and procedures for the sample collection work should additional sampling be required by MDEP/USACE as part of permitting. TRC (2025) also recommends that BWPH limit disturbance to soil and/or sediment outside the Project Site to the extent feasible during decommissioning through the use of physical barriers, such as matting or temporary access roads underlain by geotextile fabric. If soil disturbance cannot be avoided during decommissioning, it is recommended that soil in these areas be sampled to ensure worker health and safety during the project.

5.4 Shoreline Erosion

An erosion survey of the Project area was conducted in June 2002 associated with the FERC relicensing. This survey involved traversing the entire shoreline by boat, taking note of and photographing areas of erosion, and assessing causes of actively eroding shoreline sections. The results of the survey indicated that shoreline erosion is not prevalent in the Project area (FPLE Maine 2003). A few small, concentrated areas of erosion were observed along the impoundment during the survey; however, the primary cause of these small areas of erosion was determined to be a result of human foot traffic to access the river near homes. Project operations were not considered to be a potential cause of erosion primarily because shoreline areas that are not subject to heavy human use did not have

significant erosion except in localized areas where natural erosion would be expected (*i.e.,* very steep shoreline areas with non-cohesive soils) (FPLE Maine 2003). Natural erosion in areas of steep banks with non-cohesive soils were observed in a few small places but was limited to small areas at the upstream edge of the upper island and on exposed outer banks, which showed signs of minor slumping and tree toppling (FPLE Maine 2003).

Due to the dated existing information from the prior relicensing, potential for shoreline bank erosion along the impoundment was conducted through field surveys conducted by Kleinschmidt Associates in September 2024, in concert with wetlands, tributary access, and invasive species surveys. Bank Erosion Hazard Index (BEHI)[9] ratings scale classify much of the shoreline on the impoundment is at high risk of erosion. However, these conditions are expected to stabilize quickly once the spillway is partially or fully removed, with many of the sandy banks adjusting to the new water elevation and becoming vegetated rapidly. Due to the newly exposed sandy banks, there will be some movement of the finer material in the system; however, historically, this was a cobble/boulder-dominated stream, and the general channel form, shape, and extent are not anticipated to change substantially following the dam breach. The presence of a cobble and bedrock dominated riverbed in the upper reach and downstream of the Bar Mills Dam indicates that the channel bed is relatively stable and, once partial or full spillway removal occurs, the river will settle back into its historical, pre-dam channel form. Additional details describing the study area, methods, and results of the field study are contained in *Wetland, Botanical, and Shoreline Erosion Study Bar Mills Project FERC NO. 2194* (Draft January 2025), which is provided in Appendix D of this Study Report.

5.5 References

FPL Energy Maine Hydro LLC (FPLE Maine). 2003. Bar Mills Hydroelectric Project, FERC No. 2194, Application for New License, Volume I – Application and Exhibits A, E, F, G and H and Appendix A.

OSI Inc. 2024. Survey Report (OSI Report No. 24ES011) Subbottom Profiling Survey.

TRC. 2025. Preliminary Limited Sediment/Soil Characterization and Response to Town of Buxton July 11, 2024 Request Brookfield White Pine Hydro Bar Mills Dam – Saco River Buxton and Hollis, Maine,

[9] BEHI methodology is a standard practice for this type of erosion evaluation. Additional details about BEHI rating are detailed in the report provided in Appendix D of the DSR.

6.0 WATER QUALITY AND QUANTITY

6.1 Introduction

The Bar Mills Project is operated in accordance with the 2008 license and the 1997 Saco River Instream Flow Agreement. Although the turbine units are not currently operated, run-of-river operations have been unchanged since water quality studies were conducted in support of the previous project relicensing. As such, compliance with and attainment of water quality standards would likewise be unchanged.

The Towns of Buxton and Hollis requested a study to determine whether dry hydrants on Depot Street in Buxton and Canal Road in Hollis will remain operational and whether the proposed diversion weir at the upstream end of the canal will allow sufficient water to keep the hydrant operational. The request also included submittal of a plan to the Towns for approval, to mitigate negative effects of water levels on the dry hydrants. BWPH's decommissioning proposal includes a diversion weir at the upstream end of the canal to prevent flow into the canal under normal river flow conditions, therefore, the proposed decommissioning will affect the dry hydrants on Canal Road. In 2024, BWPH informally met with the Hollis and Buxton fire departments during an impoundment drawdown in September 2024 to visually inspect the existing dry hydrant infrastructure. Both hydrants are anticipated to be adversely affected by permanently reduced water levels under a partial or full spillway removal condition. Based upon these observations, BWPH is currently assessing alternative infrastructure layouts to review with the towns in mid-2025.

BWPH contracted TRC to conduct an evaluation of wells in the vicinity of the Bar Mills Dam that may be affected by the dam's removal based upon publicly available well information. Due to limited availability of individual well details (discussed below), BWPH has initiated outreach to the Towns to determine an appropriate course of information gathering and coordination with landowners. BWPH continues to work with a subcommittee formed from the Decommissioning Committee, to plan and implement an outreach and survey for landowners adjacent to the Bar Mills river reach that could potentially be affected by lower water levels. Survey results are anticipated to be obtained during November – December 2025.

BWPH issued a Draft Study Plan on May 31, 2023, which included a Water Quality and Quantity Study to compile readily available existing water quality information at the project and within the Saco River. In comments submitted for the draft study plan, MDEP

requested that macroinvertebrate sampling be conducted before and after dam removal at the site previously monitored by MDEP. Macroinvertebrate sampling was conducted in 2024 at this requested location.

6.2 Background

Water quality classifications for the Saco River were established by the Maine Legislature (38 M.R.S.A. §467). The Saco River from the confluence with the Little Ossipee River to the Skelton Dam, which includes the Bar Mills Project area, is classified as Class A waters. Designated uses for Class A waters include drinking water supply after treatment, fishing, recreation in and on the water, industrial process and cooling water supply, hydroelectric power generation, navigation, and habitat for fish and other aquatic life. Class A waters must have a minimum DO concentration of 7 mg/L or 75 percent saturation, whichever is higher, except for October 1 to May 14 to ensure spawning and egg incubation of indigenous fish, the 7-day mean DO concentration may not be less than 9.5 mg/L and the one day minimum may not be less than 8 mg/L in identified salmonid spawning areas (MRS 2021). The Class A standard for *Escherichia coli* (*E. coli*) bacteria is to not exceed a geometric mean of 64 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of samples in any 90-day interval.

The reach of the Saco River at the Bar Mills Project is designated in the draft 2024 Integrated Water Quality Report as Category 2: rivers and streams attaining some designated uses, no use is threatened, and insufficient data or no data and information is available to determine if the remaining uses are attained or threatened (MDEP 2024a).

6.3 Goals and Objectives

The goal of this study was to characterize water quality and quantity, including assessment of effects of post-partial and full spillway removal water level elevations, based on a summary of available relevant water quality data, publicly available water supply well and dry hydrant information, and hydraulic and hydrology modeling developed in 2021. A component of the study also included benthic macroinvertebrate sampling downstream of the Bar Mills dam at an historic MDEP sampling location in the bypassed reach.

6.4 Study Area

The study area includes the Bar Mills impoundment between the Bar Mills dam and West Buxton tailwater, the Bar Mills bypassed reach, and tailwater reach.

6.5 Methods

6.5.1 Post-Partial and Full Spillway Removal Water Level Assessment

BWPH completed a river elevation model of the reach from Bar Mills Dam to the upper limit of the existing impoundment just downstream of West Buxton. A 1-dimensional (1D) and 2-dimensional (2D) hydraulic model was developed using the state-of-the-art U.S. Army Corps of Engineers' HEC-RAS v6.1 software to simulate the water levels and depths for the existing conditions and post-partial and full spillway removal conditions. Each condition modeled three flows: 300 cubic feet per second (cfs), 400 cfs, and the annual median flow of 2,476 cfs. The 300 cfs flow is intended to represent the lowest summer flows and 400 cfs represents the typical low summer flow.

The following data sources were used to create the HEC-RAS models:

- Aerial Imagery – Environmental Systems Research Institute (ESRI) Aerial Color Imagery Server, accessed April 2020.
- Topographic Data – 2013 Maine Statewide 3 feet LiDAR survey obtained from the U.S. Geological Survey's National Map online data viewer.
- Bathymetric Data – Kleinschmidt Associates collected river bottom data for the river channel between Bar Mills to West Buxton Dam on April 26 through April 29, 2021, using an Acoustic Doppler Current Profiler (ADCP) with an echosounder. The precision or spacing of the data collected is approximately 2 foot spacing for the first 500 feet upstream of the dam and 50 foot spacing for the remainder of the river reach. Note that the proposed bathymetric conditions immediately adjacent to and under the existing concrete and timber crib dams were developed using engineering judgement.

In addition to using the model to characterize and compare pre- and post-partial and full spillway removal water level conditions, BWPH used the model output and historic hydrology data to evaluate potential impacts to reduction of available volume in water supply wells and the dry hydrants resulting from lower impoundment levels.

As part of the detailed design phase of the project, the HEC-RAS model will be used to determine potential velocity and flow issues associated with downstream infrastructure, namely, the Route 4A bridge piers.

6.5.2 Existing Water Quality Data Review

BWPH conducted a desktop search, compilation, and summary of existing baseline water quality data, including prior relicensing studies and any recent and ongoing water quality monitoring and data reported by the state, the SRCC, and any other relevant sources. These data and results were summarized relative to state standards for Class A waters.

6.5.3 Water Supply Wells and Dry Hydrants

BWPH contracted TRC to conduct an evaluation of wells in the vicinity of the Bar Mills Dam that may be affected by the dam's removal based on information obtained from the Maine Geological Survey's water well database; the EDR Radius Map Report; the Maine Geological Survey's Significant Sand and Gravel Aquifers map, Bar Mills Quadrangle, Maine; and 60% design drawings.

As previously noted, BWPH informally met with the municipal fire departments to visually observe the dry hydrants on Depot Street in Buxton and Canal Road in Hollis under drawdown conditions. BWPH is currently evaluating alternatives to modify and/or relocate the hydrant intakes, which will be further reviewed with the fire departments. BWPH has also initiated meetings with representatives for the Towns to further discuss the process for addressing the concerns with effects on the dry hydrants and local water supply wells. It is anticipated that this consultation will continue over the next few months.

6.5.4 Benthic Macroinvertebrate Study

BWPH conducted macroinvertebrate sampling in the Bar Mills bypassed reach in 2024 at Station 648 which was previously sampled in 2002. The sampling station was approximately 500 feet downstream of the dam. The sampling and analysis were conducted in accordance with MDEP "Methods for Biological Sampling and Analysis of Maine's Inland Waters" (MDEP 2014).

BWPH's consultant, Haley Ward, installed three replicate rock bag samplers. The samplers were deployed on August 6, 2024, and retrieved on September 3, 2024. Results, summarized below, were analyzed by Haley Ward and provided to MDEP for a water quality classification determination.

6.6 Results

6.6.1 Post-Partial and Full Breach Water Level Assessment

Based upon hydraulic modeling of water depths developed from field collection of bathymetry data in 2021, it is anticipated that under partial dam removal conditions, the presence of a hydraulic control approximately 2,200 feet upstream of the Bar Mills Dam is likely to limit the most significant change in water surface elevations to the area between the dam and the hydraulic control (Figure 6-1).



Figure 6-1 Reach Between Bar Mills Dam and Upstream Hydraulic Control at Modeled River Flow of 400 cfs Under Partial Spillway Removal



Figure 6-2 Reach Between Bar Mills Dam and Upstream Hydraulic Control at Modeled River Flow of 400 cfs Under Full Spillway Removal

Hydraulic modeling of water depths at 300 cubic feet per second (cfs), 400 cfs, and the annual median flow (50% exceedance) of 2,476 cfs determined the anticipated change in maximum and average water depths through the reach between Bar Mills dam and the remnant piers (hydraulic control). As previously noted, the 300 cfs flow is intended to represent the lowest typical summer flow and 400 cfs represents the typical low summer flow with minimum flows released from West Buxton, upstream. The modeled reduction in normal water levels in this reach averages to 7.7 feet across the three flow conditions and the average reduction in dept is 6.1 feet (Table 6-1, and Figure 6-4). Average and maximum water depths under 300, 400, and 2,476 cfs are presented in Table 6-1.

Table 6-1 Maximum and Average Water Depth for Average Mean, Lowest, and Typical Low Summer Flows Under Partial and Full Spillway Removal Conditions

Maximum Water Depth, BM Dam to Pier Remnants (ft)			
	300 cfs	400 cfs	2,476 cfs
Existing Conditions	17.5	18.1	19.2
Post Partial Removal	9.9	10	11.8
Post Full Spillway Removal	9.9	10.0	11.6
Change in Maximum Depth	7.6	8.1	7.4

Average Water Depth, BM Dam to Pier Remnants (ft)			
	300 cfs	400 cfs	2,476 cfs
Existing Conditions	8.3	8.4	9.3
Post Partial Removal	2.2	2.3	3.1
Post Full Spillway Removal	2.2	2.2	2.9
Change in Average Depth	6.1	6.1	6.2

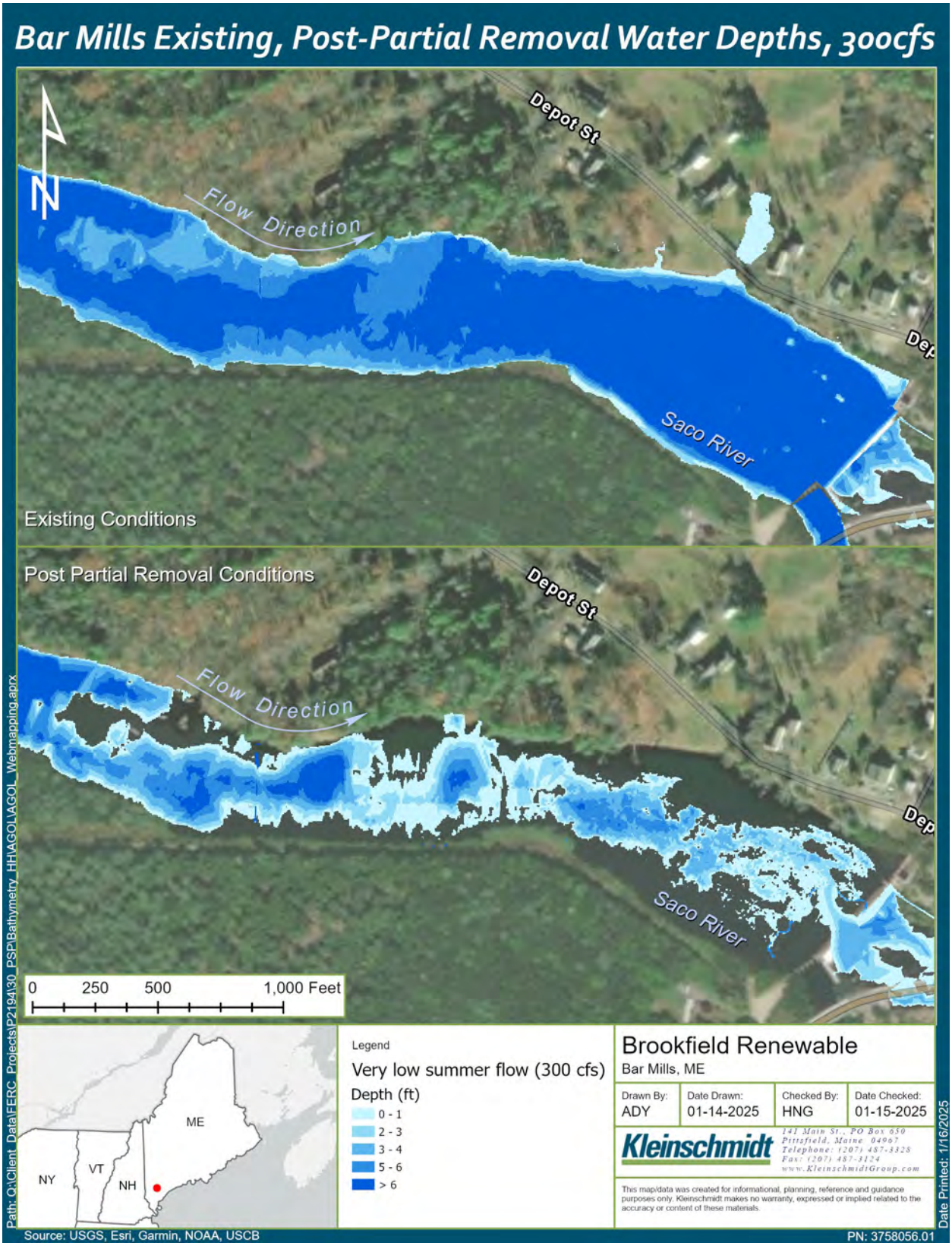


Figure 6-3 Hydraulic Modeling 300 cfs Existing and Partial Removal

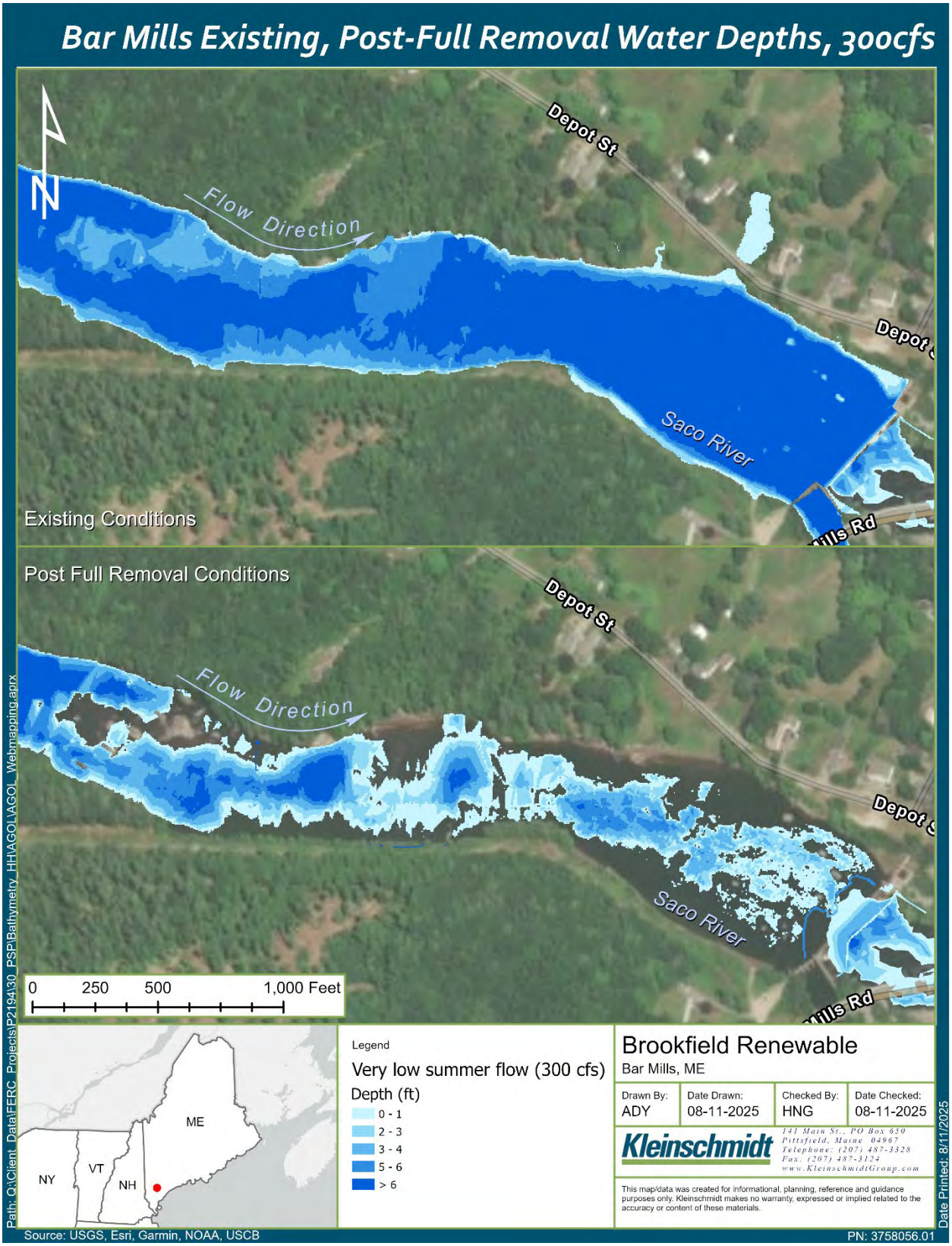


Figure 6-4 Hydraulic Modeling 300 cfs Existing and Full Spillway Removal

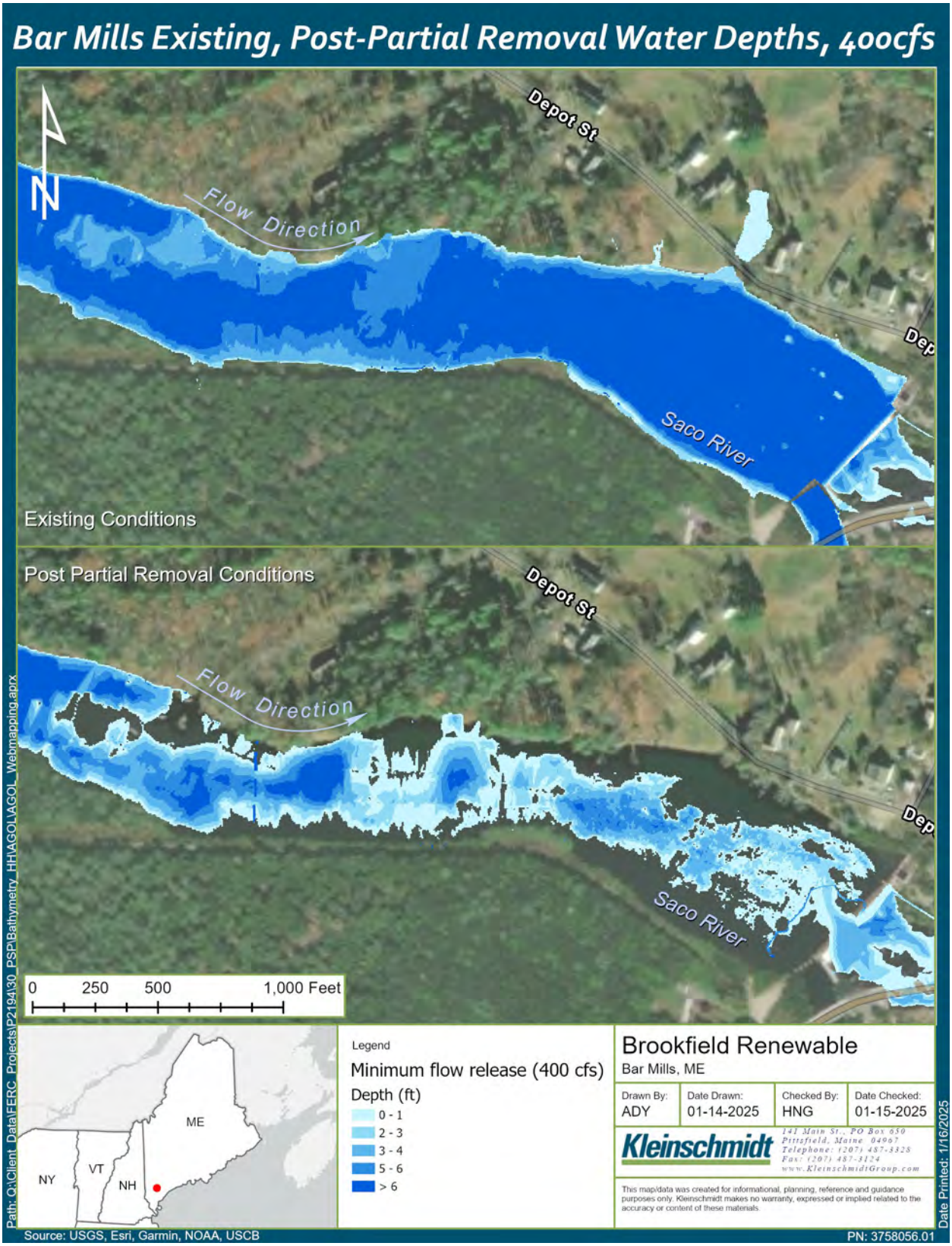


Figure 6-5 Hydraulic Modeling 400 cfs Existing and Partial Removal

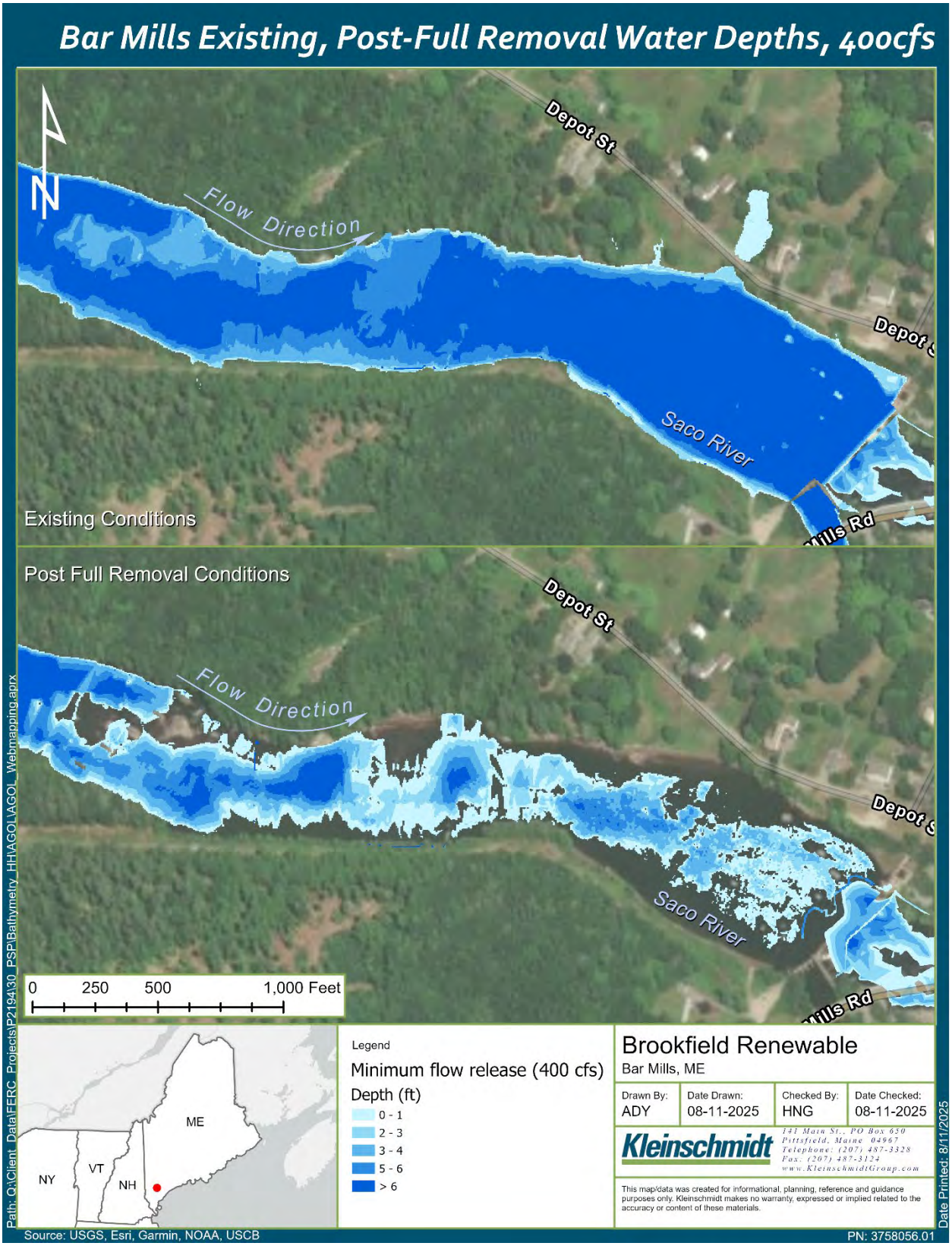


Figure 6-6 Hydraulic Modeling 400 cfs Existing and Full Spillway Removal

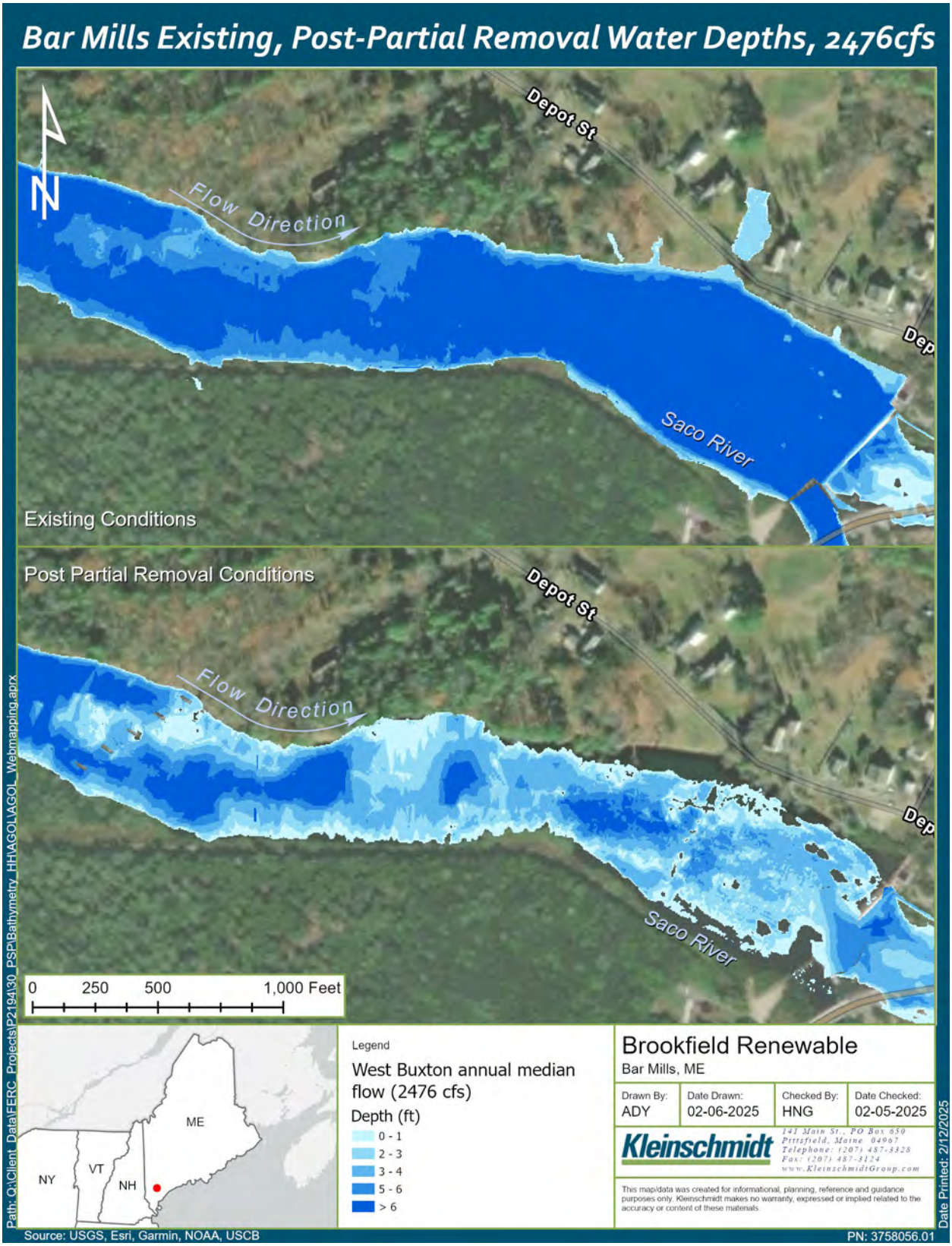


Figure 6-7 Hydraulic Modeling 2,476 cfs Existing and Partial Removal

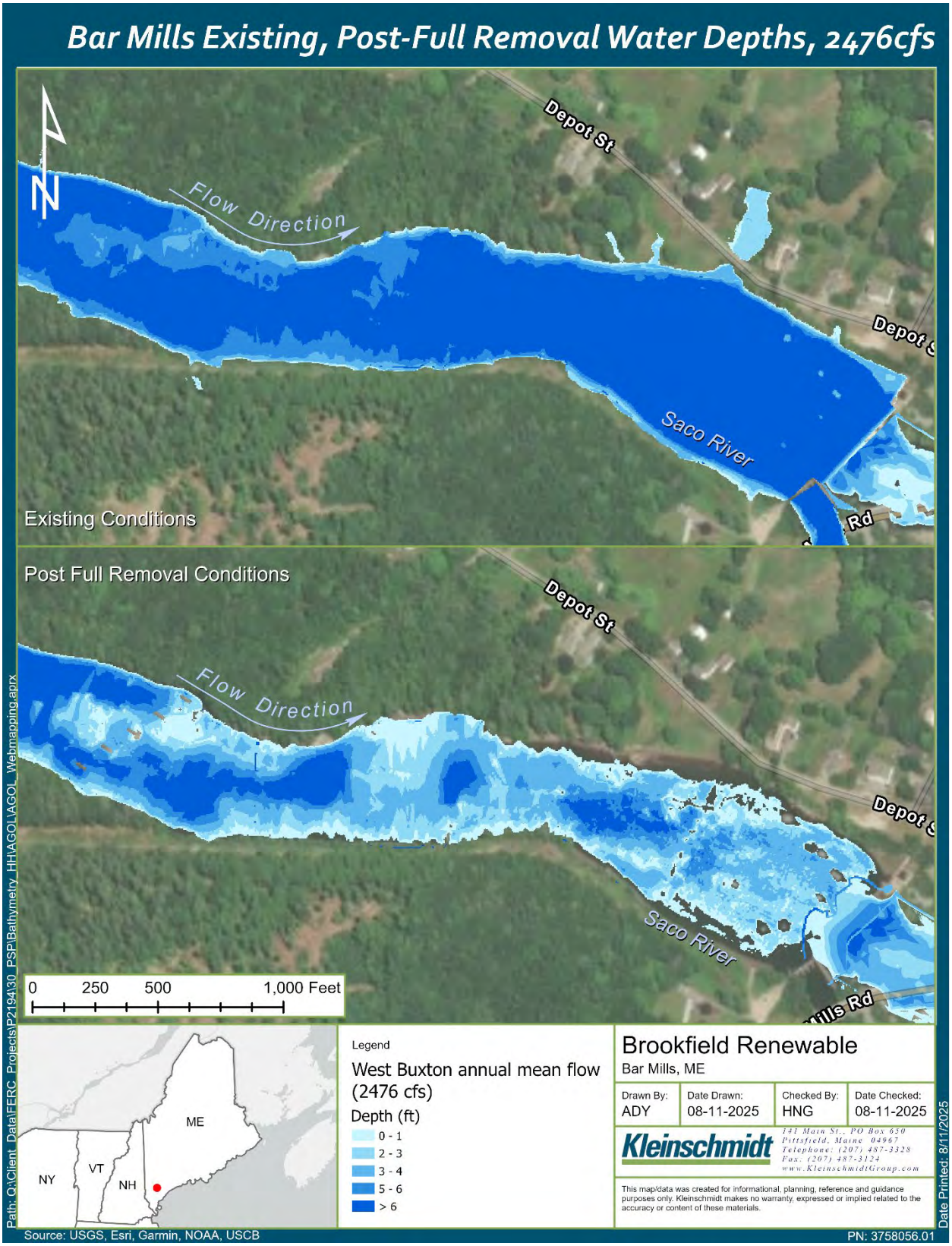


Figure 6-8 Hydraulic Modeling 2,476 cfs Existing and Full Spillway Removal

Modeling results for the reach upstream of the hydraulic control indicate that depths in the main channel under 400 cfs inflow conditions will generally range from 2-3 feet to greater than 6 feet (Figure 6-9).

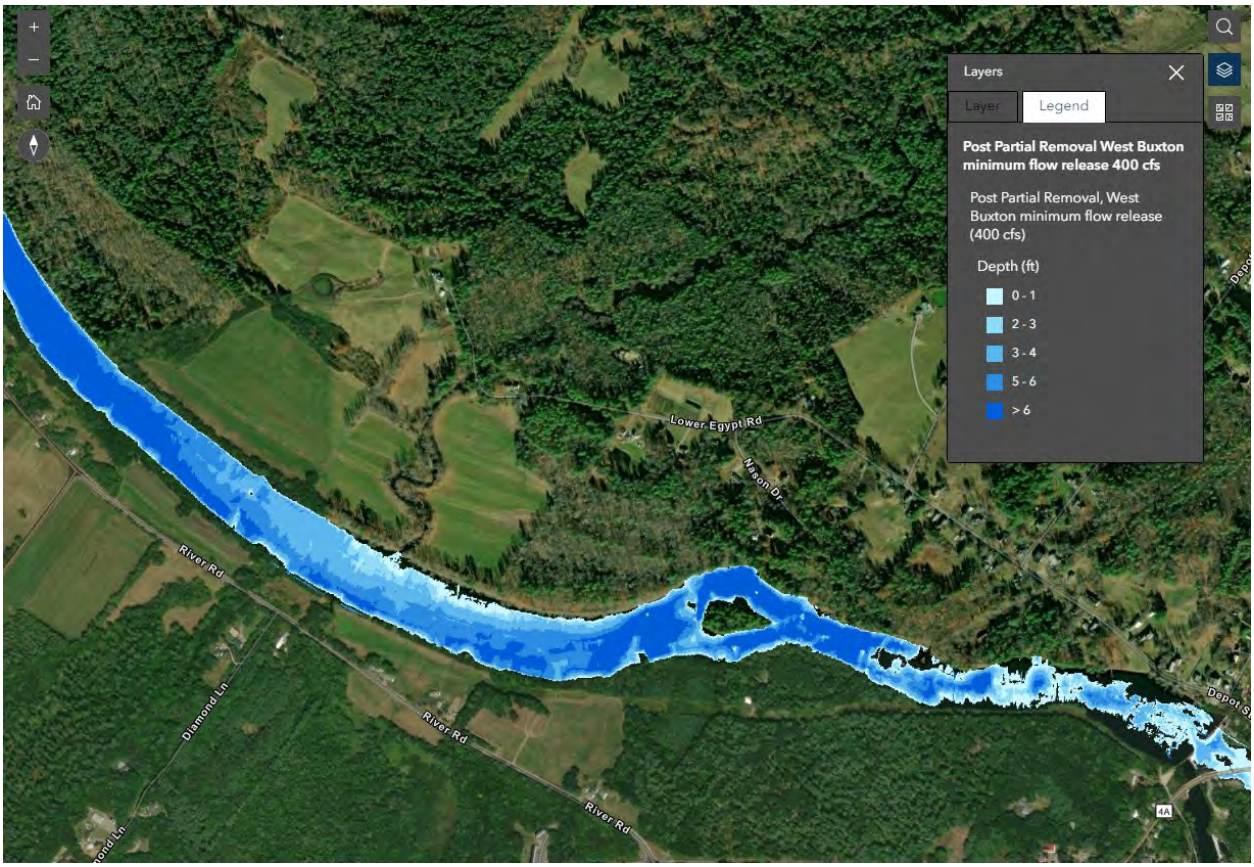


Figure 6-9 Reach Upstream of Mills Dam and Hydraulic Control at Modeled River Flow of 400 cfs Under Partial Removal Conditions

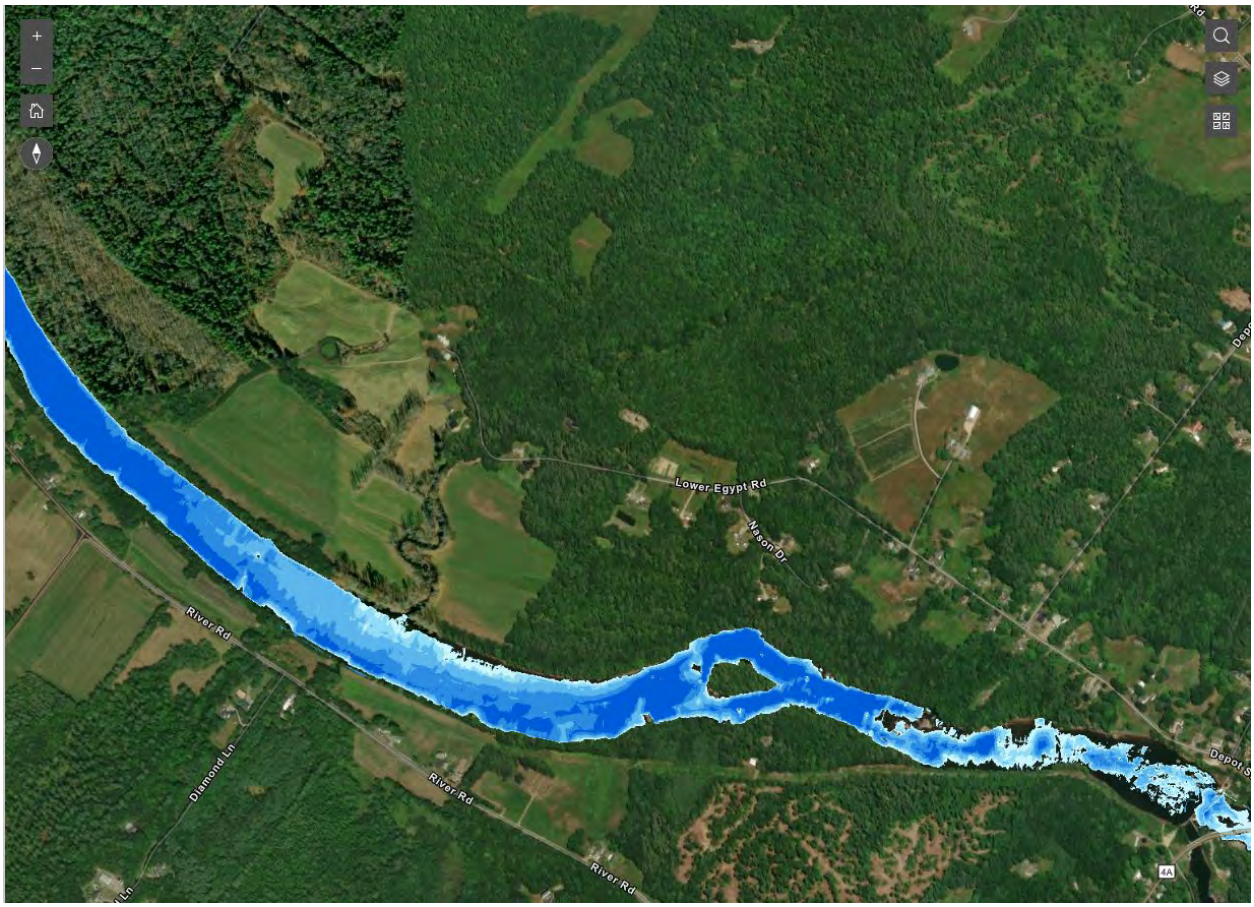


Figure 6-10 Reach Upstream of Mills Dam and Hydraulic Control at Modeled River Flow of 400 cfs Under Full Removal Conditions

6.6.2 Existing Water Quality Data

Several water quality monitoring studies have been completed in the Bar Mills Project vicinity since 2000. The results from these studies are summarized below.

2001 Bar Mills Relicensing Study

FPLE Maine collected ambient water quality data (temperature and DO) at four sites (upper impoundment, lower impoundment, tailrace, bypass reach) at the Bar Mills Project from August 26 to August 29, 2001, to support the FERC relicensing (Figure 6-11) (FPLE Maine 2003). Monitoring was completed in the morning (before 7 AM) and in the late afternoon (after 4 PM). Vertical profiles of the water temperature, DO concentration, and DO percent saturation at the upper and lower impoundment sites demonstrated that the impoundment did not stratify. In the impoundment, the water temperature ranged from

22.8°C to 24.4°C (73.0°F to 75.9°F), the DO concentration ranged from 8.0 mg/L to 8.8 mg/L, and the DO percent saturation ranged from 93.4 percent to 105.2 percent (Table 6-2, Table 6-3). In the bypass reach, the water temperature, DO concentration, and DO percent saturation ranged from 22.8°C to 24.9°C (73.0°F to 76.8°F), 8.1 mg/L to 9.1 mg/L, and 94.9 percent to 105.7 percent, respectively (Table 6-4). In the tailwater, the water temperature, DO concentration, and DO percent saturation ranged from 23.1°C to 24.3°C (73.6°F to 75.7°F), 8.3 mg/L to 8.5 mg/L, and 97.1 percent to 101.2 percent, respectively (Table 6-5). Results of the study and comments provided by the MDEP demonstrated that the Bar Mils Project waters met the designated Class A water quality standards (FPLE Maine 2003, MDEP 2008). "NS" in the referenced tables indicates that no sample was collected.

FPLE Maine collected benthic macroinvertebrate samples at the upper end of the Bar Mills Project impoundment (downstream of West Buxton dam) in August through September 2001 in support of the FERC relicensing (S-596 in Figure 6-11) (MDEP 2024b). Benthic macroinvertebrate sampling was completed in the Bar Mills bypass reach from July to August 2002 (S-648 in Figure 6-11) (MDEP 2024c). The results of macroinvertebrate sampling in the Bar Mills impoundment and bypass reach and comments provided by the MDEP indicated that Bar Mills Project waters were attaining their designated aquatic life standards for Class A waters (FPLE Maine 2003, MDEP 2008).

Table 6-2 Water Quality Data, August 26-29, 2001, Bar Mills Upper Impoundment.

Sample Dates:		8/26/2001			8/27/2001						8/28/2001						8/29/2001		
River Flow (CFS):		GENERATING, NO SPILL, 325 CFS			LEAKAGE, NOT GENERATING, 325 CFS						NO SPILL, SPILLING PM, NOT GENERATING, 350 CFS						LEAKAGE, GENERATING, 325 CFS		
Time: Weather/Temp.:		6:30 PM PARTLY CLOUDY, 80'S			5:30 AM HUMID, HIGH 60'S			6:00 PM OVERCAST, HUMID			6:30 AM PARTLY CLOUDY			5:30 PM PARTLY CLOUDY			6:30 AM CLEAR COOL		
Depth (Meters)	Sample Location	DO (mg/L)	Temp. (°C)	% Sat.	DO (mg/L)	Temp. (°C)	% Sat.	DO (mg/L)	Temp. (°C)	% Sat.	DO (mg/L)	Temp. (°C)	% Sat.	DO (mg/L)	Temp. (°C)	% Sat.	DO (mg/L)	Temp. (°C)	% Sat.
	1/4	8.4	24.2	99.8	8.3	23.0	96.8	8.8	23.8	104.9	8.0	22.9	93.4	8.4	23.9	99.6	8.1	23.1	94.8
Surface	1/2	8.4	24.3	99.7	8.3	23.1	96.8	8.8	23.8	105.1	8.0	22.9	93.5	8.4	23.9	99.5	8.1	23.1	94.9
	3/4	8.3	24.2	99.8	8.2	23.1	95.9	8.8	23.8	105.2	8.0	22.8	93.6	8.4	23.9	99.6	8.1	23.1	94.5
	1/4	8.3	24.1	99.6	8.2	23.1	96.1	8.8	23.7	104.1	8.0	23.0	93.8	8.3	23.9	99.6	8.1	23.1	94.3
1	1/2	8.3	24.2	99.6	8.3	23.1	96.8	8.7	23.8	105.1	8.1	23.0	93.9	8.3	23.8	99.4	8.1	23.1	94.3
	3/4	8.3	24.2	99.8	8.2	23.1	95.6	8.8	23.7	104.7	8.1	23.0	93.9	8.3	23.8	99.6	8.1	23.1	94.4
	1/4	8.3	24.1	99.4	8.2	23.1	95.5	8.7	23.7	102.7	8.0	23.0	93.8	8.3	23.8	99.4	8.1	23.1	94.4
2	1/2	8.3	24.2	99.4	8.2	23.2	95.6	8.7	23.7	102.5	8.0	23.0	93.8	8.3	23.8	99.4	8.1	23.1	94.3
	3/4	8.3	24.1	99.6	8.2	23.1	95.5	8.8	23.7	104.1	8.0	22.9	93.8	8.3	23.8	99.4	8.1	23.1	94.2
	1/4	8.3	24.1	99.4	8.2	23.1	95.5	8.7	23.7	102.4	8.0	23.0	93.7	8.3	23.8	99.2	8.1	23.1	94.3
3	1/2	8.3	24.1	99.2	8.2	23.2	95.6	8.7	23.7	102.4	8.0	23.0	93.8	8.3	23.8	99.3	8.1	23.1	94.2
	3/4	8.3	24.1	99.4	8.1	23.1	95.1	8.8	23.7	103.0	8.0	22.9	93.8	8.3	23.8	99.4	8.1	23.1	94.1
	1/4	8.3	24.0	99.2	8.2	23.1	95.5	8.6	23.6	101.8	8.0	23.0	93.7	8.3	23.7	99.0	8.1	23.1	94.3
4	1/2	8.3	24.0	99.1	8.0	23.2	93.8	8.6	23.6	101.4	8.0	23.0	93.8	8.3	23.7	99.1	8.0	23.1	93.7
	3/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/4	8.3	24.0	99.1	8.1	32.1	94.8	8.6	23.5	101.1	8.0	22.9	93.6	8.3	23.7	99.0	8.1	23.1	94.3
5	1/2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Transect Location	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)
1/4	4	5	4.5	5	5	5	5	5	5	5	4.8	4.8
1/2	4	4	4	4	4	4	4	4	4	4	4	4
3/4	3	3	2.8	2.8	3	3	3	3	3	3	3	3

Table 6-3 Water Quality Data, August 26-29, 2001, Bar Mills Lower Impoundment.

Sample Dates:		8/26/2001			8/27/2001						8/28/2001						8/29/2001		
River Flow (CFS):		GENERATING, NO SPILL, 325 CFS			LEAKAGE, NOT GENERATING, 325 CFS						NO SPILL, SPILLING PM, NOT GENERATING, 350 CFS						LEAKAGE, GENERATING, 325 CFS		
Time: Weather/Temp.:		6:30 PM PARTLY CLOUDY, 80'S			5:30 AM HUMID, HIGH 60'S			6:00 PM OVERCAST, HUMID			6:30 AM PARTLY CLOUDY			5:30 PM PARTLY CLOUDY			6:30 AM CLEAR COOL		
Depth (Meters)	Sample Location	DO (mg/L)	Temp. (ºC)	% Sat.	DO (mg/L)	Temp. (ºC)	% Sat.	DO (mg/L)	Temp. (ºC)	% Sat.	DO (mg/L)	Temp. (ºC)	% Sat.	DO (mg/L)	Temp. (ºC)	% Sat.	DO. (mg/L)	Temp. (ºC)	% Sat.
Surface	1/4	8.3	24.4	99.9	8.4	23.8	99.5	8.8	23.8	103.9	8.3	23.0	96.6	8.4	23.9	99.7	8.3	23.0	96.9
	1/2	8.3	24.3	100.0	8.5	23.8	100.1	8.8	23.8	103.5	8.3	23.0	96.7	8.4	23.9	99.7	8.3	23.1	96.2
	3/4	8.3	23.3	99.9	8.4	23.8	99.8	8.7	23.7	103.1	8.3	23.0	96.7	8.4	23.9	99.8	8.3	23.1	96.8
1	1/4	8.3	24.4	99.5	8.2	23.8	98.7	8.8	23.8	103.5	8.3	23.0	96.5	8.3	23.9	99.6	8.3	23.1	96.9
	1/2	8.3	24.4	99.6	8.4	23.9	99.1	8.8	23.7	103.5	8.2	23.1	96.1	8.4	23.9	99.7	8.3	23.1	96.5
	3/4	8.3	24.4	99.1	8.3	23.9	99.4	8.7	23.7	103.0	8.3	23.1	96.2	8.4	23.9	99.7	8.3	23.1	96.6
2	1/4	8.3	24.4	99.9	8.4	23.9	99.5	8.7	23.7	102.4	8.2	23.2	96.3	8.3	23.8	99.5	8.3	23.1	96.9
	1/2	8.2	24.4	98.9	8.3	23.9	98.8	8.7	23.7	102.6	8.2	23.2	96.3	8.3	23.8	99.6	8.3	23.1	96.6
	3/4	8.3	24.4	99.5	8.4	23.9	99.3	8.7	23.7	102.8	8.3	23.2	96.4	8.3	23.8	99.7	8.2	23.1	96.2
3	1/4	8.3	24.4	99.2	8.3	23.9	98.8	8.7	23.5	102.1	8.2	23.2	96.3	8.3	23.7	99.5	8.3	23.1	96.9
	1/2	8.3	24.4	98.7	8.3	23.8	99.0	8.7	23.6	102.1	8.2	23.2	96.3	8.3	23.8	99.5	8.3	23.1	96.6
	3/4	8.2	24.4	98.5	8.4	23.8	99.4	8.7	23.6	102.1	8.2	23.2	96.3	8.3	23.8	99.5	8.2	23.1	96.2
4	1/4	8.3	24.4	99.1	8.3	23.9	98.5	8.7	23.4	101.2	8.2	23.2	96.2	8.3	23.7	99.2	8.3	23.1	96.4
	1/2	8.3	24.4	99.4	8.3	23.8	98.8	8.7	23.4	101.2	8.2	23.2	96.2	8.3	23.7	99.4	8.3	23.1	96.7
	3/4	8.3	24.4	99.0	8.3	23.8	99.3	8.7	23.5	101.5	8.2	23.2	96.1	8.3	23.7	99.4	8.2	23.1	96.3
5	1/4	8.2	24.4	98.6	8.3	23.8	98.4	8.6	23.4	100.2	8.2	23.2	96.1	8.3	23.7	99.2	8.2	23.1	96.0
	1/2	8.2	24.4	98.7	8.3	23.8	98.5	8.6	23.4	100.4	8.2	23.2	96.1	8.3	23.7	99.2	8.3	23.1	96.4
	3/4	8.2	24.4	98.7	8.3	23.8	99.1	8.6	23.4	100.5	8.2	23.2	96.1	8.3	23.7	99.4	8.3	23.1	96.4
6	1/4	NS	NS	NS	8.3	23.8	98.2	NS	NS	NS	NS	NS	NS	8.3	23.7	99.1	8.2	23.1	95.5
	1/2	8.1	24.4	97.2	8.3	23.8	98.5	8.6	23.3	100.3	8.2	23.2	96.1	8.3	23.6	99.1	8.2	23.1	96.4
	3/4	8.2	24.4	98.7	8.3	23.8	98.7	8.6	23.4	100.2	8.2	23.2	96.0	8.3	23.7	99.2	8.2	23.1	96.3
7	1/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.3	23.6	99.1	8.2	23.1	95.2
	1/2	NS	NS	NS	8.3	23.8	98.2	8.5	23.3	99.8	8.2	23.2	96.1	8.3	23.6	99.1	8.2	23.1	96.3
	3/4	8.2	24.4	98.5	8.3	23.8	98.4	8.6	23.3	100.0	8.2	23.2	96.0	8.3	23.6	99.2	8.2	23.1	96.3
8	1/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/2	NS	NS	NS	8.2	23.8	97.7	8.4	23.2	99.6	8.2	23.2	96.0	8.3	23.6	99.0	8.2	23.1	96.1
	3/4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.3	23.6	99.0	8.2	23.1	96.1

Transect Location	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)	Secchi Disk Depth (m)	Total Depth (m)
1/4	5	5	5	5.2	5	5	5.2	5.3	5	6.4	5	6.5
1/2	5	5	5	7.5	5	7.4	5.2	7.4	5	7.5	5.5	7.4
3/4	5	6.6	5	6.6	5	6.3	5.2	6.7	5	7.4	5	7.3

Table 6-4 Water Quality Data, August 26-29, 2001, Bar Mills Bypass Reach.

Date	8/26/2001	8/27/2001	8/27/2001	8/28/2001		8/29/2001
Operations, River Flow (cfs)	No spill, generating, 325 cfs	Leakage, not generating, 325 cfs		No spill AM, spilling PM, not generating, 350 cfs		Leakage, generating, 325 cfs
Time:	7:00 PM	5:20 AM	7:00 PM	6:50 AM	6:15 PM	6:50 AM
Weather	Partly Cloudy, 80s	Humid, high 60s	Overcast, humid	Partly cloudy	Partly cloudy	Clear, cool
DO (mg/L)	8.1	8.2	8.6	8.8	8.7	9.1
Temp (°C)	24.9	22.8	24.0	22.9	23.7	22.9
DO % Saturation	98.1	94.9	103.8	102.1	102.7	105.7

Table 6-5 Water Quality Data, August 26-29, 2001, Bar Mills Tailwater.

Date	8/26/2001	8/27/2001	8/27/2001	8/28/2001		8/29/2001
Operations, River Flow (cfs)	No spill, generating, 325 cfs	Leakage, not generating, 325 cfs		No spill AM, spilling PM, not generating, 350 cfs		Leakage, generating, 325 cfs
Time:	5:45 PM	7:10 AM	7:00 PM	6:55 AM	6:25 PM	7:05 AM
Weather	Partly Cloudy, 80s	Humid, high 60s	Overcast, humid	Partly cloudy	Partly cloudy	Clear, cool
DO (mg/L)	8.3	8.3	8.4	8.4	8.5	8.5
Temp (°C)	24.3	23.6	23.8	23.1	24.1	23.2
DO % Saturation	99.5	97.1	100.1	97.6	101.2	99.3

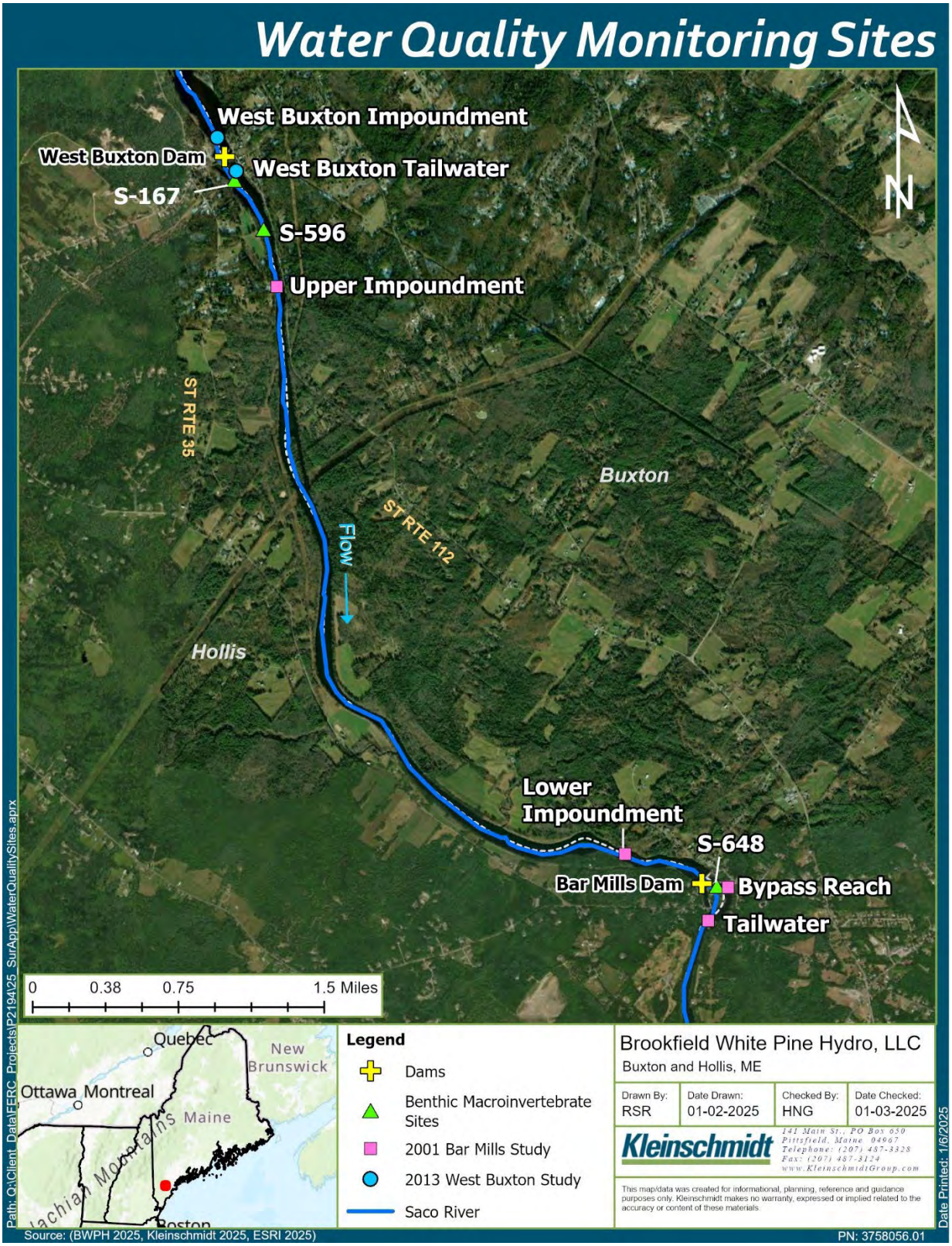


Figure 6-11 Water Quality Study Sampling Sites at the Bar Mills and West Buxton Projects.

2013 West Buxton Study

The licensee of the West Buxton Project (FERC No. 2531) completed water quality monitoring in 2013 in the West Buxton impoundment and tailrace (Figure 6-11) (BWHP 2015). The monitoring was conducted in support of the project relicensing and in accordance with MDEP sampling protocols. The Bar Mills Project impoundment extends upstream approximately 5 river miles to the downstream extent of the West Buxton Project.

Vertical profiles of water temperature and DO (concentration and percent saturation), a water transparency measurement, and water samples (analyzed for chlorophyll-a, total phosphorus, pH, color, total alkalinity) were collected two times per month from June to October 2013 at the deep spot in the impoundment. The vertical profiles demonstrated that the impoundment did not thermally stratify. The water temperature ranged from 12.7°C (54.9°F) to 25.9°C (78.6°F), the DO concentration ranged from 7.7 mg/L to 12.3 mg/L, and the DO percent saturation ranged from 93.8 percent to 115.6 percent demonstrating that DO was in attainment with the Class A standards. Chlorophyll-a (1.0 µg/L to 2.6 µg/L in 9 of 10 samples) and total phosphorus (9 µg/L to 18 µg/L) met draft nutrient criteria and demonstrated low productivity. The water transparency ranged from 2.1 m to 4.8 m, and pH ranged from 6.9 to 7.2.

In the West Buxton tailrace, sampling was conducted once per week in the morning and afternoon for 10 weeks between July 17 and September 18, 2013 (BWHP 2015). The water temperature ranged from 17.0°C (62.6°F) to 26.6°C (79.9°F), the DO concentration ranged from 8.2 mg/L to 10.2 mg/L, and the DO percent saturation ranged from 96.6 percent to 107.3 percent. Class A standards for DO were met on all sampling days.

Benthic macroinvertebrate community sampling was conducted downstream of the West Buxton tailrace (upper end of Bar Mills impoundment) from July 26 to August 23, 2013 (S-167 in Figure 6-11). Results from this sampling indicated that the macroinvertebrate community was diverse, abundant, and rich in taxa and that sensitive organisms accounted for a large portion of the community. MDEP evaluated the results of the macroinvertebrate samples collected in the West Buxton tailwater area with their linear discriminant model and determined that the aquatic community in the Saco River downstream of the West Buxton Project attained Class A standards (BWHP 2015, MDEP 2024d).

Saco River Corridor Commission

Water quality monitoring has been conducted by the Saco River Corridor Commission (SRCC) since 2001 at numerous (over 50) stations along the Saco River (SRCC 2024). The SRCC monitoring program collects surface water quality data once or twice per month from May to September or October at sites along the Saco River, the Ossipee River, the Little Ossipee River, and several smaller tributaries and ponds (SRCC 2024).

Turbidity, pH, conductivity, DO concentration, DO percent saturation, water temperature, and E-coli data from four sites at or near the Bar Mills Project are presented below (Figure 6-12, Table 6-6, 6-7, 6-8, and 6-9). Site S18 is located just upstream (approximately 200 feet) of the Bar Mills dam and powerhouse on river left near the site of the old Rogers Fibre Mill. Site S17 is approximately 6.5 river miles upstream of the Bar Mills Dam and approximately 500 feet upstream of the Bonny Eagle Project powerhouse. Site S19-U is approximately 1.3 river miles downstream of the Bar Mills dam in the Skelton Project impoundment, and Site S19-J is approximately 3.2 river miles downstream and just above the Skelton Project dam.

Since 2001, at Sites S18 just upstream of the Bar Mills dam and within the project boundary, approximately 98 percent and 99 percent of the DO concentration and percent saturation measurements exceeded the Class A standards of 7 mg/L and 75 percent saturation, respectively (Table 6-6). The median DO concentration and percent saturation from 2001 through July 2024 were 8.6 mg/L and 97.0 percent, respectively. The median and average pH (6.9) were consistent with levels observed in Class A waters (Table 6-6). Maximum water temperatures (approximately 23°C to 26°C) were observed in mid-July through August. Turbidity and conductivity levels were low.

At Site S17, 99 percent of the DO data exceeded the Class A standards (Table 6-7). At Site S19-U downstream of the Bar Mills dam, all of the DO data exceeded the standards (Table 6-8). All DO data, except for one DO concentration measurement (collected in July 2024), exceeded the standards at Site S19-J (Table 6-9).

Overall, pH, turbidity, and conductivity were similar among the sample sites within the Bar Mills Project vicinity (Table 6-6, 6-7, 6-8, and 6-9). Generally, pH ranged from approximately 6.0 to 9.0, turbidity ranged from approximately 1 NTU to 8 NTU, and conductivity ranged from approximately 20 µS/cm to 80 µS/cm. E. coli concentrations at all four sites were less than the Class A standard.

Table 6-6 Water quality data collected at Site S18 upstream of the Bar Mills Dam off Depot Street by SRCC, 2001-2024.

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation)	Water Temperature (°C)	E. coli (CFUs/100 mL)
Aug-Oct 2001	6.6 - 7	0.8 - 1.1		7.4 - 9.6	84.9 - 88.4	11.1 - 22.5	54 - 87
April-Nov 2002	6.5 - 7.4	0.6 - 6.9		6.6 - 12.3	72.1 - 114.2	6.1 - 26.1	
April-Oct 2003	6.6 - 7.5	0.9 - 5.3		6.3 - 13.9	75.7 - 127	6.8 - 24.8	
April-Oct 2004	5.9 - 7.4	1 - 11.5		7.1 - 12.3	79.9 - 96.1	4.9 - 23	
April-Oct 2005	6.7 - 8.7	1 - 9.3		6.9 - 12	77.2 - 102.1	6 - 23	
April-Oct 2006	6.9 - 8	0.7 - 3.5		7 - 11.5	73.3 - 105.8	11.2 - 25.8	
May-Oct 2007	6.9 - 7.7	0.8 - 2.5		7 - 10.9	79.7 - 110.6	14.9 - 26	
May-Oct 2008	6.5 - 6.9	1 - 5.6		6.5 - 10.6	78.7 - 100.3	13.1 - 25.4	
May-Sept 2009	6.5 - 7.4	1.8 - 3	11.3 - 16.7	8.4 - 9.8	96.6 - 102.1	15.5 - 22.9	
May-Sept 2010	6.4 - 6.9	1.2 - 3.1	20.1 - 29.9	8 - 10.5	90.7 - 113	15.3 - 26.2	
May-Oct 2011	6.7 - 7.6	1 - 38.4	16.8 - 30.7	7.5 - 9.7	88.3 - 101.9	14.5 - 27	
May-Oct 2012	6.6 - 7.8	1.3 - 3.1	17 - 27	8 - 9.8	96.1 - 98.8	15 - 25.6	
May-Sept 2013	6.6 - 7.6	1.2 - 2	19 - 25.1	8.2 - 10.1	93.4 - 100.2	15 - 23	
May-Sept 2014	6.7 - 7	1.2 - 2.9	19.7 - 28.4	8.1 - 10.3	95.5 - 101	14.2 - 23.9	
May-Sept 2015	6.5 - 6.9	0.8 - 1.7	19.4 - 31	7.9 - 10.2	96 - 100.4	14.6 - 25.6	
May-Sept 2016	6.5 - 6.8	0.8 - 1.8	23.1 - 33.4	7.6 - 10.2	94.3 - 100	14.5 - 26.3	
May-Sept 2017	5.9 - 6.6	1.2 - 3.5	19.3 - 30.3	8.3 - 9.9	95.4 - 102.2	15.4 - 23.3	
May-Sept 2018	6.1 - 8.3	0.9 - 3.7	24 - 35.7	8 - 9.8	93.8 - 101.6	16 - 26.4	
May-Sept 2019	6.2 - 8.7	1.2 - 2.8	48.8 - 75.6	6.7 - 11.3	75.2 - 102.4	10.8 - 24.6	
May-Sept 2020	6.2 - 7.3	0.7 - 2	45.4 - 81	7.9 - 9.9	95.3 - 102	15.6 - 26.8	
May-Sept 2021	6.1 - 9.1	1.2 - 2.3	47.7 - 72.1	7.9 - 10.2	94.6 - 98.4	13.9 - 25.3	
May-Sept 2022	6.6 - 7	1.1 - 3.6	54.6 - 82.1	7.7 - 10.5	95.6 - 99.4	12.8 - 26.1	4.1 - 59.8
May-Sept 2023	6.7 - 7.1	1.5 - 6.2	36.1 - 59.7	8.1 - 10.9	93.0 - 104.0	13.4 - 23.4	2.0 - 139.1
May-July 2024	6.7 - 7.0	1.0 - 1.9	38.7 - 57.0	7.4 - 10.5	94.5 - 101.3	13.4 - 27.8	9.8 - 38.8
Median	6.9	1.5	28.8	8.6	97.0	20.6	27.4
Average	6.9	2.1	36.8	8.8	95.4	19.6	39.4

Table 6-7 Water quality data collected at Site S17 near Bonny Eagle Island by SRCC, 2001-2024.

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation	Water Temperature (°C)	E. coli (CFUs/100 mL)
Aug-Oct 2001	6.7 - 7	0.7 - 1.5		7.3 - 10	85.8 - 94.7	11.8 - 22.5	16 - 69
April-Oct 2002	6.6 - 7.6	0.6 - 1.8		7.2 - 11.3	83.6 - 103.9	8.2 - 24.9	
April-Oct 2003	6.5 - 7.2	0.8 - 4.8		7.1 - 12.6	85.0 - 111.9	6.8 - 25.8	
April-Oct 2004	5.9 - 7.1	0.8 - 1.5		7.1 - 12.1	84.3 - 118.9	4.5 - 24	
April-Oct 2005	6.6 - 7.2	1 - 4.3		7.6 - 11.6	88.6 - 98.8	5 - 23	
May-Oct 2006	6.8 - 8.7	0.7 - 3.1		6.9 - 10.7	73.1 - 102.5	13.3 - 25.7	
May-Oct 2007	6.9 - 7.9	0.7 - 2		7.5 - 11.3	83.9 - 111.5	15 - 25.7	
May-Oct 2008	6.5 - 7.9	1.1 - 2.6		6.5 - 10.8	79.7 - 102.9	13.1 - 25.5	
May-Sept 2009	6.4 - 7.6	1.1 - 4.2	9.5 - 17.1	8.2 - 9.8	96.8 - 100	15.9 - 22.9	
May-Sept 2010	6.5 - 7.7	1.2 - 2.7	19.7 - 29.4	8.2 - 10.2	98.8 - 104.3	15.5 - 25.2	
May-Oct 2011	6.9 - 7.6	1 - 35.8	16.6 - 31.2	7.9 - 9.6	94 - 100.5	14.4 - 26.2	
May-Oct 2012	6.7 - 7.3	1.6 - 3	16.8 - 26.9	7.8 - 9.7	93.4 - 99.3	15.4 - 25.6	
May-Sept 2013	6.8 - 8	1 - 2.2	10.3 - 23.7	8.2 - 10	94.5 - 100.3	15.2 - 23.4	
May-Sept 2014	6.9 - 7.4	1.3 - 2.5	19.9 - 26.3	8.4 - 10.2	98.4 - 101.5	14.5 - 23.6	
May-Sept 2015	6.5 - 7.1	0.9 - 1.9	19.3 - 29.3	8.1 - 10.5	98.1 - 101.4	14 - 25.7	9.8 - 34.5
May-Sept 2016	6.2 - 6.9	0.9 - 1.7	22 - 33.1	7.9 - 10.1	96.9 - 99.9	15 - 26.3	
May-Sept 2017	5.8 - 6.9	1.2 - 4.6	19 - 29.3	8 - 9.7	94 - 100.1	15.8 - 23.2	
May-Sept 2018	6.4 - 8.3	1 - 2.5	23.7 - 35.2	7.5 - 9.7	92.7 - 98.6	16.2 - 26.7	
May-Sept 2019	6.2 - 9.3	1.3 - 3	46 - 71	7.6 - 10.9	92.1 - 99.4	11.2 - 24.4	
May-Sept 2020	6.2 - 7.6	1 - 1.7	43.1 - 85.3	7.5 - 9.7	90.6 - 101.6	15.7 - 26.6	
May-Sept 2021	6.2 - 7.1	1.1 - 2.1	50.5 - 71.4	7.7 - 10.1	92.7 - 99.8	14.2 - 25.1	
May-Sept 2022	6.5 - 7	1.1 - 1.7	51.5 - 83.1	7.8 - 10.4	93.5 - 99.4	13.7 - 26.2	2 - 39.3
May-Sept 2023	6.5 - 7.4	1.5 - 5.2	35.1 - 58.6	8.3 - 10.4	96.1 - 99.7	13.3 - 22.9	3.1 - 184.2
May-July 2024	6.8 - 6.9	1.2 - 1.9	39.9 - 60.5	7.3 - 10.0	92.5 - 99.5	14.9 - 27.1	9.6 - 58.3
Median	6.9	1.4	29.0	8.6	96.8	20.7	17.3
Average	6.9	1.7	37.4	8.8	96.3	19.7	34.1

Table 6-8 Water quality data collected at Site S19-U in the Skelton Project impoundment by SRCC, 2018-2024.

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation)	Water Temperature (°C)	E. coli (CFUs/100 mL)
May-Sept 2018	6 - 8.1	1 - 2.6	24.2 - 35.9	8 - 10.2	98 - 101.8	16 - 26.7	13.4 - 307.6
May-Sept 2019	6.3 - 8.3	1.1 - 2.7	47.9 - 73.5	8.1 - 11.4	97.7 - 103.4	10.8 - 24.7	5.2 - 73.3
May-Sept 2020	6.2 - 7.1	0.9 - 1.7	45.7 - 81.6	7.9 - 10.2	97 - 101.7	15.5 - 26.6	11 - 62
May-Sept 2021	6 - 8.8	1.1 - 2.3	48.2 - 71.9	8.1 - 10.6	96.6 - 101.8	13.8 - 25.3	9.8 - 325.5
May-Sept 2022	6.6 - 7.2	1.1 - 1.9	54.9 - 84.6	7.7 - 10.7	96.2 - 101.3	13.1 - 26.3	2 - 83.3
May-Sept 2023	6.7 - 7.0	1.5 - 7.9	35.9 - 59.8	8.4 - 11.0	96.1 - 105.2	13.4 - 23.5	3.0 - 285.1
May-July 2024	6.8 - 7.0	0.9 - 2.0	38.9 - 57.2	7.6 - 10.7	97.8 - 103.4	13.4 - 28.1	11.0 - 51.2
Median	6.8	1.6	55.3	8.7	99.2	21.7	34.3
Average	6.9	1.8	54.8	8.9	99.6	21.1	53.7

Table 6-9 Water quality data collected at Site S19-J at the public boat launch upstream of the Skelton Project dam by SRCC, 2022-2024.

Date	pH	Turbidity (NTU)	Conductivity (µS/cm)	DO (mg/L)	DO (% saturation)	Water Temperature (°C)
May-Sept 2022	6.5 - 7.0	1.4 - 5.3	54.0 - 80.7	7.2 - 10.9	87.8 - 103.3	12.8 - 27.5
May-Sept 2023	6.6 - 7.4	1.6 - 6.6	34.6 - 54.3	7.7 - 10.8	92.6 - 105.3	14.3 - 24.4
May-July 2024	6.7-7.2	1.6-5.7	42.5-59.5	6.6-10.6	87.0-102.8	13.6-29.1
Median	6.8	2.0	54.0	8.5	97.9	21.7
Average	6.8	2.7	54.1	8.5	96.7	21.3

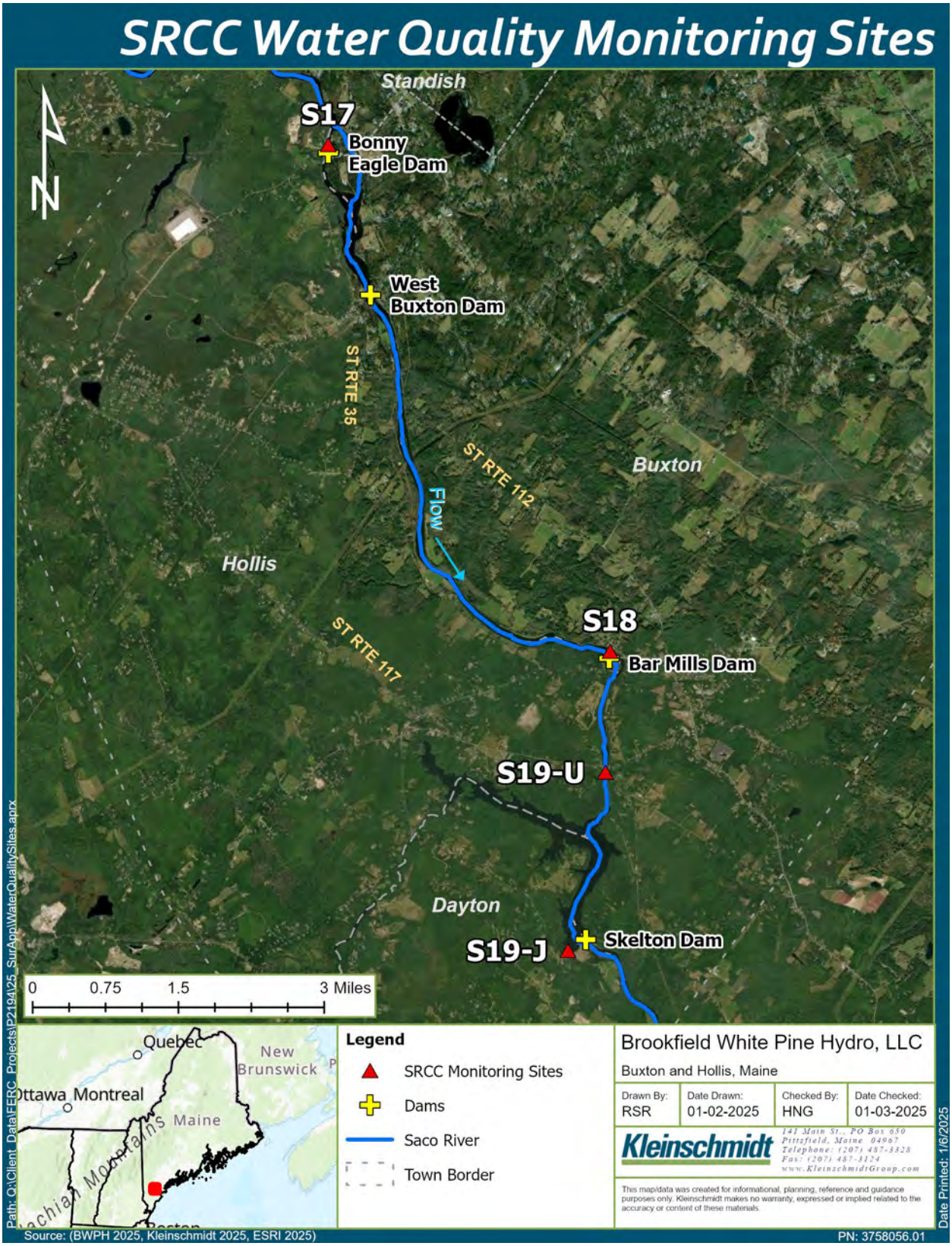


Figure 6-12 SRCC monitoring sites near the Bar Mills Project

Saco Estuary Project

Water quality monitoring was completed at 18 sites along the Saco River between North Conway, NH, and Biddeford, ME, by researchers from the University of New England between 2010 and 2012 (Zeeman and Spillane 2015). Overall, water quality was found to be good with low chlorophyll-a, nutrient, and E-coli levels. DO ranged between approximately 7 mg/L to 12 mg/L and 90 percent to 105 percent. The sample location figure contained in Zeeman and Spillane (2015) is not at a scale to identify exact locations, however Site 18 appears to be located near Bar Mills and is likely the same site historically sampled by MDEP (also identified as Site 18) just upstream (approximately 200 feet) of the Bar Mills dam and powerhouse on river left near the site of the old Rogers Fibre Mill.

6.6.3 Water Supply Wells and Dry Hydrants

TRC (2025b) notes that because the surface water of the impoundment and Saco River is hydraulically connected to the adjacent and underlying groundwater flow system, lower water levels in the impoundment and river will result in lower groundwater elevations near the former mill pond and return them to natural, pre-dam levels. TRC (2025b) identified that the greatest change in surface water elevation will be just immediately upstream from the Bar Mills dam with normal surface elevation reducing by approximately 18 feet, from a normal impoundment elevation of 148.5 feet above National Geodetic Vertical Datum (NGVD) to a few feet above the proposed new elevation of the stream channel of approximately 127.5 feet NGVD (Figure 6-13). The change in surface water elevation will be progressively less as discussed in Section 6.6.1, moving upstream from the dam and upstream of the hydraulic control in the area of the remnant bridge piers. Normal water levels (50% exceedance or 2,725 cfs) in the river upstream of the hydraulic control are anticipated to be reduced by approximately 2.5 feet following partial removal of the dam; however, the effects of the reduced water levels will be lessened due to the natural topography of the riverbed. Flow durations will not change as inflow to this segment of the river will not be affected by the partial removal or full removal of the of the spillway.

TRC (2025b) further states that the impact of dam decommissioning (i.e., lowering the Bar Mills impoundment water elevation) on groundwater elevations will be attenuated with distance from the mill pond laterally and with distance upstream from the dam. Six water supply wells were identified that have the greatest potential to be affected by permanently reduced impoundment levels, being within 650 feet of the impoundment

(Figure 6-13). TRC identified three ways in which a lower groundwater level resulting from lower impoundment elevation could affect wells:

- a drop in groundwater elevation would likely dewater a portion of the upper saturated thickness of the bedrock connected to the well
- lowered groundwater elevations could require pumps to be set at deeper elevations within the well
- lowering of the static head in the water supply wells would require that the pumps lift water a higher elevation - depending on the age and type of pump, this could lead to a reduced flow rate from the pump due to increased lift required

TRC's evaluation of known wells that could potentially be affected by a permanently lower impoundment water level identified a limited number (six individual wells). However, the extent of potential effects will not be known until completion of partial removal, at which time BWPH would need to assess potential need for mitigation measures. Additional details for TRC's evaluation are contained in TRC's (2025b) letter summary dated January 15, 2025 *Effects of Partial Dam Removal on Groundwater Levels* provided in Appendix G of this study report. Based upon Decommissioning Committee discussions, BWPH is coordinating Committee members to coordinate a well survey for landowners abutting the river reach from approximately the intake canal to Bar Mills dam. This information is intended to aid in evaluating potential risk of impacts on well based on technical data (e.g., type of well, depth, proximity to the river) and inform any potential mitigation plans. Rather than limiting the survey to the radius considered by TRC, the Committee determined it appropriate to survey landowners along the river corridor (Figure 6-15).

As previously noted, BWPH is currently evaluating alternatives to modify and/or relocate the dry hydrant intakes, which are currently being discussed with the municipal fire departments and will continue to be considered as the decommissioning process progresses.

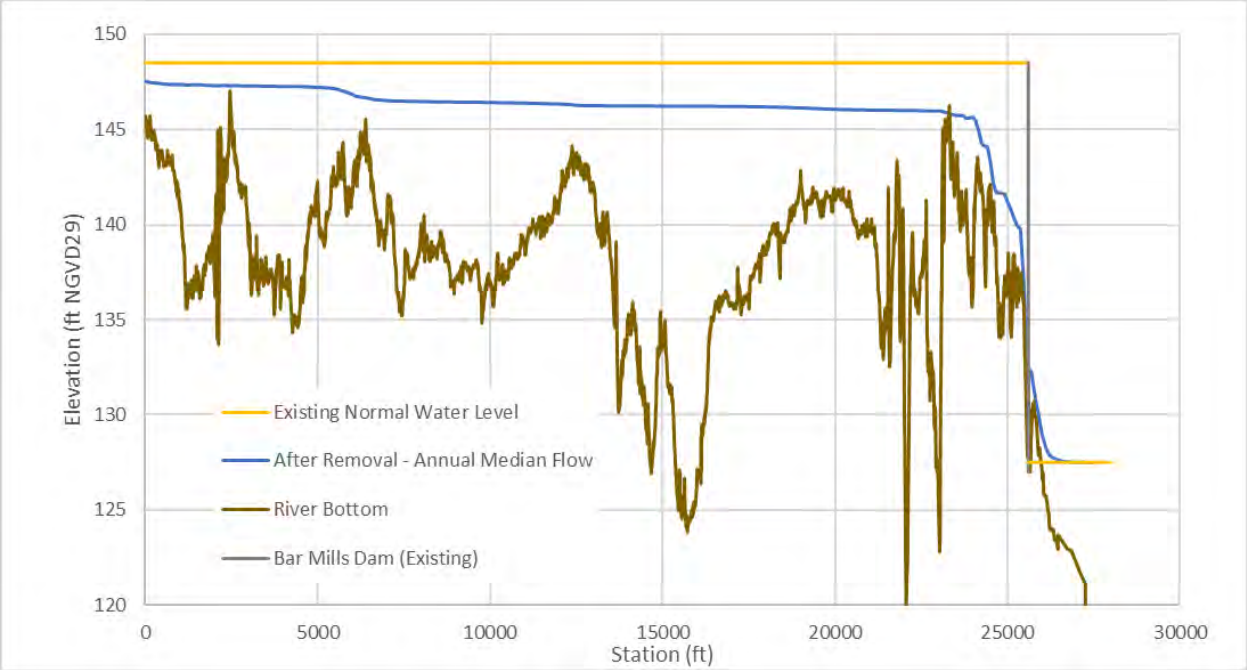


Figure 6-13 Upstream Water Levels[10]

[10] Station 0 is the upstream extent of the Bar Mills project boundary at the West Buxton tailwater.

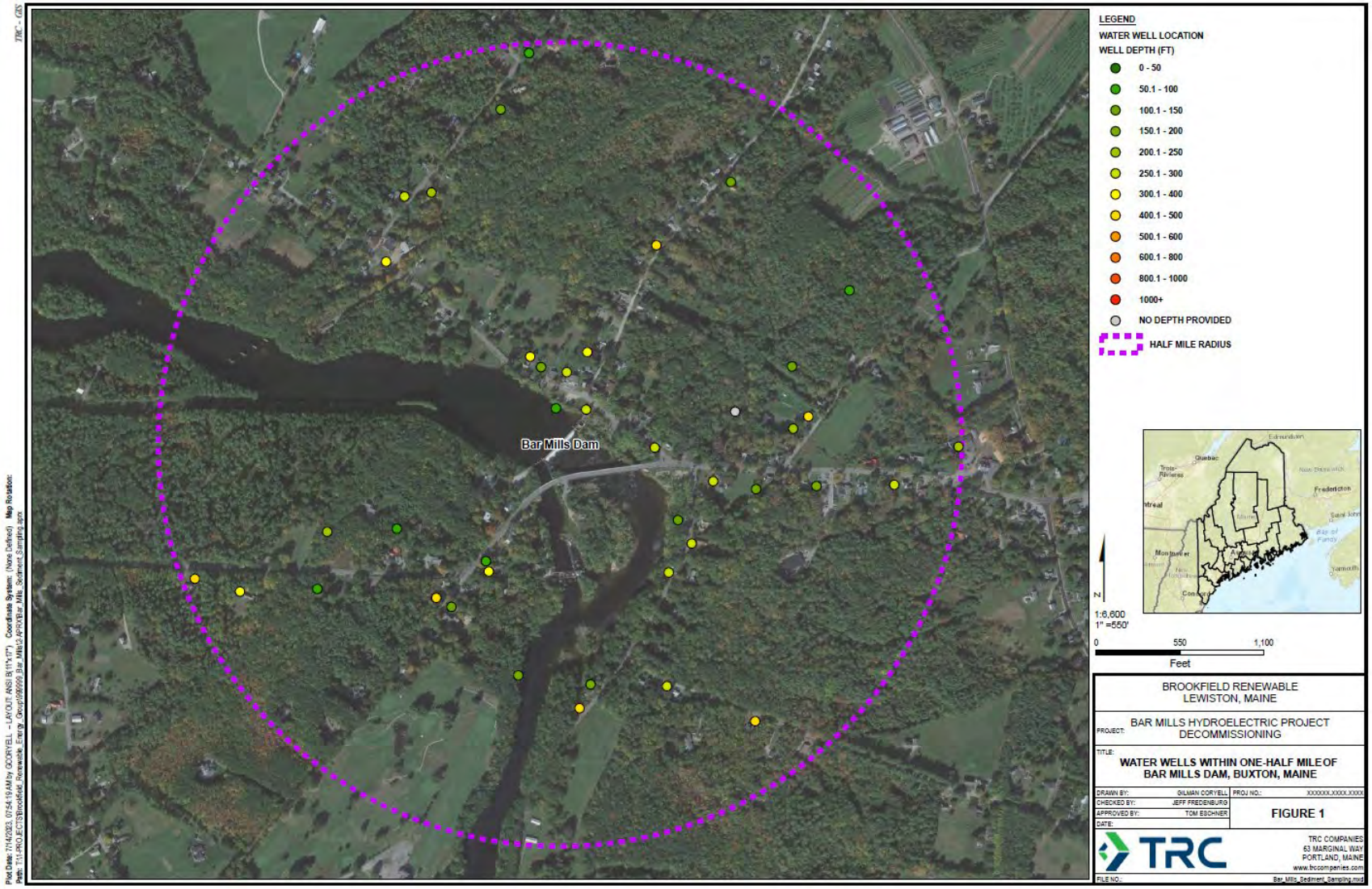
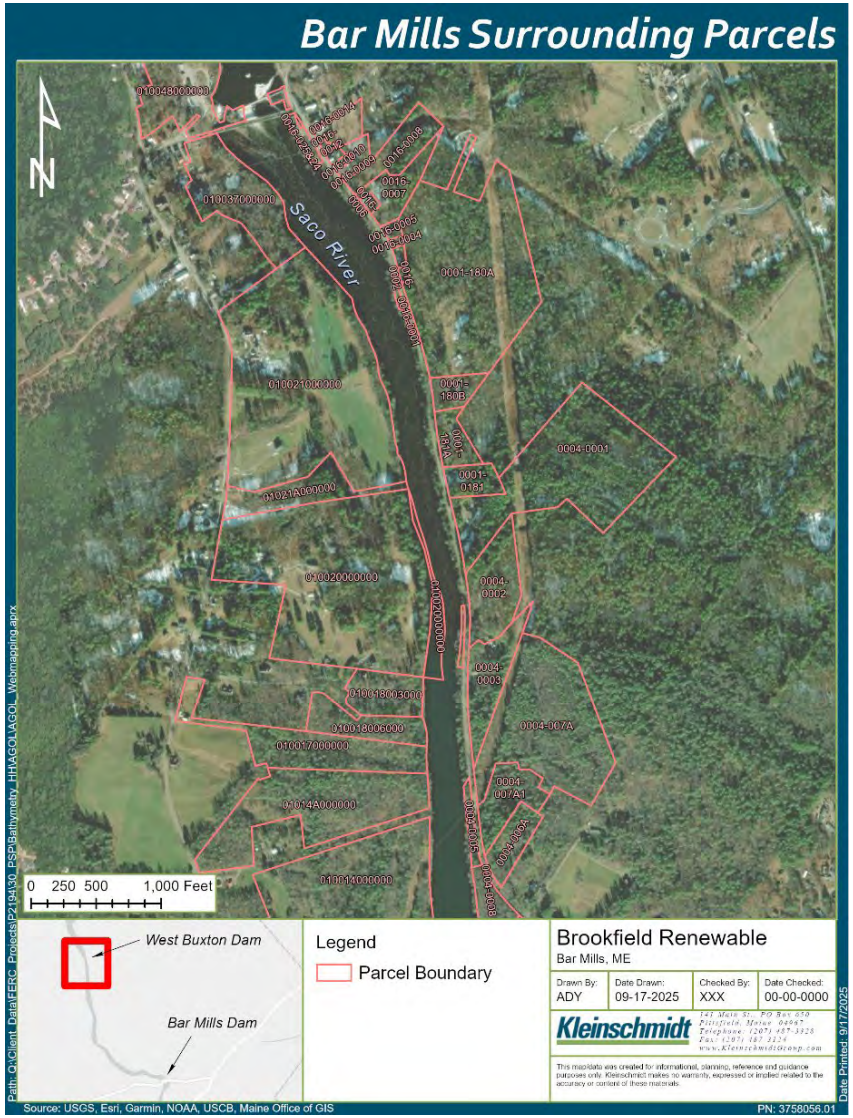


Figure 6-14 Water Wells Within One-Half Mile of Bar Mills Dam



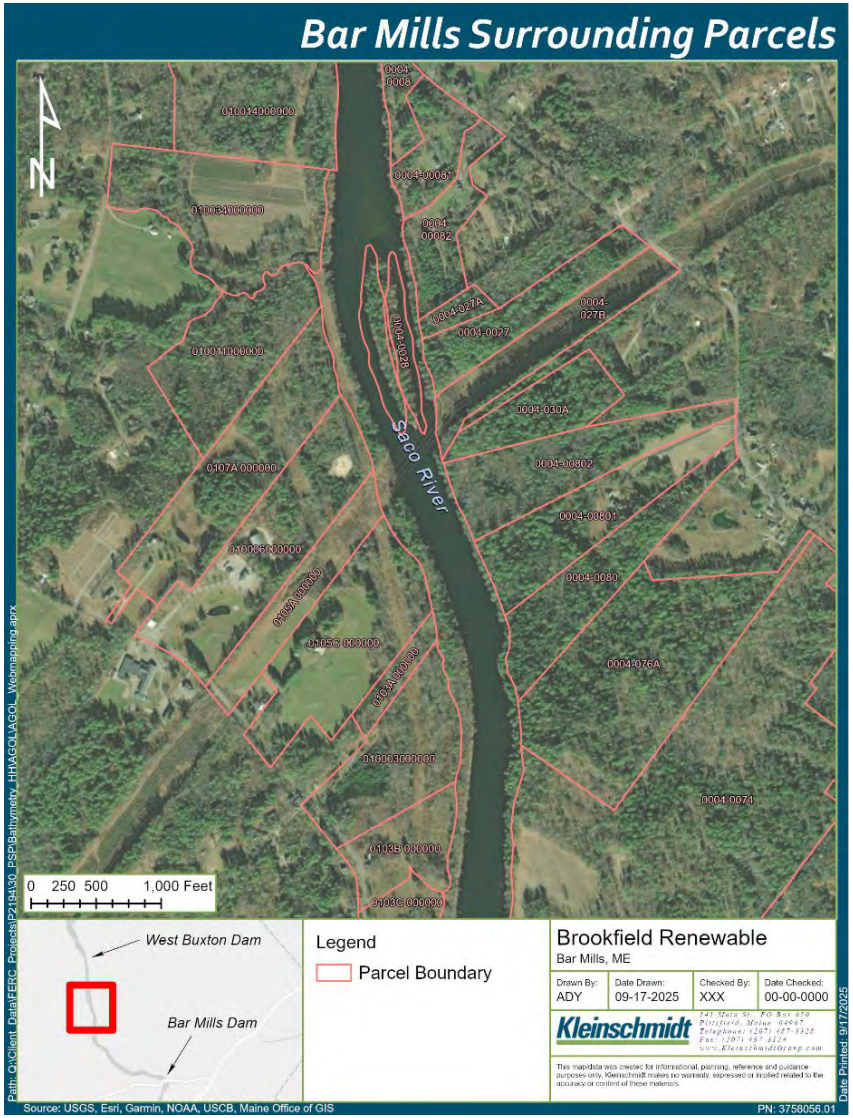
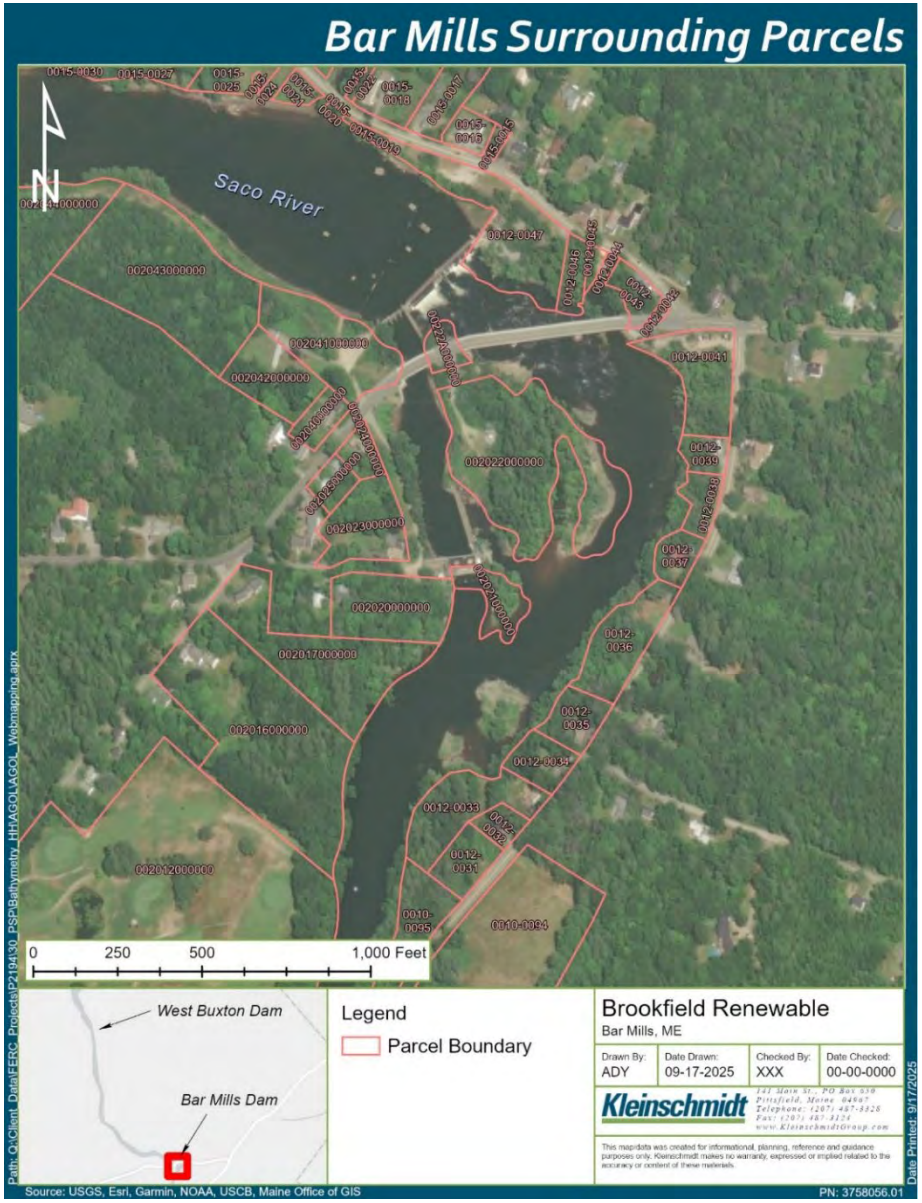


Figure 6-15 Bar Mills Surrounding Parcels





Bar Mills Surrounding Parcels Continued



Bar Mills Surrounding Parcels Continued

6.6.4 Benthic Macroinvertebrates

Results (see Table 6-10) indicate that total abundance was somewhat low, but richness was good (36 discreet taxa using MDEP counting rules) and Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies) (EPT) richness was 18, concluding that Class A standard is met. Results were submitted to MDEP for confirmation. MDEP provided an *Aquatic Life Classification Attainment Report* (Appendix H to this study report), with a determination that Class A was attained at Station 648, based primarily on Total Richness, EPT Richness and Mayflies as the 2 most dominant taxa.

Table 6-10 2024 Macroinvertebrate Data

Sample Log No.:	
Station No.:	**648**
Waterbody Name:	Saco River
Town:	Buxton
Date of Collection:	9/3/2024
Time of Collection:	
Sampled By:	Haley Ward
Subsample Factor:	1
Sampler Type:	RBG-Rock Bag

	Taxon			**No. identified from sample**		
Maine Code	**Taxon Name**	**Stage**	**Comment**	**Rep 1**	**Rep 2**	**Rep 3**
09020603	*Polycentropodidae*		Immature		2	
09020402015	*Maccaffertium*		Immature	8	10	19
09020401001008	*Baetis intercalaris*			23	12	22
09020604016030	*Hydropsyche morosa*			4	1	
09020401007011	*Acerpenna pygmaea*			15	17	26
09020611064	*Lepidostoma*				1	
09020410035	*Ephemerella*				1	
09020402009	*Epeorus*			1	1	
09020604015	*Cheumatopsyche*				1	
09020601003003	*Chimarra obscura*			3	1	
09021012047	*Simulium*	PUPAE		7	1	
09021012047	*Simulium*			28	13	2
09020402015055	*Maccaffertium vicarium*					1
09020401001012	*Baetis tricaudatus*			1		3
09020618078	*Oecetis*					3

	Taxon			No. identified from sample		
Maine Code	**Taxon Name**	**Stage**	**Comment**	**Rep 1**	**Rep 2**	**Rep 3**
09020209042121	*Acroneuria abnormis*			1	1	1
09020401010	*Procloeon*					1
09020401005	*Heterocloeon*			5		3
09020607026	*Hydroptila*					1
09010201003	*Gammarus*			1		3
09020603008	*Neureclipsis*			3	1	2
09020209042125	*Acroneuria lycorias*			2		4
09021011	*Chironomidae*	PUPAE		1		2
09020309	*Coenagrionidae*		Damaged			1
09020307043085	*Calopteryx aequabilis*					1
09020402011	*Leucrocuta*					1
09021104032	*Dineutus*			1		
09021011065113	*Tvetenia vitracies*			5	5	
09021011037057	*Cricotopus bicinctus*			2	2	
09021011037079	*Cricotopus sylvestris group*			5	1	1
09021011102185	*Polypedilum illinoense group*			1		
09021011041	*Eukiefferiella*			3		
09021011057105	*Rheocricotopus robacki*			1		
09021011076	*Tanytarsus*			1		
09021011050	*Orthocladius*			1		
09021011072	*Rheotanytarsus*			1	3	
09021011012	*Nilotanypus*			1		
09021011053	*Parametriocnemus*				1	
09021011056	*Psectrocladius*				1	5
09021011001004	*Ablabesmyia mallochi*					1
			Total Benthos	**125**	**76**	**103**

	Taxon			No. identified from sample		
Maine Code	**Taxon Name**	**Stage**	**Comment**	**Rep 1**	**Rep 2**	**Rep 3**
			Total OTUs	**26**	**20**	**21**
			Total spp.			

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7.0 FISH AND AQUATICS

7.1 Introduction

The Bar Mills Project has significant operational challenges that have prevented the generating units from running for the last five years. These challenges are associated with unavoidable AAR conditions which occurred from certain aggregates used in the concrete for the powerhouse absorbed water and caused expansion and cracking over a period of many years. There is no long-term remedy for AAR at Bar Mills except full reconstruction.

In 2019, BWPH and resource agencies executed a revised Saco River Fish Passage Assessment Agreement (SRFAA) for migratory fish species, superseding the 2007 SRFAA. The 2019 Amendment replaced Section 5.3.b.1, including a provision for a "single permanent upstream anadromous fish passage facility at each of the Projects, or an alternative method agreed upon and approved by the Parties" with an implementation schedule of May 1, 2025, for the Bar Mills Project. Without an economically viable solution to return the generating units to an operable condition, BWPH determined that surrendering the FERC Project license and decommissioning the Project through a partial breach is the most viable solution in balancing operational, environmental, future dam safety needs, and meeting fish passage requirements under the SRFAA.

In order to assess the ability of partial and full spillway removal to meet migratory fish passage objectives, BWPH utilized hydraulic modeling to evaluate zone of passage criteria (water depths and velocities) for target species at a range of flows typically considered for fish passage design.

In consideration of the reduction in normal water surface elevations in the impoundment that would result from partial and full spillway removal, BWPH also conducted field studies to assess impacts to tributary access for resident fish species. The three perennial streams in the study area are Smith Brook, Crockett Brook, and Casper Brook.

7.2 Background

In support of the previous FERC relicensing, FPLE Maine conducted a fisheries resources survey and bass spawning survey and impoundment drawdown study, finding smallmouth bass and largemouth bass to be the most abundant warmwater species and that historic impoundment fluctuations were not adversely affecting smallmouth bass reproduction at the Project (FPLE Maine 2003).

As part of BWPH conceptual designs for partial and full spillway removal, BWPH considered criteria for zone of passage and velocities for both partial and full breach at a range of flows (5, 50, and 95% exceedance conditions[11]) for Atlantic salmon, American shad, blueback herring, alewife, and sea lamprey. Modeling results were presented to agencies in a meeting on December 12, 2021, and in a technical memo on February 23, 2022. BWPH is considering partial and full spillway removal utilizing nature-like fishway design criteria to provide volitional passage that will provide effective fish passage with a natural channel configuration that is preferable over a lift or ladder in this particular situation.

7.3 Goals and Objectives

The objective of this evaluation was to use HEC-RAS modeling developed to assess effects of partial dam removal on water levels, to evaluate effects on impoundment habitat and tributary access for resident fish species and zone of passage characteristics through the dam breach zone for migratory species based upon agency defined depth and velocity criteria for American shad, blueback herring, alewife, Atlantic salmon, American eel, and sea lamprey.

A secondary objective was to assess effects of permanent lower impoundment levels on tributary stream access for resident fish species, namely smallmouth bass which has been documented as the most abundant species in the Bar Mills impoundment.

7.4 Study Area

The study area relative to resident species tributary access was the current impoundment and confluence of primary tributaries with the impoundment, Smith Brook, Crockett Brook, and Casper Brook. The study area for zone of passage evaluation for migratory species is at and immediately upstream and downstream of the west half of the spillway that is proposed for removal.

[11] 5, 50, and 95% exceedance values are calculated to be 9,900 cfs, 2,725 cfs, and 762 cfs, respectively.

7.5 Methodology

7.5.1 Tributary Access For Resident Species

BWPH conducted a field assessment of zone of passage in water depth and velocities for tributaries to the Bar Mills impoundment. This assessment was completed through a site visit to primary tributaries to document if there are any obstacles that potentially restrict fish at modeled post-breach river depth. The tributaries examined included Smith Brook, Crockett Brook, and Casper Brook. These tributaries were visited, surveyed, and photo-documented during low-water (drawdown) conditions to determine if obstacles to access are present. To the extent feasible under drawdown conditions, substrate and aquatic habitat were characterized in the zone between normal impoundment elevation and post-partial removal elevation.

In comments on the draft study plan provided by the Town of Buxton (letter dated June 19, 2023) it was requested that Stony Brook be added to the zone of passage field assessment. While BWPH was not initially opposed to include Stony Brook in the study, in preparing for mobilization of the field effort, it was discovered that Stony Brook is not a tributary to the Bar Mills impoundment, but flows into the Saco River within the Skelton impoundment and therefore would not be affected by a reduction in the Bar Mills impoundment level.

7.5.2 Zone of Passage

An evaluation of zone of passage for depth and velocity in the vicinity of the spillway was completed as part of HEC-RAS modeling of post-breach conditions for partial and full spillway removal scenarios as summarized above and in the Scoping Document.

In evaluating removal options, BWPH utilized *Federal Interagency Nature-like Fishway Passage Design Guidelines for Atlantic Coast Diadromous Fishes* (Turek et al. 2016) and 1D and 2D hydraulic modeling. The HEC-RAS depth and velocity results were reviewed for the 5%, 50% and 95% exceedance flows to evaluate the potential zone of passage for both American shad and Blueback herring, based upon minimum depth and maximum velocity criteria for these species. These fish have some of the strictest velocity and depth passage criteria compared to species such as Atlantic salmon.

7.6 Results

7.6.1 Tributary Access For Resident Species

During the 2024 field study, the three primary tributary streams had either stagnant water (Crockett and Casper brooks) or flowing water (Smith Brook) in the thalweg during the survey at the drawn down water elevation. Water in Crockett Brook and Casper Brook was stagnant for a distance of over 150 feet upstream from their confluence with the Saco River. The drawn down impoundment elevation reduced water depth and exposed shoreline banks at all three tributary confluences. The confluence of Crockett and Casper brooks with the Saco River remained at approximately 1 foot of depth at the drawn down impoundment elevation. Smith Brook had a continuous thalweg of flowing water with depths ranging from 0.5 to 1 foot (Kleinschmidt 2025). Field staff noted that water flowing from Smith Brook was significantly colder than the Saco River under the observed conditions, and that the tributary confluence area contained a mix of substrates including sand, silt, and gravel. Because smallmouth bass have been reported to spawning in water depths in the range of 0.8 feet to 12 feet (VFWD 2017), it is not anticipated that tributary depths at the confluence of the Saco River will adversely affect the ability of smallmouth bass to access these tributaries. Further, the minimum suitable zone of passage (ZOP) is defined as a water depth that is equivalent to two-thirds of the body thickness (e.g., the distance from the top of the dorsal musculature to the underside of a fish or body depth) of the largest target fish that are likely to move through the reach. This criterion is suitable for fish passage and movements in a natural channel (Bovee 1982). Based upon proportional measurement for bass in Smith (1985) a standard body length for bass of 71.5 millimeters (mm) equates to a body depth of 29 mm; a ratio of 0.41. The "preferred" length for adult smallmouth and largemouth bass identified in VFWD (2017) is 14 and 15 inches, respectively. Bass with an average length of 14.5 inches would be expected to have a body depth of approximately 5.9 inches, requiring a ZOP of 3.9 inches. Therefore, observed depths of tributary mouths would be well above the minimum necessary for smallmouth and largemouth bass.

Surveys did not and were not intended to assess levels of potential incising to be expected.

Additional details of the field evaluation, including photos are provided in Kleinschmidt (2025) *Wetland, Botanical, and Shoreline Erosion Study Bar Mills Project FERC NO. 2194*, which is provided in Appendix D of this Study Report.

7.6.2 Zone of Passage

The HEC-RAS depth and velocity results data were reviewed to evaluate the potential zone of passage for American shad, Blueback herring, and alewife. These fish have some of the strictest velocity and depth passage criteria compared to species such as Atlantic Salmon (Table 7-1).

Table 7-1 *Federal Interagency Nature-like Fishway Passage Design Guidelines for Atlantic Coast Diadromous Fishes* (Turek, J., A. Haro, and B. Towler 2016) for Bar Mills Target Species

Species	Minimum Depth (ft)	Maximum Velocity (fps)
American Shad	**2.25**	**8.25**
Blueback Herring	**1**	**6**
Alewife	**1**	**6**
Atlantic Salmon	**2.25**	**13.75**
American eel	**1.25 – 2.0**	**0.75 – 1.0**
Sea Lamprey	**0.75**	**6**

HEC-RAS results demonstrate that modeled conditions for 5% exceedance (high flow conditions – 762 cfs) provide a wide zone of suitable depths for upstream passage (Figure 7-1) under both partial and full spillway removal conditions and at 95% exceedance (low flow conditions – 9,900 cfs), flow velocities in the target criteria range exist over a wide zone (Figure 7-5). Modeling of velocities through the area proposed for removal are generally in the 3-5 feet per second (fps) at the 5% exceedance flow, with a portion of the area increasing to 8 fps or greater at the 50% exceedance flow (Figure 7-3), and approximately 30% of the area being 8 fps or greater at the 95% exceedance. Historic river flow data indicates that flow in excess of or equal to 95% exceedance and less than or equal to 5% exceedance occurs only about 4 days each within the passage season.

The USGS Conte Anadromous Fish Lab in Turners Falls, MA produced a sprint speed calculator based on swim flume tests with various alosine and other freshwater species, including American shad, alewife, blueback herring, walleye and white sucker (Haro 2004). The model developed criteria for fish passage structures, culverts, and breached dams.

Haro et al. (2004) used these data to estimate maximum distance traversed, taking into account effects of flow velocity, body length, and water temperature. Divergent effects of temperature and nonuniform length and other factors account for variability in performance, so these values are considered approximations and not absolute values. For purposes of this exercise, ambient water temperatures were assumed based on the period that each species would be experiencing its peak migration and left the default fish lengths as-is in the model as they appear reasonable for such fish in Maine populations. Based upon both partial and full spillway removal design and modeling information, a linear upstream sprint distance of approximately 21.5 feet (6.5 meters) was assumed, which is the estimated horizontal width of the base of the spillway, and a velocity of 8 feet per second (approximately 2.5 meters per second).

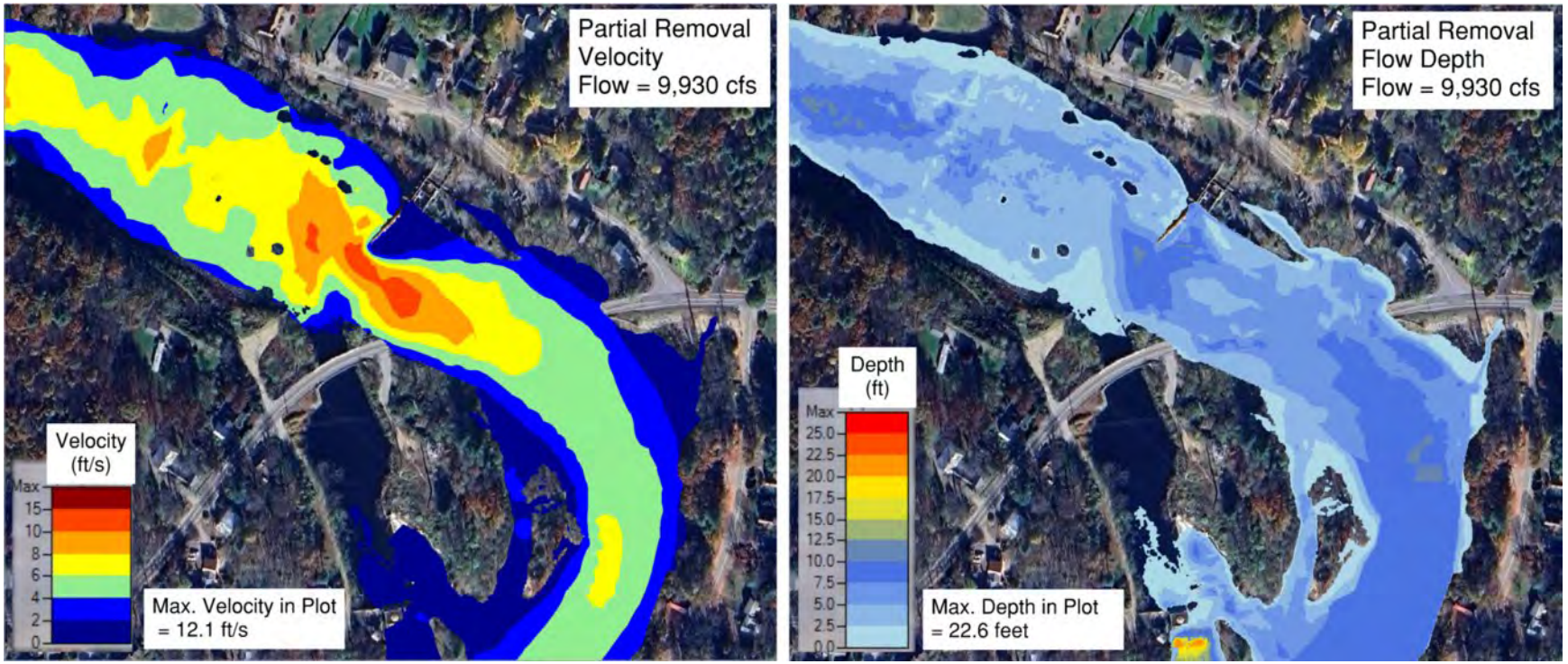


Figure 7-1 Water Depths (Left Image) and Velocities (Right Image) Partial Spillway Removal at 9,900 cfs (5% Exceedance)

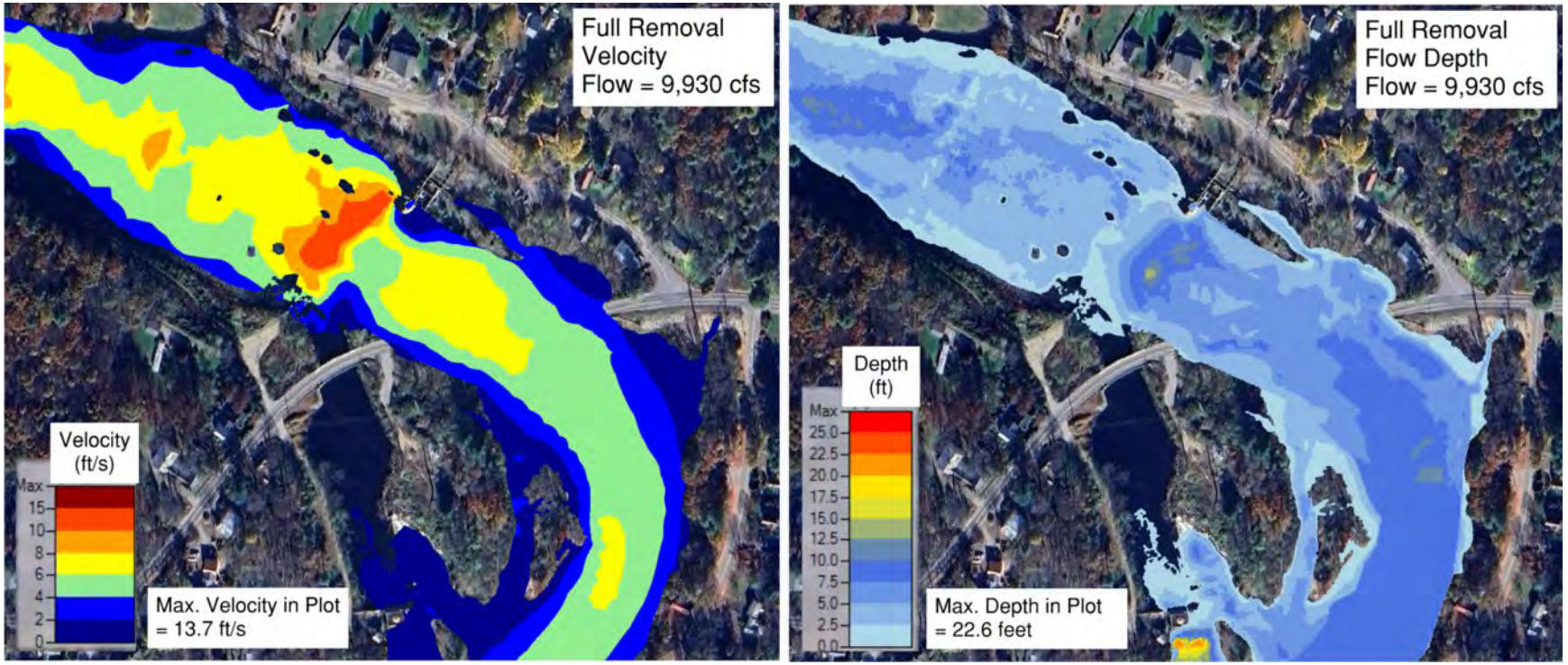


Figure 7-2 Water Depths (Left Image) and Velocities (Right Image) Full Spillway Removal at 9,900 cfs (5% Exceedance)

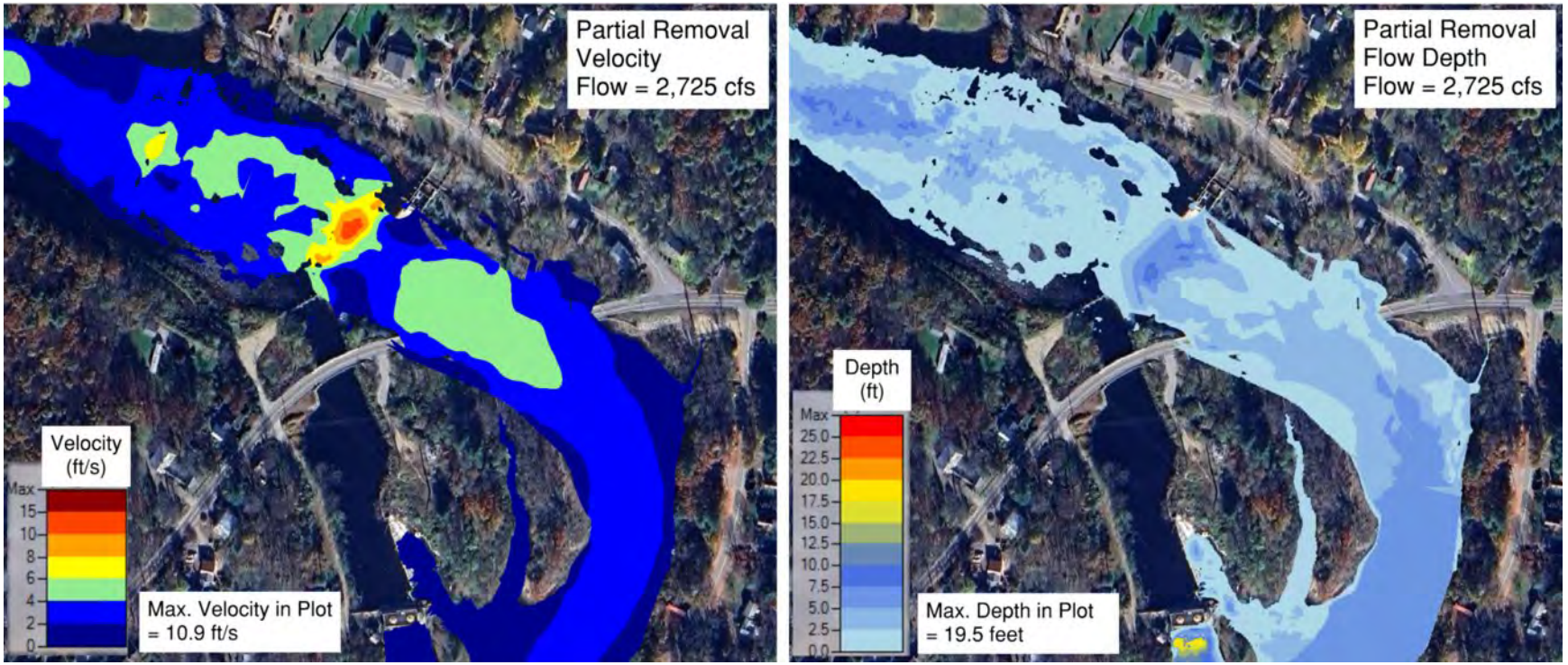


Figure 7-3 Water Depths (Left Image) and Velocities (Right Image) Partial Spillway Removal at 2,725 cfs (50% Exceedance)

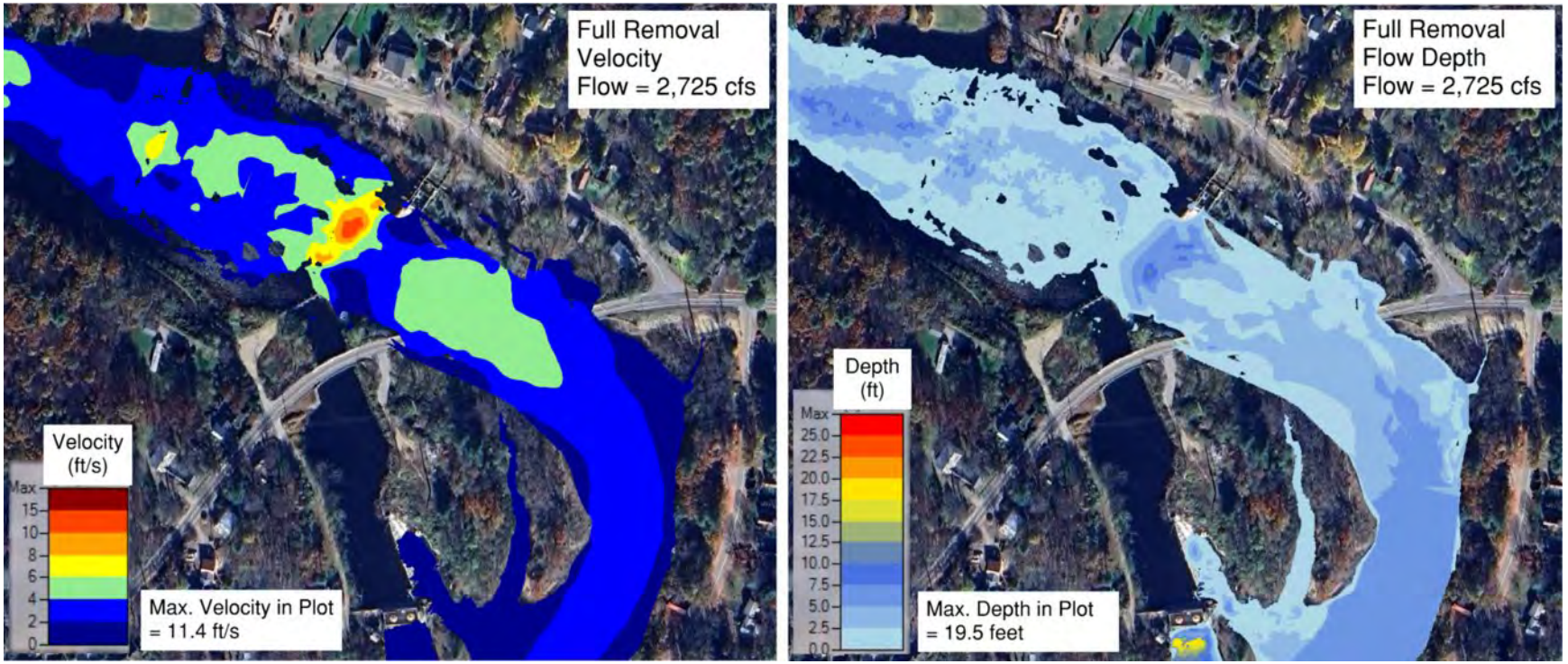


Figure 7-4 Water Depths (Left Image) and Velocities (Right Image) Full Spillway Removal at 2,725 cfs (50% Exceedance)

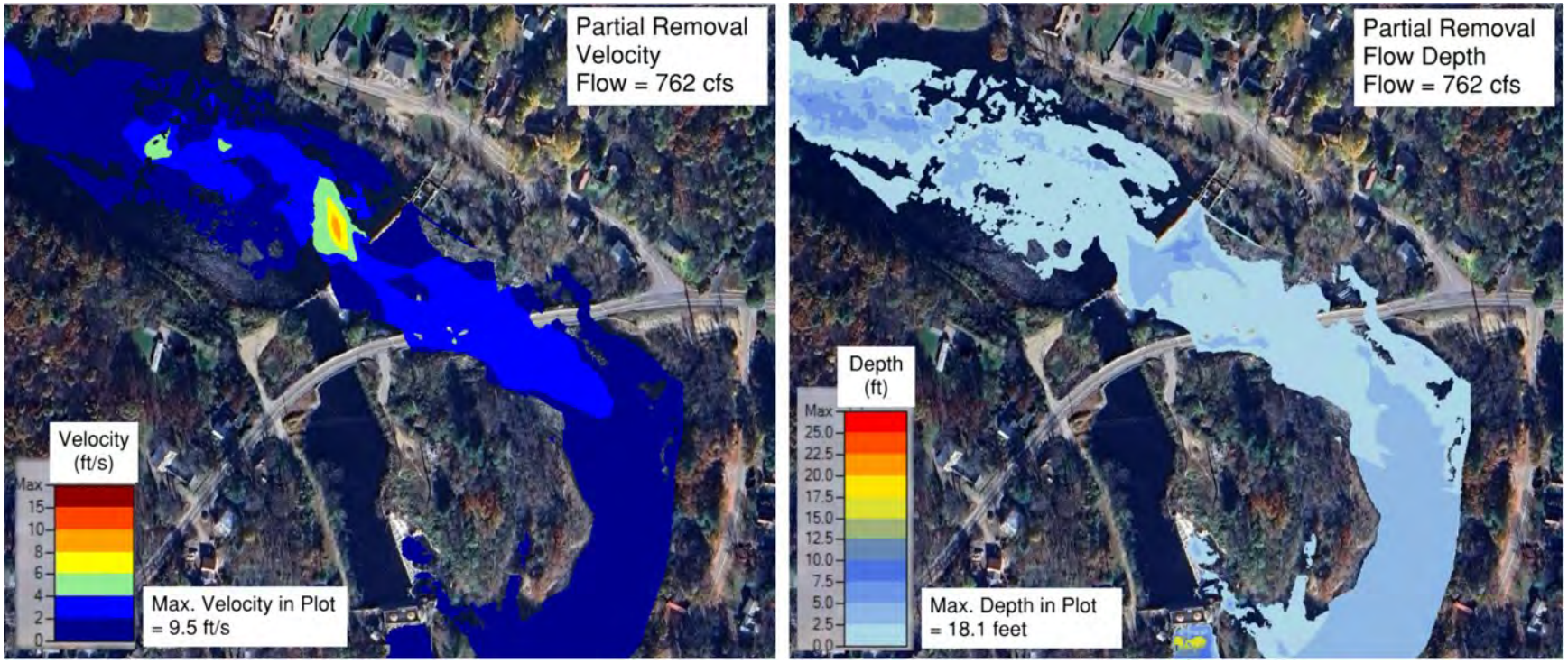


Figure 7-5 Water Depths (Left Image) and Velocities (Right Image) Partial Spillway Removal at 762 cfs (95% Exceedance)

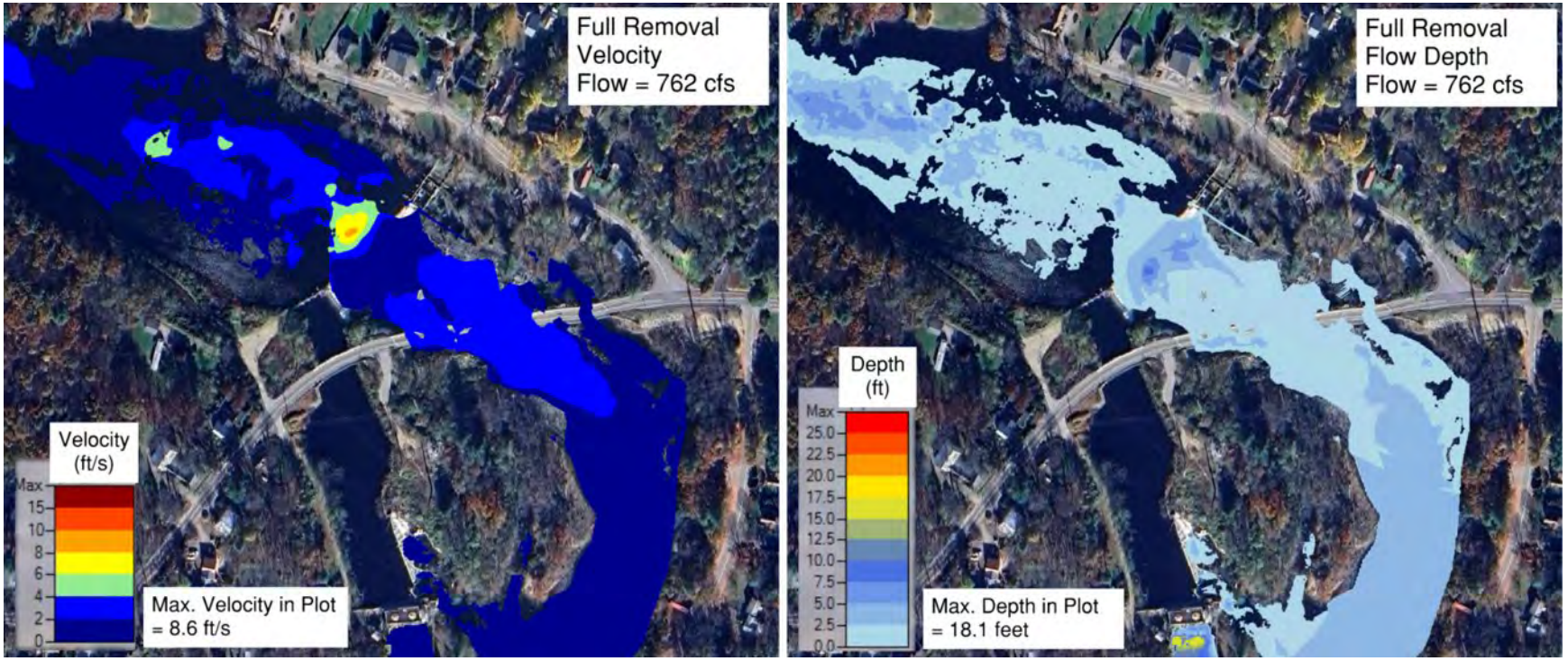


Figure 7-6 Water Depths and Velocities Full Spillway Removal at 762 cfs (95% Exceedance)

American Shad

Upstream migrating adult American shad would likely peak at the site during late May through late June. The Haro *et al*. (2004) model predicts that between 0.886 (88.6%) to 0.96 (96%) of American shad can pass at this velocity and at a sprint distance of 10 or 5 meters, respectively. This can be thought of as similar to a fishway "effectiveness" rating. Interpolation to 6.5 meters distance (the 21.5 foot reach through the former spillway section) indicates that the partial and full spillway removal alternatives would be expected to be about 90% effective at passing shad upstream. Lowering the velocity incrementally predicts slight increases in effectiveness at this sprint distance.

Blueback Herring

Upstream migrating adult blueback herring would likely pass Bar Mills throughout June. The Haro *et al*. (2004) model predicts that between 49.5% to 78% of blueback herring would pass successfully at this velocity at a sprint distance of 10 or 5 meters, respectively. Interpolation to 6.5 meters distance (the 21.5 foot reach through the former spillway section) indicates that the partial and full spillway removal alternatives would be expected to be about 65% effective at passing blueback herring upstream. Lowering the velocity incrementally predicts rapid increases in effectiveness at this sprint distance.

Alewife

Upstream migrating adult alewife would likely peak at Bar Mills during mid-May through mid-June. The Haro *et al*. (2004) model predicts that between 20.3% to 53.1 % of alewife would pass successfully at this velocity at a sprint distance of 10 or 5 meters, respectively. Interpolation to 6.5 meters distance (the 21.5 foot reach through the former spillway section) indicates that the partial and full spillway removal alternatives would be expected to be about 37% effective at passing alewife upstream. Lowering the velocity incrementally predicts gradual increases in effectiveness at this sprint distance. Note however that to achieve at least approximately 80% effectiveness the water velocity would need to be reduced to about 3.5 feet per second for this sprinting distance.

Atlantic salmon

Adult upstream passage would be from mid-May potentially until early July, a second wave could theoretically be in early fall (late September through late October). Given the strong swimming capabilities for Atlantic salmon, it is not anticipated that modeled velocities over the range of flows evaluated would pose a difficulty for upstream passage.

American eel

Upstream migrating American eel would likely be either elvers or yellow eel lifestages, and would likely move past Bar Mills between April/May (elvers) or June-August (yellow eel). Specific sprinting speed data for these lifestages American eel are unavailable, however it is unlikely that anything higher than about 0.5 feet per second would be passable (*Gail Wipplehauser, personal communication*). It is likely that these lifestages will seek alternate passage routes after failing to pass the breach.

Sea Lamprey

Ascends swift water by repeatedly anchoring to substrates and then worming body upstream, and re-anchoring to substrates and then worming body upstream, and re-anchoring. According lifecycle information available from the Massachusetts Division of Fisheries and Wildlife**, adult sea lamprey migrate from the ocean to freshwater rivers and streams to spawn in May and June and die after spawning. Because sea lamprey are capable of moving upstream in swift water and with no documented maximum velocity threshold, it is not anticipated that velocity during spring flow conditions will be an issue for upstream migrants. Table 7-2 provides a summary of the above described sprint speed assessment.

Table 7-2 Migratory Species Passage Probability for Bar Mills Partial Breach Conditions

Species	Primary migration Season	Water Temperature	Probability @ 15 ft (~5 m)	Probability @ 30 ft (~10 m)	Notes
American shad	Late May-late June	20.8 ° C	96%	89%	
Blueback herring	June	20.0 ° C	78%	50%	
Alewife	Mid-May-mid June	12.0 ° C	53%	20%	
Atlantic salmon*	May-June/Sept-Oct	20-22 ° C	n/a	n/a	No lab data but are known strong swimmers.
American eel*	June-August	20-22 ° C	n/a	n/a	Likely that eel will seek alternate passage routes.
Sea Lamprey*, **	May-June	10-15 ° C	n/a	n/a	Ascends swift water by repeatedly anchoring to substrates and then worming body upstream, and re-anchoring.

*data not available, ** source: https://www.mass.gov/info-details/sea-lamprey

7.7 References

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8.0 WILDLIFE AND BOTANICAL RESOURCES

As outlined in the study plan, a Wetland, Botanical Resources, and Shoreline Erosion study was conducted, which included:

- Characterizing existing wildlife, botanical, and wetland resources, including invasive botanical species to the extent they have the potential to occur, and evaluate the effects of lowered water levels upstream of Bar Mills Dam on these resources.
- Determining areas of the shoreline along the Bar Mills impoundment that may have higher erosion potential in the post-partial removal condition that could warrant enhancement or mitigation measures to be incorporated into the Surrender Application and Decommissioning Plan.

Field studies were conducted on July 16, 17, and 18, 2024. Prior to the field studies, the Bar Mills impoundment was drawn down 5 feet from its normal impoundment level to the approximate anticipated post-breach water level.

Due to the extensive nature of data collected and subsequent mapping and analysis for wetlands, shoreline erosion, tributary connectivity, invasive species surveys, a separate study report was developed: *Wetland, Botanical, and Shoreline Erosion Study Bar Mills Project FERC NO. 2194* (Draft January 2025), and is provided in Appendix D of Study Report. An overview summary of results for shoreline erosion is provided Section 5.0 (above), tributary access in Section 7.0 (above). An overview summary of wetlands and botanical invasive species is provided below.

8.1 Wetlands

Excluding the Saco River itself, which is considered a riverine wetland, the study area contains approximately 76 acres of wetland habitat including palustrine emergent (PEM), palustrine scrub-shrub (PSS), palustrine forested (PFO), and palustrine unconsolidated bottom (PUB) wetlands (Table 8-1). Figure 2-1 through Figure 2-4 of the report in Appendix D of this Study Report show the locations of verified wetlands and watercourses within and directly adjacent to the Bar Mills impoundment.

Table 8-1 Field Verified Wetlands Occurring within the Study Area

Wetland Type	Approximate Area (Acres)	Percent of Total Wetlands
Palustrine Emergent	15	20
Palustrine Scrub-Shrub	6	7
Palustrine Forested	54	72
Palustrine Unconsolidated Bottom	1	1
Total	**76**	**100**

Important functions of these wetlands include flood storage, wildlife habitat, and sediment and toxicant retention. It is anticipated that most wetlands will not be adversely affected by post-breach water elevations. While the primary hydrologic inputs for emergent wetlands along river shorelines are inundation from the river or stream, water wicking through exposed alluvial sand and silt are expected to keep the upper layers of the wetland saturated. The exposure of new substrate will likely enable emergent species to germinate from existing seed banks or to spread vegetatively. It is anticipated that these wetlands will either expand or shift towards the new water elevation.

The larger wetland complexes were generally found either at elevations several feet higher than the existing, normal Bar Mills impoundment level or in the floodplain. These wetlands are primarily fed by hydrologic inputs from the contributing watershed or are only affected by river water levels during seasonal flooding events. One freshwater pond (PUB; Wetland S) adjacent to the lower impoundment is influenced by the full pond levels. At post-breach water elevations, much of the standing water in the pond receded. However, the wetland continued to receive hydrologic input from higher in the watershed, likely keeping the soils hydric.

As summarized in Table 2-2 of Appendix D, 13 of the 20 wetlands that were investigated are expected to have no substantive change because they occur fed by hydrologic inputs from the watershed and occur several feet higher than the existing impoundment elevation. Of those, five may be affected by water levels on during flood conditions.

The remaining seven wetlands, representing approximately 1.4 acres are anticipated to remain hydric or saturated due to wicking of water through exposed alluvial sand and silt and are likely to shift toward the new river elevation under partial and full spillway removal

scenarios. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks and open up space for other wetland species to spread vegetatively.

One wetland located approximately 500 feet upstream of the spillway on the eastern shore (Wetland S) is likely to transition from a palustrine unconsolidated bottom to a palustrine emergent wetland. While wetland area may change--either increasing or decreasing—the overall quality of this wetland is expected to improve as restoring the more natural hydrologic conditions supports the physical, chemical, and biological processes characteristic of higher quality wetlands.

8.2 Invasive Botanical Species

BWPH documented 15 invasive botanical species throughout the study area (See Appendix C for mapped locations). Upstream of the Bar Mills Dam, most invasive species were found at trace amounts with low coverage. Downstream of the Bar Mills Dam, invasive species were found at moderate to high densities along the shore and on the island (See Appendix). The most common invasives were woody shrubs, including autumn olive (*Elaeagnus umbellata*), glossy buckthorn (*Frangula alnus*), and Morrow's honeysuckle (*Lonicera morrowii*), with lower densities of multiflora rose (*Rosa multiflora*) and Japanese barberry (*Berberis thunbergia*). Oriental bittersweet (*Celastrus orbiculatus*), a woody vine species, was prevalent as well.

Japanese knotweed (*Fallopia japonica*) was also observed in the study area, appearing in trace amounts upstream of the Bar Mills Dam but forming dense thickets along the shoreline downstream of the dam. Although this species can be found in wetlands, it typically thrives in upland areas and at higher elevations along shorelines.

It is unlikely that the woody invasive species will revegetate the newly exposed shores at high densities. Although woody invasive species thrive in disturbed areas, many typically prefer drier environments (Native Plant Trust, 2024). The newly exposed shorelines will likely support herbaceous species. The only invasive species that could potentially colonize newly exposed areas is reed canary grass. This herbaceous species thrives in wetlands and can spread rapidly. However, reed canary grass was only found in two areas at trace levels. Japanese knotweed was also observed at trace levels above the dam but in dense thickets along the shoreline downstream of the dam. While this species can be found in wetlands, it usually occurs in upland and at higher elevations along shorelines.

However, this species is highly aggressive and may take advantage of newly opened habitat, following the dam breach, the shoreline should be monitored for invasive botanical infestations while they are still relatively easy to treat and manage.

8.3 References

Native Plant Trust. 2024. Go Botany. Available at https://gobotany.nativeplanttrust.org/ , Accessed December 24, 2024.

9.0 RECREATION STUDY

9.1 Introduction

BWPH currently provides recreational opportunities at the Bar Mills Project in accordance with the conditions of the existing FERC license. These recreation facilities will remain available for public use after the Bar Mills Project is decommissioned. Following decommissioning, the reduced water levels are likely to reduce accessibility by motorized watercraft to the impoundment. As a result, BWPH currently plans to revert the existing trailered boat launch to a hand-carry facility to accommodate canoe and kayak access. Working with the Decommissioning Committee and the Town of Hollis, BWPH is exploring potential alternative public access points upstream of the old railroad crossing that could provide hand-carry boat access to flatwater paddling opportunities. Access to upstream portions of the Saco River will continue to be available from the upstream West Buxton Project (FERC No. 2531), though this is a different segment of the river from the reach between Bar Mills and West Buxton.

The Town of Buxton requested a study of modifying the existing boat launch to provide hand-carry canoe and kayak access. A list of future maintenance, schedules and costs was requested for "upkeep" of existing recreation facilities that are currently part of the project. The Final Study Plan (August 2023) included a recreation study that would assess recreational use and needs to inform future operation and maintenance of existing recreational facilities associated with the Bar Mills Project and to inform potential modifications to convert the existing boat launch to a hand carry access facility. Proposed modifications to revert the motorized boat launch assess to hand carry access will be developed in preparation of the Application for License Surrender and Decommissioning Plan.

9.2 Background

BWPH currently provides the following recreation sites at the Bar Mills Project: impoundment boat launch and parking area, canoe portage, tailwater canoe access, and Usher Island parking area and trails (Figure 9-1). At the impoundment boat launch, there is parking available for 4 single vehicles, 2 trailered vehicles, and one ADA space for a trailered vehicle (NextEra Energy 2010). At Usher Island, there is parking available for 2 single vehicles.

At the West Buxton Project, BWPH provides an impoundment boat launch with parking for 2 single vehicles, 2 trailered vehicles, and 1 ADA space (Figure 9-2), a tailwater put-in, and tailwater angler access. The boat launch is located on the West Buxton impoundments, approximately six miles upstream of Bar Mills boat launch. There is an angler access trail with parking for 3 single vehicles (BWPH 2023). On the east side of the river, there is a canoe portage and tailrace access site with parking for 2 single vehicles (BWPH 2018). Due to downstream hydraulic controls, the tailwater facilities are not anticipated to be affected by lower water levels upstream of Bar Mills.

9.3 Goals and Objectives

The goal of the study was to summarize existing recreation use at the Bar Mills Project. The objectives were to:

- Summarize recent recreational use data (e.g., number of vehicles and people on site, recreation activities) to inform any potential enhancement measures potentially needed to maintain the usability of the existing trailered boat launch after it is reverted to hand carry access.
- Assess crowding and condition of existing recreational facilities that will continue to be maintained after surrender and decommissioning of the Bar Mills Project.

9.4 Study Area

The study area included the existing recreational sites at the Bar Mills Project and the West Buxton Project (Figure 9-1, Figure 9-2). This does not include private docks or stairways, which are not owned or maintained by BWPH or considered formal recreation amenities under the FERC license.



Figure 9-1 Recreation Sites at the Bar Mill Project.



Figure 9-2 Recreation Sites at the West Buxton Project.

9.5 Methodology

9.5.1 2023

Between July 1 and September 3, 2023, BWPH collected spot counts and visitor surveys at the Bar Mills impoundment boat launch on a mix of weekdays, weekends, and holidays between 8 AM and 7 PM. The study schedule is shown in Table 9-1. Two spot counts were collected each day at the beginning and end of a four-hour shift, and surveys were conducted during the remainder of the shift. During each spot count, the field clerk recorded the date, time, weather, number of vehicles with and without trailers parked in the parking lot, and the number of individuals that could be seen boating, fishing, walking/hiking/running, picnicking, sightseeing or other activity from the parking area. Although significant levels of tubing occur downstream of the Bar Mills dam, this type of use was not monitored because this area would not be affected by partial or full spillway removal because minimum flow releases from upstream facilities would continue to provide existing flow conditions in the reach.

The visitor survey collected information on group size, length of stay on site, recreation activities, ratings of crowdedness and site condition, site recommendations, and visits during the non-recreation season (September through May).

Table 9-1 2023 Spot Count and Survey Schedule

Date	Time of Spot Counts	Day Type
Saturday, July 1, 2023	14:55, 19:00	Holiday (July 4th Weekend)
Wednesday, July 5, 2023	13:25, 17:21	Weekday
Friday, July 14, 2023	09:30, 13:30	Weekday
Saturday, July 15, 2023	12:20, 16:13	Weekend
Tuesday, July 18, 2023	10:50, 14:50	Weekday
Sunday, July 23, 2023	8:35, 12:40	Weekend
Thursday, August 3, 2023	14:38, 18:38	Weekday
Sunday, August 6, 2023	9:00, 12:50	Weekend
Monday, August 7, 2023	13:50, 17:45	Weekday
Friday, August 18, 2023	8:03, 12:03	Weekday
Wednesday, August 23, 2023	13:51, 17:50	Weekday
Saturday, August 26, 2023	9:24, 13:24	Weekend
Sunday, September 3, 2023	7:30, 11:30	Holiday (Labor Day Weekend)

9.5.2 2024

Between May 15 and September 15, 2024, BWPH completed spot counts at the Bar Mills Project recreation sites and the West Buxton Project recreation sites. The spot counts were completed on randomly selected holidays, weekdays, and weekends between 7 AM and 6 PM. During each spot count, the field clerk recorded the date, time, weather, number of vehicles with and without trailers parked in the parking lots, and the number of individuals recreating that could be seen from the parking area.

9.6 Results

9.6.1 2023 Spot Counts

A total of 13 vehicles were observed during the spot counts conducted between July 1 and September 3, 2023, at the Bar Mills impoundment boat launch; none of the vehicles had a boat trailer (Table 9-2). A total of 9 people were observed during the spot counts; 2 people were walking/hiking/running, 2 people were swimming, and 5 people were doing other activities. Zero people were seen boating, fishing, picnicking, or sightseeing.

The average number of vehicles ranged from 0.25 vehicles on weekdays to 0.63 vehicles on holidays. Based on the 4 single parking spaces available, the parking was well under utilized and ranged from 6 percent occupied on weekdays to 16 percent on holidays (Table 9-3).

Members of the Decommissioning Committee indicated that the high river flows experienced in 2023 likely affected recreational activity, particularly boating. As a result, the recreational use data recorded during the spot surveys are likely not representative of typical use levels.

Table 9-2 Number of Vehicles by Day Type at the Bar Mills Impoundment Boat Launch

Day Type	# Vehicles Without Trailer	# Vehicles With Trailer	Total # Vehicles
Weekday	7	0	7
Weekend	5	0	5
Holiday	1	0	1
Total	**13**	**0**	**13**

Table 9-3 Parking Utilization by Day Type at the Bar Mills Impoundment Boat Launch

Day Type	Average # Vehicles	Parking Utilization (Percent)
Weekday	0.25	6%
Weekend	0.50	13%
Holiday	0.63	16%
Total	**0.50**	**13%**

9.6.2 2023 Visitor Survey

Throughout the 2023 study season, 18 visitor surveys were completed. The group sizes of the 18 survey respondents ranged from 1 to 3 people with an average of 1.8 people.

All survey respondents that provided a zip code (17 of the 18 respondents) resided within approximately 20 miles of the Bar Mills Project. Most respondents (12 respondents, 70.6 percent) were from Buxton, Maine, 2 respondents were from Hollis, Maine (11.8 percent), 2 respondents were from Scarborough, Maine (11.8 percent), and 1 respondent (6 percent) was from West Newfield, Maine. Three respondents stated they own a permanent home on the impoundment.

The recreation activities participated in by the respondents are shown in Table 9-4. Swimming was the most common activity with 11 respondents (61 percent) stating they participated in that activity. Other popular activities were canoeing/kayaking and sightseeing. Other reported activities were boating, fishing, relaxing, tubing, wading, and walking.

All survey respondents rated the crowdedness at the impoundment boat launch between light and moderate; 15 of the respondents (83 percent) gave a rating of light (Table 9-5). The average rating was 1.2. All respondents rated the condition of the site between good and excellent with an average rating of 3.9 (Table 9-6).

Table 9-4 Recreation Activities Participated in at the Bar Mills Impoundment Boat Launch in 2023.

Activity	Count	Percent*
Swimming	11	61%
Sightseeing	6	33%
Canoeing/Kayaking	5	28%

Activity	Count	Percent*
Fishing	2	11%
Boating	1	6%
Relaxing	1	6%
Tubing	1	6%
Wading	1	6%
Walking	1	6%
Total	29	

*Total percentage does not equal 100% because respondents could select more than one activity.

Table 9-5 Crowdedness Ratings at the Bar Mills Impoundment Boat Launch

Crowding Rating	Count	Percent
1 Light	15	83%
2	2	11%
3 Moderate	1	6%
4	0	0%
5 Heavy	0	0%
Total	18	100

Table 9-6 Site Condition Rating at the Bar Mills Impoundment Boat Launch

Condition Rating	Count	Percent
1 Poor	0	0%
2	0	0%
3 Good	7	39%
4	6	33%
5 Excellent	5	28%
Total	18	100

Five of the 18 survey respondents indicated that they visit the impoundment boat launch site between September and May. The months visited were September, October, April, and May; one respondent reported visiting in February.

Three individuals responded that there were additional facilities or improvements needed at impoundment boat launch. One respondent said to unlock boat launch, and two respondents recommended a bathroom. Three respondents provided additional comments. The comments were: "We really like having this launch available" (this respondent's primary activity was canoeing), "Buxton doesn't have much available, I hope you keep the boat launch available," and "want site to stay quiet."

9.6.3 2024 Spot Counts

During the spot counts completed during the 2024 recreation season, a total of 21 vehicles were observed at the Bar Mills impoundment boat launch parking area and 12 vehicles were observed at the Usher Island parking area (Table 9-7). Of the 33 total vehicles, 25 did not have trailers and 8 did have trailers. Most vehicles at both recreation sites were seen on weekends. Parking at the Bar Mills impoundment boat launch and at Usher Island was underutilized (Table 9-8) with ample parking available.

During the spot counts, a total of 8 vehicles were seen at the West Buxton recreation sites; 6 were at the impoundment boat launch, 2 at the canoe portage/tailrace access, and 0 were at the angler access trail (Table 9-7). Parking was well under capacity at the West Buxton recreation sites (Table 9-8).

A total of 28 people were observed at the Bar Mills recreation sites participating in boating, fishing, walking/running, picnicking, sightseeing, and swimming (Table 9-9). Seven people were seen at the West Buxton recreation sites participating in boating and fishing.

Table 9-7 Number of Vehicles by Day Type at the Bar Mills and West Buxton Recreation Site Parking Areas.

Site	Day Type	Number of Vehicles Without Trailers	Number of Vehicles With Trailers	Total Number of Vehicles
Bar Mills Boat Launch Parking Area	Weekday	5	1	6
	Weekend	8	3	11
	Holiday	3	1	4
	Total	*16*	*5*	*21*
Bar Mills Usher Island Parking Area	Weekday	1	1	2
	Weekend	7	2	9
	Holiday	1	0	1
	Total	*9*	*3*	*12*
Bar Mills Total		**25**	**8**	**33**
West Buxton Angler Access Trail Parking Area	Weekday	0	0	0
	Holiday	0	0	0
	Total	*0*	*0*	*0*
West Buxton Boat Launch Parking Area	Weekday	2	4	6
	Holiday	0	0	0
	Total	*2*	*4*	*6*
	Weekday	1	1	2

Site	Day Type	Number of Vehicles Without Trailers	Number of Vehicles With Trailers	Total Number of Vehicles
West Buxton Canoe Portage/Tailrace Access Parking Area	Holiday	0	0	0
	Total	*1*	*1*	*2*
West Buxton Total		**3**	**5**	**8**

Table 9-8 Parking Utilization by Day Type at the Bar Mills and West Buxton Recreation Sites.

Day Type	Count (# days)	Average Number of Vehicles Without Trailers	Parking Utilization (Percent)	Average Number of Vehicles With Trailers	Parking Utilization (Percent)
Bar Mills Boat Launch Parking Area					
Weekday	5	1.0	25%	0.2	10%
Weekend	8	1.0	25%	0.4	19%
Holiday	1	3.0	75%	1.0	50%
Total	14	1.1	29%	0.4	18%
Bar Mills Usher Island Parking Area					
Weekday	5	0.4	20	NA	NA
Weekend	8	1.1	56		
Holiday	1	1.0	50		
Total	14	0.9	43		
West Buxton Boat Launch Parking Area					
Weekday	9	0.22	11%	0.44	22%
Holiday	2	0.0	0%	0.0	0%
Total	11	0.18	9%	0.36	18%
West Buxton Canoe Portage/Tailrace Access Parking Area					
Weekday	9	0.22	11%	NA	NA
Holiday	2	0	0%		
Total	11	0.18	9%		

Table 9-9 Number of respondents participating in recreation activities at the Bar Mills and West Buxton Recreation Sites during the 2024 spot counts.

Site	Boat*	Fish	Walk/Run	Picnic	Sightsee	Swim	Total
Bar Mills Boat Launch Parking Area	5	2	6	2	4	0	19
Bar Mills Usher Island Parking Area	0	3	0	2	1	3	9
Bar Mills Total	**5**	**5**	**6**	**4**	**5**	**3**	**28**
West Buxton Angler Access Trail Parking Area	0	0	0	0	0	0	0
West Buxton Boat Launch Parking Area	1	4	0	0	0	0	5
West Buxton Canoe Portage/Tailrace Access Parking Area	0	2	0	0	0	0	2
West Buxton Total	**1**	**6**	**0**	**0**	**0**	**0**	**7**

*Note- the type of boating was not specified

Recreation use monitoring completed in 2023 at the Bar Mills impoundment boat launch and in 2024 at Bar Mills recreation sites and West Buxton recreation sites demonstrated that use levels were low and under capacity. The spot counts and survey results did not indicate that motor boating was a common activity. This suggests that reverting the current boat launch to a hand-carry only launch will not have a significant effect on recreation use of the Bar Mills impoundment boat launch. Access to the other Bar Mills recreation sites and the West Buxton recreation sites will likely remain unchanged after the dam decommissioning.

Due to the reduction in water level at the Bar Mills boat launch under post-partial or full spillway removal conditions, BWPH anticipates a need to extend the launch to provide access to the newly established normal water level. Decommissioning Committee members have indicated that an extension of the existing boat launch would not provide access to still water and therefore would not provide opportunities for flatwater paddling. Soft sediments in the area may also make it difficult for ingress and egress. As noted above, BWPH is working with the Committee and the Town of Hollis to explore potential access and fire suppression alternatives. Preliminary and final designs were developed as part of the Application for License Surrender and Decommissioning Plan. BWPH acknowledges that the Towns and representatives of the Towns on the Decommissioning

Committee do not feel extending the boat launch will sufficiently address recreational access concerns or fire suppression concerns.

9.7 References

Brookfield White Pine Hydro LLC (BWPH). 2018. Final Recreation Management Plan. Accession number 20181116-5219. Available online: https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20181116-5219&optimized=false.

Brookfield White Pine Hydro LLC (BWPH). 2023. Angler Access Trail As-Built Drawing. January 13, 2023. Accession number 20230113-5084. Available online: https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20100105-5029&optimized=false.

NextEra Energy. 2010. Bar Mill Project Recreation Plan Facility Enhancements (FERC 2194). Accession number 20100105-5029. Available online: https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20100105-5029&optimized=false.

10.0 LAND USE

10.1 Introduction

The Project Boundary encompasses lands and waters necessary for the operation of the hydro facility this includes lands and flowage rights up to El. 148.5 ft MSL around the impoundment that may or may not be owned by BWPH, as well as several BWPH-owned parcels containing the powerhouse, recreation sites, and appurtenant facilities. Under partial or full spillway removal conditions, permanent impoundment water levels will be reduced, extending the shoreland zone toward the original historic river channel creating additional lands between the current project boundary and the new shoreline elevation.

10.2 Background

Upon license surrender, the FERC Project Boundary will no longer exist, and the lands within the former Project Boundary not owned by BWPH will no longer be encumbered by eminent domain rights under the FERC license. Lands and structures owned by BWPH (i.e., the powerhouse, canal, and remaining dam structure) will remain retained and maintained by the Company.

Additionally, a new normal waterline for the Saco River will be established following the partial or full spillway removal, creating additional acreage for landowners adjacent to the former impoundment. These lands would previously have been subject to BWPH's flowage rights, but would become part of the adjacent landowner's property, at least up to the bank of the Saco River, following the Project decommissioning.

10.3 Goals and Objectives

The objectives of this evaluation was to use HEC-RAS modeling to quantify additional shoreline lands under modeled water level and river flow conditions for partial or full spillway removal conditions to quantify the change in lands that would previously have been subject to BWPH's flowage rights which will become part of the adjacent landowner's property.

10.4 Study Area

The study area includes existing lands within the project boundary along the impoundment (Figure 10-1 and Figure 10-2).

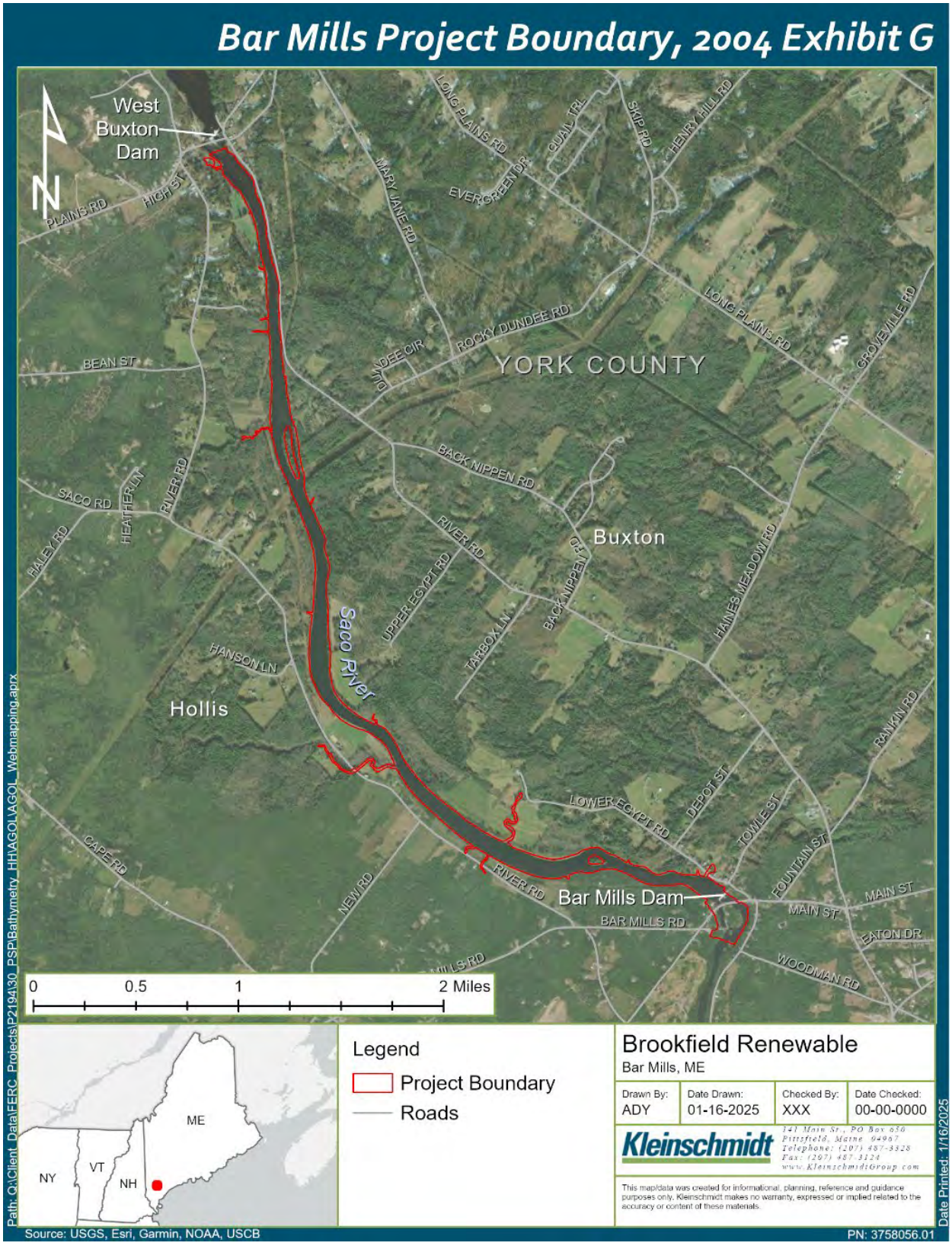


Figure 10-1 Overall Project Boundary for Bar Mils

10.5 Methodology

A modeled assessment of potential additional shoreline lands under the post-breach condition was conducted comparing acreage of shoreland within the current project boundary to acreage of shoreland under a new permanent water level under post-partial breach conditions.

10.6 Results

Based upon HEC-RAS model results, shoreland acreage under post-partial and full spillway removal conditions were approximated with GIS mapping software.

Of the approximately 20-25 acres of land within the project boundary under existing conditions, approximately 7 acres are attributed to lands adjacent to the boat launch, canal, surrounding the powerhouse and tailwater area, and Usher Island. Under the annual median flow condition (50% exceedance) of 2,467 cfs an estimated additional 26.42 acres of land would be created at the lower water level (Table 10-1 and 10-2). At the minimum river flow from releases at West Buxton (typically occurring during summer months) of 400 cfs, approximately 35.3 additional acres of shoreland would be created.

Table 10-1 Acres of Exposed Impoundment Shoreline within the Project Boundary Line, Buxton

	300 cfs	400 cfs	2,476 cfs
Existing Conditions	9.57	9.43	7.93
Post Partial Removal	29.05	27.46	13.06
Total Increase in Acreage	19.48	18.03	19.48

Table 10-2 Acres of Exposed Impoundment Shoreline within the Project Boundary Line, Hollis

	300 cfs	400 cfs	2,476 cfs
Existing Conditions	14.88	14.74	13.37
Post Partial Removal	33.42	32.01	20.31
Total Increase in Acreage	18.54	17.27	6.94

Figures 10-2 through 10-3 illustrate the anticipated change in shoreline boundaries a 300, 400, and 2,476 cfs based upon modeled post-partial removal conditions in the vicinity upstream of the dam, extending to the former bridge piers. Full removal conditions are

not presented due to the limited additional area anticipated to become dewatered immediately upstream of the spillway along the eastern shoreline.

Due to the hydraulic control located approximately 2,200 feet upstream of the Bar Mills dam, water levels upstream of the control are anticipated to be reduced by approximately 2.5 feet. Therefore, the majority of additional lands will occur along the reach between the dam and the hydraulic control with limited margins of additional lands created upstream of the hydraulic control.

Maine common law stipulates that conveyance of land ownership on non-tidal rivers or streams are to the "thread" of the water body, defined as a line "equally distant" from streambank at the ordinary water level (Hermansen 2018). It is anticipated that the new normal waterline that will be established along the impoundment will create additional acreage for landowners between the new former impoundment elevation under partial spillway removal. This would be similar to that of full spillway removal, with exception of the upstream area adjacent to the eastern spillway which is likely to become somewhat more dewatered under full removal as that with partial removal. The quantity of additional acreage will seasonally vary depending on riverflow. These lands that would previously have been subject to BWPH's flowage rights would instead become part of the adjacent landowner's property, held at least up to the bank of the Saco River, following the Project decommissioning.

10.7 References

Knud E. Hermansen & Donald R. Richards, Maine Principles of Ownership Along Water Bodies, 47 Me. L. Rev. 35 (2018)

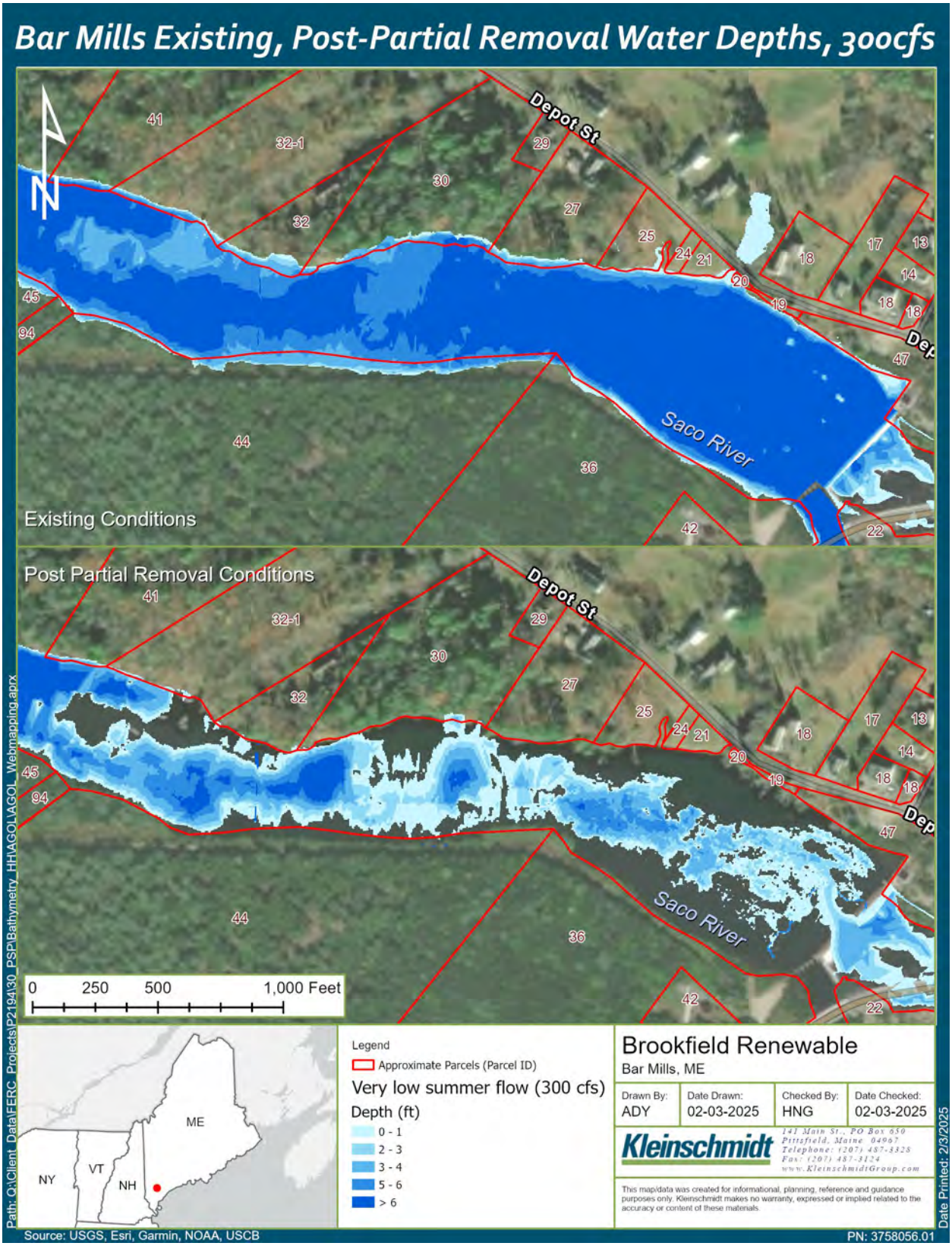


Figure 10-2 Dewatered Shoreland at 300 cfs Under Partial Removal Conditions

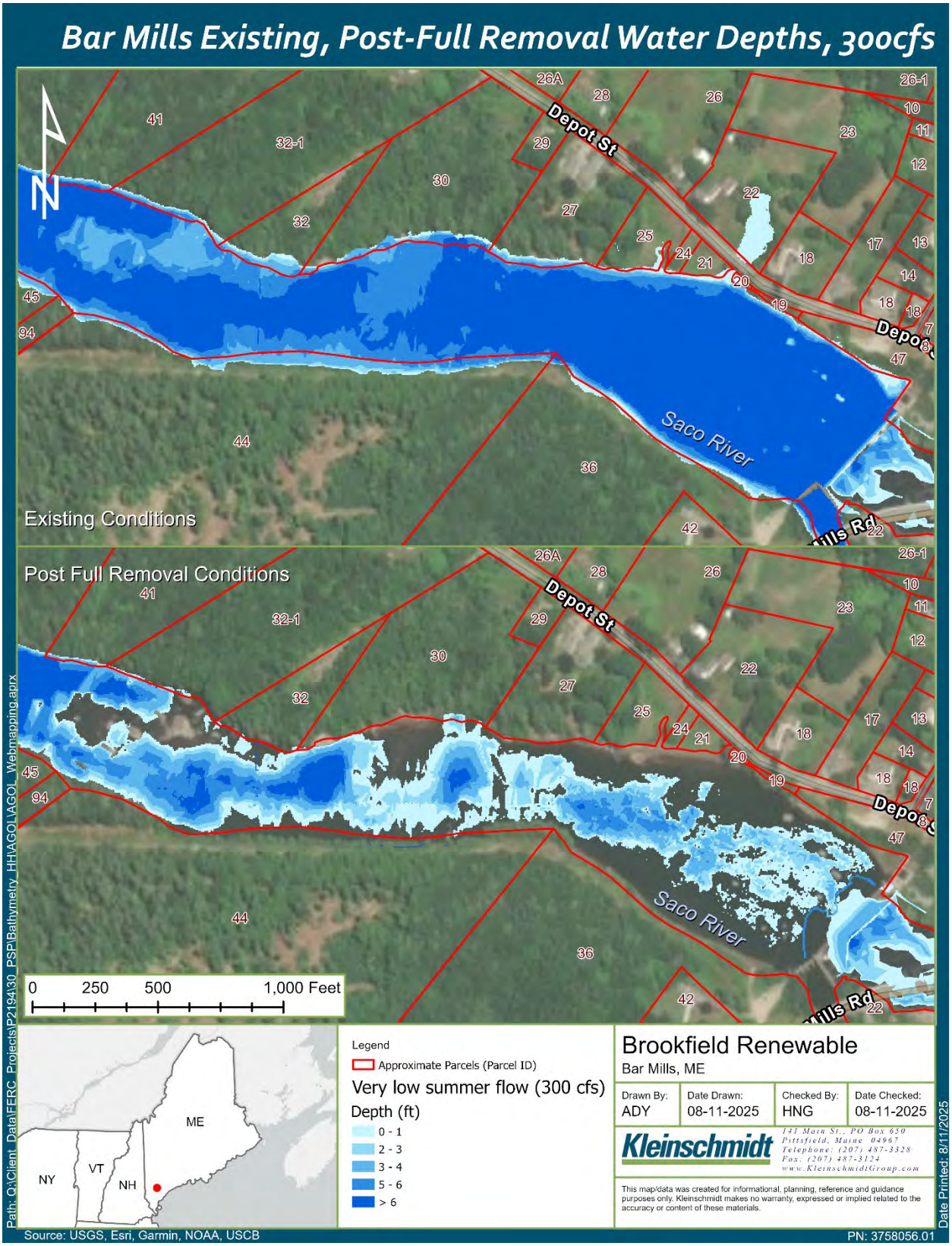


Figure 10-3 Dewatered Shoreland at 300 cfs Under Full Spillway Removal Conditions

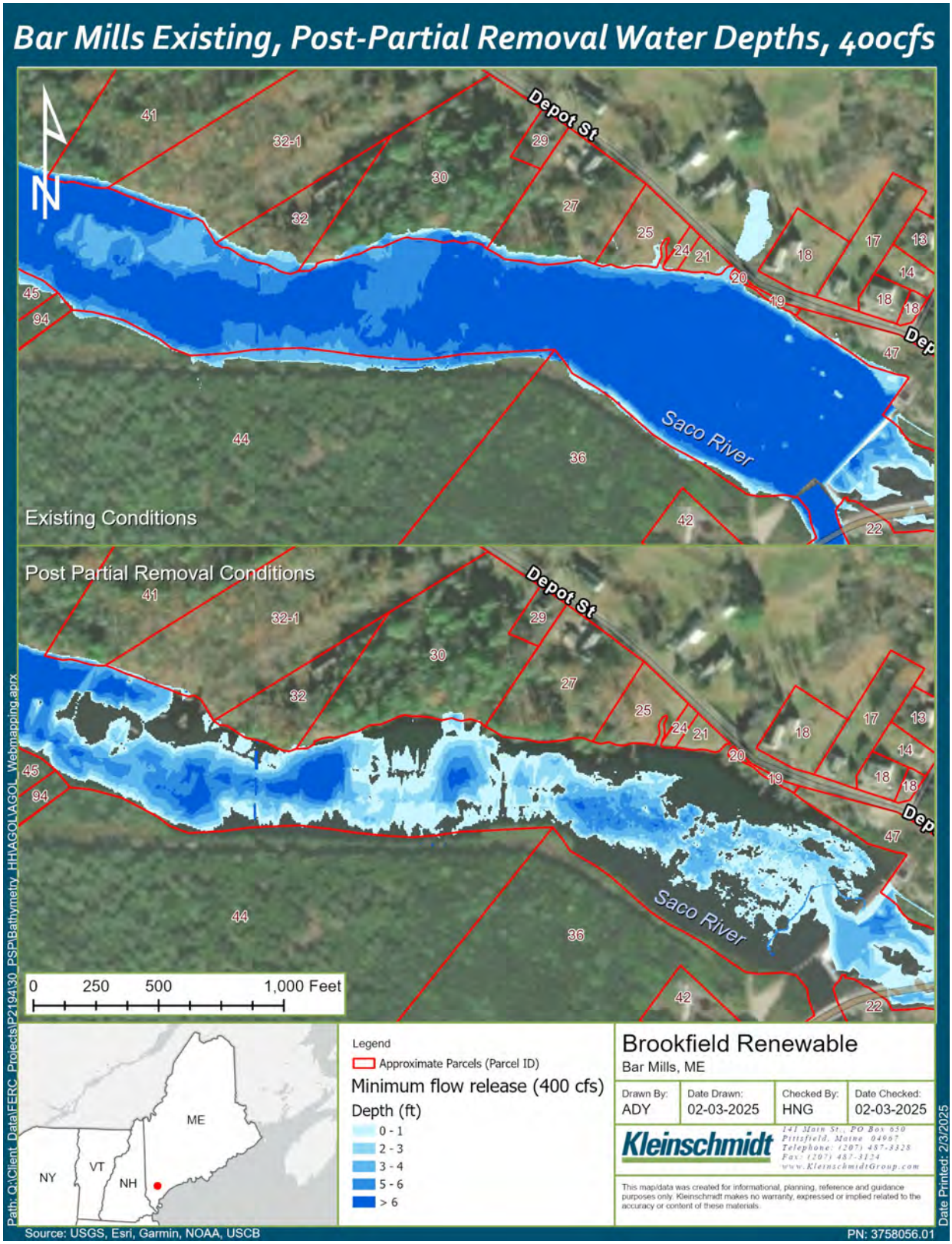


Figure 10-4 Dewatered Shoreland at 400 cfs Under Partial Spillway Removal Conditions

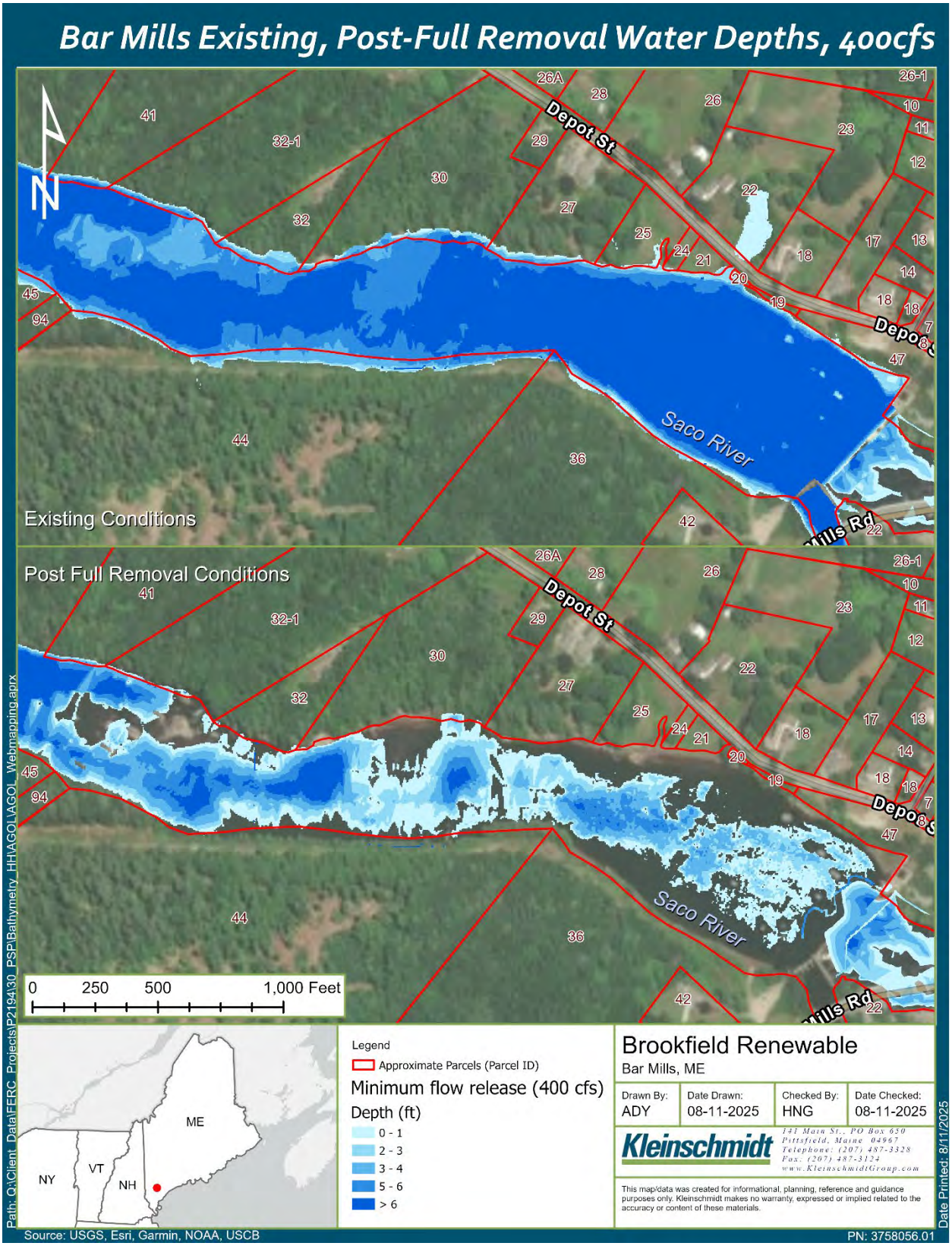


Figure 10-5 Dewatered Shoreland at 400 cfs Under Full Spillway Removal Conditions

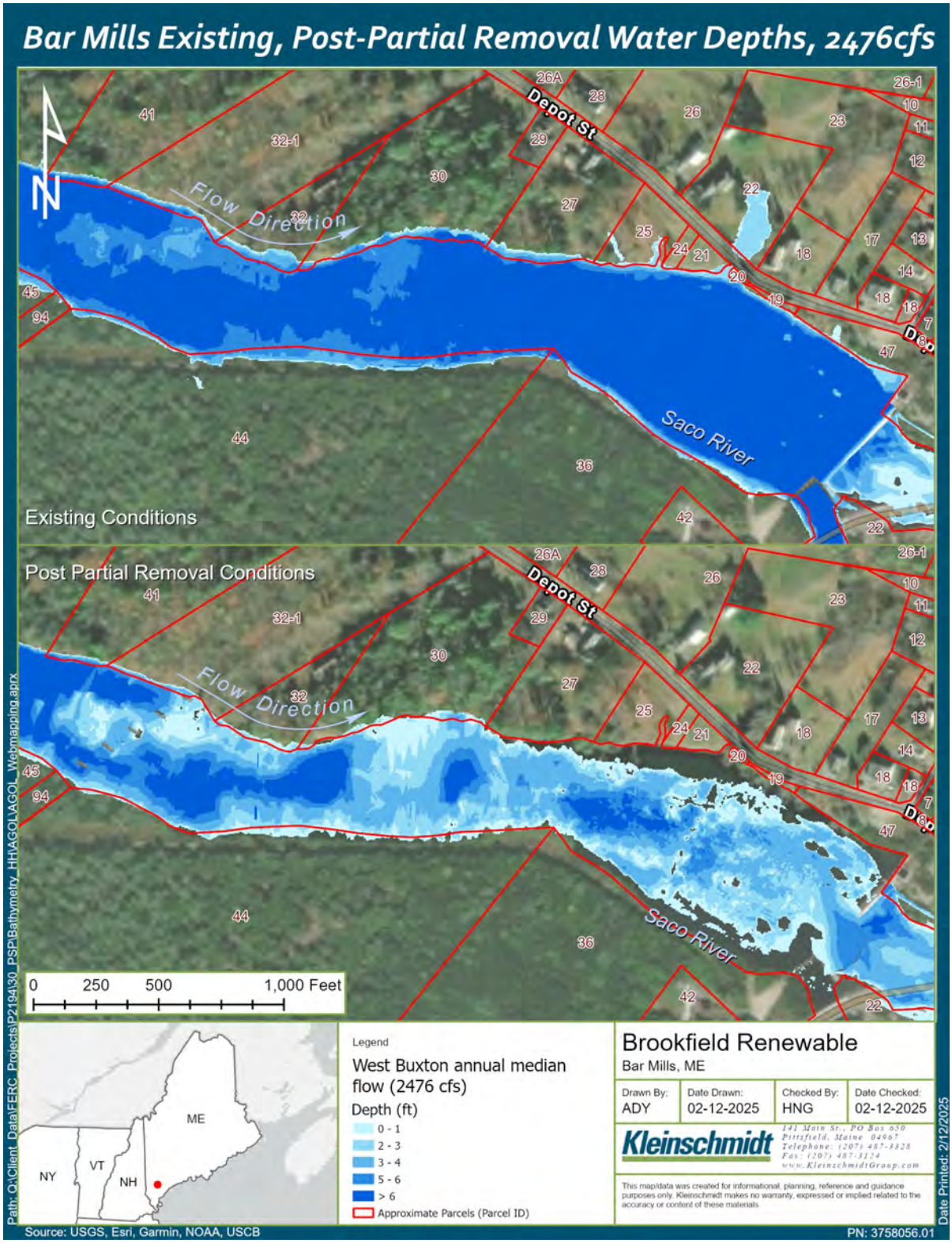


Figure 10-6 Dewatered Shoreland at 2,476 cfs Under Partial Spillway Removal Conditions

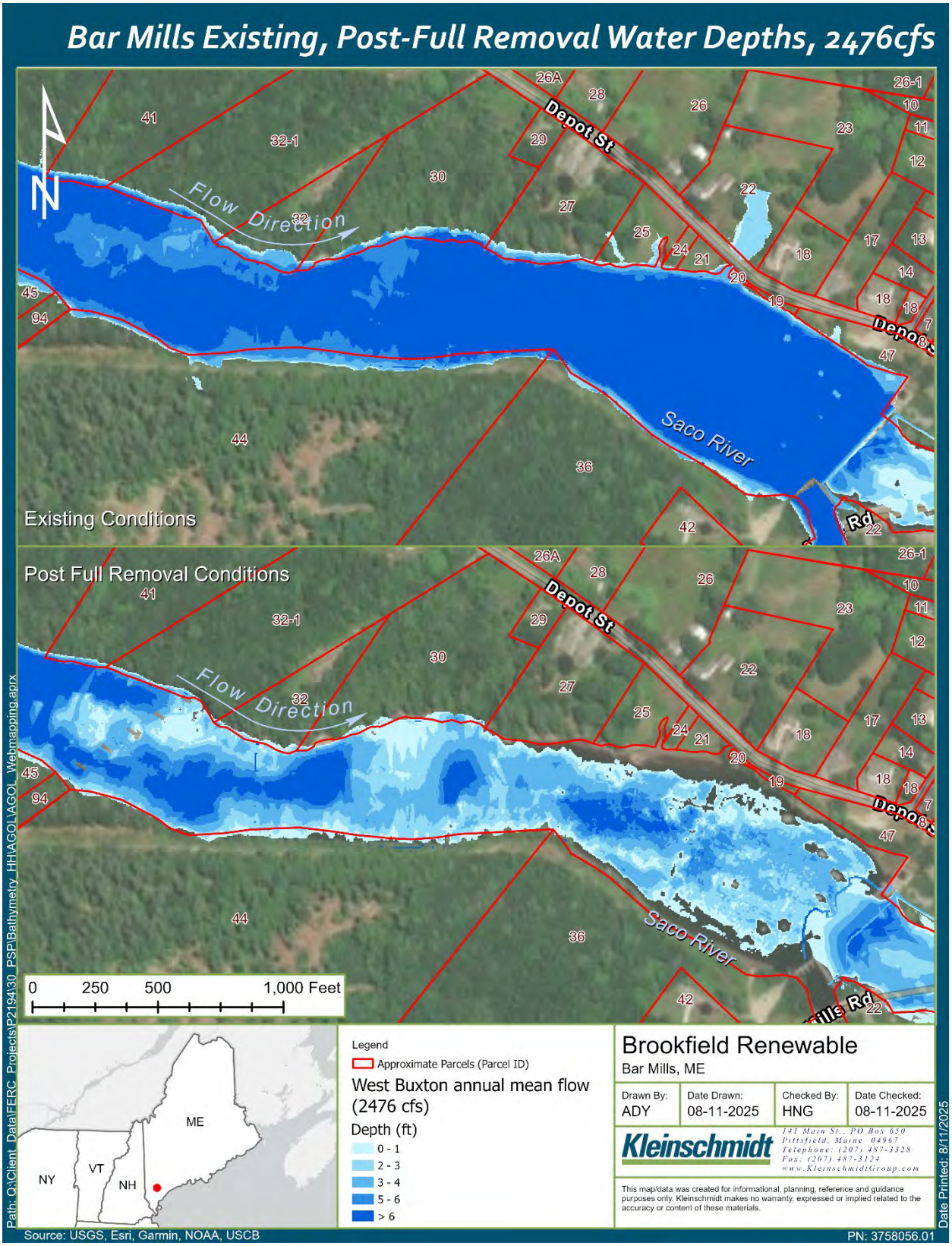


Figure 10-7 Dewatered Shoreland at 2,476 cfs Under Partial Spillway Removal Conditions

11.0 AESTHETICS

11.1 Introduction

The aesthetics of the Project area under the post-breach condition are of concern to local property owners and to the communities of Hollis and Buxton.

Partial spillway removal would return this section of the Saco River to a more natural free flowing condition and remove portions of structures currently spanning the width of the river. Full spillway removal would remove the existing dam up to the abutments on either side of the river channel.

11.2 Background

The Saco River Corridor Act (38 M.R.S. § 951) established the Saco River Corridor and the Commission (38 M.R.S. § 954). The Act found the Saco River and "adjacent lands possess outstanding scenic and aesthetic qualities.". The purpose of the Act includes preservation of the scenic character along the Saco River, from Saco Bay to the border of New Hampshire, under the authority of the corridor Commission.

BWPH is considering two alternatives. One is removal of the west portion of the spillway, canal gate structure, and draining, grading, and seeding the canal, which will result in natural river flow through the removed portion of the dam. The second alternative is the same as the first but also includes removal of the former log sluice and eastern portion of the spill way up to the retaining wall adjacent to the former mill foundation.

11.3 Goals and Objectives

The goal of the study is to develop a graphical rendering of post-breach conditions based upon HEC-RAS modeling described in Section 6.5.1 to assess pre-and post-breach aesthetic conditions in the viewshed. Development of post-partial and full spillway removal renderings will provide a depiction of the viewshed resulting from the partial dam removal.

11.4 Study Area

The study area includes the project intake canal, canal gate structure and canal spillway, and main dam and spillways. An aesthetic evaluation of the powerhouse was not conducted because BWPH does not intend to remove the structure.

11.5 Methodology

In order to assess pre-, post-partial, and full spillway removal, aesthetic conditions in the viewshed BWPH developed renderings for three vantagepoints where the general public has visual access to the Bar Mills dam, the public boat launch and the Bar Mills Bridge (Route 4A). The existing views were modified utilizing photo manipulation software coupled with water level modeling results developed to estimate water depths under post-breach conditions. The photo renderings below were designed to mimic the anticipated summer flow post breach but are only anticipated to provide a general characterization of potential post removal conditions.

11.6 Results

Based upon water level modeling, it is anticipated that the lower impoundment will largely return to a riverine reach, following the historic main channel through the area would be previously occupied by the western portion of the spillway. As discussed in Kleinschmidt (2025) shoreline conditions of the newly exposed banks stabilize quickly once the dam is partially removed, with many of the sandy banks adjusting to the new water elevation and becoming vegetated rapidly. Due to the newly exposed sandy banks, there will be some movement of finer material but with the river historically being cobble/boulder-dominated, the general channel form, shape, and extent are not anticipated to change substantially following the dam breach. Current conditions and renderings of post partial and full removal of the spillway were developed for vantage points for an aerial view, the Bar Mills Bridge, the boat launch, and the intake canal. shown in Photo 11-4 through Photo 11-10. Renderings approximate anticipated transition to permanent lower water levels under both scenarios.

An additional rendering was also developed looking down the power canal towards the powerhouse as compared to current conditions under dewatering, Photo 11-12. The primary differences illustrate a permanently dewatered condition for the canal and removal of the transmission tower and crane structure on the powerhouse.



Photo 11-1 Existing Aerial View of Bar Mills Dam



Photo 11-2 Post-Partial Breach Aerial View of Bar Mills Dam



Photo 11-3 Post-Full Spillway Removal Aerial View of Bar Mills Dam



Photo 11-4 Existing View of Bar Mills Dam from Bar Mills Bridge



Photo 11-5 Post-Partial Breach View of Bar Mills Dam from Bar Mills Bridge



Photo 11-6 Post-Full Spillway Removal View of Bar Mills Dam from Bar Mills Bridge



Photo 11-7 Existing View of Bar Mills Dam from Boat Launch



Photo 11-8 Post-Partial Breach View of Bar Mills Dam from Boat Launch



Photo 11-9 Post-Full Spillway Removal View of Bar Mills Dam from Boat Launch



Photo 11-10 Existing View of Bar Mills Dam from Canal



Photo 11-11 Post-Breach and Full Spillway Removal View of Bar Mills Dam from Canal



Photo 11-12 Existing and Rendering of Power Canal

11.7 References

Kleinschmidt. 2025. Wetland, Botanical, and Shoreline Erosion Study Bar Mills Project FERC No. 2194 (Draft July 2025)

12.0 HISTORIC STRUCTURES SURVEY

By letter dated June 21, 2023, the Maine Historic Preservation Commission (MHPC) recommended that BWPH conduct an architectural survey of structures within the area of potential effect (APE). MHPC further recommended that the APE be defined in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and that the APE must include lands enclosed by the project boundary and lands or properties outside the project boundary that may be affected by project construction and operation.

MHPC requires that architectural surveys be conducted by an historic preservation consultant that MHPC has determined to be qualified for such survey. BWPH contracted TRC to conduct the survey, which was completed in October 2025. Survey documentation confirmed that eight structures previously found to be eligible for listing on the National Register of Historic Places (NRPH) within the MHPC approved APE are eligible. The eight had previously been identified as eligible for listing in the National Register of Historic Places and were the subject of TRC's 2024 survey. Four are associated with the West Buxton hydro facility. Two are the Bar Mills Historic District and former bridge piers, which are not maintained by BWPH. The Bar Mills facility - Bar Mills Hydroelectric Plant and dam are two of the eight structures and BWPH will continue to be responsible for maintenance to the extent portions of the overall dam structures would remain. One additional feature was also determined eligible and potentially affected by the surrender and partial removal of the Bar Mills dam. Survey documentation was provided to MHPC for approval and concurrence. In a response date June 2, 2025 (Appendix H) MHPC concurred with eligibility of the facilities for listing on the National Register of Historic Places and recommended that FERC seek ways to avoid, minimize, or mitigate any adverse effects on these structures. BWPH will further consult with MHPC to develop any potential recommendations for protective or mitigative measures that may be necessary to address effects on these resources, as applicable.

APPENDIX A

TOWN DECOMMISSIONING COMMITTEE SUMMARY

Bar Mills Dam Decommissioning Committee

Introduction

In the spring of 2025, a local Committee made up of representatives from the Town of Buxton and the Town of Hollis was formed to provide community input on the decommissioning of the Bar Mills Project. The following summarizes the Committee's goals, process and outcomes to date.

Committee Goals

- Serve as liaisons between Brookfield White Pine Hydro (BWPH) and residents.
- Provide comments on the Draft Study Report (DSR).
- Share perspectives, concerns and ideas regarding decommissioning.

Committee Process

- The Committee held three meetings with BWPH in August and September to review the DSR and discuss the decommissioning process.
- Committee meetings were facilitated by a neutral 3rd party and documented in a series of Outcomes Memorandums (see attached).
- The Committee process was established in hopes of establishing a partnership between BWPH and the Towns that promotes mutual understanding and cooperation on the decommissioning for the Bar Mills Project.

Outcomes To Date

In the near-term, BWPH and the Towns of Buxton and Hollis have committed to continue working together on the following items:

- Wells – Identifying adjacent residents' private drinking water wells that could be impacted by decommissioning and developing an appropriate mitigation strategy;
- Fire Suppression – Considering and pursuing alternative intakes or otherwise for the dry hydrants in the vicinity of the Bar Mills project that are impacted post dam removal;
- Public Access – Identify opportunities for future public access to the river, including access for flatwater paddling;
- Dam Removal – Evaluate full spillway removal versus partial spillway removal;
- Rogers Fibre Mill – Evaluate opportunities to fill and cap the old Fibre Mill foundation and site in full coordination with the Town of Buxton.

Each of these items will require collecting more information and evaluating potential mitigation options over the course of the next several months and years leading up to decommissioning.

Specific activities planned to advance these commitments are described in more detail section below.

Summary of Discussions

The following summarizes topics discussed by the Decommissioning Committee, comments and concerns expressed and responses from BWPH. Some of these items discussed pertain directly to the DSR, while others focus on the Decommissioning Plan.

Draft Study Report

Following consultation with federal and state resource agencies, stakeholders, and the general public in 2022 and 2023, BWPH published a draft study plan in May 2023 and a final study plan in August 2023. Unfortunately, the 2023 study season proved challenging due to higher-than-normal summer precipitation and the bulk of the study work was delayed until 2024. Information in the DSR will be used to inform development of a Decommissioning Plan and Surrender Application, which are scheduled to be prepared in early 2026.

The following summarizes comments from the Decommissioning Committee regarding the DSR, and BWPH's response. Additional details can be found in the attached meeting Outcomes Memos.

- Full vs Partial Removal - The DSR is unclear at times about what removal is being discussed. The report should be more consistent and concise when discussing removal options.

  Response: The DSR has been revised to improve clarity. The intent is to provide information on both partial and full spillway removal.

- Sediments in the Power Canal - The DSR does not provide any information on sediments in the power canal or future flows/water in the canal.
  - Response: Sediment sampling was conducted in the canal. Section 3 of the DSR presents of summary of findings. There is no intent to dredge or otherwise disturb sediments in the canal. Information regarding future canal inundation is provided below under the Decommissioning Plan.

- Eel Passage – The DSR relies on data regarding Sea Lamprey to draw conclusion regarding impacts on American eels. These are very different fish species with distinctly different behaviors. Sea Lamprey are not a good surrogate for American eels.

  Response: The DSR has been revised to provide information specific to American Eels.

- Recreation Survey and Access to Still Water - Findings from the recreation survey are not representative due to the high flow conditions that were present at the time of the

survey. Recreational use is higher than reported in the DSR. The existing boat launch will not provide access for still water paddling.

Response: The DSR has been revised to acknowledge the limitations of the 2023 survey. BWPH is open to exploring alternative public access opportunities.

- Wells - There is limited information regarding wells that could be affected by decommissioning.

  Response – BWPH is working with the Town of Buxton and the Town of Hollis to identify wells that could be impacted, and to implement a landowner survey to gather more information on these wells. BWPH is committed to mitigating for adverse impacts to wells, but needs sufficient information to ensure the impacts are related to decommissioning. It will be difficult to determine impacts until after the spillway is removed, but data on the status and condition of existing wells prior to removal will be important to assessing future impacts.

- Wetland and Wildlife Impacts - Concern was expressed regarding impacts to wetlands and wildlife due to lowered water levels post spillway removal (partial or full). The DSR is not explicit regarding plans for monitoring post removal.

  Response – The DSR provides a detailed analysis of expected impacts to wetlands and wildlife. The Decommissioning Plan will include plans for post removal monitoring.

Decommissioning Plan

A formal Decommissioning Plan has not yet been developed. BWPH is currently collecting information, including agency and public input, that will inform the Decommissioning Plan. An initial proposal was developed in 2022 as the basis for determining the scope of the Draft Study Plan.

The following outlines elements of the initial decommissioning proposal, input received from the Committee on those elements and BWPH's response to that input. Additional details can be found in the attached meeting Outcomes Memos.

- Fire Suppression – Lowered water levels in the river post dam removal will impact existing fire hydrants near the dam. BWPH discussed options for mitigating this impact with the Committee and is currently working with the Fire Chiefs from both towns to identify options for replacing the existing fire suppression capability.

- Spillway Removal – BWPH's initial decommissioning proposal focused on a partial spillway removal strategy to ensure adequate depths for upstream fish passage and to reduce the risk of disturbing the adjacent Rogers Fibre Mill Superfund site. Public comments received in 2022 indicated concerns regarding the public safety and aesthetics of a partial spillway removal.

Response: The DSR includes analyses of both a partial and a full spillway removal. BWPH is currently collecting information on the costs of both removal strategies. No decision has been made regarding whether full or partial spillway removal will be proposed in the Decommissioning Plan.

- Powerhouse – Committee members expressed concern that the Town of Hollis could have a future liability and financial burden if the powerhouse is abandoned in the future (similar to the situation with the Fibre Mill in Buxton). Committee members also expressed concern regarding public safety (attractive nuisance) and potential environmental contamination if the powerhouse were abandoned in the future.

  Response: BWPH understands and appreciates the Committee's concerns. The powerhouse has value to BWPH and as such BWPH does not intend to demolish the powerhouse structure. BWPH is committed to maintaining the powerhouse structure to ensure it's safe and secure. The powerhouse is structurally sound and does not contain any oil or other hazardous materials. There is a transformer on the roof of the powerhouse that contains oil. BWPH is considering removing the existing crane and securing the water passageways. BWPH is open to lowering or removing the existing headgates. BWPH is also open to installing security cameras and vegetative plantings to provide additional security and visually screen the structure.

- Power Canal and Canal Spillway – Committee members asked for more information on plans for the future of the power canal and the canal spillway located at the end of the power canal. Committee members asked if the canal could be filled and expressed concern regarding public safety associated with the canal spillway if it's left in place (i.e. could become an attractive nuisance).
  - Response: The initial decommissioning proposal includes constructing a new concrete weir (2-3 feet high) at the entrance to the power canal to keep water in the main channel of the river to facilitate fish passage. At high flows, greater than 9,000 cubic feet per second (cfs), water would overtop the weir and enter the power canal. An existing pipe in the canal spillway would be maintained to facilitate draining of the canal. Flows greater than 9,000 cfs generally occur 2-3 times per year. The canal is expected to drain in roughly a day once weir overtopping ceases. The canal is expected to revegetate fairly rapidly after decommissioning. Due to the depth of the canal (over 12' in some places) filling the canal would be cost prohibitive. The canal spillway would remain in place, and fencing would remain to prevent public access.

ATTACHMENTS

MEMORANDUM

To: Bar Mills Dam Decommissioning Committee

From: Bruce DiGennaro, The Essex Partnership

Cc: Brookfield White Pine Hydro

Date: September 9, 2025 Final

Re: August 26, 2025, Bar Mills Decommissioning Committee Meeting

Meeting Attendees:

Renee Lewis (Committee Member)
Jim Boutin (Committee Member)
Mark Woodruff (Committee Member)
Mark Blier (Committee Member)
Paul Mattor (Committee Member)
Dan Yarumian (Committee Member)
Heath Knight (Committee Member)
David Field (Selectman - Buxton)
Jamie Marshall (Committee Member)
Terry Walters (Committee Member)
Matt LeBlanc (BWPH)
Ryan Nadeau (BWPH)
Andy Qua (KA)
Hannah Flanagan (KA)
Kevin Cooley (KA)
Bruce DiGennaro (Facilitator)

Action Items

- Wells - Committee members and Brookfield White Pine Hydro (BWPH) to work with the Town of Hollis and the Town of Buxton to implement a survey to obtain information on wells in the vicinity of the impoundment.
- Fire Suppression - Invite fire officials to a subsequent meeting to discuss fire suppression needs and options, or establish a subcommittee to meet with them and report back to the full Committee.
- Canal - Kleinschmidt to provide hydrologic modeling data regarding the frequency of canal inundation post dam removal and weir construction.
- Drawings – Committee members to identify specific drawings or information they would like to see and Kleinschmidt to explore options for making such information available to the Committee.
- Stakeholder and Public Outreach - Committee members to work with BWPH on communication and outreach. Discuss specifics at a subsequent meeting
- Previous Comments – Kleinschmidt to review and share comments regarding the draft study plan with the Committee

Outcomes

- Ground Rules - The Committee agreed to the following ground rules:
    - Commit to consistent participation.
    - Listen to each other – be curious.

- Use respectful language.
- Respect the agenda and people's time – be concise.

- Discussion Topics - The Committee identified the following list of items for discussion. The items shown in *red italics* were discussed at the meeting. Other items were tabled for discussion at future meetings.
  - *Process*
    - *Regulatory*
    - *Construction*
  - *Sediment – Risk Assessment*
  - Water levels
    - Property impacts upstream
    - Instream flow requirements
  - Water quality
  - *Wells*
  - *Fish passage*
  - *Invasive vegetation/revegetation*
  - *Recreation*
    - *Safety and practicality of boat launch at dam*
    - Public access
  - Public safety
  - *Fire suppression – dry hydrants*
  - Aesthetics
  - Lands
    - Future ownership
    - Future use of Brookfield lands
  - Historic structures
  - *Powerhouse*
    - *Potential future financial burden for towns*
  - *Canal*
    - *Future condition (how often wet?)*
    - Sediment
  - *Rogers Fibre Mill*
  - *Drawings*
  - Previous comments
  - *Communication with stakeholders and the public*

- Future Meetings - The Committee scheduled additional meetings as follows:
  - *September 8 from 4pm to 7pm* – site visit and meeting – meet at boat ramp at the dam at 4pm.
  - *September 26 from 8:30am to 11:30am*

- 9/8 Meeting Topics - The Committee agreed to focus on the following items at its next meeting scheduled for 9/8:
  - Recreation, including loss of flatwater opportunities
  - Public safety
  - Powerhouse, including future liabilities/burden to the towns

- Canal

- Wells – The Committee agreed to work with BWPH on implementation of a survey to obtain information on wells in the vicinity of the impoundment.

- Invasive Species – The Committee acknowledged that some invasive vegetation will populate shoreline lands exposed due to decommissioning, but that it's not practical to control invasive vegetation except through the use of herbicides, which is not desirable near waterbodies.

Discussion Highlights

- Committee Purpose and Goals:
  - BWPH's hope for the Committee process is to establish a partnership with the Towns of Hollis and the Town of Buxton that promotes mutual understanding and cooperation for the decommissioning for the Bar Mills dam on the Saco River.
  - Committee goals are to:
    - Serve as liaisons between BWPH and residents.
    - Provide comments on the Draft Study Report.
    - Share perspectives, concerns and ideas regarding decommissioning.

- Process and Timeline Going Forward
  - Committee to hold three meetings between August and November 2025.
  - Wrap up comments from Committee on Draft Study Report in September.
  - Revise Draft Study Report and release for public review by the end of September, or sooner if possible.
  - Hold a public meeting on the Draft Study Report (ideally in October 2025).
  - Use comments on the Draft Study Report, and other input from the Committee to inform BWPH's surrender application to FERC.
  - Submit the FERC license surrender application in early 2026 (target a draft in January and a final in March).
  - BWPH will submit their proposed final design as part of the surrender application. FERC will decide what the final design will be through their regulatory process, including stakeholder input.
  - The FERC process will include additional opportunities for public comment and is expected to take a year to complete with a final order expected in mid to late 2027.
  - Construction is anticipated to start in the fall of 2027 and expected to take 6 months to complete.
  - Committee members inquired about the factors that would be considered in deciding on a partial vs a full spillway removal. BWPH indicated the primary factors would be environmental considerations, cost and public input.

- Initial Comments on Draft Study Report
  - The report is unclear at times about what removal is being discussed. Some sections discuss full spillway removal, while other sections discuss a partial spillway removal. The report should be more consistent and concise when discussing removal options.

- The report is missing information regarding plans for the power canal, including information on sediments in the canal and future flows/water in the canal.
- Clarify plans regarding the existing boat launch adjacent to the dam. How far into the water will it extend, practicality of extension, safety, etc.
- The Fish Passage section of the report relies on data regarding Sea Lamprey to draw conclusion regarding impacts on American eels. These are very different fish species with distinctly different behaviors. Sea Lamprey are not a good surrogate for American eels.
- Findings from the recreation survey are not representative due to the high flow conditions that were present at the time of the survey. Recreational use is higher than reported in the Draft Study Report.

- <u>Sediment</u>
  - The Committee briefly discussed sediments upstream of the dam.
  - Kleinschmidt explained that testing indicates that there are very few fine sediments behind the dam.

- <u>Wells</u>
  - There is limited information regarding wells that could be affected by decommissioning.
  - The Committee agreed that the towns are in a better position to reach out to landowners regarding existing wells in the vicinity of the impoundment.
  - Kleinschmidt has prepared a draft survey for well owners.
  - Committee representatives agreed to work with BWPH and the towns to implement the survey (**Action Item**).
  - BWPH is committed to mitigating for adverse impacts to wells, but needs sufficient information to ensure the impacts are related to decommissioning.
  - It will be difficult to determine impacts until after the spillway is removed, but data on the status and condition of existing wells prior to removal will be important to assessing future impacts.

- <u>Recreation – Flatwater Boating</u>
  - Committee members expressed concern that there will be a loss of flatwater boating opportunities once the dam is removed.
  - Concern was also expressed that the existing boat ramp adjacent to the dam in Hollis may not be safe, or practical as a hand carry launch. There is currently soft sediment/mud in this area that could be a problem for water craft, and the current may be quite strong at or near the launch post removal. The site would not provide access to flatwater, and would not be conducive to paddling upstream.
  - An alternative access site, upstream of the bridge pilings would be better, and would provide opportunities for flatwater paddling.
  - There is land behind the Hollis Town Hall that is owned by the Town of Hollis that might be an option for an alternative boat launch/take-out location.
  - Committee members stated the impoundment receives more recreational use, including use by flatwater paddlers than is reflected in the Draft Study Report, which is based on survey data collected during abnormally high water levels and is therefore misleading.

- Committee members inquired about debris in the river upstream of the dam, particularly wood and bolts associated with old anchors used for historic log drives. Members expressed concern that these features could be hazards if exposed and not removed.
- Kleinschmidt clarified that the current plan does not anticipate removing these historic features.

- Fish Passage (upstream)
  - Committee members asked for clarification on why the Draft Study Report concludes that partial removal would be better for fish passage.
  - Kleinschmidt staff explained that a partial removal would result in a narrower river with deeper water at the dam location, which would be better for fish passage.
  - The Draft Study Report concludes that fish passage would also be viable under a full spillway removal scenario.
  - Committee members noted that fish successfully passed upstream through the area prior to the dam being built.

- Fire Suppression (dry hydrants)
  - There are two existing hydrants that will be impacted by decommissioning
  - Committee members suggested working with local fire officials on options for fire suppression and alternative hydrant locations.
  - Alternative hydrants should be determined based on need.
  - The Committee could invite fire officials to a subsequent meeting to discuss, or a subset of the Committee could organize a subcommittee to meet with them and report back to the Committee (**Action Item**).

- Rogers Fibre Mill
  - BWPH clarified that the intent is to avoid disturbing the foundation of the Rogers Fibre Mill under either a partial or a full spillway scenario.
  - The spillway on the Buxton side of the river would be removed up to the existing Fibre Mill foundation.
  - Committee members asked if it would be possible to fill/cover, or demolish the Fibre Mill foundation while construction was occurring onsite.
  - BWPH indicated it would be willing to discuss options with the Town of Buxton, if the Town was able to secure funding for work on the foundation and protect BWPH from any liability associated with the superfund site.
  - It may be easier to remove the Fibre Mill foundation once the spillway is removed as it will be in the dry.

- Powerhouse
  - BWPH intends to keep and maintain the powerhouse for storage or other future uses.
  - Committee members expressed concern that the Town of Hollis could have a future liability/financial burden if the powerhouse is abandoned in the future (similar to the situation with the Fibre Mill in Buxton).
  - Committee members also expressed concern regarding public safety (attractive nuisance) and potential environmental contamination if the powerhouse were abandoned in the future.

- Committee members expressed interest in a Phase 1 assessment and the possibility of a bond.
- BWPH indicated that, like other private property owners in the Town, they have discretion regarding their property so long as they are not violating any laws.
- Kleinschmidt pointed out that there are case studies that the Committee could look at where powerhouses have been left in tact and maintained following decommissioning (e.g. Fort Halifax).

- <u>Canal</u>
  - Committee members noted that there is no information in the Draft Study Report on the nature of the sediments in the canal.
  - Kleinschmidt clarified that there is no intent to dredge or otherwise disturb sediments in the canal.
  - Committee members expressed interest in understanding how often the canal would be wet post dam removal.
  - Kleinschmidt indicated that there is hydrologic modeling data that could be shared with the Committee to better understand the frequency of inundation, which would occur during high flow event when the weir is overtopped (**Action Item**).
  - Kleinschmidt clarified that filling the canal would require a tremendous amount of material (the canal is up to 12' deep in places) and would be cost prohibitive. The current plan is to construct a weir to keep water out of the canal except for extremely high-water events, and to maintain a drainage pipe at the downstream end of the canal which would keep the canal largely dry. The canal is expected to revegetate fairly rapidly after decommissioning.

- <u>Drawings</u>
  - Committee members expressed interest in seeing FERC Exhibit F and G drawings that are referenced in the Draft Study Report.
  - Kleinschmidt indicated that some of these drawings are classified as Critical Energy Infrastructure Information (CEII) and not available to the public for safety reasons.
  - It may be possible to share some of the drawings, or specific information from the drawings with the Committee (**Action Item**).

- <u>Communication with Stakeholders and the Public</u>
  - Committee members asked about plans to engage the public and other stakeholders.
  - BWPH indicated that it intended to hold a public meeting on the Draft Study Report, and that the FERC process included a number of opportunities for additional agency, public and stakeholder engagement.
  - Committee members offered to work with BWPH on communication and outreach, and agreed to discuss this issue more at a subsequent meeting (**Action Item**).
  - Specific stakeholders that were mentioned by the Committee were: the Saco River Corridor Commission and the Buxton and Hollis Fish and Game Club.

- <u>Background</u>
  - The project has been off-line since 2017 due to expanding concrete that is affecting the generating units.

- The project's existing FERC license was set to expire in 2024.
- Upstream fish passage was anticipated as a condition of a new FERC license.
- Addressing the concrete issue and the fish passage issue render the hydro project uneconomical.
- BWPH notified FERC of its intention to surrender the license in Nov 2020.
- With the project off-line, BWPH has maintained the dam and river flow.
- BWPH initiated a draft study planning process, including soliciting public comments in 2022.
- Studies were delayed due to high water in 2024.
- A Draft Study Report was prepared and provided to the Town Committee members in August 20

MEMORANDUM

To: Bar Mills Dam Decommissioning Committee

From: Bruce DiGennaro, The Essex Partnership

Cc: Brookfield White Pine Hydro

Date: September 30, 2025 Final

Re: September 8, 2025, Bar Mills Decommissioning Committee Meeting

Meeting Attendees:

Renee Lewis (Committee Member)
Jim Boutin (Committee Member)
Mark Woodruff (Committee Member)
Mark Blier (Committee Member)
Paul Mattor (Committee Member)
Heath Knight (Committee Member)
Jaime Marshall (Committee Member)
Dan Yarumian (Committee Member)
Cindy Fanning (Committee Member)
Terry Walters (Committee Member)
Chris Young (Hollis Fire Chief)
Nathan Schools (Buxton Fire Chief)
Matt LeBlanc (BWPH)
Ryan Nadeau (BWPH)
Andy Qua (KA)
Bruce DiGennaro (Facilitator)

Action Items

- Wells - Committee members Lewis and Woodruff will help to identify landowners that should be contacted and receive a survey, and will provide advice on how best to contact individuals. Kleinschmidt will provide a draft survey.
- Fire Suppression – Committee member Walters will participate with Brookfield staff in a follow-up meeting with the Hollis and Buxton fire chiefs to discuss alternative locations for new hydrants to replace the hydrants that will be dry as a result of removing the dam.
- Recreation/Public Access – Committee Member Walters to work on an initial proposal for future public access and recreation in concert with discussions regarding access for Fire Suppression.
- Drawings – Kleinschmit to bring drawings of the Powerhouse and Fibre Mill to the next Committee meeting.
- Survey Information – Brookfield to locate and share property survey information for the project area with the Committee.
- Canal - Kleinschmidt to provide hydrologic modeling data regarding the frequency of canal inundation post dam removal and weir construction (action from 8/26)
- Previous Comments – Kleinschmidt to review and share comments regarding the draft study plan with the Committee (action from 8/26)

Outcomes

- Draft Study Report - The Committee recommended that more time be devoted to discussing decommissioning plans and questions raised by the Committee prior to releasing the Draft Study Report to the public. Some Committee members would also like more time to review the Draft Study Report.
- Public Engagement – The Committee recommended that details regarding the decommissioning plan be developed before engaging with the broader public. Such plans should be made available in concert with the Draft Study Report so there is more context for the report. Information on the topics being discussed by the Committee should also be shared with the public. The Committee suggested engagement with the Committee possibly in November.
- Topics for 9/26 Meetings - The Committee identified the following topics for discussion at the upcoming meeting on 9/26/25:
    - *Fire suppression (report back from follow-up discussions with the fire chiefs)*
    - *Recreation*
    - *Lands*
    - *Powerhouse*
    - *Water levels (wetlands)*
    - *Drawings*
    - *Previous comments*
    - *Decommissioning proposal*

Discussion Highlights

- Draft Study Report
    - Brookfield White Pine Hydro (BWPH) representatives clarified that the Draft Study Report is an informational document intended to inform the decommissioning plan. The decommissioning plan and surrender application to FERC will be a separate document that will provide details on the proposed approach to decommissioning.
    - Committee members recommended that release of the Draft Study Report include additional context on the process and decommissioning plan, either in the form of a preface or cover letter, to avoid confusion.
    - The Committee further recommended that BWPH have more discussions regarding decommissioning with the Committee before releasing the Draft Study Plan to the public.
    - Some Committee members expressed a desire for more time to review the Draft Study Plan before public release.
    - The Committee suggested planning for public engagement in November rather than October.
- Powerhouse
    - Committee members reiterated concerns about future liability associated with the Powerhouse if it's abandoned and left to the town to deal with in 30 or 40 years, similar to the Fibre Mill situation.

- Committee members requested more information on plans for removing, or otherwise dealing with various elements at the powerhouse such as the crane and headgates.
- Committee members asked about the structural integrity of the building and seepage/stains on the exterior wall adjacent to the river. BWPH staff noted that the building was structurally sound and that concrete movement has been monitored since 1969, with no movement since 2015. Staff further indicated that alkali and rust stains on the exterior walls were not indicative of any structural issues and were a common occurrence on concrete structures in the Northeast.
- Committee members asked if there was a cost estimate for removing the powerhouse and requested that a Phase 1 evaluation be done.
- BWPH reiterated its intent to retain, utilize and maintain the powerhouse post project decommissioning.

- <u>Canal and Dam</u>
  - During the site visit, Committee members expressed concern about the liability of people accessing the remnants of the dam if there is a partial spillway removal, and the canal spillway near the powerhouse if it's left in place, as currently proposed.
  - Committee members also expressed concern about dam remnants under partial removal collecting debris which could be an eyesore.
  - Committee members noted that remnant elements could become an attractive nuisance, and a public safety hazard.
  - Committee members expressed interest in having the canal spillway demolished as part of decommissioning.

- <u>Fire Suppression</u>
  - During the site visit, which included participation by the fire chiefs from the towns of Hollis and Buxton, there was discussion regarding the impact of dam removal and the lowering of the impoundment on existing fire hydrants.
  - BWPH staff agreed to have further discussions with the fire chiefs and Committee members regarding options for relocating the affected hydrants, or otherwise providing for access to the water for fire suppression.

- <u>Existing Boat Launch at Dam</u>
  - During the site visit, the Committee discussed concerns regarding the viability of the existing boat launch for hand carry boats. Committee members reiterated earlier concerns that the site would not provide a lot of value for boaters as it would no longer provide access to flatwater and would be in the middle of fast moving water post dam removal. The site also currently contains soft mud that could be an issue for boaters. There is existing access for boaters below the powerhouse that could be sufficient for boaters and tubers.
  - The Committee recognized that the existing site would have value for anglers and other recreationist looking to get to the water, and could be attractive for tubers.
  - The Town Fire Chiefs noted that the existing boat ramp is an important access point for public safety in the event of a rescue situation.

- The site could also have value as an access point to water for fire trucks, but it could be a distance to the water post removal, and any ramp or road to the water would need to be sufficient to handle the weight of a fire truck.

- Wetland and Wildlife Impacts
  - A Committee member expressed concern regarding impacts to wetlands and wildlife due to lowered water levels post spillway removal (partial or full), and requested an opportunity for more input on this issue.
  - The Committee member also asked for more details regarding post removal monitoring that is mentioned in the Draft Study Plan.

- Rogers Fibre Mill Site
  - Committee members reiterated interest in exploring opportunities to collapse and fill the old foundation at the Fibre Mill.
  - BWPH staff clarified that the mill foundation is considered part of the dam and is owned by Brookfield. The remainder of the old mill site is owned by the Town of Buxton.
  - The Committee noted that any activity related to the Fibre Mill would require consultation and coordination with Maine Department of Environmental Protection (DEP) and the US Environmental Protection Agency (EPA), including any activity that would affect the existing drainage pipe on the site.
  - Committee members noted that the site could potentially be used as a disposal site for material from the dam.
  - A Committee member noted that the site could possibly be used for a water holding tank for fire suppression.

MEMORANDUM

To: Bar Mills Dam Decommissioning Committee

From: Bruce DiGennaro, The Essex Partnership

Cc: Brookfield White Pine Hydro

Date: October 21, 2025 Final

Re: September 26, 2025, Bar Mills Decommissioning Committee Meeting

Meeting Attendees:

Renee Lewis (Committee Member)
Jim Boutin (Committee Member)
Mark Woodruff (Committee Member)
Paul Mattor (Committee Member)
Heath Knight (Committee Member)
Jamie Marshall (Committee Member)
Dan Yarumian (Committee Member)
Cindy Fanning (Committee Member)
Terry Walters (Committee Member)
Matt LeBlanc (BWPH)
Ryan Nadeau (BWPH)
Kayla Pocquette (BWPH)
Andy Qua (KA)
Kevin Cooley (KA)
Hannah Flanagan (KA)
Bruce DiGennaro (Facilitator)

Action Items

- Fire Suppression – BWPH to share outcomes from meetings with the Buxton and Hollis Fire Chiefs with Committee members.
- Wells – Towns to distribute surveys to identified property owners with wells in the vicinity of the project.
- Property Survey Information – BWPH to share current property survey information for the project area with the Committee, including a map showing the existing FERC project boundary.
- Summary of Committee Discussions – Bruce to prepare summary of Committee discussions to date as context for the public.

Outcomes

- Fire Suppression – BWPH will continue to work with the Fire Chiefs for Buxton and Hollis to identify suitable locations for replacement hydrants or holding tanks. Several possible alternatives to the existing hydrants that will be affected by decommissioning have been identified.
- Alternative Boat Launch Locations – BWPH will continue to work with the towns regarding public access as the decommissioning plan is developed. Committee member Walters has identified several possible locations for an alternative hand carry launch location for

access to still water on the Hollis side of the river, including the cemetery, a private non-profit landowner and Town property behind the Town Hall.

- Wells – The Towns will take the lead in distributing a survey in the next 2-3 weeks to landowners whose wells may be impacted by decommissioning. The Towns will follow-up with individuals that do not respond to the survey.

- Draft Study Report (DSR)
    - The DSR will be revised to reflect comments received from the Committee.
    - The revised DSR will be released as a draft for agency and public review in mid-October.
    - The Committee suggested providing a 45-day comment period.
    - Additional information will be provided with the report documenting recent discussions with the Committee, including ongoing work regarding fire suppression and wells, and Outcomes Memos from Committee meetings will be made available.

- Public Meeting – BWPH will host a public meeting near the end of October to provide an update on decommissioning and to request comments on the DSR.

Discussion Highlights

- Canal Inundation
    - Current decommissioning plans include constructing a concrete weir approximately 3 feet high at the entrance to the existing power canal to keep water in the river for fish passage except at very high flows.
    - The weir would overtop at 9,000 to 10,000 cubic feet per second (cfs), which generally occurs 1-3 times a year.
    - The duration of canal inundation would depend on how long the river stayed above 9,000 or 10,000 cfs. The canal is expected to drain in roughly a day once the river drops below the elevation of the weir.

- Powerhouse
    - BWPH clarified that the powerhouse has value to the company and that it does not plan to demolish the powerhouse.
    - The Committee expressed continued concern regarding potential abandonment in the future, by BWPH or a future owner, which would create a burden and liability on the Town of Hollis.
    - The Committee suggested that BWPH clarify what features associated with the powerhouse would be removed as part of decommissioning (e.g. crane).

- Previous Comments – The Committee suggested that previous comments submitted on the Draft Study Plan be reviewed in anticipation of a public meeting to see if any of the comments have since been addressed, and to identify if some comments may be addressed during permitting.

- Wells Subgroup
    - The Subgroup has met 3 times since the last meeting to discuss approaches to getting additional information on wells that may be affected by decommissioning.

- The Subgroup opted for looking at a corridor along the river rather than a radius and identified roughly 150 property owners by overlaying a parcel map on the corridor.
- The Subgroup recommends that a one-page survey with a cover letter from the towns will be distributed to identified property owners in the next couple of weeks.
- The Buxton Selectboard has already discussed and approved distributing the survey.
- Approval for the Town of Hollis should be discussed with the Town Manager.
- Committee members suggested including a self-addressed stamped envelope to improve response rates. Surveys would be returned to Kleinschmidt.
- Based on results from the survey, BWPH expects to identify a smaller subset of landowners that will need to be contacted for follow-up.
- Committee member Mattor agreed to serve as an alternate to Committee member Lewis to assist with survey implementation and follow-up.

- Public Meeting Approach and Format
  - BWPH clarified that it needs to distribute the DSR soon to get agency and public input so it can move forward with developing and filing a Decommissioning Plan in early 2026.
  - The Committee expressed concern about the public being confused about the DSR versus the Decommissioning Plan, which is yet to be developed.
  - The Committee expressed concern that the public may ask the same questions that the Committee has asked, and has been discussing.
  - The Committee suggested that BWPH:
    - provide more context in, or with the DSR, as well as at the public meeting, including a summary of recent discussions with the Town Committee.
    - be clear that information is still being collected, including cost estimates, and that final decisions on the decommissioning plan have not been made.
    - be clear about the format for the public meeting, and that there will be several additional opportunities to comment in the future.
    - include an opportunity for public questions and comments. A sign-up sheet or comment cards are okay as a means of identifying how many people may want to speak and allocating time accordingly.
    - provide materials and information ahead of the meeting.

- Rogers Fibre Mill Site – BWPH clarified that it does not want to disturb the superfund site, but that it is open to considering filling and capping the old mill foundation as part of the dam removal and bank stabilization.

- Public Safety on Route 4A – Committee member Walters noted that it's dangerous crossing Route 4A where the ingress/egress is for the existing boat launch and powerhouse. Walters noted that this is not necessarily a BWPH issue, but something that the towns should be concerned about.

APPENDIX B

DRAFT STUDY REPORT COMMENTS

Date	Agency	DSR Section	Sub-Topic	Comment	Response
12/09/2025	American Rivers	Consultation	Recommend Structure Collaboration	We encourage Brookfield to not simply produce a decommissioning plan that is submitted to the communities and FERC for their comments. Instead we believe that a defined period of structured collaboration will allow the directly affected parties as well as stakeholders to design and then implement a model plan.	BWPH formed a Decommissioning Committee of ten representatives selected by the Towns to review a preliminary draft of the DSR, to identify primary issues of concern, and to form subcommittees to evaluate alternatives to address recreational access, water supply under lower water levels associated with groundwater wells and fire suppression, and other concerns identified by the committee members. A series of meetings of the Committee have been held over the course of 2025 and 2026.
12/09/2025	American Rivers	Consultation	Agreement with Town Comments	We are in agreement with the joint comments submitted by Buxton and Hollis and agree that there are significant questions and information gaps that remain.	Comment acknowledged.
12/09/2025	American Rivers	Removal Design Alternatives	Complete Removal of All Structures	We support the complete removal of the dam, the submerged timber crib dam, the powerhouse, its connected spillway, and the canal spillway as well as the full stabilization and site restoration of the former Rogers Fiber Mill site.	BWPH intends to remove the full spillway, upstream timber crib dam, the canal gate structure and associated adjacent spillway, and cap/stabilize the former mill site. The riverbed at the spillway location will be restored to pre-dam conditions, to the extent possible. The powerhouse will not be removed.
12/09/2025	American Rivers	Removal Design Alternatives	Removal of Powerhouse/Canal	We understand that Brookfield has some undefined (to us) interest in keeping the powerhouse and canal intact but agree with the towns that leaving these elements of the project in place is a job half-done that will be leaving an attractive nuisance and an ongoing liability for the town.	Comment acknowledged. BWPH maintains a plan to keep the powerhouse.
12/09/2025	American Rivers	Removal Design Alternatives	Complete Removal of All Structures	We appreciate Brookfield wanting to retain some value in the project. In further conversation with Brookfield we would like to understand how they can meet any continuing generation or storage interests without needing to leave these structures in place.	BWPH is a leading developer and operator of renewable energy and will retain the powerhouse for future use.
12/05/2025	MDIFW	Removal Design Alternatives	Does Not Support Partial Removal	MDIFW is not supportive of the partial removal alternative. The Draft Study Report appears to show some limited benefit to flow velocities with the full removal alternative. Additionally, the full removal alternative better addresses public safety for anglers and boaters, aesthetics, and natural stream functions and processes.	BWPH intends to remove the full spillway, upstream timber crib dam, the canal gate structure and associated adjacent spillway, and cap/stabilize the former mill site. The riverbed at the spillway location will be restored to pre-dam conditions, to the extent possible. The powerhouse will not be removed.
12/05/2025	MDIFW	Removal Design Alternatives	Does Not Support Weir	MDIFW is not supportive of flow diversion weir construction with the canal being periodically inundated with water during high flow periods while filled with demolition debris. This will likely lead to entrapment and mortality of resident fish species. We recommend completely filling the canal. Demolition debris use could be acceptable, provided it is combined or layered with finer materials that fill all voids, and provided it is topped with safer materials that will naturalize over time.	Completely filling the canal is not feasible due to the volume of material that will be required and associated costs.
12/05/2025	MDIFW	Recreational Access	Maintain Recreational Access	MDIFW recommends recreational access to the Saco River be maintained. Given the proposed change from a lentic (impounded) to a lotic (flowing) environment, the proposed change to a carry-in access site versus the current trailered access site is acceptable. However, MDIFW is concerned that extending the existing ramp will place the launch area in an unsuitable area with muck and fast-flowing current. If these concerns cannot be adequately addressed, MDIFW recommends an alternative access site be considered.	BWPH is actively evaluating hand carry boat access alternatives with the Town of Hollis. Based upon an initial site visit in November 2025, a location near the Hollis Town Office facilities appear to be feasible. BWPH will continue to work with the Town to pursue this alternative.
12/05/2025	MDIFW	Recreational Access	Alternative Recreational Access	Based on the draft Study Report, MDIFW understands the Licensee is exploring potential alternative access sites upstream of the railroad crossing, and recommends MDIFW be consulted if this alternative is further pursued.	See previous response.
12/05/2025	MDMR	Decommissioning Plan	Site Restoration	As stated in previous comments from MDMR, we would like to see the Bar Mills site restored to a pre-dam condition as part of the decommissioning effort with highly effective fish passage.	See previous response.
12/05/2025	MDMR	Decommissioning Plan	Complete Removal of All Structures	We remain concerned about project works that are not ultimately proposed for removal in the upcoming Draft License Surrender Application. Full removal is the only option that conclusively eliminates this long-term risk.	See above response regarding project components proposed for removal and those that will remain.
12/05/2025	MDMR	Fish Passage	Fish Passage Performance	MDMR considers the passage effectiveness estimates for blueback herring and alewife to be inadequate and additional effort will be needed beyond dam removal to provide effective fish passage for these species at the project.	BWPH does not intend to engineer passage conditions beyond the natural post-removal river without evidence that the approved removal work created an avoidable barrier. BWPH is committed to creating fish passage via dam removal while limiting impacts below the ordinary high water mark (OWHM) of the Saco River.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
12/05/2025	MDMR	Fish Passage	Fish Passage Performance	Given that the issue appears to be largely velocity related, regrading the channel to an appropriate gradient and including a thalweg could alleviate passage concerns.	BWPH does not intend to engineer passage conditions beyond the natural post-removal river without evidence that the approved removal work created an avoidable barrier. BWPH is committed to creating fish passage via dam removal while limiting impacts below the ordinary high water mark (OWHM) of the Saco River.
12/05/2025	MDMR	Fish Passage	Remove Canal for Fish Passage	If the powerhouse and associated infrastructure within the canal was proposed for removal, this area could also serve as an effective zone of passage for migratory fish if appropriate nature-like channel configurations were developed.	BWPH addresses the power canal alternative in the Alternatives Analysis provided in the US Army Corps of Engineers permit application package. BWPH is not proposing restorative actions beyond the proposed dam removal actions.
12/05/2025	MDMR	Fish Passage	Instream Modifications	Given these previous modifications, additional in-stream work to restore effective fish passage is reasonable and should be anticipated as part of the dam removal plan.	BWPH does not intend to engineer passage conditions beyond the natural post-removal river without evidence that the approved removal work created an avoidable barrier. BWPH is committed to creating fish passage via dam removal while limiting impacts below the ordinary high water mark (OWHM) of the Saco River.
12/05/2025	MDMR	Fish Passage	Revegetation	Furthermore, a subsequent proposal should include a revegetation plan to plant native trees, plants and shrubs in exposed areas of the impoundment to reduce erosion, sedimentation, and the potential for invasive species to spread.	All exposed erodible soils within an estimated 20-foot-wide shoreline restoration corridor along both sides of the approximately 5-mile-long reach, including suitable portions of islands exposed by project-related water-level changes, will be stabilized and revegetated as practicable.
12/05/2025	MDMR	Fish Passage	Not Supportive of Partial Removal	Any remnant barrier at Bar Mills would constrain basin-wide recovery. Multiple dams remain in the lower Saco, and any obstruction at Bar Mills compounds passage difficulties for upstream projects.	Comment acknowledged.
12/05/2025	MDMR	Fish Passage	Long Term Stability of Remnant Structures	From a risk-management standpoint, leaving aging concrete structures in a dynamic, high-energy reach of the Saco River presents unacceptable long-term stability and liability concerns. High spring flows and flood events have the potential to undermine or destabilize remnant structures, redirect flows, or create new hazards.	Comment acknowledged. BWPH has clarified what structures will be removed and retained including full removal of the spillway. Those remaining will continue to be maintained by BWPH post-surrender/removal.
12/05/2025	MDMR	Fish Passage	Partial Removal Concerns	Climate resilience considerations further support full removal. Restoring natural channel geometry and floodplain connectivity improves sediment transport, reduces erosion risks, and enhances the river's ability to adapt to increasing storm flows. Partial removal would retain hardened structures that interrupt floodplain function and redirect high flows, potentially worsening erosion and public safety hazards.	BWPH proposes to fully remove the Bar Mills spillway.
12/05/2025	MDMR	Fish Passage	Partial Removal Concerns	The Licensee's decision to exclude the log sluice from the partial removal alternative is likely to further reduce fish passage success and cause safety issues for the recreating public. As currently depicted, the log sluice protrudes an additional ~18 ft beyond the base of the spillway and could cause increased velocities and inconsistent flows in this area, particularly from any water conveyed down the sluice.	BWPH proposes to fully remove the Bar Mills spillway, including the log sluice.
12/05/2025	MDMR	Fish Passage	Partial Removal Concerns	MDMR recommends that any partial removal alternative or proposal includes removal of the log sluice to improve fish passage and safety at the site.	BWPH proposes to fully remove the Bar Mills spillway, including the log sluice.
12/05/2025	MDMR	Fish Passage	Partial Removal Concerns	MDMR therefore strongly encourages the Licensee to pursue full removal to meet both federal obligations and State restoration goals.	BWPH proposes to fully remove the Bar Mills spillway, including the log sluice.
11/04/2025	MDMR	HEC-RES	DSR Revisions	The paragraph starting with "HEC-RAS" on page 79 is confusing and contains erroneous information that impacts the zone of passage section. In the opening sections of that paragraph the 5% exceedance flow is referred to as the "low flow condition" and 95% exceedance as the high flow condition. These should be reversed (i.e., 5% exceedance is high flow conditions, etc.) and this error calls into question whether similar mistakes were made in other locations within this section. Please correct the 5% exceedance vs 95% exceedance error and ensure that no other mistakes were made in the zone of passage section.	Comment addressed in USR.
11/04/2025	MDMR	Figures and Labels	DSR Revisions	Figures 7-1 – 7-6 also contain errors that make them illegible or difficult to interpret. Within flow scenarios, there are no labels indicating which plot shows depth and which shows velocity. It is relatively easy to determine when looking at the figure with the related text, but that is an unnecessary step that could easily be avoided with proper labels. Please include proper labels for each plot.	Figures 7-1 through 7-6 have been enlarged in the Study Report.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
11/04/2025	MDMR	Figures and Labels	DSR Revisions	The legends for every full removal scenario plot are illegible. It is also unclear if the entire dataset is shown in each figure or if the data is truncated. For example, does the red color for velocity represent 8 ft/s or 8+ ft/s? Please amend Figures 7-1 – 7-6 to include legends that are legible and explanatory captions that clearly articulate the figure. In addition, please amend color scales as needed to accurately depict the data available for both depth and velocity.	Figures have been revised with additional labeling/clarity.
11/04/2025	MDMR	Monthly Flow Duration Curve	DSR Revisions	Relatedly, MDMR was surprised to see that monthly flow duration curves for the project were not included in the report. MDMR requests that the report be amended to include flow duration curves so the impacts and likelihood of specific flow scenarios can be fully analyzed in relation to the expected monthly flows and flows during the fish passage season.	Flow duration curves will be provided within the License Surrender Application, Exhibit A.
11/04/2025	MDMR	Stream Gradient Information	DSR Revisions	In addition, MDMR did not find any information related to the grade or slope of the river reach under either partial or full removal scenarios. Depth, velocity, and stream gradient are all important components to document when assessing a site for fish passage. Please include a description of the expected stream gradient post removal (partial or full).	Information regarding grade and slope is located in section 4.8.1.2 of the Surrender Application.
11/04/2025	MDMR	Updates to Ex Summary	DSR Revisions	MDMR was pleased to see a short executive summary included in the report that was meant to provide the highlights in one location for stakeholders who may not have had the time or patience to review the entire report. However, we found the section entitled "Migratory Fish Passage" to be lacking. Fish passage is a key issue during this decommissioning process, as dam removal (partial or full) is meant to fulfill Brookfield's obligations for fish passage under the Saco River Fish Passage Agreement. Fish passage is also an important issue for the public. Despite this, key results from the fish passage section of the report were missing from the Executive Summary. Specifically, on page 84 of the report, fish passage effectiveness was estimated to be 90% for American shad, 65% for blueback herring, and 37% for alewife. The low numbers for blueback herring and alewife are concerning and represent a major finding of the report. In the spirit of inclusivity and openness, please report this result in the Executive Summary.	Comment noted. BWPH does not feel Executive Summary needs to be revised to include fish passage details.
	MDEP Bureau of Land Resources	Permits Required	Permits Required	This proposal will require a permit under the Maine Waterway Development and Conservation Act. 38 M.R.S. §§ 630-638. The application form is located on our website here, and the addendum for dam removal is located here. https://www.maine.gov/dep/land/dams-hydro/documents/hydro2.pdf https://www.maine.gov/dep/land/dams-hydro/documents/appdamremoval.pdf	BWPH is applying for a MWDCA permit application with MDEP.
	MDEP Bureau of Land Resources	Consultation	Permits Required	The Executive Summary states, "BWPH does not intend to dredge or otherwise disturb sediments in the canal and if acceptable under MDEP and USACE permitting, fill portions of the canal with spillway demolition materials." However, on page 4 of Appendix A, BWPH states, "The canal is expected to revegetate fairly rapidly after decommissioning." The Department will need clarification of the proposal prior to permitting. The Department will look for input from municipalities, as well as other state agencies, on any water quality standards, including designated uses, which may be impacted by the proposal for the canal.	BWPH assumes additional details on the proposal will be necessary for the MWDCA permitting process.
	MDEP Bureau of Land Resources	Wells	Wells	The Departments notes that Appendix F describes six individual wells that may potentially be impacted by the Bar Mills decommissioning and partial removal. The Department encourages BWPH to follow TRCs recommended next steps at page 3 of Appendix F.	BWPH has begun the process of collecting well data with a mailed survey. Residents are asked to fill out as much detail as they have, via return mail or online.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
	MDEP Bureau of Land Resources	Dry Hydrants	Dry Hydrants	The Department notes and appreciates that BWPH is working with municipal fire departments to ensure dry hydrant intakes are not negatively impacted by the drop in impoundment level.	Comment acknowledged.
	MDEP Bureau of Remediation and Waste Management	Asbestos	Inspection before removal	In the Executive summary and elsewhere in the report the taking out of the spillway (or portion of) dam, and crane house. The Department would like to make it understood that these structures are defined as facilities under the National Emission Standards for Hazardous Air Pollutants (NESHAP) and would require inspection for asbestos containing materials prior to demolition.	Comment acknowledged.
	MDEP Bureau of Remediation and Waste Management	Characterization of former fiber mill site	DSR Revisions	Section 5.2.1 states that Rogers Fibre Site is a United State Environmental Protection Agency (EPA) Superfund Site. This is an error. The Site is not on the National Priorities List (NPL) and has neither received a Hazard Ranking System rating nor has it been evaluated by the Agency for Toxic Substances and Disease Registry (ATSDR). The Site was an EPA Removal and Demolition operation.	Comment acknowledged and revision made.
	MDEP Bureau of Remediation and Waste Management		DSR Revisions	Section 5.3 states that "BWPH's preliminary site restoration strategy involves the 'beneficial use of dewatered excavation material as construction fill' in the decommissioned canal in accordance with Maine's Solid Waste Management Rules Chapter 418, Section 7.A". This is contradicted in Appendix A page 4: "Due to the depth of the canal (over 12') in some places) filling the canal would be cost prohibitive." The Draft Study Report should be clarified as to whether BWPH is proposing to fill the spillway canal with dredged material or allowing it to revegetate.	BWHP has clarified the proposal to utilize some demolition material to fill portions of the canal but not the entire canal due to the volume of material that would be necessary.
	MDEP Bureau of Remediation and Waste Management			The final paragraph of Section 5.3.3 discusses the two 12" pipes that run under the former Roger's Fibre Mill foundation and their associated outfall channel. Based on the documentation provided in Appendix G, the diameter of the remaining 12" pipe was reduced and the channel recontoured to increase DO concentrations in the tailrace area due to the influence of a potentially failed septic system. The channel may need to be reconfigured depending on hydraulic conditions after the dam removal.	Comment acknowledged. Pipe will no longer pass flow due to reduced water levels.
	MDEP Bureau of Remediation and Waste Management			Section 5.3.5: TRC collected a total of 7 sediment samples and 1 soil sample. Three of the sediment samples were collected from the power station canal and 4 were collected from the east and western banks of the river during low water conditions. None of these samples collected had detections above MEDEP RAGs. Selenium and several PAH's were detected above EPA Region 3 BTAG values. Sediment sampling was limited by the hard bottom observed during the sub bottom profiling. MEDEP should be notified if an additional round of sediment sampling is conducted for potential reuse of sediment onsite or disposal.	BWPH intends to fully consult with both MDEP and USACE on the nature and extent of any additional sediment sampling.
	MDEP Bureau of Remediation and Waste Management			One soil sample was collected from the "island" downstream of the Roger's Fibre Mill Site. The soil sample collected was shallow and large boulders and cobbles were encountered. If the island adjacent and downstream of the Rogers Fibre Mill Site is to be disturbed during construction, MEDEP Division of Remediation should be notified and a sampling plan developed to determine if contaminated soils are present below the stabilization materials.	BWPH intends to fully consult with both MDEP and USACE on the nature and extent of any additional soil sampling.
	MDEP Bureau of Remediation and Waste Management			The final paragraph of section 5.3.5 states that "If soil disturbance cannot be avoided during decommissioning, it is recommended that soil in these areas be sampled to ensure worker health and safety during the project." MEDEP Division of Remediation should be notified prior to any soil disturbance in the former Roger's Fibre Mill Site.	BWPH intends to fully consult with both MDEP and USACE on the nature and extent of any additional soil sampling.
	MDEP Bureau of Remediation and Waste Management			Wells that may be impacted by the drop in groundwater levels associated with the dam removal should be located and more information gathered from current owners or well drillers. Wells 29755 and 39734 (Appendix F, Figure 2) appear to be associated with the Roger's Fibre Mill Site and may no longer be active or could have been destroyed during the EPA cleanup. The Maine Geological Survey relies on well drillers and property owners to submit data and corrections; well locations are often just associated with the submitted address and should be verified.	BWPH has issued a survey to adjacent landowners along the impoundment to obtain additional well data. BWPH has collected 65 surveys from adjacent landowners in 2026.
	MDEP Bureau of Water Quality			The draft study is very comprehensive. Based on the results, it appears that minimal impacts on upstream wetlands are likely to occur and that risks from exposed sediment or to the Rogers Mill superfund site are generally low. The 2024 benthic macroinvertebrate study at Station 648 indicated continued attainment of Class A standards.	Comment acknowledged.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
	MDEP Bureau of Water Quality		DSR Revisions	The Wetland, Botanical and Shoreline Erosion Study noted trace amounts of the aquatic invasive species (AIS), curly pondweed (Potamogeton crispus), at the lower end of the impoundment. This species has not previously been identified in the Saco River. Department AIS program staff and botanist, Don Cameron, reviewed the photo in the report. Both confirmed that the plant is not P. crispus since the leaves in the photo clearly taper at both ends and have pointed tips. It is most likely the native, P. gramineus.	The final report has been revised to correct this information.
	MDEP Bureau of Water Quality			Based on the Preliminary Limited Sediment/Soil Characterization, SED-1 sample has high concentrations of several semi-volatile organic compounds (SVOCs). The project managers should consider the option of excavating sediment around the SED-1 location, rather than letting that sediment wash downstream.	BWPH intends to fully consult with both MDEP and USACE on the nature and extent of any additional sediment sampling and handling.
	MDEP Bureau of Water Quality		Revised DSR	The initial decommissioning proposal includes, "constructing a new concrete weir (2-3 feet high) at the entrance to the power canal to keep water in the main channel of the river to facilitate fish passage. At high flows, greater than 9,000 cubic feet per second (cfs), water would overtop the weir and enter the power canal. An existing pipe in the canal spillway would be maintained to facilitate draining of the canal. Flows greater than 9,000 cfs generally occur 2-3 times per year. The canal is expected to drain in roughly a day once weir overtopping ceases. The canal is expected to revegetate fairly rapidly after decommissioning. Due to the depth of the canal (over 12' in some places) filling the canal would be cost prohibitive. The canal spillway would remain in place, and fencing would remain to prevent public access." The Department notes that this proposal and the canal's designated uses and standards should be discussed further. If the canal is dewatered in the future, this should be carried out carefully over enough time for aquatic life to migrate and/or be removed and transported into downstream aquatic areas. Similar considerations should be planned and implemented with the timing of impoundment drawdown associated with full or partial dam removal.	BWPH does not propose to manage high flows in the canal after decommissioning the Project. The material in the canal will be graded to prevent pooling of water that may strand fish and other aquatic life. During construction the canal will be dewatered at a rate to encourage out migration. This will minimize the potential for adverse effects on aquatic life or the potential for fish stranding. BWPH does not anticipate having to relocate species due to the slow drawdown.
	MDEP Bureau of Water Quality		Revised DSR	One additional comment is that the first row of the row in Table 6-10 2024 Macroinvertebrate Data (in green below) should be deleted since the table does not include the depth data, and the row is not needed for the report.	The table has been revised in the final report to address this recommendation.
12/05/2025	Buxton and Hollis	Water Supply Wells		The select boards want to receive the following information: 1. Results of the surveys that are returned and the list of properties with no returned survey 2. List of properties with wells that might be affect by reduced levels in the Bar Mills impoundment 3. Criteria BWPH used to assess which wells might be affected 4. Pre and post removal monitoring plan 5. Individual mitigation plans for each affected well	Well survey results were returned to the towns by the residents. The towns shared the data with BWPH, and discussed with committee members. A final mitigation plan is still being developed.
12/05/2025	Buxton and Hollis	Dry Hydrants		Select boards are satisfied with progress to date for this issue	Comment acknowledged. BWPH will continue to consult with the Fire Chiefs.
12/05/2025	Buxton and Hollis			Select boards preferred course of action is the complete removal of the dam, submerged timber crib dam, the powerhouse, its connected spillway, and the canal spillway. The boards emphasize the importance of involving both the USEPA and the MDEP to determine how to stabilize the remnants of the Rogers Fibre Mill foundation/dam and reduce the risks and liabilities from residual soil contamination of the site. FERC must consider the following information that substantiates full removal.	BWPH does not plan to remove the powerhouse or canal spillway. MDEP and USEPA will continue to be consulted.
12/05/2025	Buxton and Hollis			If BWPH chooses to leave the Buxton portion of the dam and the submerged timber crib dam it will not comply with the Town of Buxton's Zoning Ordinance 11.13.D for structures projecting into water bodies. This ordinance states: The facility shall be no larger in dimension than necessary to carry on the activity; and be consistent with the existing conditions, use, and character of the area. Since the remaining concrete of the dam and timber crib dam on the Buxton side of the Saco River will no longer fulfill their intended activity nor be consistent with the new conditions, use, and character of the river, they should be removed.	BWPH proposes to remove the entire main spillway and remaining timber crib.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
12/05/2025	Buxton and Hollis	Bar Mills Dam and Rogers Fibre Mill		The FERC license includes the "concrete foundation of the demolished Rogers Fibre Mill Building" within the project boundary because it is a water retaining structure.	Comment acknowledged.
12/05/2025	Buxton and Hollis			Hydraulic modeling of water depths in Figures 6-3 and 6-5 of the DSR suggests removal of the Hollis portion of the dam lowers the river level so that equipment can access the Buxton portion of the dam and submerged timber crib dam for removal.	Comment acknowledged.
12/05/2025	Buxton and Hollis			The sub-bottom profiling survey discussed in section 5.3.5 of the DSR, found the riverbed in composed of bedrock or glacial till with only small portions of finer materials along the Hollis and Buxton shorelines.	Comment acknowledged.
12/05/2025	Buxton and Hollis			Partial removal will leave half of the dam, the sluice, and remnants of the timber crib dam. The remaining structures will collect tree branches and detritus creating a safety hazard for people in hand carry boats.	Comment acknowledged. BWPH is proposing full removal of the spillway and timber crib remnants.
12/05/2025	Buxton and Hollis			Analytical results of limited soil sampling described in section 5.3.5 of the DSR indicated that soil sampled from the island downstream from and contiguous with the former Rogers Fibre Mill does not contain concentrations of tested analytes at concentrations exceeding the applicable MDEP remedial action guidelines.	Comment acknowledged.
12/05/2025	Buxton and Hollis			The June 18, 1999, USACE site visit report for the EPA documents remaining contaminated sediments in an 80-foot by 110-foot area located downstream of the Rogers Fibre Mill foundations/dam between Depot Street and the Saco River. Sediment thickness varied from 6 to 36 inches with bedrock exposed in a few places within the area (Appendix D, EPA/USACE correspondence)	Comment acknowledged.
12/05/2025	Buxton and Hollis			In the EPA Action Memorandum Addendum dated August 9, 1999, funding the requested to install a stone cover to mitigate the off-site migration of the residual contamination. The subsequent EPA pollution report No. 6 dated October 25, 1999, documented the modification of the site restoration and stabilization plan which included the installation of the stone cover. Currently, this area has trees growing through the stone cover.	Comment acknowledged.
12/05/2025	Buxton and Hollis	Request FERC to evaluate during Decommissioning Plan		After the dam is fully or partially removed, the lower river level will expose the penstocks allowing access to the inside of the deteriorating mill foundation/dam. This will be a attractive nuisance and the select board wants BWPH to remove or make the safety hazards inaccessible.	Comment acknowledged.
12/05/2025	Buxton and Hollis			EPA modified one of the 12-inch diameter pipes passing through the remaining dam/foundation of the Rogers Fibre Mill. A limited flow of water through the pipe was intended to improve the dissolved oxygen content of the water in the narrow drainage channel downstream of the mill foundation. After full or partial removal of the dam, the inlet for the pipe will be dry. EPA or MDEP needs to determine whether water flowing through the pipe is the still necessary.	Comment acknowledged. BWPH will consult with EPA and DEP on this topic.
12/05/2025	Buxton and Hollis		Report revisions	The shoreline erosion assessment did not extend downstream of the dam along the Rogers Fibre Mill. At a minimum, the concrete retaining wall and boulders along the shoreline of the river should be documented in the DSR.	The assessment did not extend downstream because flow and water depth conditions will be largely unchanged from existing conditions. Erosion protection measures associated with demolition of the Fibre Mill foundation will be included in final construction designs.
12/05/2025	Buxton and Hollis			Two data gaps were identified in the EA: 1. The EPA after action report and its addendum documenting the removal and remediation activities completed at the former Rogers Fibre Mill site were not made available to TRC. A copy of the EPA's removal actions admin file and its addendum is available for review at the Buxton Town Office. 2. The complete laboratory analytical data for the samples collected during the EPA remediation project was not available. The Decommissioning Committee can share the data with BWPH that was obtained through a Freedom of Information Act request with the EPA.	Comment acknowledged.
12/05/2025	Buxton and Hollis			The EA in App A needs to consider ither manufacturing activities at the mill after the production of fibre board ended that may have caused contamination. For example, there is local knowledge that the Saco River Canoe Company either manufactured or sold canoes in Mill Building 1.	Comment acknowledged.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
12/05/2025	Buxton and Hollis			The DSR does not assess river depth and velocity during high flow conditions that may impact shoreline and town owned properties in the post removal conditions. The Decommissioning Committee is working with American Rivers and its consultant to model 5% exceedance flows.	Comment acknowledged.
12/05/2025	Buxton and Hollis			The select boards would like to obtain the FERC license Ex F-5 demolished Rogers Fibre Mill foundation/dam. Currently, they are classified as CEII. However, considering their relevance in upcoming planning discussions for the decommissioning plan, FERC should make the documents available to the select boards and decommissioning committee.	Comment acknowledged. BWPH can assist the committee in requesting the information from FERC.
12/05/2025	Buxton and Hollis			BWPH needs to provide a transparent explanation and cost comparison to the select boards once the decision is made to fully or partially remove the dam and timber crib dam.	Comment acknowledged. BWPH proposes to remove the full spillway and former timber crib dam.
12/05/2025	Buxton and Hollis	Powerhouse		The select boards are concerned that as the powerhouse deteriorates over time it will becomes less of a maintenance priority for BWPH or a future owner and move of a attractive nuisance and public safety hazard. If the following the questions remain unanswered, the select boards foresee financial and oversight liability for the town of Hollis. Furthermore, FERC will be ill-informed to determine what project features, beyond turbines and generators, should be removed, if the project is decommissioned.	BWPH does not plan to remove the powerhouse or canal spillway.
12/05/2025	Buxton and Hollis			How are the structure and property valuable if the powerhouse no longer fulfills its intended function?	Brookfield is a large investment company that anticipates the powerhouse having value for yet to be determined future functions.
12/05/2025	Buxton and Hollis			What are the costs and risks of demolishing the powerhouse now versus: 1. A binding indemnification and hold harmless provision ensuring that BWPH remains solely responsible for any liability, claims, or costs associated with deterioration and contamination, or removal of the powerhouse and spillway infrastructure; and 2. a performance bond or escrow fund to guarantee financing for future removal or cleanup at the time of transfer, abandonment, or deemed uninhabitable?	BWPH's legal counsel has provided a response to the Towns regarding these topics.
12/05/2025	Buxton and Hollis			What will BWPH's maintenance costs be for the powerhouse property if it remains in its current condition?	This information is confidential.
12/05/2025	Buxton and Hollis			What is the interconnect value for BWPH or a future owner if one or more power storage batteries are installed on the powerhouse property?	The value has not been determined as there are no current battery storage plans at Bar Mills.
12/05/2025	Buxton and Hollis			How is the Bonny Eagle Project (P-2529) better suited as an alternative for additional storage batteries instead of Bar Mills powerhouse property?	Such an evaluation has not been done.
12/05/2025	Buxton and Hollis			To date, discussions about the future of the powerhouse parcel have not considered the Town of Hollis Zoning Ordinance amended June 10, 2025. The parcel is non-conforming lot situated within the Rural Residential Three-Acre zone and the shoreline zone., both of which impose substantial limitations on prospective development and use of the property.	Comment acknowledged.
12/05/2025	Buxton and Hollis			Because BWPH plans to keep the powerhouse it was not included in the EA. However, BWPH provided an undated Asbestos Survey spreadsheet for the EA. It identified four structures within the subject property having asbestos containing materials.	Comment acknowledged. Structures to be removed that contain asbestos, materials will be properly disposed of following MDEP guidelines
12/05/2025	Buxton and Hollis	Canal and Powerhouse Spillway		The select boards objective for the canal is to leave it as flood control for the Saco River by removing the powerhouse spillway and not building the diversion weir. FERC cannot evaluate this alternative since the DSR lacks hydraulic modeling of canal flows excluding the powerhouse spillway and proposed diversion weir.	BWPH is not proposing to remove the powerhouse or spillway.
12/05/2025	Buxton and Hollis			The select boards are concerned that woody debris and sediment deposited in the canal during high flows will eventually block the 3 by 3 foot opening in the powerhouse spillway and reduce drainage. Removing debris from the opening will be difficult and the Town of Hollis does not want to take on added enforcement responsibility. As part of the Decommissioning Plan, the select boards will need to know BWPH's maintenance tasks and schedule for the canal after the license is surrendered.	Comment acknowledged; long term, ongoing maintenance will be generally described in the Decommissioning Plan.
12/05/2025	Buxton and Hollis			BWPH and the Decommissioning Committee agree that maintaining a boat launch in the impoundment will remain valuable for anglers and other recreationists wanting to access the Saco River.	Comment acknowledged.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
12/05/2025	Buxton and Hollis	Recreation		Section 9.6 of the DSR does not include photographs of the recreational facilities at the time of the drawdown in 2024. Without photographs, it will be difficult for FERC to assess conditions at lower water levels at each of the facilities BWPH will be responsible for maintaining after the license surrender.	The impoundment boat launch will be reverted back to a natural state and the shoreline will be stabilized. Usher Island trails are not anticipated to be affected by lower water levels. Canoe portage below powerhouse will not be impacted by lower water levels. Photos during drawdown conditions are not believed to be relevant.
12/05/2025	Buxton and Hollis			Figure 9-2 needs to be corrected to accurately depict the angler access trail. Currently, the trail is approximately half the distance shown and does not end at the shoreline of the Saco River. The Town of Hollis needs to know whether the trail has been completed to plan specifications.	The purpose of the DSR figures are to show general recreation access points, they are not intended to show precise dimensional characteristics.
12/05/2025	Buxton and Hollis			As part of the Decommissioning Plan, the select boards will need to know BWPH's maintenance tasks and schedule for the recreational facilities after the license is surrendered.	Comment acknowledged.
12/05/2025	Buxton and Hollis	Water Levels. Section 6.6.1		Include a maximum and average water depths from the railroad pier remnants to West Buxton in Table 6-1	Comment acknowledged.
12/05/2025	Buxton and Hollis			Add figures that show the 5% exceedance flow of 9,900cfs and recent drought and flood conditions. For example, the minimum flow recorded at the Cornish Stream Gage in August and September of 2025 was 241 cfs. While high flows persisted for most of the winter and spring of 2023-2024 reaching a maximum of 21,100cfs.	Comment acknowledged. Beyond scope of intended study.
12/05/2025	Buxton and Hollis			Provide the gradient of the river from West Buxton to the remnants of the railroad bridge and from that point to the Bar Mills Dam.	See Figure 6-13.
12/05/2025	Buxton and Hollis	Wetlands and Shoreline Erosion		The select boards recommend producing a hydraulic model to demonstrate at what river flows the palustrine forested wetlands will be inundated and provide a statistical analysis describing how often those flows have occurred historically.	Comment acknowledged.
12/05/2025	Buxton and Hollis			A data gap is found in the shoreline erosion study. As mentioned above, there was no assessment of the shoreline along the former Rogers Fibre Mill site because the study area was limited to the Bar Mills impoundment. This leaves the select boards and FERC without information pertinent to the potential for sediment transport from the Rogers Fibre Mill site.	BWPH proposes to demolish/cap mill foundation, which will include erosion protection components of the design.
12/05/2025	Buxton and Hollis			The shoreline erosion study concluded that if there is no critical infrastructure or property located near a river bank that is more susceptible to erosion, a site-specific review of potential adjustments to the bank post-breach may be necessary. The select boards want to receive site specific reviews.	No such specific site reviews were identified by the study. The DSR only includes information for areas that were field evaluated using standard practice, for erosion potential.
12/05/2025	Buxton and Hollis	Aesthetics		Sentiment among residents of Buxton and Hollis is that if BWPH is not going to bring the project back online, they should remove the whole thing. Partial removal will leave half of a dam and its sluice. Hydraulic modeling in section 6.6.1 of the DSR indicates the partial remnants of the dam will be out of the water when flows are less than or equal to 400cfs.	Comment acknowledged but does not inform revisions to the DSR.
12/05/2025	Buxton and Hollis			FERC needs to consider the aesthetics over the long term. The community will be sorely disappointed if the remaining concrete of the dam became a wall for graffiti visible from the Maine Route 4A bridge or Depot St in Buxton.	Comment acknowledged but does not inform revisions to the DSR.
12/05/2025	Buxton and Hollis			The renderings in section 11.6 neglect the publicly accessible vantage points of the powerhouse from the river; the public road and private properties along Salmon Falls Rd, in Buxton, and Canal St in Hollis. FERC should note the renderings in the section do not consider leaf-on and leaf-off differences.	Comment acknowledged. FERC will determine if it has sufficient information.
12/05/2025	Buxton and Hollis			Heavy rust staining , efflorescence, and broken concrete on the powerhouse diminish the scenic character of the Saco River. The select boards want FERC to evaluate these vantage points for the deteriorating conditions that will last for decades and consider removal of the powerhouse as essential for restoring the scenic quality.	Comment acknowledged. FERC will determine if it has sufficient information.
12/05/2025	Buxton and Hollis	Fish Passage		Section 7.6.2 zone of passage modeling for blueback herring and alewife are predicted to be 65% and 37% effective, respectfully, after the dam is fully or partially removed. This suggest conditions from altering the riverbed at the time of the dams construction or after its removal will be inconsistent with the Town of Buxton Ordinance 11.13.C. Removing the entire dam the powerhouse and its connected spillway should be required by FERC to eliminate adverse effects on the upstream fish passage. FERC will not be able to evaluate this alternative unless the DSR includes hydraulic models of the canal without the powerhouse spillway and proposed diversion weir using the median flow for May and June when American shad, blueback herring, and alewife migrate upstream.	BWPH is proposing full removal of the spillway, demolition and capping of the Fibre Mill foundation, but is not proposing removal of the powerhouse.
12/05/2025	Buxton and Hollis			What is the Bar Mills historic district?	The Bar Mills Historic District is located on either side of the Saco River between Hollis and Buxton connected by Main Street (ME Route 4A) and the Bar Mills Bridge. It is composed of commercial, industrial, residential, and municipal buildings dating from the late eighteenth century to the mid-twentieth century.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
12/05/2025	Buxton and Hollis	Historic Structures Section 12		What qualifies the powerhouse and portions of the remaining dam to be eligible for listing on the nations register of historic places?	The Bar Mills Powerhouse is eligible for listing in the NRHP under Criteria A and C in the areas of Industry and Architecture. Criteria are described in a publication available through the National Park Service https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf
12/05/2025	Buxton and Hollis			What structures are eligible for listing on the National Register or could be potentially affected by the surrender and partial removal of the Bar Mills dam?	Eligible structures are discussed in Section 12 of the DSR.
12/05/2025	Buxton and Hollis			What is the extent of the Hydroelectric Project Historic District?	The Bar Mills Historic District is located on either side of the Saco River between Hollis and Buxton connected by Main Street (ME Route 4A) and the Bar Mills Bridge. It is composed of commercial, industrial, residential, and municipal buildings dating from the late eighteenth century to the mid-twentieth century.
12/05/2025	Buxton and Hollis			What alternatives might FERC propose to avoid, minimize, and mitigate the adverse effects on this historic property?	FERC will conduct formal Section 106 consultation relative to historic properties.
09/18/3025	Town of Hollis	General and Future Considerations		The DSR acknowledges that under partial removal, portions of the eastern spillway, remnants of the Rogers Fibre Mill, turbine room foundations, and the powerhouse would remain. Once water levels are lowered, these structures will become directly accessible to the public, creating serious hazards of collapse, entrapment, and unauthorized entry.	Comment acknowledged.
09/18/2025	Town of Hollis			The DSR should include a full analysis of complete removal of the dam, mill remnants, and powerhouse as the only reliable means of eliminating structural hazards, including but not limited to a cost comparison between full and partial removal.	BWPH is proposing full removal of the spillway, demolition and capping of the Fibre Mill foundation, but is not proposing removal of the powerhouse.
09/18/2025	Town of Hollis			The DSR should include an explicit assessment of navigation hazards, debris choke points, and safe canoe/kayak routes under the partial and full removal scenarios.	Comment acknowledged.
09/18/2025	Town of Hollis			Consider a comprehensive public safety plan addressing fencing, signage, restricted access zones, and monitoring if any structures remain	Comment acknowledged.
09/18/2025	Town of Hollis			Consider a long-term inspection and maintenance plan to identify and remove hazardous debris.	Comment acknowledged.
09/18/2025	Town of Hollis			Consider providing a hazardous material inventory to Hollis Fire/EMS so first responders are aware of risks associated with remaining infrastructure.	Comment acknowledged.
09/18/2025	Town of Hollis	Powerhouse and Spillway Liability		BWPH proposes to leave the powerhouse in place citing the difficulty of removal. Built in the 1950's the structure is already compromised by AAR. The expense of including the powerhouse demolition into the dam would removal would be a marginal increase, compared to removing the structure at a later date. The DSR did not analyze its structural integrity, construction materials, or hazardous contents.	BWPH is not proposing to remove the powerhouse and therefore is not assessing costs to do so. BWPH will continue to maintain the powerhouse structure and conduct periodic safety reviews.
09/18/2025	Town of Hollis			The DSR should include: a structural and hazardous materials analysis of the powerhouse clarification of the wastewater permits status and proposed disposal arrangements an evaluation of costs and risks of removing the powerhouse now versus deferring demolition	BWPH is not proposing to remove the powerhouse and therefore is not assessing costs to do so.
09/18/2025	Town of Hollis			Future Considerations: a binding indemnification and hold harmless provision ensuring that BWPH remains solely responsible for any liability, claims, or costs associated with deterioration, contamination, or removal of powerhouse and spillway infrastructure a performance bond or escrow fund to guarantee financing for future removal and cleanup	Comment acknowledged. BWPH's legal counsel has responded to the Towns on this topic.
09/18/2025	Town of Hollis	Water Level Reduction Effect on Dry Hydrant and Water Wells		The DSR projects a water level reduction of approximately 18 feet immediately upstream of the dam, with average reductions of 7-8 feet extending to West Buxton. This threatens to disable the Canal Rd dry hydrant, an essential public safety asset, and could reduce yields or cause outright failure of nearby wells. Six wells within 650 feet of the dam are specifically identified as especially vulnerable; however, substantially more wells could be affected leaving public and private well supplies unusable.	Consultation with the Fire Chiefs is ongoing.
09/18/2025	Town of Hollis			The DSR should include a full inventory of wells within 1/2 mile of the impoundment and data results	Well survey results are ongoing.
09/18/2025	Town of Hollis			The DSR should include a plan for relocation or replacement of hydrants, with potential new sites identified in consultation with local fire services	Consultation with the Fire Chiefs is ongoing.
09/18/2025	Town of Hollis			The DSR should include hydraulic calculations and profiles (river evaluations, pipe intakes, post removal bed profiles) to assess hydrant function	Not withing the scope of the DSR - this may be considered as part of the hydrant alternatives in consultation with the Town Fire Chiefs.
09/18/2025	Town of Hollis			Future considerations should include: installation of monitoring wells and definition of clear trigger thresholds for intervention a Brookfield funded well mitigation program (deepening, replacement, or hookups)	Not withing the scope of the DSR - this will be considered as part of the well evaluation.
09/18/2025	Town of Hollis			The Town of Hollis requests a Phase II ESA	Comment acknowledged.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
09/18/2025	Town of Hollis	Environmental Concerns		The DSR should include a sediment characterization program testing for metals, PAHs, PCBs, petroleum, hydrocarbons, and toxicity bioassays	Comment acknowledged.
09/18/2025	Town of Hollis			The DSR should include a clarification of how MDEP and USACE permitting requirements will interact with FERC's surrender review, with contaminant data submitted to FERC prior to approval.	The DSR is meant to gather baseline data.
09/18/2025	Town of Hollis			The DSR should include submission of all data for independent peer review	Comment acknowledged.
09/18/2025	Town of Hollis			Future considerations: a comprehensive sediment and hazardous materials management plan addressing both sediments and powerhouse contaminants.	The DSR is meant to gather baseline data.
09/18/2025	Town of Hollis	Erosion and Invasive Species		The DSR contains little detail regarding the long term effects of water level reduction along with riverbanks. It assumes newly exposed banks will naturally revegetate. While some areas may stabilize, case studies from other dam removals show disturbed banks often erode and become colonized by invasive species.	Comment acknowledged.
09/18/2025	Town of Hollis			The DSR should include identified areas that may be particularly vulnerable to erosion and may require active revegetation or stabilization efforts.	The DSR identifies areas of potential erosion and anticipated effects of lower water levels on those areas, which are anticipated to naturally revegetate.
09/18/2025	Town of Hollis			Future considerations: a restorations and revegetation plan with native plantings, invasive monitoring, and triggers for intervention.	Should the permitting process require revegetation plans, BWPH will develop such plans at that time.
09/18/2025	Town of Hollis	Flora and Fauna		The DSR highlights fish passage improvements, but inadequately assess impacts on wild brook trout, riparian nesting birds, and tributary streams that provide habitat	Comment acknowledged.
09/18/2025	Town of Hollis			The DSR should include expanded ecological survey of trout pools, wetlands, and nesting habitat for comparison post-decommissioning	BWPH completed a wetland delineation based on feedback provided by agencies and stakeholders from the draft and final study plan. (KA suggests adding a blurb to wetland appendix about scientist qualifications)
09/18/2025	Town of Hollis			The DSR should include adaptive management measures such as fish rescues, supplemental plantings, or habitat enhancements efforts that will help mitigate adverse effects post decommissioning	The mitigation is the dam removal. The DSR is designed to gather baseline data at the site, not provide mitigation.
09/18/2025	Town of Hollis	Full V Partial Removal		BWPH favors partial removal due to contamination concerns. Full removal is references throughout the DSR but little analysis is provided based on a full removal of the dam. Partial removal shifts hazards and liabilities onto municipalities. Full removal, while complex, offers a cleaner and safer long-term solution.	BWPH is proposing full removal of the spillway, demolition and capping of the Fibre Mill foundation, but is not proposing removal of the powerhouse.
09/18/2025	Town of Hollis			The DSR should include a comparative alternatives analysis of partial versus full removal, with transparent cost, risk comparisons, and community impacts clearly laid out.	The Decommissioning Plan and the USACE 404 application will provide an alternatives analysis.
09/18/2025	Town of Hollis			The DSR should include clean up strategies for unknown contaminants if full removal is pursued.	The DSR is meant to gather baseline data.
09/18/2025	Town of Hollis	Aesthetics		The Saco River Corridor Act recognizes this section of river as having "outstanding scenic and aesthetic qualities" Retaining derelict industrial infrastructure undermines that value. True restoration requires removal of non-functional infrastructure, not preservation of decaying structures. The DSR is inadequate in assessing visual impacts.	BWPH is proposing full removal of the spillway, demolition and capping of the Fibre Mill foundation, but is not proposing removal of the powerhouse.
09/18/2025	Town of Hollis			The DSR should include a professional visual impact assessment with expanded aesthetics analysis addressing vantage points from private and public property, seasonal differences, cumulative effects of remaining infrastructure, and comparative renderings of partial v full removal scenarios.	The DSR adequately evaluates aesthetics for purposes of characterizing effects of lower water levels on visual resources from publicly accessible vantagepoints.
09/18/2025	Town of Hollis			The DSR should include evaluation of powerhouse removal as an essential element of restoring scenic quality.	BWPH is not proposing to remove the powerhouse.
09/18/2025	Town of Hollis	Public Access		The DSR notes that the Bar Mills boat launch would be reduced to hand carry access. Lower water levels will also expose muddy shoreline areas requiring further development of board access infrastructure.	Any design or construction relative to reverting the boat launch to hand carry access will need to be developed post-surrender and permitted by state and federal agencies.
09/18/2025	Town of Hollis			The DSR should include identification of alternative access points that could provide motor watercraft access to the river post decommissioning	BWPH is working with the Towns via the Decommissioning Committee to look into other recreation access options.
09/18/2025	Town of Hollis			Future considerations: plans to extend ramps, provide new access points, and stabilize shorelines interpretive signage on the rivers history and restoration work with the town to identify and fund development infrastructure for alternative access to the river	BWPH is working with the Towns via the Decommissioning Committee to look into other recreation access options.
09/18/2025	Town of Hollis	Land Use Concerns		The DSR projects that approximately 12 acres of upland will be created as water levels receded. This will affect shoreland zoning boundaries and trigger adjustments to municipal zoning maps, with related administrative and fiscal burdens for the Town. Property assessments may also shift substantially as parcels gain new acreage.	Comment acknowledged.
09/18/2025	Town of Hollis			The DSR should include a parcel-level analysis of effected properties to be included in the DSR.	Comment acknowledged.

Date	Agency	DSR Section	Sub-Topic	Comment	Response
09/18/2025	Town of Hollis			Future Considerations: Brookfield funded preparation of updated zoning and assessment maps to relieve town of financial burdens	Comment acknowledged.

APPENDIX C

BAR MILLS DECOMMISSIONING PLANNING ENVIRONMENTAL REVIEW

BAR MILLS DECOMMISIONING PLANNING ENVIRONMENTAL REVIEW

Bar Mills Hydroelectric Project
Hollis and Buxton, Maine



Prepared For:
Kleinschmidt Associates
141 Main Street
Pittsfield, ME 04967

Prepared By:
TRC Environmental Corporation
64 Marginal Way, 4th Floor
Portland, ME 04101

Prepared By:
Zachary E. Bonin, PG
Project Manager / Geologist

Reviewed by:
Thomas R. Eschner, PG
Senior Project Manager

Project Number: 510195

February 2024
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EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC) was retained by Kleinschmidt Associates ("Kleinschmidt" or "Client") to perform an environmental review on behalf of Brookfield White Pine Hydro LLC (BWPH) in connection with the proposed decommissioning of its Bar Mills Project located in Hollis and Buxton, York County, Maine (also referred to as the "Project").

TRC understands that BWPH holds a license to operate the Bar Mills Project issued by the Federal Energy Regulatory Commission (FERC) (FERC No. 2194). The Project consists of a dam structure, an impoundment, a powerhouse, an intake canal and appurtenant features. The concrete dam extends from Buxton, on the east side of the Saco River adjacent to the site of the former Rogers Fibre Mill, to the Project canal headworks in Hollis, on the west side of the river. Flowage easements and the impoundment extend the Project well upstream; however, the area from the dam on the north, downstream to the powerhouse spillway drain gate on the south, and from the existing project boundary on the west of the canal to the riverbank on the east, is considered the "subject property" for purposes of this review.

Based on BWPH's Bar Mills Decommissioning Scoping Document dated August 2022 and prepared by Kleinschmidt, TRC understands that BWPH has rights to lands within the FERC Project Boundary, holds flowage rights along the impoundment, and has identified abutting landowners for the purpose of providing public notice of the decommissioning process. In light of the various operational, environmental, and future dam safety needs, decommissioning the Project through a partial breach has been determined by BWPH to be the most viable approach. BWPH considering partial dam removal by removing the western part of the dam, which is approximately 15 feet tall, with flashboards, and has an average pool depth of 10 to 15 feet. Under this alternative, the eastern portion of the main spillway and low flow gate structure would remain. Portions of a former timber crib dam exist within a few hundred feet upstream of, and parallel with, the current dam. A former railroad bridge approximately 1,500 feet upstream will provide upstream control after the partial removal of the dam. BWPH is also considering full removal of the western portion, log sluice, and eastern portion of the spillway, ending at the eastern abutment adjacent to the former mill complex foundation. The powerhouse and canal spillway are anticipated to remain under both scenarios.

In developing this decommissioning approach, BWPH has conducted a preliminary assessment of the potential effects of partial and full spillway removal on flows and water levels and potential effects on water quality and other resources. Furthermore, TRC understands that during recent public meetings regarding the decommissioning, specific concerns have been raised by stakeholders about the potential effect of dam removal on groundwater levels in nearby wells and on the remobilization of contaminated sediment.

In consideration of these concerns, TRC has prepared this environmental review to evaluate potential environmental concerns on the subject property. In preparing this review, TRC has used the general principles of a Phase I Environmental Site Assessment (Phase I ESA) as the basis for its review. Phase I ESAs are performed in accordance with the ASTM E 1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and are typically performed in anticipation of a potential purchase or lease involving a subject property, for which the completion of a Phase I ESA is intended to satisfy one of the requirements for the "User" to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations pursuant to the Comprehensive Environmental Response,

Compensation and Liability Act (CERCLA). The purpose of a Phase I ESA is to identify Recognized Environmental Conditions (RECs) at the subject property, as defined by the ASTM E 1527-21 Standard: *"(1) the presence of hazardous substances or petroleum products in, on or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on or at the subject property under conditions that pose a material threat of a future release to the environment."*

This assessment has revealed the following findings in connection with the subject property.

Finding No. 1 – Former Rogers Fibre Mill

Rogers Fibre Mill, a manufacturer of fiberboard materials, operated on the northeast-adjoining property from 1917 to 1980. Following the closure of the mill and its subsequent deterioration and partial collapse, the Town of Buxton became concerned about the unsound structure posing a threat to the community. In August 1997, the Town of Buxton requested the assistance of US Senator Olympia Snowe in addressing its concerns related to the former mill.

In response to the Town of Buxton's request, the United States Environmental Protection Agency (EPA) conducted an inspection of the former mill site on August 18, 1997, at which time it observed several potentially hazardous materials, including fuel oil, No. 6 oil, asbestos, kerosene, paint, and waste oil. Based on the site investigation, EPA concluded that additional site activities, including drum and container sampling, would be necessary to evaluate the threats posed by these hazardous materials. In September 1997, EPA performed a preliminary sampling investigation, which identified asbestos-containing building materials, elevated concentrations of volatile organic compounds (VOCs) in various drums and containers, and metals (copper, lead, and zinc) in residues on the floor of the mill.

Between 1998 and 1999, EPA oversaw the removal of asbestos-containing materials and residual hazardous substances and demolition of the mill building. Assessment performed concurrent with the demolition identified the presence of building concrete contaminated with polycyclic aromatic hydrocarbons (PAHs) and heavy metals, soils and debris contaminated with PAHs, dye-stained soils/materials onsite, and asbestos-containing materials and metal slag (containing high levels of lead, copper, and zinc) on the "island" formed by the tail race and sluice outlet downstream of the mill. Portions of the mill foundation that were not removed were reportedly decontaminated to the satisfaction of EPA so that they could remain. In an EPA memorandum dated August 9, 1999, EPA stated that it intended to install a "stone cover to mitigate off-site migration of the residual contamination", indicating that it intended to leave an unspecified amount of residually impacted soil/sediment downstream of the mill's remaining foundation. EPA demobilized from the mill site in October 1999. It is also noted that discharges of petroleum to the Saco River were identified from a previously unknown underground storage tank (UST) discovered on the mill property in 2005.

Based on the documented releases of asbestos-containing materials, VOCs, PAHs, and heavy metals associated with the former mill, and potential petroleum impacts related to the property, it is presumed that soil/sediments at and possibly in the vicinity of the subject property have been impacted by these contaminants, including both surficial and shallow soils, as well as deeper soils on the subject property. This finding represents a recognized environmental condition (REC) for

the subject property and should be evaluated prior to the disturbance of soil/sediment during the planned decommissioning project. Furthermore, should the disturbance of soil on the former Rogers Fibre Mill property be required during the planned decommissioning project, the extent of the disturbances should be known and evaluated prior to the project and/or minimized to the extent feasible during excavation activities.

Finding No. 2 – Timber Crib Dam

Portions of a former timber crib dam exist within a few hundred feet upstream of, and parallel with, the current dam and are anticipated to be removed during the planned decommissioning project. The potential exists for the timber used in the former dam to be treated with creosote, a wood preservative derived from the distillation of tar from wood or coal that use been used since the mid-1800s. This finding represents a REC for the subject property and should be evaluated prior to the final disposition of the timber crib dam to ensure proper management and disposal during the planned decommissioning project.

Finding No. 3 – Leaking Motor-Driven Winch in Crane Building

Three motor-driven winch systems are located inside the derrick crane building and each contains up to 1 quart of oil. Two of the units are modern systems (post-1979) and are not likely to contain polychlorinated biphenyls (PCBs); these units were observed to be in good condition with no staining or leaks observed. The third unit appears to be an earlier vintage (potentially pre-1979) and may contain PCBs. TRC observed oil-absorbent pads with minor staining below this unit, indicating it may be compromised and suggesting potential past releases of oil. TRC understands that the crane building may be removed during the planned decommissioning project. This finding is considered a de minimis condition and should be evaluated should the winch system or crane building be removed.

This Executive Summary is part of this complete report; the findings, opinions, or conclusions in this Executive Summary are made in context with the complete report. TRC recommends that the User read the entire report for supporting information related to findings, opinions, and conclusions.

Please note: In accordance with TRC's proposal dated March 28, 2023 and the Subconsultant Agreement between Kleinschmidt and TRC executed on April 20, 2023, TRC has prepared a supplemental report on hazardous building materials associated with the planned removal project, which is submitted under separate cover.

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1.0 INTRODUCTION

TRC Environmental Corporation (TRC) was retained by Kleinschmidt Associates ("Kleinschmidt" or "Client") to perform an environmental review on behalf of Brookfield White Pine Hydro LLC (BWPH) in connection with the proposed decommissioning of its Bar Mills Project located in Hollis and Buxton, York County, Maine.

TRC understands that BWPH holds a license to operate the Bar Mills Project issued by the Federal Energy Regulatory Commission (FERC) (FERC No. 2194). The Project consists of a dam structure, an impoundment, a powerhouse, an intake canal and appurtenant features. The concrete dam extends from Buxton, on the east side of the Saco River adjacent to the site of the former Rogers Fibre Mill, to the Project canal headworks in Hollis, on the west side of the river. Flowage easements and the impoundment extend the Project well upstream; however, the area from the dam on the north, downstream to the powerhouse spillway drain gate on the south, and from the existing project boundary on the west of the canal to the riverbank on the east, is considered the subject property for purposes of this review. A subject property location map is included as **Figure 1**.

Based on BWPH's Bar Mills Decommissioning Scoping Document dated August 2022 and prepared by Kleinschmidt, TRC understands that BWPH has rights to lands within the FERC Project Boundary, holds flowage rights along the impoundment, and has identified abutting landowners for the purpose of providing public notice of the decommissioning process. In light of the various operational and environmental considerations, and future dam safety needs, decommissioning the Project through a partial or full spillway removal alternatives have been determined by BWPH to be the viable. Under the partial removal scenario, BWPH would remove the western part of the dam, which is approximately 15 feet tall, with flashboards, and has an average pool depth of 10 to 15 feet. For full spillway removal, BWPH would also remove the log sluice and eastern portion of the spillway to the abutment adjacent to the former mill foundation. The powerhouse and canal spillway are anticipated to remain under both removal scenarios. Portions of a former timber crib dam exist within a few hundred feet upstream of, and parallel with, the current dam. A former railroad bridge approximately 1,500 feet upstream will provide upstream control after the partial removal of the dam.

In developing this decommissioning approach, BWPH identified a limited number of decommissioning activities requiring further consideration during the decommissioning process, including the effects of partial and full spillway removal on flows and water levels and effects on water quality and other resources, among others. Furthermore, TRC understands that during recent public meetings regarding the decommissioning, specific concerns have been raised about the effect of dam removal on groundwater levels in nearby wells and on the remobilization of contaminated sediment.

1.1 Purpose and Scope of Services

In consideration of these concerns, TRC has prepared this environmental review to evaluate potential environmental concerns on the subject property. In preparing this review, TRC has used the general principles of a Phase I Environmental Site Assessment (Phase I ESA) as the basis for its review. Phase I ESAs are performed in accordance with the ASTM E 1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*

and are typically performed in anticipation of a potential purchase or lease involving a subject property, for which the completion of a Phase I ESA is intended to satisfy one of the requirements for the "User" to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The purpose of a Phase I ESA is to identify Recognized Environmental Conditions (RECs) at the subject property, as defined by the ASTM E 1527-21 Standard: *"(1) the presence of hazardous substances or petroleum products in, on or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on or at the subject property under conditions that pose a material threat of a future release to the environment."*

TRC understands that in its decommissioning process, BWPH's objective is to protect its workers and minimize onsite and offsite liability and costly delay during the decommissioning, rather than to obtain liability protections as a purchaser. Consequently, a full ASTM E 1527-21-compliant Phase I ESA has not been requested. Therefore, TRC has performed environmental due diligence in general conformance with the ASTM E 1527-21 Standard to identify potential environmental concerns on the subject property.

The Scope of Services for this review included the following tasks:

- Subject property and vicinity reconnaissance;
- Subject property and vicinity description and physical setting;
- Historical sources review and a description of historical subject property and adjoining property conditions;
- Interviews with owners, operators, and/or occupants of the subject property, and/or local officials;
- Review of environmental databases and regulatory agency records;
- Review of previous environmental reports/documentation, as applicable; and
- Preparation of a report summarizing findings, opinions, and conclusions.

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2.0 SUBJECT PROPERTY DESCRIPTION

2.1 Subject Property Location and Description

The subject property location, ownership, and parcel information are included in the following table. A subject property location map is included as **Figure 1**.

Table 2.1 - Subject Property Location and Description

Subject Property Details	Description
Location	Off Bar Mills Road and Canal Road in Hollis, York County, Maine 04042
Primary use of surrounding area	Residential, undeveloped wooded land
Acreage	The area covered by this review (the subject property) comprises approximately 15.77 acres (as shown in **Figure 1**). Note: The specific acreage of the parcels comprising the subject property is not available with the Town of Hollis Assessor.
Parcel Numbers	Map 002 Lots 20, 21, 22, 22A, and 41
Zoning	Rural Residential Three-Acre (RR3) and Economic Development Overlay Zone (EDZ) by Town of Hollis
Owner	Brookfield White Pine Hydro, LLC
Operator	Brookfield White Pine Hydro, LLC

2.2 Subject Property Improvements

Current subject property improvements are listed in the following table. A subject property layout is included as **Figure 2**.

Table 2.2 - Subject Property Improvements

Subject Property Feature	Description
Buildings	A small building is situated in the center of the bridge atop Bar Mills Dam and contains dam control equipment. The powerhouse is not included in this review, as it is not proposed to be removed, but consists of a 34-foot by 80-foot one-story concrete structure constructed circa 1956 that is situated at the southern end of the power canal. The powerhouse contains two turbine generator units (Turbine Generator Units 1 and 2) capable of producing a combined 4.5 megawatts (MW) of electricity; the turbine generator units last operated in 2017.
Dam	Bar Mills Dam comprises a 25-foot-high, 400-foot-long concrete dam and spillway section topped with 6.75-foot-high steel hinged flashboards. A metal bridge spans the entire distance of the dam. The entirety of the metal bridge, the western portion of the dam, and the dam's western abutment are anticipated to be removed during

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Table 2.2 - Subject Property Improvements

Subject Property Feature	Description
	the decommissioning project, while the eastern portion of the dam is anticipated to remain. Portions of a former timber crib dam exist within a few hundred feet upstream of, and parallel with, the current dam and are also anticipated to be removed.
Power Canal	A 725-foot-long power canal extends from its northern end at the canal headworks its southern end at the powerhouse.
Substation / Transmission Line	A CMP-owned substation with a ground-mounted power transformer is located in the northwestern corner of Usher Island. The substation is situated along a CMP-owned transmission line that extends along the western banks of the Saco River north of the substation and along its eastern bank to the south.
Exterior areas	Outside of the Saco River watercourses, exterior areas of the subject property largely consist of unpaved roadways/parking lots and vegetated areas, including Usher Island, and vegetated, uninhabited island accessible for public recreational use.
On-site roads/rail lines	Canal Road forms the western boundary of the subject property south of Bar Mills Road.
Potable water supply	None.
Sewage disposal system(s)	None.
Stormwater system	None – Roadside ditches and adjoining waterways
Heating system (supplier)	None.
Cooling system (supplier)	None
Back-up fuel source(s)	None
Electricity supplier(s)	Central Maine Power

2.3 Current and Historical Subject Property Use

2.3.1 Current Subject Property Use(s)

The subject property is currently operated by Brookfield White Pine Hydro LLC (BWPH) as a hydroelectric project. The Project consists of a 25-foot-high, 400-foot-long concrete dam structure, a 725-foot intake canal, a powerhouse that contains two turbine generator units capable of producing a combined 4.5 MW of electricity when in operation, an approximately 263-acre impoundment, and appurtenant features. The concrete dam extends from Buxton, on the east side of the Saco River adjacent to the site of the former Rogers Fibre Mill, to the Project canal headworks in Hollis, on the west side of the river. The Bar Mills Project ceased hydroelectric generation in 2017 due to turbine operational challenges resulting from concrete issues.

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2.3.2 *Previous Owner and Operator Information*

Based on the historical record review (Section 3.0) and information provided by the Client, historical subject property ownership and operator information are provided below.

Table 2.3 - Previous and Current Owner & Operator Information

Subject Property Owner & Operator	Description	From	To
Brookfield White Pine Hydro, LLC	Hydroelectric Project	2013	Present
FPL Energy/NextEra	Hydroelectric Project	1998	2013
Central Maine Power	Hydroelectric Project	1942	1998
Cumberland County Power and Light Company	Hydroelectric Project	1919	1942

2.4 Physical Setting

According to United States Geological Survey topographic maps reviewed, including the map included as **Figure 1**, the subject property is located on and adjacent to the Saco River, the subject property topographic elevation is approximately 137 feet above mean sea level, and local topography slopes to the east-southeast, towards the Saco River. The topographic downward slope observed at the subject property during the site reconnaissance is generally toward the east-southeast. Based on local topography, the assumed direction of shallow groundwater flow is to the southwest, toward the Saco River Reservoir.

The database radius report, supplied by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, was reviewed to obtain information available from the United States Department of Agriculture (USDA) regarding the dominant soil composition at and in the vicinity of the subject property. This information is summarized below:

Soil Component Name: Lyman
Hydric Status: Soil does not meet the requirements for a hydric soil
Soil Surface Texture: Fine sandy loam
Deeper Soil Types: Gravelly fine sandy loam, unweathered bedrock

Soil Component Name: Rumney
Hydric Status: All hydric
Soil Surface Texture: Loam
Deeper Soil Types: Very fine sandy loam, loamy fine sand

Soil Component Name: Buxton
Hydric Status: Soil does not meet the requirements for a hydric soil
Soil Surface Texture: Silt loam
Deeper Soil Types: Silt loam, silty clay

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Please refer to the Geocheck Physical Setting Source Summary of the EDR report presented in **Appendix A** for further information regarding the soil composition in the vicinity of the subject property.

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3.0 RECORDS REVIEW

3.1 Historical Research

Information regarding subject property and vicinity historical uses was obtained from various publicly available and practically reviewable sources including:

- Aerial photographs dated 1940, 1960, 1975, 1978, 1987, 1992, 1998, 2003, 2007, 2011, 2015, and 2018;
- Topographic maps dated 1891, 1892, 1893, 1942, 1944, 1983, 2014, and 2018;
- City directories dated 2005, 2010, 2014, 2017, and 2020;
- Local municipal records;
- An environmental database report; and
- Interviews with subject property representative(s) and regulatory agency officials, as necessary.

Aerial photographs, topographic maps, city directories, Sanborn Maps®, and the environmental database report were provided by EDR. Historical research documentation is included in **Appendix B**.

Historical Sanborn® Fire Insurance Maps (Sanborn Maps®) were originally produced for assessing fire insurance liability in urban areas in the United States. The maps provide detailed information (e.g., building construction, subject property occupants, storage tank locations, and hazardous material storage areas), which can be used as a resource to document land use and structural change over time. EDR researched the availability of Sanborn Maps® in the vicinity of the subject property; however, EDR stated that Sanborn Map® coverage does not exist for the subject property or nearby surrounding area.

3.1.1 Subject Property History

Table 3.1 - Subject Property History

Year	Subject Property History
1800s to at least 1940	The original dam is believed to have been constructed in the 1800s; little information is available for the dam from this time period.
From at least 1940 to 1960	The 1940 aerial photograph depicts the subject property as Saco River, the Bar Mill Dam, and Usher Island on the Saco River. The island is mostly vegetated land during this time. It is understood that the dam was reconstructed circa 1956.
1960 to Present	The 1960 aerial photograph indicates that the dam structure has been reconfigured, suggesting the reconstruction activities performed circa 1956 are complete. Portions of Usher Island and the area west of the dam have been cleared. The subject property has not changed substantially in the aerial photographs since 1960, except for periodic clearing of vegetation on Usher Island and the parking area west of the dam.

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3.1.2 Adjoining Property History

Table 3.2 - Adjoining Features and Property History

Direction from Subject Property	Adjoining Features and Property History
North	From 1917 to 1980, the northeast-adjoining property operated the Roger Fiber Mill and subsequently remained vacant until 1998. Between 1998 and 1999, the mill was torn down due to hazardous materials and the unsound structure posing a threat to the community of Buxton. Presently, the northeast-adjoining property is the remaining portions of the mill structure (i.e., portions of the mill foundation).
East	Since at least 1940 until present, the east-adjoining property has been Salmon Falls Road followed by scattered dwellings.
South	Since at least 1940 until the present, the south-adjoining property has been the Saco River powerhouse followed by scattered dwellings situated on the banks of the river.
West	From 1940 to 1960, the west-adjoining properties consisted of undeveloped land. Circa 1960, several residential dwells were constructed on the west-adjoining properties and have remained through the present.

3.1.3 Surrounding Property History

Beginning in 1940, the surrounding properties have included scattered roads, agricultural land, undeveloped wooded land, dwellings and a few commercial buildings. Since that time, large amounts of surrounding agricultural land have been allowed to overgrow and now consist of undeveloped wooded land.

3.2 Database Report and Environmental Record Review

A database search report that identifies properties listed on state and federal databases within the ASTM-required radii of the subject property was obtained from EDR. These properties included those that could be mapped and those that could not (i.e., orphan properties). A copy of the database search report is included in **Appendix A**. The database search report includes the list of environmental databases/records searched and their corresponding abbreviations.

3.2.1 Subject Property

Subject property information included in the database search report is summarized in the following tables:

Subject Property Facility Name(s) and/or Address(es)	Brookfield White Pine Hydro – Bar Mills Station 18 Canal Street, Route 4, Hollis, ME 04042
Map No(s).	A1
Database(s)	AST

Description/ID No(s).	A100426496
Database Review Summary	The EDR database report identifies the Bar Mills Project in its AST database for the storage of 14,937 pounds of miscellaneous oils associated with the turbine generators in the powerhouse and the power transformer on the roof of the powerhouse. Registrations documented in the EDR report are dated 2014 through 2021. Based on information provided by BWPH, and as documented in the 2022 Tier II Report, approximately 880 gallons (5,720 pounds) of oil associated with the turbine generator units in the powerhouse were drained in January 2023. The power transformer on the roof of the powerhouse contains 1,418 gallons (9,217 pounds) of non-PCB mineral oil. Note that the powerhouse is not included in this review as it is not proposed to be removed.

Subject Property Facility Name(s) and/or Address(es)	Brookfield Facility – Bar Mills 18 Canal Street, Hollis, ME 04042
Map No(s).	A2
Database(s)	RCRA Listing
Description/ID No(s).	RCRA-VSQG 1025503730 EPA ID MEX020012047
Database Review Summary	The Bar Mills Brookfield Facility is designated Conditionally Exempt Small Quantity Generator under RCRA.

Subject Property Facility Name(s) and/or Address(es)	Brookfield Renewable Energy Group Bar Mills Station 18 Canal Street, Route 4, Hollis, ME 04042
Map No(s).	A5, A6
Database(s)	Tier 2
Description/ID No(s).	S118417690 S118755198
Database Review Summary	Tier 2 reporting from 2015, 2016, 2017, 2018, 2019, 2020, and 2021.

TRC notes that no oil/gas production wells, water wells, or pipelines were identified on the subject property based on information provided by EDR.

Based on the above listing(s), no information regarding a release at the subject property was noted. Therefore, no subsequent file review was conducted.

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3.2.2 Adjoining and Surrounding Property Record Review

TRC evaluated the following factors to determine whether additional environmental records should be reviewed with respect to the potential for contaminant migration from the adjoining and surrounding properties:

(1) Whether the property is upgradient or downgradient of the subject property related to potential groundwater migration based on the local topography, and the assumed (or known) groundwater depth and shallow groundwater flow direction (refer to Section 2.4 above);
(2) Whether the property is upgradient or downgradient of the subject property related to potential vapor migration based on readily available information pursuant to ASTM Practice E1527-21 including soil and geological characteristics; contaminant characteristics; contaminated plume migration data; and significant conduits that might provide preferential pathways for vapor migration such as major utility corridors, sanitary sewers, storm sewers, and significant natural conduits such as karst terrain (vapor migration may also be influenced by the age and design of infrastructure features associated with these conduits);
(3) Property case status (i.e., whether the state environmental agency or applicable regulatory authority has issued a No Further Action (NFA) letter or other similar closure document);
(4) Type of database and whether the presence of contamination is known; and
(5) The distance between the listed property and the subject property.

Based on this evaluation, TRC limited the review of additional environmental records to the properties listed below because the other properties are considered to have a low potential for contamination to migrate to the subject property.

3.2.2.1 Adjoining Properties

Information regarding adjoining properties (those which share a common property boundary with the subject property) included in the database search report is summarized in the following table:

Facility Name(s) and/or Address(es)	Rogers Fibre Mill (Colonial Fiber) Depot Street, Buxton, ME
Map No(s).	N/A (Orphan Listing)
Approximate Location Relative to the Subject Property	Adjoining Northeast
Presumed Hydrogeologic Setting	Upgradient
Database(s)	SEMS-ARCHIVE, RCRA NonGen / NLR PRP
Description/ID No(s)	EPA ID MED000242578, EDR ID 1000338805
Database Review Summary	The Rogers Fibre Co., a manufacturer of fiberboard materials, operated a mill on the north-adjoining property in Buxton from 1917 to 1980. The

	company merged with the Colonial Board Company (CBC) in 1967 and was known from that point on as CBC's Rogers Fibre Division. Following the closure of the mill and its subsequent deterioration and partial collapse, the Town of Buxton became concerned about the unsound structure posing a threat to the community. In August 1997, the Town of Buxton requested the assistance of US Senator Olympia Snowe in addressing its concerns related to the former mill. In response to the Town of Buxton's request, the United States Environmental Protection Agency (EPA) conducted an inspection of the former mill site on August 18, 1997, at which time it observed several potentially hazardous materials, including fuel oil, No. 6 oil, asbestos, kerosene, paint, and waste oil. Based on the site investigation, EPA concluded that additional site activities, including drum and container sampling, would be necessary to evaluate the threats posed by these hazardous materials. In September 1997, the EPA performed a preliminary sampling investigation, which identified asbestos-containing building materials, elevated concentrations of volatile organic compounds (VOCs) in various drums and containers, and metals (copper, lead, and zinc) in residues on the floor of the mill. In addition to these analytes, EPA assessed materials for pH, flashpoint, pesticides/PCBs. Between 1998 and 1999, EPA oversaw the removal of asbestos-containing materials and residual hazardous substances, as well as the demolition of the mill building. Assessment performed concurrent with the demolition identified the presence of building concrete contaminated with polycyclic aromatic hydrocarbons (PAHs) and heavy metals, soils and debris contaminated with PAHs, dye-stained soils/materials onsite, and asbestos-containing materials and metal slag (containing high levels of lead, copper, and zinc) on the "island" formed by the tail race and sluice outlet downstream of the mill. Prior to demolition, portions of the mill's foundation were determined to be integral to water-retaining capability of the mill dam and were therefore excluded from the demolition. According to EPA documentation, these portions of the mill foundation were decontaminated to the satisfaction of EPA so that they could remain. EPA records identify two 12-inch pipes in the remaining mill foundation, one of which was capped and one of which was modified to reduce its flow so as to prevent damage to the channel downstream of the mill foundation following the remediation effort. In an EPA memorandum dated August 9, 1999, EPA stated that it intended to install "a stone cover to mitigate off-site migration of the residual contamination," indicating that it intended to leave an unspecified amount of residually impacted soil/sediment downstream of the mill foundation. EPA demobilized from the mill site in October 1999. Based on the documented releases of asbestos-containing materials, VOCs, PAHs, and heavy metals associated with the former mill, it is presumed that soil/sediments at and possibly in the vicinity of the subject property have been impacted by these materials. This represents a REC for the subject property.

Facility Name(s) and/or Address(es)	Brookfield – Bar Mills Canal Road

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	Hollis, ME
Map No(s).	8
Approximate Location Relative to the Subject Property	Adjoining southwest
Presumed Hydrogeologic Setting	Downgradient
Database(s)	NPDES
Description/ID No(s)	S110121112
Database Review Summary	The Bar Mills Project powerhouse was recorded as a National Pollutant Discharge Elimination System (NPDES) site. As previously noted, the powerhouse is not included in this review as it is not proposed to be removed.

3.2.2.2 Surrounding Properties

Information regarding surrounding properties (those within the general vicinity of the subject property) included in the database search report is summarized in the following table(s):

Facility Name(s) and/or Address(es)	Bertrand Genest / Saco River Trading Post 8 Depot St., Buxton, ME
Map No(s).	B9, B10
Approximate Location Relative to the Subject Property	0.034 miles NE
Presumed Hydrogeologic Setting	Upgradient
Database(s)	LUST, UST
Description/ID No(s).	S105796014, U003877459
Database Review Summary	LUST - Spill No. P-601-2002: In August 2022, a release of an unknown volume of unleaded gasoline was discovered during the removal of a corroded UST that was unregistered at a property that had formerly been a gas station. During the removal, another tank was found at this same property that contained remaining gasoline and there was evidence of soil contamination that needed cleanup. However, there is no record of additional cleanup being performed. Although records do not indicate whether additional cleanup activities were completed, based on the

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	location of this listing on the opposite side of the Saco River, it is unlikely for this release to impact the subject property. UST: • A 500-gallon steel UST containing leaded gasoline was installed on October 1, 1969, and removed on August 15, 2002. • A 550-gallon steel UST containing leaded gasoline was installed on October 1, 1969, and removed on August 15, 2002.

Facility Name(s) and/or Address(es)	Mystery Tank 18 Depot Street, Buxton, Maine
Map No(s).	B12
Approximate Location Relative to the Subject Property	0.041 miles NE
Presumed Hydrogeologic Setting	Upgradient
Database(s)	UST
Description/ID No(s).	U004139986
Database Review Summary	• A 1,000-gallon steel UST containing leaded gasoline was installed on October 1, 1969, and removed on July 26, 2005. • A 500-gallon steel UST containing leaded gasoline was installed on October 1, 1969, and removed on July 26, 2005. • A 750-gallon steel UST containing leaded gasoline was installed on October 1, 1969, and removed on July 26, 2005.

Facility Name(s) and/or Address(es)	Town of Buxton Depot Street, Buxton, ME
Map No(s).	C11
Approximate Location Relative to the Subject Property	0.039 miles NNE
Presumed Hydrogeologic Setting	Upgradient
Database(s)	LUST
Description/ID No(s).	S108229784
Database Review Summary	LUST - Spill No. P-380-2005: A citizen reported discovering a UST fill pipe at the former Rogers Fiber Mill in Bar Mills, with a heavy amount of

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	petroleum leaking into the Saco River. The tank was found to be unregistered. The tank was removed; no contamination was found during the removal. No further action was necessary. It is possible that sediments in the vicinity of the subject property remain impacted based on the observe impacts to the Saco River and may affect the subject property.

Facility Name(s) and/or Address(es)	Vacant Residence Map 12 Lot 10 Depot Road, Buxton, ME
Map No(s).	C13
Approximate Location Relative to the Subject Property	0.048 miles NNE
Presumed Hydrogeologic Setting	Upgradient
Database(s)	LAST
Description/ID No(s).	S112212122
Database Review Summary	LAST - Spill No. P-1061-2009: An unknown amount of #2 fuel oil was spilled from a corroded 275-gallon AST at a residential property. The contaminated soil was excavated, but some oil saturated soils remain on site. Although there is some residual contamination documented, based on the location of this listing on the opposite side of the Saco River, it is unlikely for this release to impact the subject property.

Facility Name(s) and/or Address(es)	Saco River T and T Co. 61 & 63 Main Street Buxton, ME
Map No(s).	14, 15
Approximate Location Relative to the Subject Property	0.141 miles ENE
Presumed Hydrogeologic Setting	Upgradient
Database(s)	VCP, ALLSITES, UST
Description/ID No(s).	S106797499, U000242749
Database Review Summary	VCP and ALLSITES sub status is undertaking post-closure obligations.

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	UST: • A 500-gallon steel UST containing #2 fuel oil was installed on December 1, 1985, and removed on July 31, 1997. • A 1,000-gallon steel UST containing #2 fuel oil was installed on October 1, 1969, and removed on January 1, 1989.

3.3 Previous Documents

BWPH provided the following documents for TRC's review:

- November 2020, Bar Mills Hydroelectric Station Spill Prevention, Control, and Countermeasure (SPCC) Plan & Oil Spill Contingency Plan, prepared by BWPH. A supplemental version of the SPCC Plan in draft form describes the removal of approximately 880 gallons of oil associated with the thrust bearing lubricating systems (330 gallons each for the turbine/generator) and the governor systems (110 gallons each) as part of the decommissioning of the project, as further described below.
- January 4, 2023, Non-Hazardous Waste Manifest, prepared by Environmental Projects, Inc. of Auburn, ME (EPI) for BWPH. The manifest documents the removal of approximately 915 gallons of oil associated with the turbine generator thrust bearing lubricating systems and governor systems in the powerhouse. Also included with the manifest was correspondence between EPI and BWPH dating between September 14, 2022 and December 13, 2023 relating to the results of the oil testing for polychlorinated biphenyls (PCBs).
- Asbestos Survey Spreadsheet (Undated) prepared by BWPH. The survey identified the following asbestos-containing materials within the subject property of this review:
    - Crane Building, Brake Shoes, approx. 25 square feet
    - Crane Building, White Cable, approx. 45 linear feet
    - Gatehouse, Transite Wallboard, approx. 300 square feet
    - Gray Storage Building, Cement Board, approx. 360 square feet

In addition, BWPH provided TRC with copies of records associated with demolition and remediation at the adjoining Rogers Fibre Mill property dating between 1998 and 1999.

Information provided in these reports is summarized throughout this report, as applicable.

3.4 Other Environmental Record Sources

Per the ASTM Standard, local or additional state records were reviewed to enhance and supplement the ASTM-required federal and state records reviewed and discussed earlier in this report. Local sources that were contacted to obtain this information are discussed below:

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Table 3.3 - Other Environmental Record Sources

Regulatory Agency/ Department	Available Information
Hollis Assessor's Office	TRC contacted the Hollis Assessor's Office on June 7, 2023, regarding the availability of files pertaining to the subject property. The following documents were provided: • Property Assessment Record for the subject property. • Tax Card for the subject property. • Tax Map for the subject property.
Hollis Code Enforcement Office	TRC contacted the Hollis Code Enforcement Office on June 7, 2023, regarding the availability of files pertaining to the subject property. The following documents were provided: • 1998 USA Federal Energy Regulatory Commission order issuing license for Federal Power Act to operate and maintain the West Buxton Project; This document outlines background and analysis of impacts of the project, including comprehensive plans to conserve waterways and fish passages affected by the project, preserving the water-related recreational use around the area, improving the consumption efficiency of electricity, and plan to operate the project safely and efficiently. • 1999 Deed Indenture for the West Buxton Hydro Project; This document serves as an agreement between Central Maine Power (CMP) and FPL EnergyMaine Hydro LLC (FPL). The document acknowledges that the West Buxton Hydro Project is licensed by the Federal Regulatory Commission, and notes CMP's reserved easements, which ensure that the use of the land for the project will not endanger health, prohibit recreational use, or restrict public access to the project waters, and will maintain environmental and scenic values of the project. Additional easements included detail agreements between CMP and FPL regarding the use and maintenance of the transmission corridor, powerhouse transmission lines, utility lines, vegetation control, powerhouse, substation, access ways, intertie and revenue meters, and southern hydro buildings. • 2002 Correspondences between FPL EnergyMaine Hydro LLC and a resident of the Salmon Falls area regarding a complaint about noise levels coming from the dam station. • 2007 License amendment for modifying and approving fish passage report and recommendations for fish passage and fisheries management. • 2008 General Application for Waste Discharge License (WDL)/ Maine Pollutant Discharge Elimination System (MEPDES) permit for wastewater discharges for Bar Mills Hydro Station in Hollis, Maine. This permit was required due to the non-contact bearing cooling water from two separate outfalls discharging from the hydroelectric generating facility. In the chance of an unexpected leak, the discharge may be contaminated by hydraulic or lubrication oil or grease. This permit pertains to the powerhouse,

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Table 3.3 - Other Environmental Record Sources

Regulatory Agency/ Department	Available Information
	which is not included in this review as it is not proposed to be removed. • 2013 Maine Water Quality Certification application for West Buxton Hydroelectric Project.
Hollis Fire & Rescue Department	TRC contacted the Hollis Fire & Rescue Department on June 7, 2023, regarding the availability of files pertaining to the subject property. The following documents were provided: • 2023 Tier II Emergency and Hazardous Chemical Inventory report for Brookfield White Pine Hydro – Bar Mills Station. This assessment revealed the presence of miscellaneous oils from turbines, transformer oil, and various oils in the powerhouse operating equipment (hydraulic, lubricating, and mineral oils). According to the report: "880 gallons of oil were removed from the powerhouse oil containing equipment (thrust bearing and turbines) in December 2022. A powerhouse rooftop transformer holds 1,418 gallons of oil." The information in this report pertains to the powerhouse, which is not included in this review as it is not proposed to be removed.
Hollis Health Officer	TRC contacted the Hollis Health Officer on June 7, 2023, regarding the availability of files pertaining to the subject property. No records were on file pertaining to the subject property.
Hollis Town Clerk	TRC contacted the Hollis Assessor's Office on June 7, 2023, regarding the availability of files pertaining to the subject property. No records were on file pertaining to the subject property.
Buxton Assessor's Office	TRC contacted the Buxton Assessor's Office on June 7, 2023, regarding the availability of files pertaining to the adjoining Rogers Fibre Mill. The following documents were provided: • Tax Map for the adjoining Rogers Fibre Mill property.
Buxton Code Enforcement Office	TRC contacted the Buxton Code Enforcement Office on June 7, 2023, regarding the availability of files pertaining to the adjoining Rogers Fibre Mill. The following documents were provided: • 2005 West Buxton Hydroelectric Project Response to Comments on Initial Study Report Meeting Summary; This document details some comments on the Initial Study Report Meeting Summary for the relicensing of the West Buxton Hydroelectric Project. The Atlantic Salmon Federation (ASF) commented with concerns regarding the negative effects of the dam on migratory fisheries and river flow (affecting sedimentation, nutrient flow, channel morphology, riparian and wetland habitats, and biological life). Organizations that also submitted comments on the meeting summary included Maine Atlantic Salmon Commission, Maine Department of Marine Resources, National Marine Fisheries Service, Saco River Salmon Club Hatchery, and the United States Fish and Wildlife Service. Additionally, photos and maps of the Bar Mill Dam were included.

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Table 3.3 - Other Environmental Record Sources

Regulatory Agency/ Department	Available Information
	• 2005 Order on Downstream Fish Passage Effectiveness; This is a report on the effectiveness of the downstream fish passage facility. It was determined that the overall project passage survival rate via the spillway, turbines, and the downstream fish passage facility from the three release scenarios tested in 2003 were 94-96 percent. Additional downstream passage studies are being planned in the future.
Buxton Fire & Rescue Department	TRC contacted the Buxton Fire & Rescue Department on June 7, 2023, regarding the availability of files pertaining to the subject property. No response was received by the Buxton Fire & Rescue Department as of the time of this report.
Buxton Health Officer	TRC contacted the Buxton Health Officer on June 7, 2023, regarding the availability of files pertaining to the subject property. No records were on file pertaining to the subject property.

4.0 SITE RECONNAISSANCE

4.1 Methodology and Limiting Conditions

Zachary Bonin, TRC Project Manager/Geologist, and Thomas Eschner, TRC Senior Project Manager, conducted a site reconnaissance of accessible areas on and around the subject property on May 18, 2023 for the purpose of identifying potential RECs and were accompanied by Melissa Ward (BWPH), Chris Karam (BWPH), Cameron Goodhart (BWPH), and Kevin Cooley (Kleinschmidt), who provided access to the subject property and answered questions during the reconnaissance. Photographs taken during the site reconnaissance activities are provided in **Appendix D**. A subject property layout plan is included as **Figure 2**.

During the site reconnaissance, TRC was provided with access to all portions of the subject property pertinent to the scope of the intended removal. Please note that the powerhouse is not included in the limits of the subject property for the purposes of this review; thus, the powerhouse was not observed during the site reconnaissance.

4.2 Interior and Exterior Subject Property Observations

Unless otherwise noted, the items listed in the table below appeared in good condition with no visual evidence of staining, deterioration, or a discharge of hazardous materials; and there are no records of a release in these areas. Items where further description is warranted are discussed in the section(s) following the table.

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Table 4.1 - Interior and Exterior Subject Property Observations

Item	Present (Current/ Historical/ Not Observed)	Description
Hazardous material storage or handling areas	Present (Current/ Historical)	See Section 4.2.1.
Solid and liquid wastes including municipal wastes	Not Observed	See Section 4.2.2.
Underground Storage Tanks (USTs) and associated piping	Not Observed	See Section 4.2.3.
Aboveground Storage Tanks (ASTs) and associated piping	Not Observed	See Section 4.2.4.
Unlabeled drums and containers (≥5 gallons)	Not Observed	N/A
Strong, pungent, or noxious odors	Not Observed	N/A
Pools of liquid, including surface water bodies and sumps (handling hazardous substances or substances likely to be hazardous only)	Not Observed	N/A
Known or Likely PCB-containing items (liquid-filled transformers, hydraulic equipment, etc.)	Present (Current/ Historical)	A motor-driven gate opener is situated below the dam bridge in the middle of its span across the river. According to BWPH, the unit contains up to 10 gallons of oil and was installed circa 2010. Based on the age of the unit, it is not likely to contain PCBs. The unit features secondary containment and was observed to be in good condition with no staining or indications of a release. According to BWPH personnel, there have been no known releases of oil from the unit. Three motor-driven winch systems are located inside the derrick crane building and each contain up to 1 quart of oil. Two of the units are modern systems (post-1979) and are not likely to contain PCBs; these units were observed to be in good condition with no staining or leaks observed. The third unit appears to be an earlier vintage (potentially pre-1979) and may contain PCBs; oil-absorbent pads with minor staining were present below this unit, indicating potential past releases of oil. Three pole-mounted transformers were observed in the parking lot area adjacent to

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Table 4.1 - Interior and Exterior Subject Property Observations

Item	Present (Current/ Historical/ Not Observed)	Description
		the dam. The transformers appeared to be in good condition with no perforations or staining observed. The transformers were not labeled regarding their PCB content. A CMP-owned substation with a ground-mounted power transformer is located in the northwestern corner of Usher Island. The transformers appeared to be in good condition with no perforations or staining observed. Labeling on the transformer indicated that it contains non-PCB dielectric fluid (<1 part per million PCBs).
Stains or corrosion	Present (Current)	Oil absorbent pads with minor staining were observed on one of the motor-driven winch systems in the crane building. The floor in the area of the unit appeared to be in good condition with no overt staining, but further evaluation should be considered if the oil in the unit is determined to contain PCBs.
Drains and sumps	Not Observed	No floor drains were observed in the areas of the subject property accessed during TRC's site reconnaissance.
Oil water separator	Not Observed	N/A
Pits, ponds, and lagoons	Not Observed	N/A
Stressed vegetation	Not Observed	N/A
Fill material	Not Observed	N/A
Wastewater (discharged from or to the subject property)	Present (Historical)	Bar Mills Dam historically held a discharge permit for wastewater discharges associated with the powerhouse.
Stormwater (discharged from or to the subject property)	Not Observed	Stormwater at the subject property discharges as sheet flow to permeable ground surfaces.
Wells (including dry wells, irrigation wells, injection wells, abandoned wells, oil and gas wells, or other wells)	Not Observed	N/A
Septic systems or cesspools	Not Observed	N/A
Debris piles	Not Observed	N/A

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Table 4.1 - Interior and Exterior Subject Property Observations

Item	Present (Current/ Historical/ Not Observed)	Description
Evidence of Uncontrolled Access	Not Observed	N/A

4.2.1 Hazardous Substances

Hazardous substances including raw materials, finished products and formulations, hazardous wastes, hazardous constituents and pollutants including intermediates and byproducts that are currently present at the subject property, and unidentified substance containers (when open or damaged, and containing unidentified substances suspected of being hazardous or petroleum products) are listed in the following table.

Table 4.2 - Current Subject Property Hazardous Substances

Material Name	Approximate Quantity at the Subject Property During Reconnaissance (gallons/pounds)	Storage Containers and Conditions*
Dielectric Fluid (Non-PCB)	>2,300 gallons (estimated)	Ground-mounted power transformer in CMP-owned substation located in the northwestern corner of Usher Island. The transformers appeared to be in good condition with no perforations or staining observed. The specific volume of dielectric fluid contained in the transformer is not known.
Dielectric Fluid (Unknown PCB-Content)	40-60 gallons (estimated)	Three pole-mounted transformers located in the parking lot area adjacent to the dam. The transformers appeared to be in good condition with no perforations or staining observed. The specific volume of dielectric fluid contained in the transformers is not known.
Motor oil	Approx. 10 gallons	Motor-driven gate opener situated below the dam bridge in the middle of its span across the river. The unit features secondary containment and was observed to be in good condition with no staining or indications of a release. According to Brookfield personnel, there have been no known releases of oil from the unit.
Motor Oil (Non-PCB)	1-2 quarts	Two motor-driven winch systems located inside the derrick crane building. Units appear to be modern systems (post-1979) and are not likely to contain PCBs; these units were observed to be in good condition with no staining or leaks observed.

Table 4.2 - Current Subject Property Hazardous Substances

Material Name	Approximate Quantity at the Subject Property During Reconnaissance (gallons/pounds)	Storage Containers and Conditions*
Motor Oil (Unknown PCB Content)	Up to 1 quart	One motor-driven winch system located inside the derrick crane building. Unit appears to be an earlier vintage (potentially pre-1979) and may contain PCBs; oil-absorbent pads with minor staining were present below this unit, indicating it may be compromised and suggesting potential past releases of oil.

* Definition of conditions:

Compromised: Obvious holes in container or visual evidence of a release.

Poor: Container appears dented, bulging, rusted, or visual evidence of spillage.

Fair: Container appears intact with visual traces of rust.

Good: No visual evidence of container damage.

Excellent: Container appears like new.

4.2.2 Solid and Liquid Wastes

According to subject property representatives, no solid or liquid wastes are generated or stored at the subject property. Additionally, no solid or liquid wastes were observed during the site visit.

4.2.3 Underground Storage Tanks

According to subject property representatives, no USTs are currently or have historically been present at the subject property. Additionally, no visual evidence (e.g., vent pipes, fill ports, dispensing equipment, etc.) of USTs was observed during the site visit.

4.2.4 Aboveground Storage Tanks

According to subject property representatives, no ASTs are currently or have historically been present at the subject property.

4.3 Adjoining and Surrounding Properties Reconnaissance

4.3.1 Adjoining Properties

During the site reconnaissance, TRC viewed the adjoining properties from the subject property and publicly accessible areas (e.g., public roadways, etc.).

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Table 4.3 - Adjoining Properties Reconnaissance

Direction from Subject Property	Current Land Use Description
North	Foundation of former Rogers Fibre Mill and a public park (on the site of former mill) in Buxton, ME.
East	Residential properties along Main Street and Salmon Falls Road in Buxton, ME
South	Residential properties along Canal Road in Hollis, ME
West	Residential properties along Canal Road and Bar Mills Road in Hollis, ME

4.3.2 Surrounding Properties

Surrounding properties generally include residential and undeveloped wooded land to the north, west, and mixed residential and commercial land to the east and south.

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5.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Potential findings can include RECs, controlled RECs (CRECs), historical RECs (HRECs), and de minimis conditions, pursuant to ASTM Practice E1527-21.

RECs are defined as (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment: (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

CRECs are defined as RECs affecting the subject property that have been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, AULs, institutional controls, or engineering controls).

HRECs are defined as previous releases of hazardous substances or petroleum products affecting the subject property that have been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria without subjecting the subject property to any controls (for example, property use restrictions, AULs, institutional controls, or engineering controls). An HREC is not a REC.

De minimis conditions are related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not RECs nor CRECs.

Business environmental risks (BERs) are defined as a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. Consideration of BER issues may involve addressing one or more non-scope considerations.

Data gaps are defined as a lack of or inability to obtain information required by this practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to, site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the Key Site Manager, regulatory officials, etc.).

TRC has performed this environmental due diligence review using the general principles of a Phase I ESA per ASTM Practice E1527-21 for the proposed decommissioning of the Bar Mills Project in Hollis and Buxton, York County, Maine. Any exceptions to, or deletions from, this practice are described in Sections 1.3 and 5.7 of this report.

The following findings were noted during the preparation of this report. TRC has provided the Environmental Professional's rationale for concluding whether each finding is or is not currently a REC, CREC, HREC, de minimis condition, or BER.

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Finding No. 1 – Former Rogers Fibre Mill

Rogers Fibre Mill, a manufacturer of fiberboard materials, operated on the northeast-adjoining property from 1917 to 1980. Following the closure of the mill and its subsequent deterioration and partial collapse, the Town of Buxton became concerned about the unsound structure posing a threat to the community. In August 1997, the Town of Buxton requested the assistance of US Senator Olympia Snowe in addressing its concerns related to the former mill.

In response to the Town of Buxton's request, the EPA conducted an inspection of the former mill site on August 18, 1997, at which time it observed several potentially hazardous materials, including fuel oil, No. 6 oil, asbestos, kerosene, paint, and waste oil. Based on the site investigation, EPA concluded that additional site activities, including drum and container sampling, would be necessary to evaluate the threats posed by these hazardous materials. In September 1997, the EPA performed a preliminary sampling investigation, which identified asbestos-containing building materials, elevated concentrations of VOCs in various drums and containers, and metals (copper, lead, and zinc) in residues on the floor of the mill.

Between 1998 and 1999, EPA oversaw the removal of asbestos-containing materials and residual hazardous substances and demolition of the mill building. Assessment performed concurrent with the demolition identified the presence of building concrete contaminated with PAHs and heavy metals, soils and debris contaminated with PAHs, dye-stained soils/materials onsite, and asbestos-containing materials and metal slag (containing high levels of lead, copper, and zinc) on the "island" formed by the tail race and sluice outlet downstream of the mill. Portions of the mill foundation that were not removed were reportedly decontaminated to the satisfaction of EPA so that they could remain. In an EPA memorandum dated August 9, 1999, EPA stated that it intended to install a "stone cover to mitigate off-site migration of the residual contamination", indicating that it intended to leave an unspecified amount of residually impacted soil/sediment downstream of the mill remaining foundation. EPA demobilized from the mill site in October 1999. It is also noted that discharges of petroleum to the Saco River were identified from a previously unknown UST discovered on the mill property in 2005.

Based on the documented releases of asbestos-containing materials, VOCs, PAHs, and heavy metals associated with the former mill, and potential petroleum impacts related to the property, it is possible that soil/sediments at and in the vicinity of the subject property have been impacted by these contaminants, including both surficial and shallow soils, as well as deeper soils on the subject property. This finding represents a REC for the subject property and should be evaluated prior to the disturbance of soil/sediment during the planned decommissioning project. Furthermore, should the disturbance of soil on the former Rogers Fibre Mill property be required during the planned decommissioning project, the extent of the disturbances should be known and evaluated prior to the project and/or minimized to the extent feasible during decommissioning.

Finding No. 2 – Timber Crib Dam

Portions of a former timber crib dam exist within a few hundred feet upstream of, and parallel with, the current dam and are anticipated to be removed during the planned decommissioning project. The potential exists for the timber used in the former dam to be treated with creosote, a wood preservative derived from the distillation of tar from wood or coal that use been used since the mid-1800s. This finding represents a REC for the subject property and should be evaluated prior

to final disposition of the timber crib dam to ensure proper management and disposal during the planned decommissioning project.

Finding No. 3 – Leaking Motor-Driven Winch in Crane Building

Three motor-driven winch systems are located inside the derrick crane building and each contain up to 1 quart of oil. Two of the units are modern systems (post-1979) and are not likely to contain PCBs; these units were observed to be in good condition with no staining or leaks observed. The third unit appears to be an earlier vintage (potentially pre-1979) and may contain PCBs. TRC observed oil-absorbent pads with minor staining below this unit, indicating it may be compromised and suggesting potential past releases of oil. TRC understands that the crane building may be removed during the planned decommissioning project. This finding is considered a de minimis condition and should be evaluated should the winch system or crane building be removed.

5.1 RECs

This assessment has revealed the following RECs in connection with the subject property:

1. *Finding No. 1 – Former Rogers Fibre Mill*
2. *Finding No. 2 – Timber Crib Dam*

5.2 CRECs

This assessment has revealed no evidence of CRECs in connection with the subject property.

5.3 HRECs

This assessment has revealed no evidence of HRECs in connection with the subject property.

5.4 De Minimis Conditions

This assessment has revealed the following de minimis conditions in connection with the subject property:

1. *Finding No. 3 – Leaking Motor-Driven Winch in Crane Building*

5.5 Business Environmental Risks (BERs)

This assessment has revealed no evidence of BERs that warrant further discussion in this section.

5.6 Data Gaps

TRC has made an appropriate inquiry into the commonly known and reasonably ascertainable resources concerning the historical ownership and use of the subject property back to the first development per Section 8.3.8 of ASTM Practice E1527-21.

As of the time of this submittal, the following data gaps have been identified:

- The After Action Report documenting the removal and remediation activities completed by the EPA at the former Rogers Fibre Mill property between 1998 and 1999 has not been made available to TRC. Information regarding these removal/remediation efforts has been gathered from other EPA documentation available from the time of these activities. However, it is noted that the available documentation does not include the complete laboratory analytical data for the samples collected during the remediation project, including those that indicate the concentrations of contaminants remaining in soil/sediment at the conclusion of the response actions.

5.7 Limiting Conditions and Deviations

5.7.1 Accuracy and Completeness

ASTM Practice E1527-21 recognizes inherent limitations for Phase I ESAs that apply to this report, including:

- Uncertainty Not Eliminated – No Phase I ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Data gaps identified during this Phase I ESA are listed in Section 5.6.
- Not Exhaustive – A Phase I ESA is not an exhaustive investigation.
- Past Uses of the Property – A review of standard historical sources at intervals less than 5 years is not required.

The Client is advised that the Phase I ESA conducted at the subject property is a limited inquiry into a property's environmental status, cannot wholly eliminate uncertainty, and is not an exhaustive assessment to discover every potential source of environmental liability at the subject property. Therefore, TRC does not make a statement i) of warranty or guarantee, express or implied for any specific use; ii) that the subject property is free of RECs or environmental impairment; iii) that the subject property is "clean;" or iv) that impairments, if any, are limited to those that were discovered while TRC was performing the Phase I ESA. This limiting statement is not meant to compromise the findings of this report; rather, it is meant as a statement of limitations within the ASTM Standard and intended scope of this assessment. Specific limiting conditions identified during the site reconnaissance are described in Section 4.1. Subsurface conditions may differ from the conditions implied by surface observations and can be evaluated more thoroughly through intrusive techniques that are beyond the scope of this assessment. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other construction purposes.

This report presents TRC's site reconnaissance observations, findings, and conclusions as they existed at the time of the site reconnaissance. TRC makes no representation or warranty that the past or current operations at the property are or have been in compliance with applicable federal, state, and local laws, regulations, and codes. TRC makes no guarantees as to the accuracy or completeness of information obtained from others during the course of this Phase I ESA report. It is possible that information exists beyond the scope of this assessment, or that information was not provided to TRC. Additional information subsequently provided, discovered, or produced may alter findings or conclusions made in this Phase I ESA report. TRC is under no obligation to update this report to reflect such subsequent information. The findings presented in this report are based

upon reasonably ascertainable information and observed subject property conditions at the time of the assessment.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not assessed. Regardless of the findings stated in this report, TRC is not responsible for consequences or conditions arising from facts that were not fully disclosed to TRC during the assessment.

An independent data research company provided the government agency database referenced in this report. Information regarding surrounding area properties was requested for approximate minimum search distances and was assumed to be correct and complete unless obviously contradicted by TRC's observations or other credible referenced sources reviewed during the assessment.

TRC is not a professional title insurance or land surveyor firm and makes no guarantee, explicit or implied, that any land title records acquired or reviewed, or any physical descriptions or depictions of the property in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

5.7.2 Warranties and Representations Disclaimer

TRC prepared this document solely for the benefit of the Client. With regard to third-party recipients of this document, neither TRC, nor the Client, nor any of their respective parents, affiliates, or subsidiaries, nor any person acting on their behalf: (a) makes any warranty, expressed or implied, with respect to the use of any information or methods disclosed in this document; or (b) assumes any liability with respect to the use of any information or methods disclosed in this document. Any third-party recipient of this document, by its acceptance or use of this document, releases TRC, the Client, and their parents, affiliates, and subsidiaries from any liability for direct, indirect, economic, incidental, consequential, or special loss or damage whether arising in contract, warranty, express or implied, tort, or otherwise, and irrespective of fault, negligence, and strict liability.

This report does not warrant against: (1) operations or conditions which were not evident from visual observations or historical information provided; (2) conditions which could only be determined by physical sampling or other intrusive investigation techniques; (3) locations other than the client-provided addresses and/or subject property description; or (4) information regarding off-site location(s) (with possible impact to the subject property) not published in publicly available records.

5.7.3 Continued Validity/User Reliance

This report is presumed to be valid, in accordance with, and subject to, the limitations specified in ASTM Practice E1527-21, for a period of 180 days from the completion of each component using the dates provided in Section 6, or until the Client obtains specific information that may materially alter a finding, opinion, or conclusion in this report, or until the Client is notified by TRC that it has obtained specific information that may materially alter a finding, opinion, or conclusion in this report. Additionally, pursuant to ASTM Practice E1527-21, this report is presumed valid if the required components are completed fewer than 180 days prior to the date of acquisition of the property or (for transactions not involving an acquisition) the date of the intended transaction.

5.7.4 Significant Assumptions

During this Phase I ESA, TRC relied on database information; interviews with subject property representatives, regulatory officials, and other individuals having knowledge of subject property operations; and User-provided information as requested in our authorized Scope of Work. TRC has assumed that the information provided is true and accurate. Reliance on electronic database search reports is subject to the limitations set forth in those reports. TRC did not independently verify the information provided. TRC found no reason to question the validity of the information received unless explicitly noted elsewhere in this report. If other information is discovered and/or if previous reports exist that were not provided to TRC, our conclusions may not be valid.

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6.0 REFERENCES

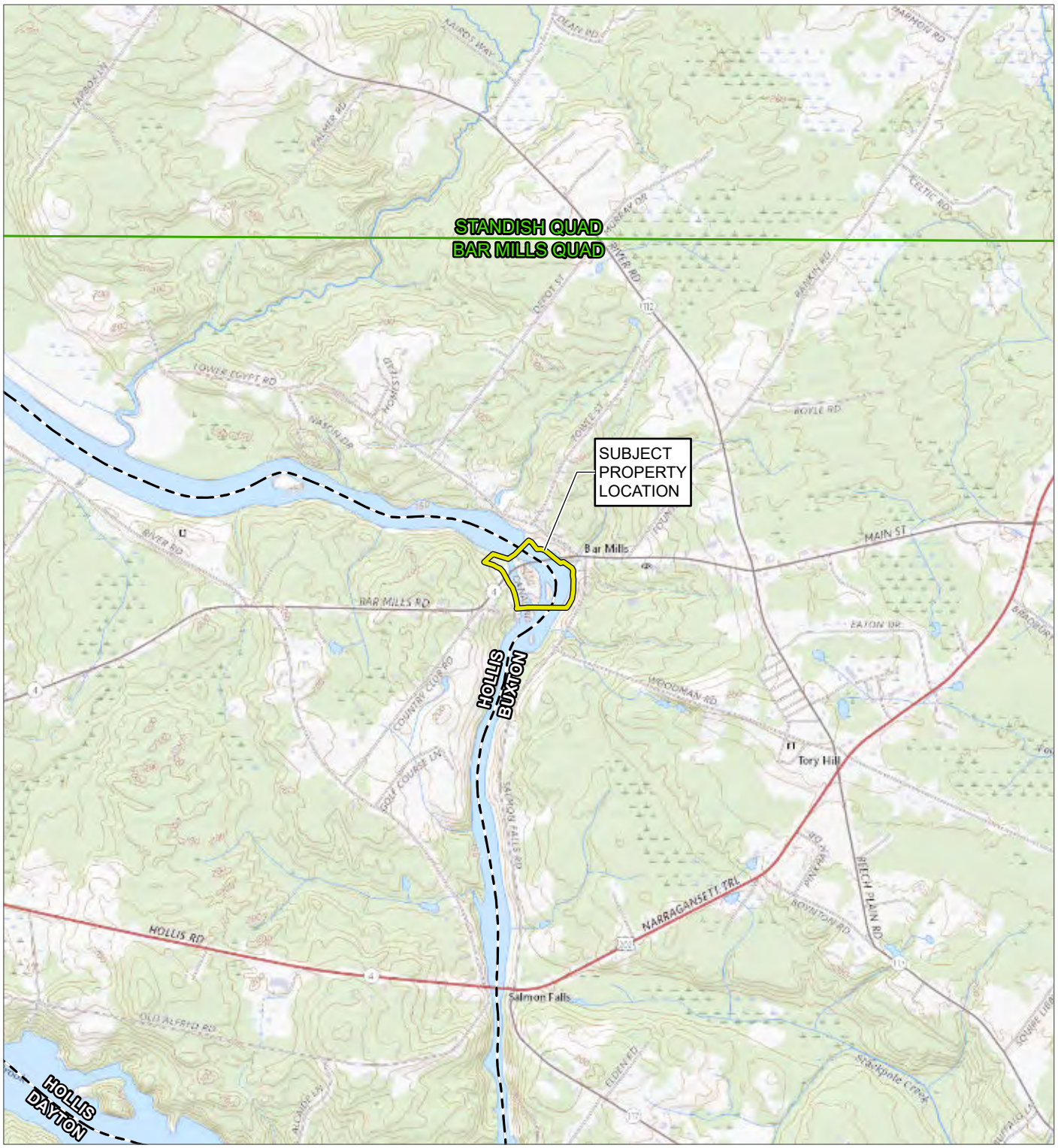
Table 6.1 - Reference Information

Description/Title of Document(s) Received or Agency Contacted	Date Information Request Filled/Date of Agency Contact	Information Updated	Reference Source
Regulatory database search and historical sources	April 27, 2023	N/A	EDR Inquiry Number: 7321371
Site reconnaissance conducted by Zachary Bonin and Thomas Eschner	May 18, 2023	N/A	N/A
Hollis Assessor's Office	June 7, 2023	N/A	N/A
Hollis Code Enforcement Office	June 7, 2023	N/A	N/A
Hollis Fire & Rescue	June 7, 2023	N/A	N/A
Hollis Health Officer	June 7, 2023	N/A	N/A
Hollis Town Clerk	June 7, 2023	N/A	N/A
Buxton Assessor's Office	June 7, 2023	N/A	N/A
Buxton Code Enforcement Office	June 7, 2023	N/A	N/A
Buxton Fire & Rescue	June 7, 2023	N/A	N/A
Buxton Health Officer	June 7, 2023	N/A	N/A
Provided previous documents as discussed in Section 1.0.	N/A	N/A	N/A

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FIGURES

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SUBJECT PROPERTY BOUNDARY

MUNICIPAL BOUNDARY

USGS 7.5 MINUTE QUADRANGLE MAP BOUNDARY

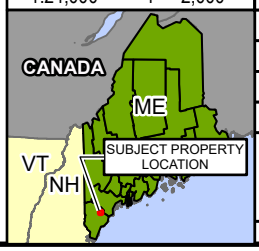
BASE MAP: USGS NATIONAL MAP
DATA SOURCES: USGS, ESRI, TRC

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0 1,000 2,000

FEET

1:24,000 1" = 2,000'



PROJECT:

BAR MILLS PROJECT
HOLLIS AND BUXTON, ME
ENVIRONMENTAL DUE DILIGENCE

TITLE:

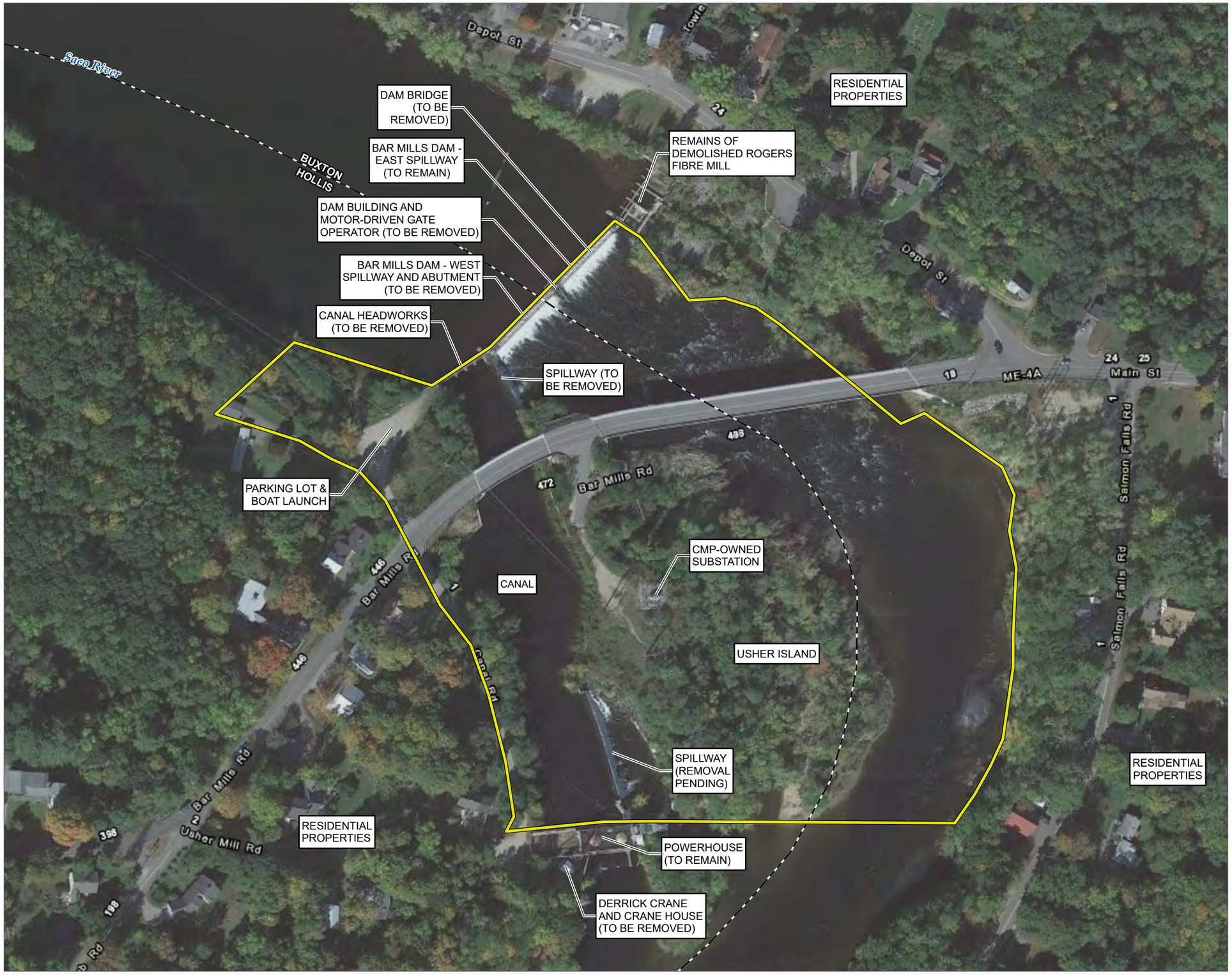
SITE LOCATION MAP

DRAWN BY:	R. BARBER	PROJ. NO.:	510195.9990.0000
CHECKED BY:	J. FREDENBURG		
APPROVED BY:	Z. BONIN		**FIGURE 1**
DATE:	JUNE 2023		

TRC
6 ASHLEY DRIVE
1ST FLOOR
SCARBOROUGH, ME 04074
PHONE: 207.879.1930

FILE: West_Buxton

Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet; Map Rotation: 0
-- Saved By: RBARBER on 6/13/2023, 09:43:29 AM; File Path: T:\1-PROJECTS\Brookfield_Renewable_Energy_Group\510195_West_Buxton\2-APRX\West_Buxton.aprx; Layout Name: West Buxton Fig1 Subject Property Location 20230613



SUBJECT PROPERTY BOUNDARY

MUNICIPAL BOUNDARY

BASE MAP: GOOGLE IMAGERY SERVICE
DATA SOURCES: USGS, ESRI, TRC

1:1,800
1" = 150'

0 150 300 FEET

PROJECT:
BAR MILLS PROJECT
HOLLIS AND BUXTON, ME
ENVIRONMENTAL DUE DILIGENCE

TITLE:
SUBJECT PROPERTY LAYOUT

DRAWN BY:	R. BARBER	PROJ. NO.:	510195.9990.0000
CHECKED BY:	J. FREDENBURG		
APPROVED BY:	Z. BONIN		**FIGURE 2**
DATE:	JUNE 2023		

TRC
6 ASHLEY DRIVE
1ST FLOOR
SCARBOROUGH, ME 04074
PHONE: 207.879.1930

FILE: West_Buxton.aprx

Coordinate System: NAD 1983 StatePlane Maine West FIPS 1602 Feet; Map Rotation: 0
Saved By: RBARBER on 6/13/2023 09:45:29 AM; File Path: T:\PROJECTS\Stockfield_Renewable_Energy_Group\510195_West_Buxton\3-APRX\West_Buxton.aprx; Layout Name: West Buxton Fig2 Subject Property Layout 20230613

Appendix A:
Database Radius Report

DRAFT

Bar Mills Hydroelectric Project
Bar Mills Road
Hollis, ME 04042

Inquiry Number: 7321371.2s
April 27, 2023

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

BAR MILLS ROAD
HOLLIS, ME 04042

COORDINATES

Latitude (North):	43.6118470 - 43° 36' 42.64''
Longitude (West):	70.5520840 - 70° 33' 7.50''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	374750.3
UTM Y (Meters):	4829717.5
Elevation:	137 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	11730219 BAR MILLS, ME
Version Date:	2018
North Map:	11747715 STANDISH, ME
Version Date:	2018

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150705, 20150711
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
BAR MILLS ROAD
HOLLIS, ME 04042

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	BROOKFIELD WHITE PIN	18 CANAL STREET, ROU	AST	Higher	1 ft.
A2	BROOKFIELD FACILITY	18 CANAL RD	RCRA-VSQG	Higher	1 ft.
A3	BROOKFIELD FACILITY	18 CANAL RD	ECHO	Higher	1 ft.
A4	BROOKFIELD RENEWABLE	18 CANAL STREET, ROU	AST	Higher	1 ft.
A5	BROOKFIELD RENEWABLE	18 CANAL STREET, ROU	TIER 2	Higher	1 ft.
A6	BROOKFIELD WHITE PIN	18 CANAL STREET, ROU	TIER 2	Higher	1 ft.
A7	BROOKFIELD FACILITY	18 CANAL RD	FINDS	Higher	1 ft.
8	BROOKFIELD - BAR MIL	CANAL RD	NPDES	Higher	2, 0.000,
B9	BERTRAND GENEST	8 DEPOT ST	LUST	Higher	181, 0.034, NE
B10	SACO RIVER TRADING P	8 DEPOT ST	UST	Higher	181, 0.034, NE
C11	TOWN OF BUXTON	DEPOT ST	LUST	Higher	207, 0.039, NNE
B12	MYSTERY TANK	18 DEPOT ST	UST	Higher	214, 0.041, NNE
C13	VACANT RESIDENCE MAP	19 DEPOT ROAD	LAST	Higher	254, 0.048, NNE
14	SACO RIVER T AND T C	61 & 63 MAIN STREET	VCP, ALLSITES	Higher	747, 0.141, ENE
15	SACO RIVER TEL & TEL	MAIN ST	UST	Higher	888, 0.168, ESE
D16	LOWS VARIETY	RTS 112 & 4	LUST, UST	Higher	2433, 0.461, East
D17	LOWS VARIETY	115 MAIN ST	LUST	Higher	2500, 0.473, East

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS ---------- Remediation Sites List

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ---------- Solid Waste Facility List
LCP ---------- Municipal Landfill Closure Database

Lists of state and tribal leaking storage tanks

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Remediation Sites List

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS ---------- Remediation Sites List

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ---------- Recycling Facilities
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
DEL SHWS ---------- Sites Removed from the Uncontrolled Sites List
US CDL ---------- National Clandestine Laboratory Register

EXECUTIVE SUMMARY

Local Land Records

LIENS	Environmental Liens Information Listing
LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Hazardous Material and Oil Spill System Database
SPILLS 90	SPILLS 90 data from FirstSearch
SPILLS 80	SPILLS 80 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing

PFAS ATSDR PFAS Contamination Site Location Listing
PFAS WQP Ambient Environmental Sampling for PFAS
PFAS NPDES Clean Water Act Discharge Monitoring Information
PFAS ECHO Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC Aqueous Foam Related Incidents Listing
PFAS PFAS Contamination Site Location Listing
AIRS Emissions Inventory Data
DRYCLEANERS Drycleaner Facilities
MANIFEST Hazardous Waste Manifest Information Listing
UIC Underground Injection Control
PFAS TRIS List of PFAS Added to the TRI
MINES MRDS Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal RCRA generators

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA)

of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 03/06/2023 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKFIELD FACILITY EPA ID:: MEX020012047	18 CANAL RD	0 - 1/8 (0.000 mi.)	A2	10

Lists of state and tribal leaking storage tanks

LAST: A listing of leaking aboveground storage tanks.

A review of the LAST list, as provided by EDR, and dated 01/21/2023 has revealed that there is 1 LAST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VACANT RESIDENCE MAP Spill Number: P-1061-2009	19 DEPOT ROAD	NNE 0 - 1/8 (0.048 mi.)	C13	31

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Protection's Hazardous Material and Oil Spill System Database (H.O.S.S.).

A review of the LUST list, as provided by EDR, and dated 01/21/2023 has revealed that there are 4 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BERTRAND GENEST Spill Value: Oil Incident Spill Number: P-601-2002	8 DEPOT ST	NE 0 - 1/8 (0.034 mi.)	B9	22
TOWN OF BUXTON Spill Value: Oil Incident Spill Number: P-380-2005	DEPOT ST	NNE 0 - 1/8 (0.039 mi.)	C11	26
LOWS VARIETY Spill Value: Oil Incident Spill Number: P-786-2002	***RTS 112 & 4***	***E 1/4 - 1/2 (0.461 mi.)***	***D16***	***36***
LOWS VARIETY Spill Value: Oil Incident Spill Number: P-1054-2007	115 MAIN ST	E 1/4 - 1/2 (0.473 mi.)	D17	42

Lists of state and tribal registered storage tanks

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Underground Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 02/06/2023 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SACO RIVER TRADING P Tank Status: REMOVED Pipe Status: REMOVED Facility Id: 20705	8 DEPOT ST	NE 0 - 1/8 (0.034 mi.)	B10	25
MYSTERY TANK Tank Status: REMOVED Pipe Status: REMOVED Facility Id: 21013	18 DEPOT ST	NNE 0 - 1/8 (0.041 mi.)	B12	29
SACO RIVER TEL & TEL Tank Status: REMOVED Pipe Status: REMOVED Facility Id: 10929	MAIN ST	ESE 1/8 - 1/4 (0.168 mi.)	15	34

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Protection's Aboveground Storage Tank Database.

A review of the AST list, as provided by EDR, has revealed that there are 2 AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKFIELD WHITE PIN Database: AST, Date of Government Version: 12/31/2021 Facility Id: FATR2018AEQN1201BBTP Facility Id: FATR2016AEQN1201BBTP Facility Id: FATR2015AEQN1201BBTP Facility Id: FATR2021AEQN1201BBTP Facility Id: FATR2019AEQN1201BBTP **Additional key fields are available in the Map Findings section*	18 CANAL STREET, ROU	0 - 1/8 (0.000 mi.)	A1	8
BROOKFIELD RENEWABLE Database: AST, Date of Government Version: 12/31/2021 Facility Id: FATR2014AEQN1201BBTP	18 CANAL STREET, ROU	0 - 1/8 (0.000 mi.)	A4	12

Lists of state and tribal voluntary cleanup sites

VCP: A list of sites where the necessary investigation and/or remedation activities have been completed to the Department's satisfaction and the applicants to the VRAP have been issued final certification documents. The list does not include those sites that are currently participating in the VRAP but have not yet received certification.

A review of the VCP list, as provided by EDR, and dated 01/09/2023 has revealed that there is 1 VCP

site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SACO RIVER T AND T C	***61 & 63 MAIN STREET***	***ENE 1/8 - 1/4 (0.141 mi.)***	***14***	***33***
Facility Status: REMEDY IN PLACE: CLOSED				
Facility Id: REM01537				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

ALLSITES: The Sites List Database is the public record of information regarding properties that have been, are now, or are planned to be addressed by the Division of Remediation of the Bureau of Remediation and Waste Management. This database is not intended to be a comprehensive, all-inclusive source of information regarding the properties listed therein.

A review of the ALLSITES list, as provided by EDR, and dated 01/09/2023 has revealed that there is 1 ALLSITES site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SACO RIVER T AND T C	***61 & 63 MAIN STREET***	***ENE 1/8 - 1/4 (0.141 mi.)***	***14***	***33***
Status: REMEDY IN PLACE: CLOSED				
Facility ID: REM01537				

Other Ascertainable Records

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 02/02/2023 has revealed that there is 1 FINDS site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKFIELD FACILITY	18 CANAL RD	0 - 1/8 (0.000 mi.)	A7	20
Registry ID:: 110070541297				

EXECUTIVE SUMMARY

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 01/01/2023 has revealed that there is 1 ECHO site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKFIELD FACILITY Registry ID: 110070541297	18 CANAL RD	0 - 1/8 (0.000 mi.)	A3	12

NPDES: A listing of wastewater facility locations.

A review of the NPDES list, as provided by EDR, and dated 09/19/2022 has revealed that there is 1 NPDES site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKFIELD - BAR MIL Npdes License: ME0001244	CANAL RD	0 - 1/8 (0.000 mi.)	8	21

TIER 2: A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

A review of the TIER 2 list, as provided by EDR, and dated 12/31/2021 has revealed that there are 2 TIER 2 sites within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKFIELD RENEWABLE Facility Id: FATR2014AEQN1201BBTP	18 CANAL STREET, ROU	0 - 1/8 (0.000 mi.)	A5	13
BROOKFIELD WHITE PIN Facility Id: FATR2020AEQN1201BBTP Facility Id: FATR2016AEQN1201BBTP Facility Id: FATR2017AEQN1201BBTP Facility Id: FATR2015AEQN1201BBTP Facility Id: FATR2018AEQN1201BBTP	18 CANAL STREET, ROU	0 - 1/8 (0.000 mi.)	A6	14

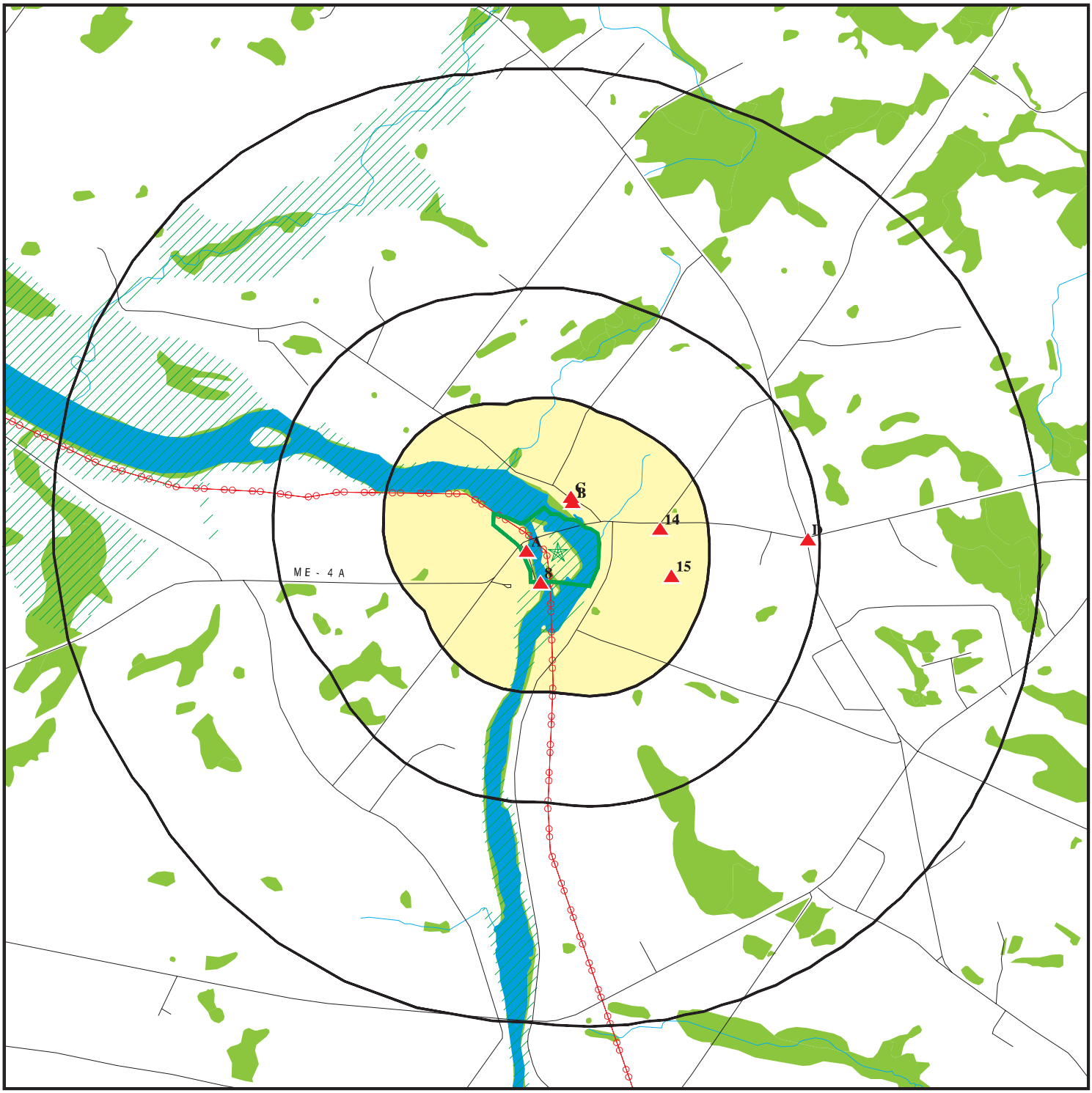
**Additional key fields are available in the Map Findings section*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 10 records.

Site Name	Database(s)
ROGERS FIBRE MILL (COLONIAL FIBER)	SEMS-ARCHIVE, RCRA NonGen / NLR, PRP
ATKINSON, RICHARD F	PRP
ATKINSON, BEVERLY A	PRP
SACO RIVER TEL & TEL- BAR MILLS SW	TIER 2
ROBERT LARRY	LAST
BART CHAMBERLAIN	LAST
DAYTON SAND & GRAVEL COMPANY TRUCK	LAST, SPILLS
APARTMENT BUILDING	LUST
JOHNSONS GARAGE	LUST
SACO RIVER TEL & TEL - BAR MILLS S	FINDS

OVERVIEW MAP - 7321371.2S



0 1/4 1/2 1 Miles

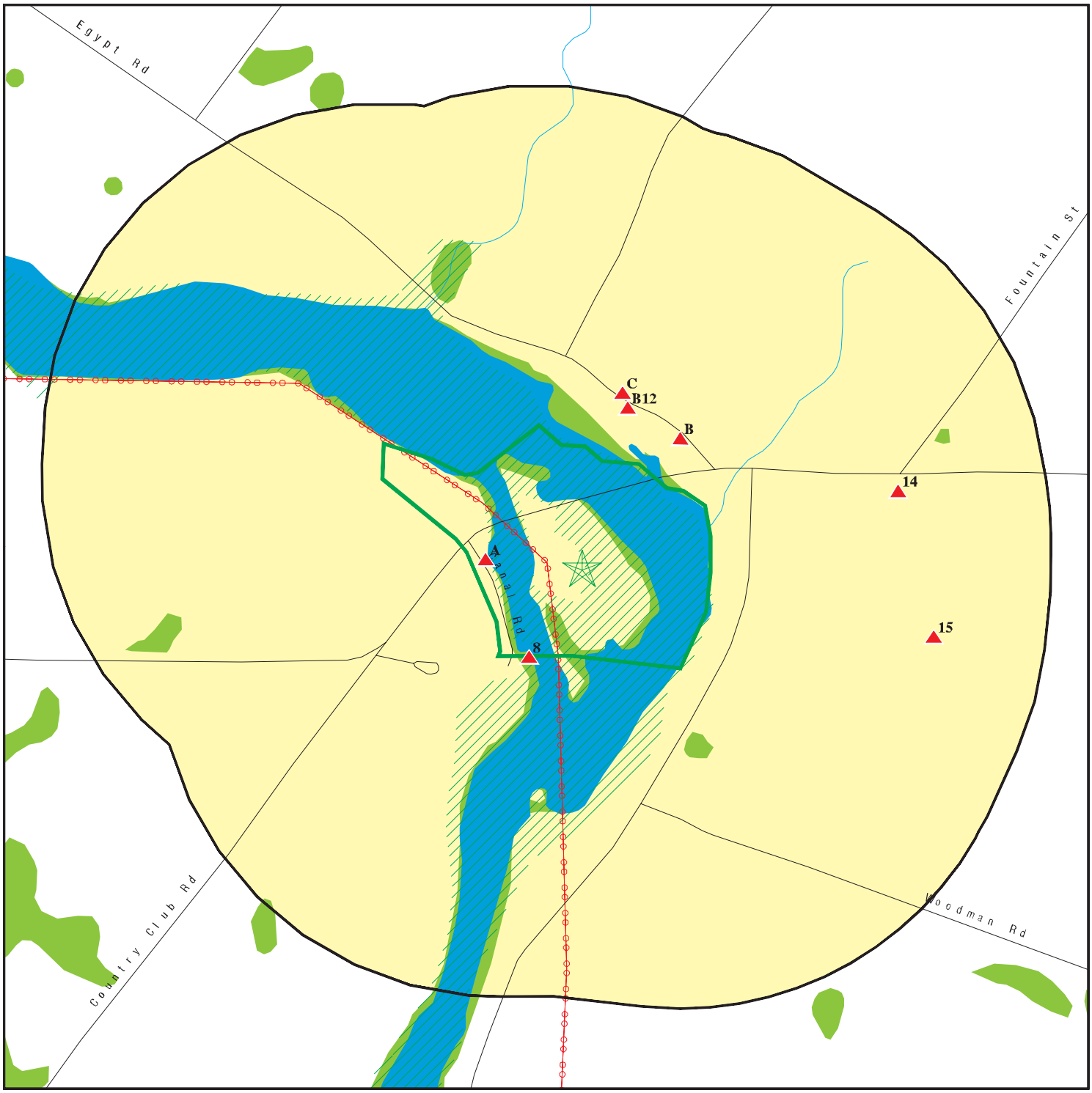
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Bar Mills Hydroelectric Project	CLIENT:	TRC
ADDRESS:	Bar Mills Road Hollis ME 04042	CONTACT:	Zack Bonin
		INQUIRY #:	7321371.2s
LAT/LONG:	43.611847 / 70.552084	DATE:	April 27, 2023 3:40 pm

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DETAIL MAP - 7321371.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Bar Mills Hydroelectric Project	CLIENT:	TRC
ADDRESS:	Bar Mills Road Hollis ME 04042	CONTACT:	Zack Bonin
		INQUIRY #:	7321371.2s
LAT/LONG:	43.611847 / 70.552084	DATE:	April 27, 2023 3:42 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		1	0	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
LCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LAST	0.500		1	0	0	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUST	0.500		2	0	2	NR	NR	4
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		2	1	NR	NR	NR	3
AST	0.250		2	0	NR	NR	NR	2
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	1	0	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
ALLSITES	0.500		0	1	0	NR	NR	1
DEL SHWS	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
SPILLS 80	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		1	NR	NR	NR	NR	1
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		1	NR	NR	NR	NR	1
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPDES	0.001		1	NR	NR	NR	NR	1
TIER 2	0.001		2	NR	NR	NR	NR	2
UIC	0.001		0	NR	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	13	3	2	0	0	18

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION** **AST** **A100426496**
18 CANAL STREET, ROUTE 4 **N/A**
< 1/8 **HOLLIS, ME 04042**
1 ft.

Site 1 of 7 in cluster A

Relative: AST:
Higher

Actual: Name: BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
151 ft. Address: 18 CANAL STREET, ROUTE 4
City,State,Zip: HOLLIS, ME 04042
Facility ID: FATR2021AEQN1201BBTP
Facility Status: Not reported
Facility Phone: Not reported
Facility Dept: Brookfield White Pine Hydro LLC
Record Id: Not reported
CAS Number: Not reported
Submitted By: Not reported
Max Container is Holding: 14937
Max Amount Container: 14937
Location: Inside Powerhouse (turbines) in operating equipment
Mail Address: 150 Main Street
Mail City: Lewiston
Mail State: ME
Mail Zip: 04240
Lat/Long: 43.61088 / -70.55279

Chemical Name: OILS, MISCELLANEOUS: TURBINE
Amount: 14937
Amount Unit: pounds
Type Code: Above ground tank
Pressure Code: Greater than ambient pressure
Temperature Code: Ambient temperature
Max Amount Code: 06
Days On Site: 365
CIEHS Chemical: Not reported
Report Year: 2021

Name: BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address: 18 CANAL STREET, ROUTE 4
City,State,Zip: HOLLIS, ME 04042

Chemical Name: OILS, MISCELLANEOUS: TURBINE
Amount: 14937
Amount Unit: pounds
Type Code: Above ground tank
Pressure Code: Greater than ambient pressure
Temperature Code: Ambient temperature
Max Amount Code: 06
Days On Site: 365
CIEHS Chemical: Not reported
Report Year: 2020

Name: BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address: 18 CANAL STREET, ROUTE 4
City,State,Zip: HOLLIS, ME 04042

Chemical Name: OILS, MISCELLANEOUS: TURBINE
Amount: 14937
Amount Unit: pounds

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **A100426496**

Type Code:	Above ground tank
Pressure Code:	Greater than ambient pressure
Temperature Code:	Ambient temperature
Max Amount Code:	06
Days On Site:	365
CIEHS Chemical:	No
Report Year:	2019
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Chemical Name:	OILS, MISCELLANEOUS: TURBINE
Amount:	14937
Amount Unit:	pounds
Type Code:	Above ground tank
Pressure Code:	Greater than ambient pressure
Temperature Code:	Ambient temperature
Max Amount Code:	06
Days On Site:	365
CIEHS Chemical:	No
Report Year:	2018
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Chemical Name:	OILS, MISCELLANEOUS: TURBINE
Amount:	14937
Amount Unit:	pounds
Type Code:	Above ground tank
Pressure Code:	Greater than ambient pressure
Temperature Code:	Ambient temperature
Max Amount Code:	06
Days On Site:	365
CIEHS Chemical:	No
Report Year:	2017
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Chemical Name:	OILS, MISCELLANEOUS: TURBINE
Amount:	14937
Amount Unit:	pounds
Type Code:	Above ground tank
Pressure Code:	Greater than ambient pressure
Temperature Code:	Ambient temperature
Max Amount Code:	06
Days On Site:	365
CIEHS Chemical:	No
Report Year:	2016
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **A100426496**

Chemical Name:	OILS, MISCELLANEOUS: TURBINE
Amount:	14937
Amount Unit:	pounds
Type Code:	Above
Pressure Code:	Great
Temperature Code:	Ambie
Max Amount Code:	06
Days On Site:	365
CIEHS Chemical:	No
Report Year:	2015

A2 **BROOKFIELD FACILITY - BAR MILLS** **RCRA-VSQG** **1025503730**
18 CANAL RD **MEX020012047**
< 1/8 **HOLLIS CENTER, ME 04042**
1 ft.

Site 2 of 7 in cluster A

Relative: **Higher**
Actual: **151 ft.**

RCRA Listings:

Date Form Received by Agency:	20190320
Handler Name:	Brookfield Facility - Bar Mills
Handler Address:	18 CANAL RD
Handler City,State,Zip:	HOLLIS CENTER, ME 04042
EPA ID:	MEX020012047
Contact Name:	JASON SEYFRIED
Contact Address:	MAIN ST
Contact City,State,Zip:	LEWISTON, ME 04240
Contact Telephone:	207-755-5615
Contact Fax:	Not reported
Contact Email:	JASON.SEYFRIED@BROOKFIELDRENEWABLE.COM
Contact Title:	COMPLIANCE SPECIALIST
EPA Region:	01
Land Type:	Not reported
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	MAIN ST
Mailing City,State,Zip:	LEWISTON, ME 04240
Owner Name:	Not reported
Owner Type:	Not reported
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No

BROOKFIELD FACILITY - BAR MILLS (Continued) **1025503730**

Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190325
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Historic Generators:

Receive Date:	20190320
Handler Name:	BROOKFIELD FACILITY - BAR MILLS
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

A3 **BROOKFIELD FACILITY - BAR MILLS** **ECHO** **1024930208**
18 CANAL RD **N/A**
< 1/8 **HOLLIS CENTER, ME 04042**
1 ft.

Site 3 of 7 in cluster A

Relative: ECHO:
Higher

Envid:	1024930208
Registry ID:	110070541297
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110070541297
Name:	BROOKFIELD FACILITY - BAR MILLS
Address:	18 CANAL RD
City,State,Zip:	HOLLIS CENTER, ME 04042

Actual:
151 ft.

A4 **BROOKFIELD RENEWABLE ENERGY GROUP BAR MILLS STATIO** **AST** **A100413024**
18 CANAL STREET, ROUTE 4 **N/A**
< 1/8 **HOLLIS, ME 04042**
1 ft.

Site 4 of 7 in cluster A

Relative: AST:
Higher

Name:	BROOKFIELD RENEWABLE ENERGY GROUP BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Facility ID:	FATR2014AEQN1201BBTP
Facility Status:	Not reported
Facility Phone:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Record Id:	Not reported
CAS Number:	Not reported
Submitted By:	Jason Seyfried
Max Container is Holding:	14937
Max Amount Container:	14937
Location:	Inside Powerhouse (turbines) in operating equipment
Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Lat/Long:	43.61085 / -70.55283
Chemical Name:	OILS, MISCELLANEOUS: TURBINE
Amount:	14937
Amount Unit:	pounds
Type Code:	Above
Pressure Code:	Great
Temperature Code:	Ambie
Max Amount Code:	6
Days On Site:	365
CIEHS Chemical:	No
Report Year:	2014

Actual:
151 ft.

A5 **BROOKFIELD RENEWABLE ENERGY GROUP BAR MILLS STATIO** **TIER 2** **S118417690**
18 CANAL STREET, ROUTE 4 **N/A**
< 1/8 **HOLLIS, ME**
1 ft.

Site 5 of 7 in cluster A

Relative: TIER 2:
Higher

Name:	BROOKFIELD RENEWABLE ENERGY GROUP BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME
Facility Mailing Address:	Not reported
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
Facility Mailing Country:	Not reported
Report Year:	2014
Submitted By:	Jason Seyfried
Acute/Chronic:	Not reported
Average Amount:	Not reported
Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	Not reported
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	1/19/2015
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2014AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	11/10/2015
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported
Validation Report:	Not reported
Latitude:	43.61085

Actual:
151 ft.

BROOKFIELD RENEWABLE ENERGY GROUP BAR MILLS STATION (Continued) **S118417690**

Longitude: -70.55283

A6 **BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION** **TIER 2** **S118755198**
18 CANAL STREET, ROUTE 4 **N/A**
< 1/8 **HOLLIS, ME 04042**
1 ft.

Site 6 of 7 in cluster A

Relative: **Higher**
Actual: **151 ft.**

TIER 2:

Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Facility Mailing Address:	150 Main Street
Facility Mailing City:	Lewiston
Facility Mailing State:	ME
Facility Mailing Zip:	04240
Facility Mailing Country:	USA
Report Year:	2020
Submitted By:	Not reported
Acute/Chronic:	Not reported
Average Amount:	Not reported
Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	true
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	2021-01-20
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2020AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	01/20/2021
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **S118755198**

Validation Report:	false
Latitude:	43.61088
Longitude:	-70.55279
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Facility Mailing Address:	150 Main Street
Facility Mailing City:	Lewiston
Facility Mailing State:	ME
Facility Mailing Zip:	04240
Facility Mailing Country:	USA
Report Year:	2016
Submitted By:	Jason Seyfried, Compliance Specialist
Acute/Chronic:	Not reported
Average Amount:	Not reported
Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	T
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	1/24/2017
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2016AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	08/28/2017
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported
Validation Report:	Not reported
Latitude:	43.61085
Longitude:	-70.55283

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **S118755198**

Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Facility Mailing Address:	150 Main Street
Facility Mailing City:	Lewiston
Facility Mailing State:	ME
Facility Mailing Zip:	04240
Facility Mailing Country:	USA
Report Year:	2017
Submitted By:	Jason Seyfried, Compliance Specialist
Acute/Chronic:	Not reported
Average Amount:	Not reported
Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	T
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	1/11/2018
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2017AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	09/13/2018
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported
Validation Report:	Not reported
Latitude:	43.61085
Longitude:	-70.55283
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **S118755198**

Facility Mailing Address:	150 Main Street
Facility Mailing City:	Lewiston
Facility Mailing State:	ME
Facility Mailing Zip:	04240
Facility Mailing Country:	USA
Report Year:	2015
Submitted By:	Jason Seyfried, Compliance Specialist
Acute/Chronic:	Not reported
Average Amount:	Not reported
Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	Not reported
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	1/21/2016
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2015AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	08/19/2016
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported
Validation Report:	Not reported
Latitude:	43.61085
Longitude:	-70.55283
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Facility Mailing Address:	150 Main Street
Facility Mailing City:	Lewiston
Facility Mailing State:	ME

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **S118755198**

Facility Mailing Zip:	04240
Facility Mailing Country:	USA
Report Year:	2018
Submitted By:	Jason Seyfried, Compliance Specialist
Acute/Chronic:	Not reported
Average Amount:	Not reported
Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	T
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	1/24/2019
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2018AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	07/30/2019
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported
Validation Report:	Not reported
Latitude:	43.61085
Longitude:	-70.55283
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Facility Mailing Address:	150 Main Street
Facility Mailing City:	Lewiston
Facility Mailing State:	ME
Facility Mailing Zip:	04240
Facility Mailing Country:	USA
Report Year:	2019

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **S118755198**

Submitted By:	Jason Seyfried, Compliance Specialist
Acute/Chronic:	Not reported
Average Amount:	Not reported
Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	T
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	1/23/2020
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2019AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	01/23/2020
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported
Validation Report:	Not reported
Latitude:	43.61085
Longitude:	-70.55283
Name:	BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION
Address:	18 CANAL STREET, ROUTE 4
City,State,Zip:	HOLLIS, ME 04042
Facility Mailing Address:	150 Main Street
Facility Mailing City:	Lewiston
Facility Mailing State:	ME
Facility Mailing Zip:	04240
Facility Mailing Country:	USA
Report Year:	2021
Submitted By:	Not reported
Acute/Chronic:	Not reported
Average Amount:	Not reported

BROOKFIELD WHITE PINE HYDRO - BAR MILLS STATION (Continued) **S118755198**

Record ID:	Not reported
Facility Router Record ID:	Not reported
Chemical Inventory Record ID:	Not reported
Chemical Same As Last Year:	true
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Not reported
CI Last Modified:	Not reported
MSDS Number For Chemical:	Not reported
CI Notes:	Not reported
Days On Site:	Not reported
Entered Chemical Name:	Not reported
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Maximum Amount:	Not reported
Maximum Amount Code:	Not reported
Maximum Amount Container:	Not reported
Mixture:	Not reported
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
Date Signed:	2022-01-07
Date TierII Received:	Not reported
Facility Dept:	Brookfield White Pine Hydro LLC
Facility ID:	FATR2021AEQN1201BBTP
Failed Validation:	Not reported
Facility Date Modified:	01/07/2022
Facility Mail Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Mail Country:	Not reported
Lat/Long Location Descr:	Not reported
Lat/Long Method:	Not reported
Notes:	Not reported
Validation Report:	Not reported
Latitude:	43.61088
Longitude:	-70.55279

A7 **BROOKFIELD FACILITY - BAR MILLS** **FINDS** **1025467022**
18 CANAL RD **N/A**
< 1/8 **HOLLIS CENTER, ME 04042**
1 ft.

Site 7 of 7 in cluster A

Relative: **Higher**

Actual: **151 ft.**

FINDS:
Registry ID: 110070541297

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA

BROOKFIELD FACILITY - BAR MILLS (Continued) **1025467022**

program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

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8 **BROOKFIELD - BAR MILLS** **NPDES** **S110121112**
CANAL RD **N/A**
< 1/8 **HOLLIS, ME**
0.000 mi.
2 ft.

Relative:
Higher

Actual:
139 ft.

NPDES:

Name:	BROOKFIELD - BAR MILLS
Address:	CANAL RD
City,State,Zip:	HOLLIS, ME
Maine License:	W-000581
Category:	MINOR
NPDES ID:	ME0001244
Comments:	Not reported
Gps Date:	01/30/2001
Location Accuracy:	WITHIN 1M
Location Method:	GPS MAPPING GRADE
Source:	NORTHERN ECOLOGICAL ASSOCIATES
Latitude:	43.610897474668
Longitude:	-70.55286388453

Outfall:

NPDES ID:	ME0001244
Facility:	BROOKFIELD - BAR MILLS
Name:	MINOR
Id:	1
Class:	OTHER
Category:	MINOR
Active:	ACTIVE
Town:	HOLLIS
Waterbody:	Saco River
Comments:	Not reported
GPS Date:	01/30/2001
Location Accuracy:	WITHIN 5M
Location Method:	GPS MAPPING GRADE
Data Source:	NORTHERN ECOLOGICAL ASSOCIATES
Latitude:	43.610864667175
Longitude:	-70.5526275925107

NPDES ID:	ME0001244
Facility:	BROOKFIELD - BAR MILLS
Name:	MINOR
Id:	1
Class:	OTHER
Category:	MINOR
Active:	ACTIVE
Town:	HOLLIS
Waterbody:	Saco River
Comments:	Not reported
GPS Date:	01/30/2001
Location Accuracy:	WITHIN 5M
Location Method:	GPS MAPPING GRADE
Data Source:	NORTHERN ECOLOGICAL ASSOCIATES

BROOKFIELD - BAR MILLS (Continued) **S110121112**

Latitude: 43.6108653402626
Longitude: -70.5525780433849

B9 **BERTRAND GENEST** **LUST** **S105796014**
NE **8 DEPOT ST** **N/A**
< 1/8 **BUXTON, ME**
0.034 mi.
181 ft. **Site 1 of 3 in cluster B**

Relative: Higher

Actual: 152 ft.

LUST:

Event:

Name:	BERTRAND GENEST
Address:	8 DEPOT ST
City,State,Zip:	BUXTON, ME
Spill Number:	P-601-2002
Spill Cause:	Corrosion - Tank
Spill Type:	Oil Incident
Inc Tank:	Underground Tank(s) Involved
Removal Flag:	True
UST Registered Flag:	False
MCD Value:	31060
Create Date:	08/15/2002
Create By:	EISBERNA
Modify Date:	11/20/2002
Modify By:	EITGALLA
Report Status:	Final Report
Actual Spill Datetime:	Not reported
Actual Spill Date Unknown:	True
Number Wells At Risk:	0
Number Wells Impacted:	0
Dtree Completed Flag:	True
Further Response Action:	False
Reporter Type:	Contractor/Consultant
Detection Method:	Tank and/or Piping Removal
Inc Location:	Other - None specified
Inc Source:	Storage Unit - Underground Storage Tank
Material Disposal Info:	Contaminated soil to Commercial Recycling.
Lust Document Search:	https://fortisport.maine.gov/fortisportal/dddisplayqueryprompts.aspx?Database=OfficeDocs&Query=DEP_Spills&QuerySet=Portal_Queries&User=Portal.DEP&Password=DEPPortal1

Change:

Description:	Report Status change from DR to DRV
Date Change:	08/28/2002
Changed By:	EISBERNA
Description:	Report Created with Report Status = DR
Date Change:	08/15/2002
Changed By:	EISBERNA
Description:	Report Status change from DRV to DQA
Date Change:	09/06/2002
Changed By:	EIJWOODA
Description:	Report Status change from DQA to FR
Date Change:	11/20/2002
Changed By:	EITGALLA

BERTRAND GENEST (Continued) **S105796014**

Contact:
- Contact Type: Subject/Spiller
- Potential RP: True
- Name: BERTRAND GENEST
- Title: Not reported
- Company: Not reported
- Address: PO BOX 787
- City,State: CORNISH,ME
- Country: USA
- Zipcode: 04020
- Phone/Ext: /
- Comments: Not reported

Primary Employee:
- Primary Employee: True
- Name: SHERYL J BERNARD

File:
- Spill Id: P-601-2002
- Date Created: 01/27/2003
- Created By: EICSTULT
- Date Modified: 07/24/2009
- Modified By: IMAGING
- File Num Sheets: 0
- Notes: Report scanned into the imaging system on 24-JUL-09.
- Reconcile Date: 01/27/2003
- File Reconciled By: Not reported

Media Affected:
- Medium: Land

Log:
- Spill Void Flag: False
- Spill Office: Portland
- Spill Off Sequence: 601
- Spill Year: 2002
- Create Date: 08/15/2002
- Created By: EISBERNA
- Modify Date: 08/15/2002
- Modify By: EISBERNA
- Log Spill Type: Oil Incident
- Log Spill Datetime: Not reported
- Spill Time Unk: True
- Spill Dt Unknown: True
- Log Rep Dt Tm: 08/15/2002
- Log Rep Prod Cd: 23
- Log Rep Prod: UNLEADED GASOLINE
- Log Emp Name: SHERYL J BERNARD
- Location: 8 Depot St.
- Log Location Town: BUXTON
- Log Tank Involved: Underground Tank(s) Involved
- Notes: Contamination found at unregistered UST

Material Recovered:

BERTRAND GENEST (Continued) **S105796014**

Material Recovered Type: CS
Material Recovered: Contaminated Soil
Material Amount: 7.14
Material Units: tons
Material Amt Qualifier: ACTUAL

Material Recovered Type: VP
Material Recovered: Unspilled Product
Material Amount: 5
Material Units: gals.
Material Amt Qualifier: ESTIMATE

Recovery Method: Excavation

Recovery Method: Pumps

Spill Point:

Product:
Product Code: UNLEADED GASOLINE
Product Other: Not reported
Product Amt: Not reported
Product Amt Unit: Not reported
Product Amt Qualifier: UNKNOWN
Primary Product: True

Attachments:
Description: Cleanup DTREE
Attach Type: Electronic Form
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 08/15/2002

Description: Generator Special Waste Processing Form
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 08/28/2002

Description: Oil Spill Debris Form
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 08/28/2002

B10 **SACO RIVER TRADING POST** **UST** **U003877459**
NE **8 DEPOT ST** **N/A**
< 1/8 **BUXTON, ME**
0.034 mi.
181 ft. **Site 2 of 3 in cluster B**

Relative: **Higher**

Actual: **152 ft.**

UST:

Name:	SACO RIVER TRADING POST
Address:	8 DEPOT ST
City:	BUXTON
Facility ID:	20705
Facility Location2:	BUXTON
Facility Code:	COMMERCIAL
Fed Reg Ind:	No
Owner Name:	GENEST, BERT
Owner Contact:	Not reported
Owner Delivery Address:	PO BOX 787
Owner City/State/Zip:	CORNISH, ME 04020
Owner Telephone:	2076254162
Operator Contact:	Not reported
On Aquifer:	No
On Aquifer Label:	Not reported
Near Public Water:	No
Near Public Water Label:	Not reported
Near Private Water:	Yes
Near Private Water Label:	NEAR PRIVATE WATER
Near Other Water:	Yes
Nearby Water Other Owner Label:	NEARBY WATER OTHER OWNER
Latitude:	Not reported
Longitude:	Not reported
Owner/Operator Name:	GENEST, BERT
Owner/Operator Address:	PO BOX 787
Owner/Operator City,St,Zip:	CORNISH, ME 04020
Owner/Operator Phone:	2076254162
Tank Number:	1
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	15-AUG-02
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-OCT-69
Product Type:	LEADED GASOLINE
Tank Volume in Gallons:	500
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	05-SEP-02
Tank Leak Detection Label:	NONE
Chamber ID:	1
Chamber Pump Type Label:	SUCTION
Chamber Pump Type Desc:	SUCTION
Pipe Status:	**REMOVED**
Pipe Status Date:	15-AUG-02
Pipe Date Installed:	Not reported
Pipe Material Label:	GALVANIZED STEEL
Pipe Status Label:	REMOVED
Pipe Leak Detection:	NONE
Pipe Leak Detection Label:	NONE
Overfill:	UNKNOWN

SACO RIVER TRADING POST (Continued) **U003877459**

Overfill Protection Label:	UNKNOWN
Tank Number:	2
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	15-AUG-02
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-OCT-69
Product Type:	LEADED GASOLINE
Tank Volume in Gallons:	550
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	05-SEP-02
Tank Leak Detection Label:	NONE
Chamber ID:	1
Chamber Pump Type Label:	SUCTION
Chamber Pump Type Desc:	SUCTION
Pipe Status:	**REMOVED**
Pipe Status Date:	15-AUG-02
Pipe Date Installed:	Not reported
Pipe Material Label:	GALVANIZED STEEL
Pipe Status Label:	REMOVED
Pipe Leak Detection:	NONE
Pipe Leak Detection Label:	NONE
Overfill:	UNKNOWN
Overfill Protection Label:	UNKNOWN

C11 **TOWN OF BUXTON** **LUST** **S108229784**
NNE **DEPOT ST** **N/A**
< 1/8 **BUXTON, ME**
0.039 mi.
207 ft. **Site 1 of 2 in cluster C**

Relative:
Higher

Actual:
147 ft.

LUST:

Event:

Name:	TOWN OF BUXTON
Address:	DEPOT ST
City,State,Zip:	BUXTON, ME
Spill Number:	P-380-2005
Spill Cause:	Other - No Cause
Spill Type:	Oil Incident
Inc Tank:	Underground Tank(s) Involved
Removal Flag:	False
UST Registered Flag:	False
MCD Value:	31060
Create Date:	05/24/2005
Create By:	EICPAQUE
Modify Date:	09/08/2006
Modify By:	EITGALLA
Report Status:	Final Report
Actual Spill Datetime:	Not reported
Actual Spill Date Unknown:	True
Number Wells At Risk:	0
Number Wells Impacted:	0
Dtree Completed Flag:	False

TOWN OF BUXTON (Continued) **S108229784**

Further Response Action: False
Reporter Type: Anonymous
Detection Method: Other
Inc Location: Government - Local
Inc Source: No Source
Material Disposal Info: Not reported
Lust Document Search: https://fortisport.maine.gov/fortisportal/dddisplayqueryprompts.aspx?Database=OfficeDocs&Query=DEP_Spills&QuerySet=Portal_Queries&User=Portal.DEP&Password=DEPPortal1

Change:
Description: Report Created with Report Status = DR
Date Change: 05/24/2005
Changed By: EICPAQUE

Description: Report Status change from DR to DQA
Date Change: 09/28/2005
Changed By: EIJWOODA

Description: Report Status change from DQA to FR
Date Change: 09/08/2006
Changed By: EITGALLA

Contact:
Contact Type: Subject/Spiller
Potential RP: True
Name: Not reported
Title: Not reported
Company: MYSTERY
Address: Not reported
City,State: ,ME
Country: USA
Zipcode: Not reported
Phone/Ext: /
Comments: Not reported

Primary Employee:
Primary Employee: True
Name: JON L WOODARD

File:
Spill Id: P-380-2005
Date Created: 09/11/2006
Created By: IMAGING
Date Modified: 09/11/2006
Modified By: IMAGING
File Num Sheets: 0
Notes: Report scanned into the imaging system on 11-SEP-06.
Reconcile Date: Not reported
File Reconciled By: Not reported

Media Affected:
Medium: None

Log:

TOWN OF BUXTON (Continued) **S108229784**

Spill Void Flag:	False
Spill Office:	Portland
Spill Off Sequence:	380
Spill Year:	2005
Create Date:	05/24/2005
Created By:	EICPAQUE
Modify Date:	07/22/2005
Modify By:	EIJWOODA
Log Spill Type:	Oil Incident
Log Spill Datetime:	Not reported
Spill Time Unk:	True
Spill Dt Unknown:	True
Log Rep Dt Tm:	06/06/2005
Log Rep Prod Cd:	20
Log Rep Prod:	GASOLINE UNSPECIFIED
Log Emp Name:	JON L WOODARD
Location:	Rogers Fiber Mill property. Depot St., Bar Mills
Log Location Town:	BAR MILLS
Log Tank Involved:	Underground Tank(s) Involved
Notes:	UST found by public

Material Recovered:

Material Recovered Type:	VP
Material Recovered:	Unspilled Product
Material Amount:	1300
Material Units:	gals.
Material Amt Qualifier:	ESTIMATE
Recovery Method:	Vacuum Trucks

Spill Point:

Date Reported:	6/6/2005 9:00:00 AM
Notes:	UST found by public
Product:	GASOLINE UNSPECIFIED
Product Notes:	Not reported
Latitude:	43.613549
Longitude:	-70.551507

Product:

Product Code:	LEADED GASOLINE
Product Other:	Not reported
Product Amt:	0
Product Amt Unit:	gals.
Product Amt Qualifier:	ESTIMATE
Primary Product:	True

Attachments:

Description:	Expense Tracking
Attach Type:	Electronic Form
File Name:	Not reported
File Code:	Not reported
File Size:	Not reported
File Modify Date:	06/28/2005

B12 **MYSTERY TANK** **UST** **U004139986**
NNE **18 DEPOT ST** **N/A**
< 1/8 **BUXTON, ME**
0.041 mi.
214 ft. **Site 3 of 3 in cluster B**

Relative: UST:
Higher

Actual: Name: MYSTERY TANK
148 ft. Address: 18 DEPOT ST
City: BUXTON
Facility ID: 21013
Facility Location2: BUXTON
Facility Code: PUBLIC FACILITY
Fed Reg Ind: Yes
Owner Name: BUXTON TOWN OF
Owner Contact: Not reported
Owner Delivery Address: PO BOX 189
Owner City/State/Zip: BUXTON, ME 04093
Owner Telephone: 2079295191
Operator Contact: Not reported
On Aquifer: No
On Aquifer Label: Not reported
Near Public Water: No
Near Public Water Label: Not reported
Near Private Water: No
Near Private Water Label: Not reported
Near Other Water: No
Nearby Water Other Owner Label: Not reported
Latitude: Not reported
Longitude: Not reported
Owner/Operator Name: BUXTON TOWN OF
Owner/Operator Address: PO BOX 189
Owner/Operator City,St,Zip: BUXTON, ME 04093
Owner/Operator Phone: 2079295191

Tank Number: 1
Tank Status: **REMOVED**
Tank Status Label: REMOVED
Tank Status Date: 27-JUL-05
Tank Sub Status: **SA_NOT_REQUIRED**
Tank Sub Status Label: SA NOT REQUIRED
Installation Date: 01-OCT-69
Product Type: LEADED GASOLINE
Tank Volume in Gallons: 1000
Tank Above/Below: BELOWGROUND
Tank Material: STEEL - BARE OR ASPHALT COATED.
Reg Date: 27-JUL-05
Tank Leak Detection Label: NONE
Chamber ID: 1
Chamber Pump Type Label: SUCTION
Chamber Pump Type Desc: SUCTION
Pipe Status: **REMOVED**
Pipe Status Date: 26-JUL-05
Pipe Date Installed: 10/01/1969
Pipe Material Label: STEEL - BARE OR ASPHALT COATED.
Pipe Status Label: REMOVED
Pipe Leak Detection: NONE
Pipe Leak Detection Label: NONE
Overfill: NONE

MYSTERY TANK (Continued) **U004139986**

Overfill Protection Label:	NONE
Tank Number:	2
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	27-JUL-05
Tank Sub Status:	**SA_NOT_REQUIRED**
Tank Sub Status Label:	SA NOT REQUIRED
Installation Date:	01-OCT-69
Product Type:	LEADED GASOLINE
Tank Volume in Gallons:	500
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	27-JUL-05
Tank Leak Detection Label:	NONE
Chamber ID:	1
Chamber Pump Type Label:	SUCTION
Chamber Pump Type Desc:	SUCTION
Pipe Status:	**REMOVED**
Pipe Status Date:	26-JUL-05
Pipe Date Installed:	10/01/1969
Pipe Material Label:	STEEL - BARE OR ASPHALT COATED.
Pipe Status Label:	REMOVED
Pipe Leak Detection:	NONE
Pipe Leak Detection Label:	NONE
Overfill:	NONE
Overfill Protection Label:	NONE
Tank Number:	3
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	27-JUL-05
Tank Sub Status:	**SA_NOT_REQUIRED**
Tank Sub Status Label:	SA NOT REQUIRED
Installation Date:	01-OCT-69
Product Type:	LEADED GASOLINE
Tank Volume in Gallons:	750
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	27-JUL-05
Tank Leak Detection Label:	NONE
Chamber ID:	1
Chamber Pump Type Label:	SUCTION
Chamber Pump Type Desc:	SUCTION
Pipe Status:	**REMOVED**
Pipe Status Date:	26-JUL-05
Pipe Date Installed:	10/01/1969
Pipe Material Label:	STEEL - BARE OR ASPHALT COATED.
Pipe Status Label:	REMOVED
Pipe Leak Detection:	NONE
Pipe Leak Detection Label:	NONE
Overfill:	NONE
Overfill Protection Label:	NONE

C13 **VACANT RESIDENCE MAP 12 LOT 10** **LAST** **S112212122**
NNE **19 DEPOT ROAD** **N/A**
< 1/8 **BUXTON, ME**
0.048 mi.
254 ft. **Site 2 of 2 in cluster C**

Relative:
Higher

Actual:
153 ft.

LAST:

Event:

Name:	VACANT RESIDENCE MAP 12 LOT 10
Address:	19 DEPOT ROAD
City,State,Zip:	BUXTON, ME
Spill Number:	P-1061-2009
Inc Tank Code:	A
Inc Tank:	Above Ground Tank(s) Involved
Removal Flag:	False
UST registered flag:	True
AST inside flag:	True
Create Date:	01/08/2010
Create By:	EIJLUONG
Modify Date:	11/21/2012
Modify By:	11/21/2012
Report Status Code:	FR
Report Status:	Final Report
Spill Datetime:	Not reported
Spill Date Unknown:	True
Spill Time Unknown:	True
Number of wells at risk:	0
Number of wells impacted:	0
DTREE completed flag:	False
MCD Value:	31060
Further response action:	False
Spill Type Code:	O
Spill Type:	Oil Incident
Reporter Type Code:	7
Reporter Type:	Other Involved Party
Detection Method Code:	H
Detection Method:	Odor/Vapor/Mist
Inc Location Code:	SF
Inc Location:	Residential - Single Family
Inc Source Code:	TA
Inc Source:	Storage Unit - Aboveground Storage Tank
Spill Cause Code:	03
Spill Cause:	Corrosion - Piping
Material Disposal Info:	Soil transported to Commercial Paving and Recycling of Scarborough
Last Document Search:	https://fortisport.maine.gov/fortisportal/dddisplayqueryprompts.aspx?Database=OfficeDocs&Query=DEP_Spills&QuerySet=Portal_Queries&User=Portal.DEP&Password=DEPPortal1

Change:

Description:	Report Created with Report Status = DR
Date Change:	01/08/2010
Changed By:	EIJLUONG
Description:	Report Status change from DQA to FR
Date Change:	11/21/2012
Changed By:	EIELEIGH
Description:	Report Status change from DR to DRV
Date Change:	05/04/2010

VACANT RESIDENCE MAP 12 LOT 10 (Continued) **S112212122**

Changed By: EIJLUONG

Description: Report Status change from DRV to DQA
Date Change: 05/21/2010
Changed By: EIJWOODA

Contact:
Contact Type: Subject/Spiller
Potential RP: True
Name: Not reported
Title: OWNER
Company: FEDERAL NATIONAL MORTGAGE ASSOCIATION
Address: 8609, WESTWOOD CENTER DRIVE
City,State: VIENNA,VA
Country: USA
Zipcode: 22182
Phone/Ext: /
Comments: Not reported

Primary Employee:
Primary Employee: True
Name: JOHN R LUONGO JR

Media Affected:
Medium: Land

Log:
Spill Void Flag: False
Spill Office: Portland
Spill Off Sequence: 1061
Spill Year: 2009
Create Date: 01/08/2010
Created By: EIJLUONG
Modify Date: 01/08/2010
Modify By: EIJLUONG
Log Spill Type: Oil Incident
Log Spill Datetime: Not reported
Spill Time Unk: True
Spill Dt Unknown: True
Log Rep Dt Tm: 12/09/2009
Log Rep Prod Cd: 02
Log Rep Prod: #2 FUEL OIL
Log Emp Name: JOHN R LUONGO JR
Location: 19 depot road
Log Location Town: BUXTON
Log Tank Involved: Above Ground Tank(s) Involved
Notes: leaking copper line to furnace on dirt floor

Material Recovered:
Material Recovered Type: CS
Material Recovered: Contaminated Soil
Material Amount: 7.82
Material Units: tons
Material Amt Qualifier: ACTUAL

VACANT RESIDENCE MAP 12 LOT 10 (Continued) **S112212122**

Spill Point:
Recovery Method: Excavation

Product:
Product Code: #2 FUEL OIL
Product Other: Not reported
Product Amt: 150
Product Amt Unit: gals.
Product Amt Qualifier: ESTIMATE
Primary Product: True

Attachments:
Description: Spill Debris
Attach Type: Electronic Form
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 01/08/2010

Description: Expense Tracking
Attach Type: Electronic Form
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 01/25/2010

Description: signed spill debris
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 05/04/2010

Description: Soil Waste Processing information
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 05/04/2010

14
ENE
1/8-1/4
0.141 mi.
747 ft.

SACO RIVER T AND T CO.
61 & 63 MAIN STREET
BUXTON, ME

VCP **S106797499**
ALLSITES **N/A**

Relative:
Higher

Actual:
171 ft.

VCP:
Name: SACO RIVER T AND T CO.
Address: 61 & 63 MAIN STREET
City,State,Zip: BUXTON, ME
Facility ID: REM01537
Facility status: REMEDY IN PLACE: CLOSED
Program Type: VRAP
Lat/Long: 43.61266 / -70.54746
Institutional Control?: FALSE

SACO RIVER T AND T CO. (Continued) **S106797499**

Alias: Not reported
Acres: 8
Sub Status: UNDERTAKING POST-CLOSURE OBLIGATIONS
Status Date: 12/08/2004

ALLSITES:
Name: SACO RIVER T AND T CO.
Address: 61 & 63 MAIN STREET
City,State,Zip: BUXTON, ME
Status: REMEDY IN PLACE: CLOSED
Program Type: VRAP
Lat/Long: 43.61266 / -70.54746
Institutional Control?: FALSE
Alias: Not reported
Acres: 8
Sub Status: UNDERTAKING POST-CLOSURE OBLIGATIONS
Status Date: 12/08/2004

15
ESE
1/8-1/4
0.168 mi.
888 ft.

SACO RIVER TEL & TEL CO **UST** **U000242749**
MAIN ST **N/A**
BUXTON, ME

Relative:
Higher

Actual:
179 ft.

UST:
Name: SACO RIVER TEL & TEL CO
Address: MAIN ST
City: BUXTON
Facility ID: 10929
Facility Location2: BUXTON
Facility Code: COMMERCIAL
Fed Reg Ind: No
Owner Name: SACO RIVER TEL & TEL CO
Owner Contact: Not reported
Owner Delivery Address: PO BOX 48
Owner City/State/Zip: BAR MILLS, ME 04004
Owner Telephone: 2079299911
Operator Contact: Not reported
On Aquifer: No
On Aquifer Label: Not reported
Near Public Water: No
Near Public Water Label: Not reported
Near Private Water: Yes
Near Private Water Label: NEAR PRIVATE WATER
Near Other Water: No
Nearby Water Other Owner Label: Not reported
Latitude: 43.61111
Longitude: -70.54694
Owner/Operator Name: SACO RIVER TEL & TEL CO
Owner/Operator Address: PO BOX 48
Owner/Operator City,St,Zip: BAR MILLS, ME 04004
Owner/Operator Phone: 2079299911

Tank Number: 1
Tank Status: **REMOVED**
Tank Status Label: REMOVED
Tank Status Date: 31-JUL-97

SACO RIVER TEL & TEL CO (Continued) **U000242749**

Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-DEC-85
Product Type:	#2 FUEL OIL
Tank Volume in Gallons:	500
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	07-JAN-87
Tank Leak Detection Label:	UNKNOWN
Chamber ID:	1
Chamber Pump Type Label:	UNKNOWN
Chamber Pump Type Desc:	UNKNOWN
Pipe Status:	**REMOVED**
Pipe Status Date:	31-JUL-97
Pipe Date Installed:	Not reported
Pipe Material Label:	BLACK IRON - CAST IRON - IRON CONDUIT
Pipe Status Label:	REMOVED
Pipe Leak Detection:	UNKNOWN
Pipe Leak Detection Label:	UNKNOWN
Overfill:	UNKNOWN
Overfill Protection Label:	UNKNOWN

Tank Number:	2
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	01-JAN-89
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-OCT-69
Product Type:	#2 FUEL OIL
Tank Volume in Gallons:	1000
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	07-JAN-87
Tank Leak Detection Label:	UNKNOWN
Chamber ID:	1
Chamber Pump Type Label:	UNKNOWN
Chamber Pump Type Desc:	UNKNOWN
Pipe Status:	**REMOVED**
Pipe Status Date:	01-JAN-89
Pipe Date Installed:	Not reported
Pipe Material Label:	OTHER
Pipe Status Label:	REMOVED
Pipe Leak Detection:	UNKNOWN
Pipe Leak Detection Label:	UNKNOWN
Overfill:	UNKNOWN
Overfill Protection Label:	UNKNOWN

D16 **LOWS VARIETY** **LUST** **U003982745**
East **RTS 112 & 4** **UST** **N/A**
1/4-1/2 **BUXTON, ME**
0.461 mi.
2433 ft. **Site 1 of 2 in cluster D**

Relative: Higher

Actual: 237 ft.

LUST:

Event:

Name:	LOWS VARIETY
Address:	RTS 112 & 4
City,State,Zip:	BUXTON, ME
Spill Number:	P-786-2002
Spill Cause:	Other - Unknown
Spill Type:	Oil Incident
Inc Tank:	Underground Tank(s) Involved
Removal Flag:	True
UST Registered Flag:	True
MCD Value:	31060
Create Date:	10/23/2002
Create By:	EICPAQUE
Modify Date:	09/17/2003
Modify By:	EITGALLA
Report Status:	Final Report
Actual Spill Datetime:	Not reported
Actual Spill Date Unknown:	True
Number Wells At Risk:	0
Number Wells Impacted:	0
Dtree Completed Flag:	False
Further Response Action:	False
Reporter Type:	DEP Personnel
Detection Method:	Tank and/or Piping Removal
Inc Location:	Terminal - Service Station
Inc Source:	Storage Unit - Underground Storage Tank
Material Disposal Info:	Contaminated soil to CRS.
Lust Document Search:	https://fortisport.maine.gov/fortisportal/dddisplayqueryprompts.aspx?Database=OfficeDocs&Query=DEP_Spills&QuerySet=Portal_Queries&User=Portal.DEP&Password=DEPPortal1

Change:

Description:	Report Status change from DR to DRV
Date Change:	01/27/2003
Changed By:	EIGOBRIE
Description:	Report Status change from DRV to FR
Date Change:	09/17/2003
Changed By:	EITGALLA
Description:	Report Created with Report Status = DR
Date Change:	10/23/2002
Changed By:	EICPAQUE

Contact:

Contact Type:	Subject/Spiller
Potential RP:	True
Name:	Not reported
Title:	Not reported
Company:	H A MAPES OIL [@ LOWS VARIETY]
Address:	PO BOX 704
City,State:	SPRINGVALE,ME

LOWS VARIETY (Continued) **U003982745**

Country: USA
Zipcode: 04083
Phone/Ext: /
Comments: Not reported

Primary Employee:
Primary Employee: False
Name: PATRICIA SEAWARD

Primary Employee: True
Name: GREGORY B O'BRIEN

File:
Spill Id: P-786-2002
Date Created: 09/22/2003
Created By: EIPLAMBE
Date Modified: 07/28/2009
Modified By: IMAGING
File Num Sheets: 0
Notes: Report scanned into the imaging system on 28-JUL-09.
Reconcile Date: 09/22/2003
File Reconciled By: Not reported

Media Affected:
Medium: Land

Log:
Spill Void Flag: False
Spill Office: Portland
Spill Off Sequence: 786
Spill Year: 2002
Create Date: 10/23/2002
Created By: EICPAQUE
Modify Date: 01/27/2003
Modify By: EIGOBRIE
Log Spill Type: Oil Incident
Log Spill Datetime: Not reported
Spill Time Unk: True
Spill Dt Unknown: True
Log Rep Dt Tm: 10/21/2002
Log Rep Prod Cd: 23
Log Rep Prod: UNLEADED GASOLINE
Log Emp Name: GREGORY B O'BRIEN
Location: Routes 112 and 4A
Log Location Town: BAR MILLS
Log Tank Involved: Underground Tank(s) Involved
Notes: UST removal

Material Recovered:
Material Recovered Type: CS
Material Recovered: Contaminated Soil
Material Amount: 11.32
Material Units: tons
Material Amt Qualifier: ACTUAL

LOWS VARIETY (Continued) **U003982745**

Recovery Method: Excavation

Spill Point:
Date Reported: 10/21/2002
Notes: UST removal
Product: UNLEADED GASOLINE
Product Notes: Not reported
Latitude: 43.611968
Longitude: -70.541023

Product:
Product Code: UNLEADED GASOLINE
Product Other: Not reported
Product Amt: Not reported
Product Amt Unit: Not reported
Product Amt Qualifier: UNKNOWN
Primary Product: True

Attachments:
Description: Site Assessment Report
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 01/27/2003

Description: LUST Site Release Report
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 01/27/2003

Description: Removal Notice (2)
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 01/27/2003

Description: Waste Processing Information
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 01/27/2003

Description: Spill Debris
Attach Type: Electronic Form
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 01/27/2003

Description: Oil Spill Debris Form
Attach Type: Paper Attach

LOWS VARIETY (Continued) **U003982745**

File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 09/17/2003

UST:
Name: LOWS VARIETY
Address: RTS 112 & 4
City: BUXTON
Facility ID: 4525
Facility Location2: BUXTON
Facility Code: RETAIL OIL
Fed Reg Ind: Yes
Owner Name: HA MAPES INC
Owner Contact: JONATHAN MAPES
Owner Delivery Address: PO BOX 157
Owner City/State/Zip: SPRINGVALE, ME 04083
Owner Telephone: 2073240174
Operator Contact: Not reported
On Aquifer: No
On Aquifer Label: Not reported
Near Public Water: No
Near Public Water Label: Not reported
Near Private Water: Yes
Near Private Water Label: NEAR PRIVATE WATER
Near Other Water: Yes
Nearby Water Other Owner Label: NEARBY WATER OTHER OWNER
Latitude: Not reported
Longitude: Not reported
Owner/Operator Name: LOW, ERIC
Owner/Operator Address: RR 1 BOX 428
Owner/Operator City,St,Zip: BUXTON, ME 04093
Owner/Operator Phone: Not reported

Tank Number: 1
Tank Status: **REMOVED**
Tank Status Label: REMOVED
Tank Status Date: 01-APR-88
Tank Sub Status: **Not reported**
Tank Sub Status Label: Not reported
Installation Date: 01-OCT-69
Product Type: REGULAR GASOLINE
Tank Volume in Gallons: 2000
Tank Above/Below: BELOWGROUND
Tank Material: STEEL - BARE OR ASPHALT COATED.
Reg Date: 19-AUG-86
Tank Leak Detection Label: UNKNOWN
Chamber ID: 1
Chamber Pump Type Label: UNKNOWN
Chamber Pump Type Desc: UNKNOWN
Pipe Status: **REMOVED**
Pipe Status Date: 01-APR-88
Pipe Date Installed: Not reported
Pipe Material Label: GALVANIZED STEEL
Pipe Status Label: REMOVED
Pipe Leak Detection: UNKNOWN

LOWS VARIETY (Continued) **U003982745**

Pipe Leak Detection Label:	UNKNOWN
Overfill:	UNKNOWN
Overfill Protection Label:	UNKNOWN

Tank Number:	2
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	01-APR-88
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-OCT-69
Product Type:	REGULAR GASOLINE
Tank Volume in Gallons:	2000
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	19-AUG-86
Tank Leak Detection Label:	UNKNOWN
Chamber ID:	1
Chamber Pump Type Label:	UNKNOWN
Chamber Pump Type Desc:	UNKNOWN
Pipe Status:	**REMOVED**
Pipe Status Date:	01-APR-88
Pipe Date Installed:	Not reported
Pipe Material Label:	GALVANIZED STEEL
Pipe Status Label:	REMOVED
Pipe Leak Detection:	UNKNOWN
Pipe Leak Detection Label:	UNKNOWN
Overfill:	UNKNOWN
Overfill Protection Label:	UNKNOWN

Tank Number:	3
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	01-APR-88
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-JUL-82
Product Type:	LEADED GASOLINE
Tank Volume in Gallons:	2000
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	19-AUG-86
Tank Leak Detection Label:	UNKNOWN
Chamber ID:	1
Chamber Pump Type Label:	UNKNOWN
Chamber Pump Type Desc:	UNKNOWN
Pipe Status:	**REMOVED**
Pipe Status Date:	01-APR-88
Pipe Date Installed:	Not reported
Pipe Material Label:	GALVANIZED STEEL
Pipe Status Label:	REMOVED
Pipe Leak Detection:	UNKNOWN
Pipe Leak Detection Label:	UNKNOWN
Overfill:	UNKNOWN
Overfill Protection Label:	UNKNOWN

LOWS VARIETY (Continued) **U003982745**

Tank Number:	4
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	01-APR-88
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-JUL-82
Product Type:	UNLEADED GASOLINE
Tank Volume in Gallons:	6000
Tank Above/Below:	BELOWGROUND
Tank Material:	STEEL - BARE OR ASPHALT COATED.
Reg Date:	19-AUG-86
Tank Leak Detection Label:	UNKNOWN
Chamber ID:	1
Chamber Pump Type Label:	UNKNOWN
Chamber Pump Type Desc:	UNKNOWN
Pipe Status:	**REMOVED**
Pipe Status Date:	01-APR-88
Pipe Date Installed:	Not reported
Pipe Material Label:	GALVANIZED STEEL
Pipe Status Label:	REMOVED
Pipe Leak Detection:	UNKNOWN
Pipe Leak Detection Label:	UNKNOWN
Overfill:	UNKNOWN
Overfill Protection Label:	UNKNOWN

Tank Number:	5
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED
Tank Status Date:	24-OCT-02
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-AUG-88
Product Type:	UNLEADED GASOLINE
Tank Volume in Gallons:	8000
Tank Above/Below:	BELOWGROUND
Tank Material:	DOUBLE-WALLED CP STEEL
Reg Date:	19-AUG-86
Tank Leak Detection Label:	SECONDARY CONTAINMENT / CONT ELEC MON
Chamber ID:	1
Chamber Pump Type Label:	SUCTION
Chamber Pump Type Desc:	SUCTION
Pipe Status:	**REMOVED**
Pipe Status Date:	24-OCT-02
Pipe Date Installed:	Not reported
Pipe Material Label:	F/GLASS - PETROLEUM
Pipe Status Label:	REMOVED
Pipe Leak Detection:	CONFORMING_SUCTION_SYSTEM
Pipe Leak Detection Label:	CONFORMING SUCTION SYSTEM
Overfill:	VENT_BALL
Overfill Protection Label:	VENT BALL

Tank Number:	6
Tank Status:	**REMOVED**
Tank Status Label:	REMOVED

LOWS VARIETY (Continued) **U003982745**

Tank Status Date:	24-OCT-02
Tank Sub Status:	**Not reported**
Tank Sub Status Label:	Not reported
Installation Date:	01-AUG-88
Product Type:	PREMIUM UNLEADED
Tank Volume in Gallons:	8000
Tank Above/Below:	BELOWGROUND
Tank Material:	DOUBLE-WALLED CP STEEL
Reg Date:	19-AUG-86
Tank Leak Detection Label:	SECONDARY CONTAINMENT / CONT ELEC MON
Chamber ID:	1
Chamber Pump Type Label:	SUCTION
Chamber Pump Type Desc:	SUCTION
Pipe Status:	**REMOVED**
Pipe Status Date:	24-OCT-02
Pipe Date Installed:	Not reported
Pipe Material Label:	F/GLASS - PETROLEUM
Pipe Status Label:	REMOVED
Pipe Leak Detection:	CONFORMING_SUCTION_SYSTEM
Pipe Leak Detection Label:	CONFORMING SUCTION SYSTEM
Overfill:	VENT_BALL
Overfill Protection Label:	VENT BALL

D17 **LOWS VARIETY** **LUST** **S110713893**
East **115 MAIN ST** **N/A**
1/4-1/2 **BUXTON, ME**
0.473 mi.
2500 ft. **Site 2 of 2 in cluster D**

Relative: Higher
Actual: 238 ft.

LUST:

Event:

Name:	LOWS VARIETY
Address:	115 MAIN ST
City,State,Zip:	BUXTON, ME
Spill Number:	P-1054-2007
Spill Cause:	Other - Unknown
Spill Type:	Oil Incident
Inc Tank:	Underground Tank(s) Involved
Removal Flag:	False
UST Registered Flag:	True
MCD Value:	31060
Create Date:	02/01/2007
Create By:	EICPAQUE
Modify Date:	12/15/2010
Modify By:	EIKWALKE
Report Status:	Final Report
Actual Spill Datetime:	Not reported
Actual Spill Date Unknown:	True
Number Wells At Risk:	0
Number Wells Impacted:	0
Dtree Completed Flag:	False
Further Response Action:	False
Reporter Type:	Contractor/Consultant
Detection Method:	Odor/Vapor/Mist
Inc Location:	Terminal - Service Station
Inc Source:	Storage Unit - Underground Storage Tank
Material Disposal Info:	Contaminated soil to CPRC Recycling, Scarborough.

LOWS VARIETY (Continued) **S110713893**

Lust Document Search: https://fortisport.maine.gov/fortisportal/dddisplayqueryprompts.aspx?Database=OfficeDocs&Query=DEP_Spills&QuerySet=Portal_Queries&User=Portal.DEP&Password=DEPPortal1

Change:
Description: Report Status change from DR to DRV
Date Change: 11/05/2010
Changed By: EIGOBRIE

Description: Report Status change from DRV to DQA
Date Change: 11/10/2010
Changed By: EIJWOODA

Description: Report Status change from DQA to FR
Date Change: 12/15/2010
Changed By: EIKWALKE

Contact:
Contact Type: Subject/Spiller
Potential RP: True
Name: Not reported
Title: Not reported
Company: HA MAPES OIL
Address: PO BOX 157
City,State: SPRINGVALE,ME
Country: USA
Zipcode: 04083
Phone/Ext: /
Comments: Not reported

Primary Employee:
Primary Employee: True
Name: GREGORY B O'BRIEN

Media Affected:
Medium: Land

Log:
Spill Void Flag: False
Spill Office: Portland
Spill Off Sequence: 1054
Spill Year: 2007
Create Date: 02/01/2007
Created By: EICPAQUE
Modify Date: 08/24/2011
Modify By: EIKWALKE
Log Spill Type: Oil Incident
Log Spill Datetime: Not reported
Spill Time Unk: True
Spill Dt Unknown: True
Log Rep Dt Tm: 11/07/2007
Log Rep Prod Cd: 23
Log Rep Prod: UNLEADED GASOLINE
Log Emp Name: GREGORY B O'BRIEN
Location: Rt 112 @ Rt 4A
Log Location Town: BUXTON

LOWS VARIETY (Continued) **S110713893**

Log Tank Involved: Underground Tank(s) Involved
Notes: Contaminated soil removal

Material Recovered:
Material Recovered Type: CS
Material Recovered: Contaminated Soil
Material Amount: 302.4
Material Units: tons
Material Amt Qualifier: ACTUAL

Recovery Method: Excavation

Spill Point:

Product:
Product Code: UNLEADED GASOLINE
Product Other: Not reported
Product Amt: Not reported
Product Amt Unit: Not reported
Product Amt Qualifier: UNKNOWN
Primary Product: True

Attachments:
Description: Acadia Environmental Report
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 11/05/2010

Description: Spill Debris
Attach Type: Electronic Form
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 11/05/2010

Description: Waste Processing Information
Attach Type: Paper Attach
File Name: Not reported
File Code: Not reported
File Size: Not reported
File Modify Date: 11/05/2010

Count: 10 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BAR MILLS	1000338805	ROGERS FIBRE MILL (COLONIAL FIBER)	DEPOT STREET	04004	SEMS-ARCHIVE, RCRA NonGen / NL PRP
BAR MILLS	S108794654	SACO RIVER TEL & TEL- BAR MILLS SW	63 MAIN STREET		TIER 2
BAR MILLS	1023392630	SACO RIVER TEL & TEL - BAR MILLS S	63 MAIN STREET	04004	FINDS
BAR MILLS	1026569635	ATKINSON, RICHARD F	MAIN STREET PO BOX 277	04004	PRP
BAR MILLS	1026569634	ATKINSON, BEVERLY A	MAIN STREET PO BOX 277	04004	PRP
HOLLIS	S114130340	ROBERT LARRY	447 BAR MILLS ROAD		LAST
HOLLIS	S113450907	APARTMENT BUILDING	24 MAIN STREET, RT 35		LUST
HOLLIS	S112833199	BART CHAMBERLAIN	25 RIVER RD		LAST
HOLLIS	S109801926	JOHNSONS GARAGE	966 RIVER RD, ROUTE 35		LUST
HOLLIS	S112212194	DAYTON SAND & GRAVEL COMPANY TRUCK	513 RIVER ROAD		LAST, SPILLS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 25

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/20/2022
Date Data Arrived at EDR: 12/21/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 03/28/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/02/2022
Date Data Arrived at EDR: 11/08/2022
Date Made Active in Reports: 01/10/2023
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/03/2023
Next Scheduled EDR Contact: 05/22/2023
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/16/2022
Date Made Active in Reports: 02/09/2023
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/21/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/16/2022
Date Made Active in Reports: 02/09/2023
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/21/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/12/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 12/19/2022
Number of Days to Update: 5

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/21/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: Remediation Sites List

Uncontrolled Sites locations included in the Remediation Sites List.

Date of Government Version: 01/09/2023
Date Data Arrived at EDR: 01/11/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 72

Source: Department of Environmental Protection
Telephone: 207-287-7688
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Semi-Annually

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Facility List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/31/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 04/24/2023
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 01/30/2023
Next Scheduled EDR Contact: 05/15/2023
Data Release Frequency: Quarterly

LCP: Municipal Landfill Closure Database

The Municipal Landfill Closure and Remediation Program was established in 1988 to assist nearly 400 municipalities with the closure of their unlicensed municipal solid waste landfills. Project managers in this program have conducted site investigations and provided technical engineering assistance to aid municipalities in this process. Funding to accomplish this goal was provided by the state, utilizing several bonds that supported a 75% state cost sharing reimbursement process.

Date of Government Version: 11/14/2011
Date Data Arrived at EDR: 11/15/2011
Date Made Active in Reports: 11/30/2011
Number of Days to Update: 15

Source: Department of Environmental Protection
Telephone: 207-287-8552
Last EDR Contact: 01/30/2023
Next Scheduled EDR Contact: 05/15/2023
Data Release Frequency: No Update Planned

Lists of state and tribal leaking storage tanks

LUST: Hazardous Material and Oil Spill System Database (H.O.S.S.)

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 01/21/2023
Date Data Arrived at EDR: 01/24/2023
Date Made Active in Reports: 04/12/2023
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Quarterly

LAST: HOSS Database
A listing of leaking aboveground storage tanks.

Date of Government Version: 01/21/2023
Date Data Arrived at EDR: 01/24/2023
Date Made Active in Reports: 04/12/2023
Number of Days to Update: 78
Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/26/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 134
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/19/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/29/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/06/2023
Date Data Arrived at EDR: 02/07/2023
Date Made Active in Reports: 04/26/2023
Number of Days to Update: 78
Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 02/07/2023
Next Scheduled EDR Contact: 05/22/2023
Data Release Frequency: Quarterly

AST: Aboveground Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 09/07/2022
Date Made Active in Reports: 11/22/2022
Number of Days to Update: 76
Source: Maine Emergency Management Agency
Telephone: 207-626-4503
Last EDR Contact: 03/02/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Annually

AST 2: Registered Petroeum Tanks Database
Aboveground storage tank site locations registered with the Bureau of Remediation and Waste Management.

Date of Government Version: 12/19/2022
Date Data Arrived at EDR: 12/22/2022
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 88
Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 03/28/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/19/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 134
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Remediation Sites List

Sites with Institutional Controls in place included in the Remediation Sites List. Institutional Controls are legally enforceable site use restrictions recorded on the property deed and therefore operate in perpetuity regardless of change in site ownership.

Date of Government Version: 01/09/2023
Date Data Arrived at EDR: 01/11/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 72
Source: Department of Environmental Protection
Telephone: 207-287-7688
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Semi-Annually

Lists of state and tribal voluntary cleanup sites

VCP: Remediation Sites List

Voluntary Response Action Program sites included in the Remediation Sites List. VRAP promotes the investigation, remediation and redevelopment of contaminated properties by offering liability assurances/protections from state enforcement actions for applicants to the program.

Date of Government Version: 01/09/2023
Date Data Arrived at EDR: 01/11/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 72
Source: Department of Environmental Protection
Telephone: 207-287-7688
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/17/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Remediation Sites List

Brownfields site locations included in the Remediation Sites List. Brownfields are "Real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant".

Date of Government Version: 01/09/2023
Date Data Arrived at EDR: 01/11/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 72

Source: Department of Environmental Protection
Telephone: 207-287-7688
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 04/06/2023
Date Data Arrived at EDR: 04/13/2023
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 06/26/2023
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities

A listing of municial colletcion sites for electronic waste and mercury-added products.

Date of Government Version: 03/04/2022
Date Data Arrived at EDR: 03/30/2022
Date Made Active in Reports: 06/27/2022
Number of Days to Update: 89

Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/19/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/12/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/27/2023
Next Scheduled EDR Contact: 05/08/2023
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 01/06/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 8
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/02/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: No Update Planned

ALLSITES: Remediation Sites List
The Sites List Database is the public record of information regarding properties that have been, are now, or are planned to be addressed by the Division of Remediation of the Bureau of Remediation and Waste Management. This database is not intended to be a comprehensive, all-inclusive source of information regarding the properties listed therein.

Date of Government Version: 01/09/2023
Date Data Arrived at EDR: 01/11/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 72
Source: Department of Environmental Protection
Telephone: 207-287-7688
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Quarterly

DEL HWS: Sites Removed from the Uncontrolled Sites List
Sites are removed from the List once it is determined that they are not "worthy of listing". This term is used as there are a number of reasons to remove a site from the List, including: no file exists, the site was reported as an oil spill, there is no evidence of a hazardous substance release or based on an investigation the site is referred to another program unrelated to hazardous substance or hazardous waste. Sites are removed on a case by case basis. The USP intends this to be an on-going process, as time and resources allow.

Date of Government Version: 01/09/2023
Date Data Arrived at EDR: 01/11/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 72
Source: Department of Environmental Protection
Telephone: 207-287-7688
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Semi-Annually

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 01/06/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 8

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/02/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Information Listing

An Environmental Lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC 9607(1) and similar state or local laws. In other words: a lien placed upon a propertys title due to an environmental condition

Date of Government Version: 02/03/2023
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 04/24/2023
Number of Days to Update: 80

Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/13/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/21/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

SPILLS: Hazardous Material and Oil Spill System Database

The database contains surface, groundwater and hazardous material spills.

Date of Government Version: 01/21/2023
Date Data Arrived at EDR: 01/24/2023
Date Made Active in Reports: 04/12/2023
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 207-287-2651
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 11/05/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 01/25/2013
Number of Days to Update: 22

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 06/07/2001
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 11/01/2022
Date Data Arrived at EDR: 11/10/2022
Date Made Active in Reports: 02/09/2023
Number of Days to Update: 91

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/14/2023
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/02/2023
Next Scheduled EDR Contact: 05/22/2023
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/13/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/21/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 01/30/2023
Next Scheduled EDR Contact: 05/15/2023
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/03/2023
Next Scheduled EDR Contact: 05/15/2023
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/13/2023
Next Scheduled EDR Contact: 06/26/2023
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 02/09/2023
Number of Days to Update: 100

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/16/2023
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/17/2023
Date Data Arrived at EDR: 01/18/2023
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 91

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/18/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/04/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/13/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 05/15/2023
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/03/2022
Date Data Arrived at EDR: 01/04/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 89

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/04/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/29/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/26/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 13

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/13/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/03/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/27/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/03/2023
Next Scheduled EDR Contact: 05/15/2023
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/23/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 01/12/2023
Date Made Active in Reports: 04/07/2023
Number of Days to Update: 85

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/26/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/13/2023
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 11/17/2022
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 85

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/22/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 02/27/2023
Date Data Arrived at EDR: 03/01/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 23

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 04/04/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/20/2022
Date Data Arrived at EDR: 12/20/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 80

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/16/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/02/2023
Date Data Arrived at EDR: 02/28/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 24

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 02/28/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 11/09/2021
Date Data Arrived at EDR: 10/20/2022
Date Made Active in Reports: 01/10/2023
Number of Days to Update: 82

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2023
Date Data Arrived at EDR: 01/04/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/31/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/13/2023
Date Data Arrived at EDR: 02/14/2023
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 64

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/14/2023
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 07/08/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 123

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 04/04/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/07/2023
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/07/2023
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 01/02/2023
Date Data Arrived at EDR: 01/05/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid, respectively. Both are fluorinated organic chemicals, part of a larger family of compounds referred to as perfluoroalkyl substances (PFASs).

Date of Government Version: 03/15/2023
Date Data Arrived at EDR: 03/23/2023
Date Made Active in Reports: 04/06/2023
Number of Days to Update: 14

Source: Department of Environmental Protection
Telephone: 207-287-4305
Last EDR Contact: 03/17/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Varies

AIRS: Emissions Inventory Data

Point Source Criteria Pollutant Emissions Inventory data. Criteria air pollutant emissions, expressed in tons, by facility and pollutant.

Date of Government Version: 06/05/2022
Date Data Arrived at EDR: 06/08/2022
Date Made Active in Reports: 08/24/2022
Number of Days to Update: 77

Source: Department of Environmental Protection
Telephone: 207-287-7036
Last EDR Contact: 03/02/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Annually

DRYCLEANERS: Drycleaner Facilities
A listing of drycleaning facilities that use perchloroethylene.

Date of Government Version: 08/30/2022
Date Data Arrived at EDR: 08/30/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 79

Source: Department of Environmental Protection
Telephone: 207-287-7030
Last EDR Contact: 02/09/2023
Next Scheduled EDR Contact: 05/15/2023
Data Release Frequency: Varies

MANIFEST: Hazardous Waste Manifest Information Listing
Hazaroudous waste manifest information

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 06/14/2019
Date Made Active in Reports: 08/29/2019
Number of Days to Update: 76

Source: Department of Environmental Protection
Telephone: 207-287-7882
Last EDR Contact: 03/02/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Annually

NPDES: Wastewater Facilities Listing
A listing of wastewater facility locations.

Date of Government Version: 09/19/2022
Date Data Arrived at EDR: 09/20/2022
Date Made Active in Reports: 12/07/2022
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 207-287-3901
Last EDR Contact: 03/22/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 09/07/2022
Date Made Active in Reports: 11/22/2022
Number of Days to Update: 76

Source: Maine Emergency Management Agency
Telephone: 207-624-4441
Last EDR Contact: 03/02/2023
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Annually

UIC: Underground Injection Control
An injection well is any bored, drilled or driven shaft, or dug hole whose depth is greater than its largest surface dimension; an improved sinkhole; or a subsurface distribution system used to discharge fluids underground. These wells range from deep, highly technical, and more frequently monitored wells to shallow on-site drainage systems, such as septic systems, cesspools, and storm water drainage wells.

Date of Government Version: 11/08/2022
Date Data Arrived at EDR: 11/08/2022
Date Made Active in Reports: 01/24/2023
Number of Days to Update: 77

Source: Department of Environmental Protection
Telephone: 207-791-8110
Last EDR Contact: 02/03/2023
Next Scheduled EDR Contact: 05/22/2023
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI
Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 03/07/2023
Date Data Arrived at EDR: 03/07/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: No Update Planned

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Maine.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 191

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Maine.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 200

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Maine.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/16/2022
Date Data Arrived at EDR: 11/16/2022
Date Made Active in Reports: 02/06/2023
Number of Days to Update: 82

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/10/2023
Next Scheduled EDR Contact: 05/22/2023
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/27/2023
Next Scheduled EDR Contact: 05/08/2023
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/13/2022
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Listing
Source: Department of Human Services
Telephone: 207-287-5060

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MEGIS
Telephone: 207-287-6144

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

BAR MILLS HYDROELECTRIC PROJECT
BAR MILLS ROAD
HOLLIS, ME 04042

TARGET PROPERTY COORDINATES

Latitude (North):	43.611847 - 43° 36' 42.65''
Longitude (West):	70.552084 - 70° 33' 7.50''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	374750.3
UTM Y (Meters):	4829717.5
Elevation:	137 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	11730219 BAR MILLS, ME
Version Date:	2018
North Map:	11747715 STANDISH, ME
Version Date:	2018

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

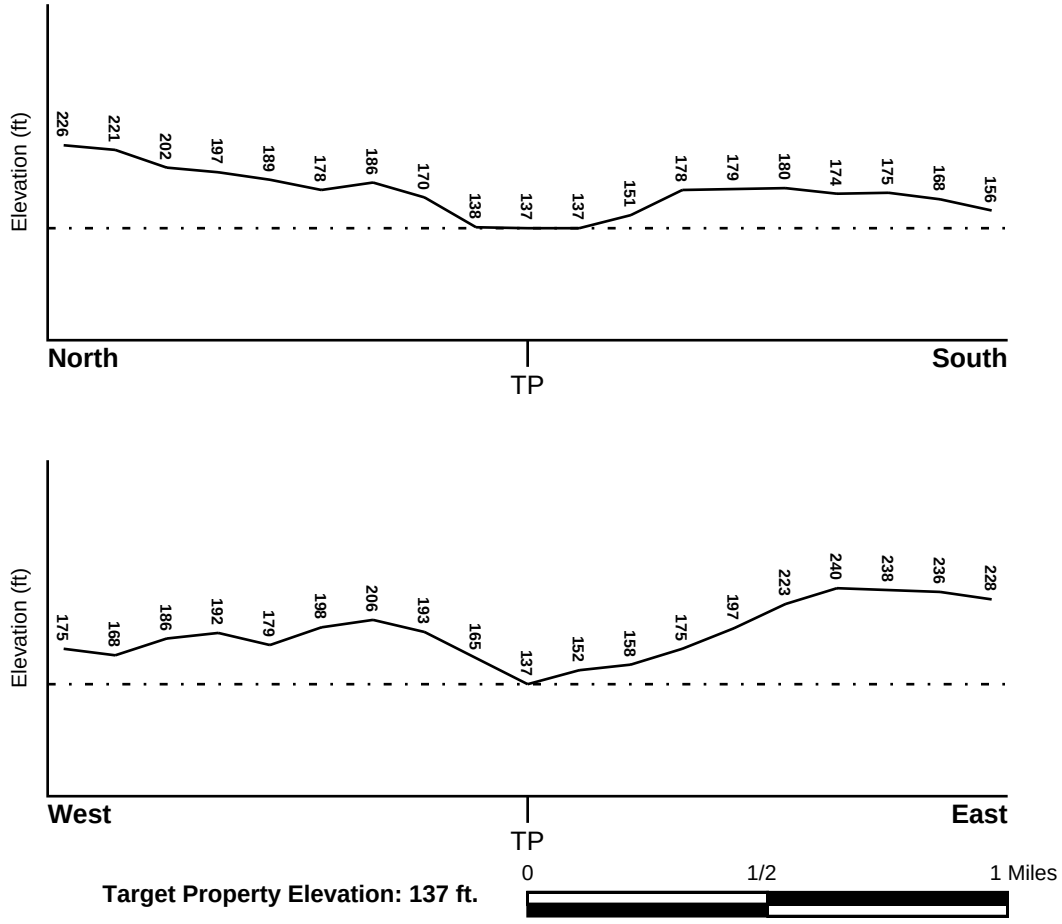
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ESE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
2301550010D	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
2301460015B	FEMA Q3 Flood data
2301500008B	FEMA Q3 Flood data
2301500011B	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BAR MILLS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Devonian and Silurian
Series:	Devonian and Silurian
Code:	DSe *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7321371.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Bar Mills Hydroelectric Project	CLIENT:	TRC
ADDRESS:	Bar Mills Road Hollis ME 04042	CONTACT:	Zack Bonin
LAT/LONG:	43.611847 / 70.552084	INQUIRY #:	7321371.2s
		DATE:	April 27, 2023 3:42 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name:	WATER
Soil Surface Texture:	
Hydrologic Group:	Not reported
Soil Drainage Class:	
Hydric Status: All hydric	
Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

No Layer Information available.

Soil Map ID: 2

Soil Component Name:	LYMAN
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class C/D - Drained/undrained hydrology class of soils that can be drained and classified.
Soil Drainage Class:	Somewhat excessively drained
Hydric Status: Not hydric	
Corrosion Potential - Uncoated Steel:	Low
Depth to Bedrock Min:	> 38 inches
Depth to Watertable Min:	> 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:
2	3 inches	18 inches	gravelly fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:
3	18 inches	22 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:

Soil Map ID: 3

Soil Component Name: RUMNEY

Soil Surface Texture: loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5
2	9 inches	25 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5
3	25 inches	59 inches	loamy fine sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5

Soil Map ID: 4

Soil Component Name: BUXTON

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
2	7 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
3	18 inches	37 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
4	37 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6

Soil Map ID: 5

Soil Component Name: SCIO

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5
2	7 inches	25 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5
3	25 inches	35 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5
4	35 inches	59 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5

Soil Map ID: 6

Soil Component Name: SCIO

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
2	7 inches	25 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
3	25 inches	35 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
4	35 inches	59 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1

Soil Map ID: 7

Soil Component Name: SCIO

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5
2	7 inches	25 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5
3	25 inches	35 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5
4	35 inches	59 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 6.5 Min: 4.5

Soil Map ID: 8

Soil Component Name: LYMAN

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C/D - Drained/undrained hydrology class of soils that can be drained and classified.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 38 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:
2	3 inches	18 inches	gravelly fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:
3	18 inches	22 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:

Soil Map ID: 9

Soil Component Name: RAYNHAM

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4.23 Min: 0.42	Max: 7.3 Min: 5.6
2	5 inches	35 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4.23 Min: 0.42	Max: 7.3 Min: 5.6
3	35 inches	59 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4.23 Min: 0.42	Max: 7.3 Min: 5.6

Soil Map ID: 10

Soil Component Name: BUXTON

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
2	7 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
3	18 inches	37 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
4	37 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6

Soil Map ID: 11

Soil Component Name: SCANTIC

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
2	14 inches	35 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6
3	35 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 1.41 Min: 0	Max: 7.3 Min: 5.6

Soil Map ID: 12

Soil Component Name: LYMAN

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C/D - Drained/undrained hydrology class of soils that can be drained and classified.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 38 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:
2	3 inches	18 inches	gravelly fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:
3	18 inches	22 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 141.14 Min: 0.07	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
E12	USGS40000419639	1/8 - 1/4 Mile East
I23	USGS40000419644	1/8 - 1/4 Mile ENE
L29	USGS40000419632	1/4 - 1/2 Mile WSW
O44	USGS40000419641	1/4 - 1/2 Mile East
72	USGS40000419624	1/2 - 1 Mile WSW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
W75	USGS40000419625	1/2 - 1 Mile ESE
X78	USGS40000419620	1/2 - 1 Mile SE
86	USGS40000419672	1/2 - 1 Mile NNE
88	USGS40000419619	1/2 - 1 Mile SE
Y93	USGS40000419604	1/2 - 1 Mile SSW
100	USGS40000419603	1/2 - 1 Mile South

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B8	ME0007383	1/8 - 1/4 Mile NE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	MEMGS2000029287	0 - 1/8 Mile East
A2	MEMGS2000060776	0 - 1/8 Mile ESE
B3	MEMGS2000060929	0 - 1/8 Mile NE
A4	MEMGS2000019359	1/8 - 1/4 Mile East
C5	MEMGS2000018558	1/8 - 1/4 Mile WSW
D6	MEMGS2000023263	1/8 - 1/4 Mile North
C7	MEMGS2000050655	1/8 - 1/4 Mile WSW
D9	MEMGS2000018634	1/8 - 1/4 Mile NNW
A10	MEMGS2000046732	1/8 - 1/4 Mile ENE
D11	MEMGS2000033719	1/8 - 1/4 Mile North
F13	MEMGS2000025410	1/8 - 1/4 Mile South
G14	MEMGS2000018559	1/8 - 1/4 Mile WSW
H15	MEMGS2000019200	1/8 - 1/4 Mile NNW
E16	MEMGS2000018635	1/8 - 1/4 Mile ENE
17	MEMGS2000042700	1/8 - 1/4 Mile SSW
H18	MEMGS2000035518	1/8 - 1/4 Mile North
G19	MEMGS2000047072	1/8 - 1/4 Mile WSW
H20	MEMGS2000029172	1/8 - 1/4 Mile NNW
21	MEMGS2000050827	1/8 - 1/4 Mile SSE
I22	MEMGS2000068676	1/8 - 1/4 Mile NE
F24	MEMGS2000042683	1/8 - 1/4 Mile South
25	MEMGS2000018560	1/8 - 1/4 Mile West
J26	MEMGS2000034709	1/4 - 1/2 Mile ENE
K27	MEMGS2000022619	1/4 - 1/2 Mile East
J28	MEMGS2000062117	1/4 - 1/2 Mile ENE
K30	ME6000000001432	1/4 - 1/2 Mile ENE
31	MEMGS2000018637	1/4 - 1/2 Mile NE
32	MEMGS2000034156	1/4 - 1/2 Mile West
L33	MEMGS2000068675	1/4 - 1/2 Mile WSW
34	MEMGS2000039381	1/4 - 1/2 Mile NNE
35	MEMGS2000036435	1/4 - 1/2 Mile East

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

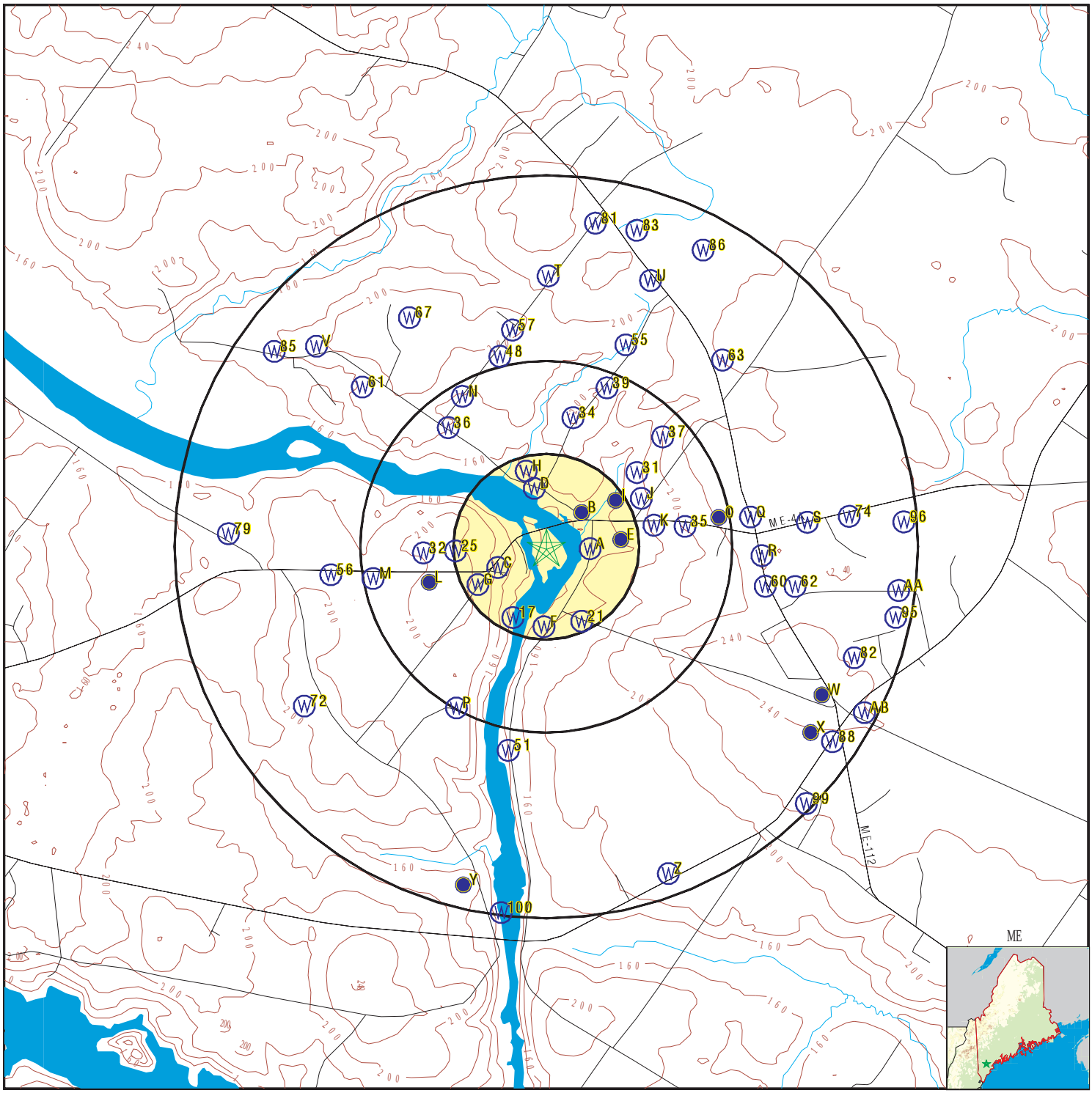
MAP ID	WELL ID	LOCATION FROM TP
36	MEMGS2000045390	1/4 - 1/2 Mile NW
37	MEMGS2000018636	1/4 - 1/2 Mile NE
M38	MEMGS2000021254	1/4 - 1/2 Mile WSW
39	MEMGS2000021268	1/4 - 1/2 Mile NNE
N40	MEMGS2000021266	1/4 - 1/2 Mile NNW
O41	MEMGS2000018638	1/4 - 1/2 Mile ENE
N42	MEMGS2000065004	1/4 - 1/2 Mile NNW
O43	ME6000000001848	1/4 - 1/2 Mile East
P45	ME6000000000926	1/4 - 1/2 Mile SSW
P46	ME6000000001649	1/4 - 1/2 Mile SSW
M47	MEMGS2000065663	1/2 - 1 Mile West
48	MEMGS2000031228	1/2 - 1 Mile NNW
Q49	MEMGS2000054752	1/2 - 1 Mile East
Q50	MEMGS2000038882	1/2 - 1 Mile East
51	MEMGS2000037360	1/2 - 1 Mile South
R52	MEMGS2000039836	1/2 - 1 Mile East
Q53	MEMGS2000061806	1/2 - 1 Mile East
R54	MEMGS2000039413	1/2 - 1 Mile East
55	MEMGS2000022493	1/2 - 1 Mile NNE
56	MEMGS2000023018	1/2 - 1 Mile West
57	MEMGS2000018630	1/2 - 1 Mile North
R58	MEMGS2000018639	1/2 - 1 Mile East
R59	MEMGS2000024055	1/2 - 1 Mile East
60	MEMGS2000040505	1/2 - 1 Mile East
61	MEMGS2000018629	1/2 - 1 Mile NW
62	MEMGS2000025366	1/2 - 1 Mile East
63	MEMGS2000027054	1/2 - 1 Mile NE
S64	MEMGS2000036748	1/2 - 1 Mile East
S65	MEMGS2000070953	1/2 - 1 Mile East
T66	MEMGS2000018631	1/2 - 1 Mile North
67	MEMGS2000034178	1/2 - 1 Mile NNW
T68	MEMGS2000024179	1/2 - 1 Mile North
U69	MEMGS2000066898	1/2 - 1 Mile NNE
U70	MEMGS2000066897	1/2 - 1 Mile NNE
U71	MEMGS2000037771	1/2 - 1 Mile NNE
V73	MEMGS2000018626	1/2 - 1 Mile NW
74	MEMGS2000035499	1/2 - 1 Mile East
V76	MEMGS2000018628	1/2 - 1 Mile NW
W77	MEMGS2000034192	1/2 - 1 Mile ESE
79	MEMGS2000066789	1/2 - 1 Mile West
W80	MEMGS2000018654	1/2 - 1 Mile ESE
81	MEMGS2000018632	1/2 - 1 Mile North
82	MEMGS2000018649	1/2 - 1 Mile ESE
83	MEMGS2000018633	1/2 - 1 Mile NNE
X84	MEMGS2000029183	1/2 - 1 Mile SE
85	MEMGS2000018627	1/2 - 1 Mile NW
Y87	MEMGS2000019505	1/2 - 1 Mile SSW
Z89	MEMGS2000062873	1/2 - 1 Mile SSE
Z90	MEMGS2000049109	1/2 - 1 Mile SSE
AA91	MEMGS2000018648	1/2 - 1 Mile East
Y92	MEMGS2000018557	1/2 - 1 Mile SSW
AB94	MEMGS2000036457	1/2 - 1 Mile ESE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
95	MEMGS2000021242	1/2 - 1 Mile ESE
96	MEMGS2000073300	1/2 - 1 Mile East
AA97	MEMGS2000019828	1/2 - 1 Mile East
AB98	MEMGS2000073061	1/2 - 1 Mile ESE
99	ME6000000000178	1/2 - 1 Mile SE

PHYSICAL SETTING SOURCE MAP - 7321371.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

SITE NAME:	Bar Mills Hydroelectric Project	CLIENT:	TRC
ADDRESS:	Bar Mills Road Hollis ME 04042	CONTACT:	Zack Bonin
		INQUIRY #:	7321371.2s
LAT/LONG:	43.611847 / 70.552084	DATE:	April 27, 2023 3:42 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
East
0 - 1/8 Mile
Higher

ME WELLS **MEMGS2000029287**

Well #:	52492	Drill Date:	15-MAY-96
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	OTHER	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	20	Overburden Thickness:	18
Well Depth:	120	Well Yield (GPM):	Not Reported
Yield Date:	15-MAY-96	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=52492		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=52492		

A2
ESE
0 - 1/8 Mile
Higher

ME WELLS **MEMGS2000060776**

Well #:	121931	Drill Date:	29-AUG-18
Drill Date Estimated:	NO	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	40	Overburden Thickness:	3
Well Depth:	265	Well Yield (GPM):	Not Reported
Yield Date:	29-AUG-18	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	NO
Geothermal Well:	Not Reported	Comments:	WELL IS FOR THEATER.
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=121931		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=121931		

B3
NE
0 - 1/8 Mile
Higher

ME WELLS **MEMGS2000060929**

Well #:	122118	Drill Date:	28-APR-15
Drill Date Estimated:	NO	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	ROTARY DRILLED	Flow Improved By:	NONE
Casing Length (ft):	120	Overburden Thickness:	110
Well Depth:	300	Well Yield (GPM):	Not Reported
Yield Date:	28-APR-15	Static Water Level:	0

SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	NO
Geothermal Well:	Not Reported		
Comments:	GIS COORDINATES ARE APPROXIMATE, NONE LISTED ON DRILLER CARD		
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=122118		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=122118		

A4
East
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000019359**

Well #:	30930	Drill Date:	27-APR-88
Drill Date Estimated:	Not Reported	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	37	Overburden Thickness:	33
Well Depth:	300	Well Yield (GPM):	Not Reported
Yield Date:	27-APR-88	Static Water Level:	1
SWL Measured:	28-APR-88	Vein Depth:	290
Vein Yield:	4	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	BUILDING
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=30930		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=30930		

C5
WSW
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000018558**

Well #:	29679	Drill Date:	01-JAN-71
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	17	Overburden Thickness:	10
Well Depth:	100	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29679		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29679		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D6
North
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000023263**

Well #:	39734	Drill Date:	09-JAN-92
Drill Date Estimated:	Not Reported	Drilling Company:	Not Reported
Well Use:	OTHER	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	30	Overburden Thickness:	25
Well Depth:	300	Well Yield (GPM):	Not Reported
Yield Date:	09-JAN-92	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported		
Comments:	OWNER: C.F.H.INC, PATRICK CANONIA, 2 STONEY BROOK RD, CAPE ELIZABETH		
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=39734		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=39734		

C7
WSW
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000050655**

Well #:	104024	Drill Date:	13-FEB-07
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	40	Overburden Thickness:	30
Well Depth:	360	Well Yield (GPM):	Not Reported
Yield Date:	13-FEB-07	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=104024		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=104024		

B8
NE
1/8 - 1/4 Mile
Higher

FRDS PWS **ME0007383**

Epa region:	01	State:	ME
Pwsid:	ME0007383	Pwsname:	SALMON FALLS GOLF COURSE
Cityserved:	Not Reported	Stateserved:	ME
Zipserved:	Not Reported	Fipscounty:	23031
Status:	Active	Retpopsrvd:	310
Pwssvcconn:	1	Psource longname:	Groundwater

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pwstype:	TNCWS	Owner:	Private
Contact:	BELL, SUSAN	Contactorgname:	BELL, SUSAN
Contactphone:	207-929-5233	Contactaddress1:	52 GOLF COURSE LN
Contactaddress2:	Not Reported	Contactcity:	HOLLIS
Contactstate:	ME	Contactzip:	04042
Pwsactivitycode:	A		

Pwsid:	ME0007383	Facid:	14457
Facname:	TREATMENT PLANT 1	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, pre	Factypecode:	TP

PWS ID:	ME0007383	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	SALMON FALLS REST, GOLF, MOTEL
PWS type code:	NC	Retail population served:	310
Contact:	BELL, SUSAN	Contact address:	52 GOLF COURSE LN
Contact address:	HOLLIS	Contact city:	ME
Contact state:	04	Contact zip:	207-929-52
Contact telephone:	Not Reported		

PWS ID:	ME0007383	Activity status:	Active
Date system activated:	7701	Date system deactivated:	Not Reported
Retail population:	00000250	System name:	SALMON FALLS REST, GOLF, MOTEL
System address:	HOLLIS REALTY ASSOC.	System address:	PO BOX 36
System city:	BAR MILLS	System state:	ME
System zip:	04004		

County FIPS:	Not Reported	City served:	FORT KENT

Population served:	101 - 500 Persons	Treatment:	Untreated

Latitude:	433647	Longitude:	0703301

Violation id:	36806	Orig code:	S
State:	ME	Violation Year:	2008
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008
Cmp edt:	09/30/2008		

Violation ID:	36806	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/20/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal

Violation ID:	36806	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	05/01/2009
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	36806	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	04/21/2009
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal

Violation ID:	36806	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/20/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal

PWS name:	SALMON FALLS REST, GOLF, MOTEL		
Population served:	310	PWS type code:	NC

Violation ID:	36806	Contaminant:	COLIFORM (TCR)
Violation type:	Monitoring, Routine Major (TCR)		
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	9/30/2008 0:00:00
Enforcement date:	11/20/2008 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		

PWS name:	SALMON FALLS REST, GOLF, MOTEL		
Population served:	310	PWS type code:	NC
Violation ID:	36806	Contaminant:	COLIFORM (TCR)
Violation type:	Monitoring, Routine Major (TCR)		
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	9/30/2008 0:00:00
Enforcement date:	11/20/2008 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		

D9
NNW
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000018634**

Well #:	29755	Drill Date:	01-JAN-66
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	INDUSTRIAL	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	23	Overburden Thickness:	16
Well Depth:	95	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29755		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29755		

A10
ENE
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000046732**

Well #:	95415	Drill Date:	31-AUG-05
Drill Date Estimated:	Not Reported	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	60	Overburden Thickness:	50
Well Depth:	260	Well Yield (GPM):	Not Reported
Yield Date:	31-AUG-05	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=95415		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=95415		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D11
North
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000033719**

Well #:	63443	Drill Date:	23-MAR-99
Drill Date Estimated:	Not Reported	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	MUNICIPAL	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	49	Overburden Thickness:	44
Well Depth:	280	Well Yield (GPM):	Not Reported
Yield Date:	23-MAR-99	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=63443		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=63443		

E12
East
1/8 - 1/4 Mile
Higher

FED USGS **USGS40000419639**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 116	Type:	Well
Description:	Not Reported	HUC:	01060001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1955
Well Depth:	127	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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F13
South
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000025410**

Well #:	44201	Drill Date:	10-AUG-94
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	16	Overburden Thickness:	4
Well Depth:	170	Well Yield (GPM):	Not Reported
Yield Date:	10-AUG-94	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	120
Vein Yield:	4	Vein 2 Depth:	150
Vein 2 Yield:	12	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	BUILDING; YIELD 15 TO 18 GPM
Hydrofracture:	Not Reported		

Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=44201
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=44201

G14
WSW **ME WELLS** **MEMGS2000018559**
1/8 - 1/4 Mile
Higher

Well #:	29680	Drill Date:	01-JAN-71
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	17	Overburden Thickness:	10
Well Depth:	102	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29680		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29680		

H15
NNW **ME WELLS** **MEMGS2000019200**
1/8 - 1/4 Mile
Higher

Well #:	30546	Drill Date:	14-AUG-87
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	33	Overburden Thickness:	29
Well Depth:	160	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=30546		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=30546		

E16
ENE **ME WELLS** **MEMGS2000018635**
1/8 - 1/4 Mile
Higher

Well #:	29756	Drill Date:	01-JAN-55
Drill Date Estimated:	YES	Drilling Company:	D. W. FORD CO., INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported

Casing Length (ft):	29	Overburden Thickness:	22
Well Depth:	127	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	3
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Y-116
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29756		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29756		

17
SSW
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000042700**

Well #:	85536	Drill Date:	18-NOV-03
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	9
Well Depth:	183	Well Yield (GPM):	Not Reported
Yield Date:	18-NOV-03	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	130
Vein Yield:	1	Vein 2 Depth:	177
Vein 2 Yield:	48	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	RAW LAT/LONG: 43 36.544/70 33.232
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=85536		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=85536		

H18
North
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000035518**

Well #:	67687	Drill Date:	01-APR-00
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	90	Overburden Thickness:	29
Well Depth:	315	Well Yield (GPM):	Not Reported
Yield Date:	01-APR-00	Static Water Level:	20
SWL Measured:	01-APR-00	Vein Depth:	290
Vein Yield:	2	Vein 2 Depth:	309
Vein 2 Yield:	16	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=67687		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=67687		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

G19
WSW
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000047072**

Well #:	96028	Drill Date:	07-OCT-10
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	7
Well Depth:	422	Well Yield (GPM):	Not Reported
Yield Date:	07-OCT-10	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	340
Vein Yield:	2	Vein 2 Depth:	405
Vein 2 Yield:	1	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	STATIC LEVEL - 20 FEET
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=96028		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=96028		

H20
NNW
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000029172**

Well #:	52265	Drill Date:	29-SEP-95
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	37	Overburden Thickness:	21
Well Depth:	364	Well Yield (GPM):	Not Reported
Yield Date:	29-SEP-95	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	320
Vein Yield:	1	Vein 2 Depth:	351
Vein 2 Yield:	19	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	BUILDING
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=52265		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=52265		

21
SSE
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000050827**

Well #:	104375	Drill Date:	13-JAN-07
Drill Date Estimated:	Not Reported	Drilling Company:	YANKEE WATER SYSTEMS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	73	Overburden Thickness:	10
Well Depth:	270	Well Yield (GPM):	Not Reported
Yield Date:	13-JAN-07	Static Water Level:	0

SWL Measured:	Not Reported	Vein Depth:	265
Vein Yield:	20	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	YES
Geothermal Well:	Not Reported	Comments:	SETBACK REDUCTION NOTICE
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=104375		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=104375		

I22
NE
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000068676**

Well #:	132807	Drill Date:	01-JAN-43
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	0	Overburden Thickness:	0
Well Depth:	0	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	SE - 160’
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=132807		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=132807		

I23
ENE
1/8 - 1/4 Mile
Higher

FED USGS **USGS40000419644**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 115	Type:	Well
Description:	Not Reported	HUC:	01060001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1960
Well Depth:	127	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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F24
South
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000042683**

Well #:	85501	Drill Date:	27-MAY-03
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR

Casing Length (ft):	20	Overburden Thickness:	10
Well Depth:	420	Well Yield (GPM):	Not Reported
Yield Date:	27-MAY-03	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	265
Vein Yield:	1.5	Vein 2 Depth:	370
Vein 2 Yield:	.5	Vein 3 Depth:	415
Vein 3 Yield:	38	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	YIELD 40+ GPM
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=85501		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=85501		

25
West
1/8 - 1/4 Mile
Higher

ME WELLS **MEMGS2000018560**

Well #:	29681	Drill Date:	01-JAN-45
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	INSTITUTIONAL	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	14	Overburden Thickness:	7
Well Depth:	66	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Y-59
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29681		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29681		

J26
ENE
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000034709**

Well #:	65667	Drill Date:	20-SEP-99
Drill Date Estimated:	Not Reported	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	40	Overburden Thickness:	35
Well Depth:	220	Well Yield (GPM):	Not Reported
Yield Date:	20-SEP-99	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=65667		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=65667		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

K27
East
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000022619**

Well #:	38422	Drill Date:	29-DEC-90
Drill Date Estimated:	Not Reported	Drilling Company:	MCCLINTICK WELL DRILLING
Well Use:	MUNICIPAL	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	20	Overburden Thickness:	8
Well Depth:	162	Well Yield (GPM):	Not Reported
Yield Date:	29-DEC-90	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported		
Comments:	BAR MILLS POST OFFICE C/O STRUCTURE & DESIGN INC. (BY DRILLER)SACO RIVER TELEGRAPH & TELEPHONE (		
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=38422		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=38422		

J28
ENE
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000062117**

Well #:	123616	Drill Date:	27-SEP-16
Drill Date Estimated:	NO	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	40	Overburden Thickness:	13
Well Depth:	420	Well Yield (GPM):	Not Reported
Yield Date:	27-SEP-16	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=123616		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=123616		

L29
WSW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000419632**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 59	Type:	Well
Description:	Not Reported	HUC:	01060002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported

Aquifer Type:	Not Reported	Construction Date:	1945
Well Depth:	66	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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K30
ENE **ME WELLS** **ME6000000001432**
1/4 - 1/2 Mile
Higher

Database:	Public Water Supply Wells
PWS ID:	94320101
Type:	Non-Transient, Non-Community
Source Water Assessment Report ID:	94320101.pdf

31
NE **ME WELLS** **MEMGS2000018637**
1/4 - 1/2 Mile
Higher

Well #:	29758	Drill Date:	01-JAN-60
Drill Date Estimated:	YES	Drilling Company:	Not Reported
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	0	Overburden Thickness:	0
Well Depth:	127	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported		
Comments:	Y-115; YIELD IMPROVED 1.3 GPM FROM 100' TO 127'		
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29758		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29758		

32
West **ME WELLS** **MEMGS2000034156**
1/4 - 1/2 Mile
Higher

Well #:	64451	Drill Date:	12-OCT-98
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	5
Well Depth:	221	Well Yield (GPM):	Not Reported
Yield Date:	12-OCT-98	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	145
Vein Yield:	3	Vein 2 Depth:	207
Vein 2 Yield:	11	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		

Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=64451
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=64451

L33
WSW
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000068675**

Well #:	132806	Drill Date:	01-JAN-45
Drill Date Estimated:	YES	Drilling Company:	D. W. FORD CO., INC.
Well Use:	MUNICIPAL	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	0	Overburden Thickness:	0
Well Depth:	66	Well Yield (GPM):	Not Reported
Yield Date:	01-JAN-45	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	SE - 200’
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=132806		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=132806		

34
NNE
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000039381**

Well #:	77168	Drill Date:	12-APR-02
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	40	Overburden Thickness:	29
Well Depth:	405	Well Yield (GPM):	Not Reported
Yield Date:	12-APR-02	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	340
Vein Yield:	1	Vein 2 Depth:	396
Vein 2 Yield:	15	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=77168		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=77168		

35
East
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000036435**

Well #:	70081	Drill Date:	10-AUG-00
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN’S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported

Casing Length (ft):	40	Overburden Thickness:	25
Well Depth:	300	Well Yield (GPM):	Not Reported
Yield Date:	10-AUG-00	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=70081		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=70081		

36
NW
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000045390**

Well #:	92230	Drill Date:	30-DEC-04
Drill Date Estimated:	Not Reported	Drilling Company:	HIGH PINE WELL DRILLING, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	20	Overburden Thickness:	10
Well Depth:	345	Well Yield (GPM):	Not Reported
Yield Date:	30-DEC-04	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	100
Vein Yield:	2	Vein 2 Depth:	330
Vein 2 Yield:	50	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=92230		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=92230		

37
NE
1/4 - 1/2 Mile
Higher

ME WELLS **MEMGS2000018636**

Well #:	29757	Drill Date:	01-JAN-73
Drill Date Estimated:	YES	Drilling Company:	KEN DYER
Well Use:	DOMESTIC	Well Type:	GRAVEL
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	70	Overburden Thickness:	85
Well Depth:	85	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	BRE - <115'
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29757		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29757		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

M38
WSW **ME WELLS** **MEMGS2000021254**
1/4 - 1/2 Mile
Higher

Well #:	35782	Drill Date:	01-JUL-91
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	16	Overburden Thickness:	5
Well Depth:	305	Well Yield (GPM):	Not Reported
Yield Date:	01-JUL-91	Static Water Level:	10
SWL Measured:	01-JUL-91	Vein Depth:	190
Vein Yield:	1	Vein 2 Depth:	210
Vein 2 Yield:	1	Vein 3 Depth:	250
Vein 3 Yield:	1	Vein 4 Depth:	280
Vein 4 Yield:	3	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=35782		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=35782		

39
NNE **ME WELLS** **MEMGS2000021268**
1/4 - 1/2 Mile
Higher

Well #:	35812	Drill Date:	30-SEP-91
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	33	Overburden Thickness:	21
Well Depth:	143	Well Yield (GPM):	Not Reported
Yield Date:	30-SEP-91	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	80
Vein Yield:	4	Vein 2 Depth:	110
Vein 2 Yield:	2	Vein 3 Depth:	125
Vein 3 Yield:	4	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	MAP/LOT: BOOK 4547, PAGE 028, PARCEL 014-0
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=35812		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=35812		

N40
NNW **ME WELLS** **MEMGS2000021266**
1/4 - 1/2 Mile
Higher

Well #:	35810	Drill Date:	05-OCT-91
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	18	Overburden Thickness:	6
Well Depth:	220	Well Yield (GPM):	Not Reported
Yield Date:	05-OCT-91	Static Water Level:	0

SWL Measured:	Not Reported	Vein Depth:	150
Vein Yield:	2	Vein 2 Depth:	209
Vein 2 Yield:	23	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=35810		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=35810		

O41
ENE **ME WELLS** **MEMGS2000018638**
1/4 - 1/2 Mile
Higher

Well #:	29759	Drill Date:	01-JAN-51
Drill Date Estimated:	YES	Drilling Company:	D. W. FORD CO., INC.
Well Use:	INSTITUTIONAL	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	21	Overburden Thickness:	15
Well Depth:	208	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	4
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Y-52; PARTIAL CHEMICAL ANALYSIS 2/8/1961
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29759		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29759		

N42
NNW **ME WELLS** **MEMGS2000065004**
1/4 - 1/2 Mile
Higher

Well #:	127536	Drill Date:	30-JAN-18
Drill Date Estimated:	NO	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	32	Overburden Thickness:	2
Well Depth:	300	Well Yield (GPM):	Not Reported
Yield Date:	30-JAN-18	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=127536		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=127536		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

O43
East
1/4 - 1/2 Mile
Higher

ME WELLS **ME6000000001848**

Database:	Public Water Supply Wells
PWS ID:	146101
Type:	Non-Transient, Non-Community
Source Water Assessment Report ID:	146101.pdf

O44
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000419641**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 52	Type:	Well
Description:	Not Reported	HUC:	01060002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	208	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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P45
SSW
1/4 - 1/2 Mile
Higher

ME WELLS **ME6000000000926**

Database:	Public Water Supply Wells		
PWS ID:	7383102	Type:	Transient
Source Water Assessment Report ID:	7383102.pdf		

P46
SSW
1/4 - 1/2 Mile
Higher

ME WELLS **ME6000000001649**

Database:	Public Water Supply Wells		
PWS ID:	7383101	Type:	Transient
Source Water Assessment Report ID:	7383101.pdf		

M47
West
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000065663**

Well #:	128467	Drill Date:	09-AUG-17
Drill Date Estimated:	NO	Drilling Company:	D&M WELL COMPANY
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported

Casing Length (ft):	40	Overburden Thickness:	25
Well Depth:	460	Well Yield (GPM):	Not Reported
Yield Date:	09-AUG-17	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	D152
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=128467		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=128467		

48
NNW
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000031228**

Well #:	57107	Drill Date:	15-MAY-96
Drill Date Estimated:	Not Reported	Drilling Company:	WOODSOME WELL DRILLING
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	20	Overburden Thickness:	10
Well Depth:	130	Well Yield (GPM):	Not Reported
Yield Date:	15-MAY-96	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=57107		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=57107		

Q49
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000054752**

Well #:	111666	Drill Date:	11-AUG-09
Drill Date Estimated:	Not Reported	Drilling Company:	AFFORDABLE WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	31	Overburden Thickness:	5
Well Depth:	415	Well Yield (GPM):	Not Reported
Yield Date:	11-AUG-09	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=111666		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=111666		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

Q50
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000038882**

Well #:	76116	Drill Date:	13-OCT-01
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	55	Overburden Thickness:	20
Well Depth:	400	Well Yield (GPM):	Not Reported
Yield Date:	13-OCT-01	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	PAGELINE: 0127/003
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=76116		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=76116		

51
South
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000037360**

Well #:	72292	Drill Date:	14-SEP-01
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	CABLE TOOL	Flow Improved By:	AIR
Casing Length (ft):	30	Overburden Thickness:	19
Well Depth:	405	Well Yield (GPM):	Not Reported
Yield Date:	14-SEP-01	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	385
Vein Yield:	2	Vein 2 Depth:	401
Vein 2 Yield:	48	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=72292		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=72292		

R52
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000039836**

Well #:	78128	Drill Date:	09-JAN-02
Drill Date Estimated:	Not Reported	Drilling Company:	AFFORDABLE WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	40	Overburden Thickness:	33
Well Depth:	205	Well Yield (GPM):	Not Reported
Yield Date:	09-JAN-02	Static Water Level:	0

SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	33 FT GRAVEL
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=78128		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=78128		

Q53
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000061806**

Well #:	123240	Drill Date:	23-AUG-16
Drill Date Estimated:	NO	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	40	Overburden Thickness:	30
Well Depth:	500	Well Yield (GPM):	Not Reported
Yield Date:	23-AUG-16	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=123240		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=123240		

R54
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000039413**

Well #:	77238	Drill Date:	18-NOV-01
Drill Date Estimated:	Not Reported	Drilling Company:	JOHN H. SWETT WELL DRILLING
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	40	Overburden Thickness:	10
Well Depth:	600	Well Yield (GPM):	Not Reported
Yield Date:	18-NOV-01	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	500
Vein Yield:	2	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	YES		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=77238		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=77238		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

55
NNE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000022493**

Well #:	38171	Drill Date:	17-SEP-92
Drill Date Estimated:	Not Reported	Drilling Company:	WELLS UNLIMITED, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	26	Overburden Thickness:	18
Well Depth:	180	Well Yield (GPM):	Not Reported
Yield Date:	17-SEP-92	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	180
Vein Yield:	4	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=38171		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=38171		

56
West
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000023018**

Well #:	39250	Drill Date:	17-SEP-91
Drill Date Estimated:	Not Reported	Drilling Company:	JOHN H. SWETT WELL DRILLING
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	12	Overburden Thickness:	4
Well Depth:	400	Well Yield (GPM):	Not Reported
Yield Date:	17-SEP-91	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	380
Vein Yield:	2	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=39250		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=39250		

57
North
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018630**

Well #:	29751	Drill Date:	01-JAN-48
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	0	Overburden Thickness:	0
Well Depth:	100	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0

SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29751		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29751		

R58
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018639**

Well #:	29760	Drill Date:	01-JAN-54
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	35	Overburden Thickness:	29
Well Depth:	100	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29760		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29760		

R59
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000024055**

Well #:	41241	Drill Date:	16-NOV-92
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	35	Overburden Thickness:	27
Well Depth:	220	Well Yield (GPM):	Not Reported
Yield Date:	16-NOV-92	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=41241		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=41241		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

60
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000040505**

Well #:	79895	Drill Date:	15-JUL-02
Drill Date Estimated:	Not Reported	Drilling Company:	JOHN H. SWETT WELL DRILLING
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	60	Overburden Thickness:	38
Well Depth:	600	Well Yield (GPM):	Not Reported
Yield Date:	15-JUL-02	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	560
Vein Yield:	4	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=79895		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=79895		

61
NW
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018629**

Well #:	29750	Drill Date:	01-JAN-69
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	16	Overburden Thickness:	10
Well Depth:	72	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29750		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29750		

62
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000025366**

Well #:	44125	Drill Date:	21-SEP-93
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	25	Overburden Thickness:	16
Well Depth:	140	Well Yield (GPM):	Not Reported
Yield Date:	21-SEP-93	Static Water Level:	12

SWL Measured:	21-SEP-93	Vein Depth:	80
Vein Yield:	2	Vein 2 Depth:	125
Vein 2 Yield:	2	Vein 3 Depth:	133
Vein 3 Yield:	4	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=44125		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=44125		

63
NE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000027054**

Well #:	47847	Drill Date:	11-NOV-94
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	OTHER	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	5
Well Depth:	304	Well Yield (GPM):	Not Reported
Yield Date:	11-NOV-94	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	205
Vein Yield:	3	Vein 2 Depth:	290
Vein 2 Yield:	5.5	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=47847		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=47847		

S64
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000036748**

Well #:	71034	Drill Date:	08-JUN-01
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	7
Well Depth:	320	Well Yield (GPM):	Not Reported
Yield Date:	08-JUN-01	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	TOWN: BAR MILLS
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=71034		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=71034		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

S65
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000070953**

Well #:	135245	Drill Date:	07-JUL-20
Drill Date Estimated:	Not Reported	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	30	Overburden Thickness:	20
Well Depth:	520	Well Yield (GPM):	Not Reported
Yield Date:	07-JUL-20	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	NO
Geothermal Well:	NO	Comments:	Not Reported
Hydrofracture:	NO		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=135245		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=135245		

T66
North
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018631**

Well #:	29752	Drill Date:	01-JAN-68
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	16	Overburden Thickness:	10
Well Depth:	66	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29752		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29752		

67
NNW
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000034178**

Well #:	64507	Drill Date:	26-MAY-99
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	27	Overburden Thickness:	17
Well Depth:	360	Well Yield (GPM):	Not Reported
Yield Date:	26-MAY-99	Static Water Level:	0

SWL Measured:	Not Reported	Vein Depth:	267
Vein Yield:	2	Vein 2 Depth:	310
Vein 2 Yield:	2	Vein 3 Depth:	351
Vein 3 Yield:	8	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=64507		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=64507		

T68
North
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000024179**

Well #:	41462	Drill Date:	02-JUN-93
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	25	Overburden Thickness:	15
Well Depth:	161	Well Yield (GPM):	Not Reported
Yield Date:	02-JUN-93	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	130
Vein Yield:	5	Vein 2 Depth:	150
Vein 2 Yield:	20	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	STATIC LEVEL 17 FEET
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=41462		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=41462		

U69
NNE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000066898**

Well #:	130176	Drill Date:	08-AUG-18
Drill Date Estimated:	NO	Drilling Company:	WESTERN MAINE WATER INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	20	Overburden Thickness:	10
Well Depth:	480	Well Yield (GPM):	Not Reported
Yield Date:	08-AUG-18	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	480
Vein Yield:	1.5	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	NO
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	YES		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=130176		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=130176		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

U70
NNE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000066897**

Well #:	130175	Drill Date:	07-SEP-18
Drill Date Estimated:	NO	Drilling Company:	WESTERN MAINE WATER INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	10
Well Depth:	320	Well Yield (GPM):	Not Reported
Yield Date:	07-SEP-18	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	305
Vein Yield:	3.5	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	OWNER CARD RIPPED MISSING WELL NUMBER
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=130175		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=130175		

U71
NNE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000037771**

Well #:	73445	Drill Date:	19-SEP-01
Drill Date Estimated:	Not Reported	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	20	Overburden Thickness:	10
Well Depth:	480	Well Yield (GPM):	Not Reported
Yield Date:	19-SEP-01	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	LOCATION FROM ADDRESS
Hydrofracture:	YES		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=73445		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=73445		

72
WSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000419624**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 503	Type:	Well
Description:	Not Reported	HUC:	01060002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported

Well Depth:	27	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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V73
NW
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018626**

Well #:	29747	Drill Date:	01-JAN-67
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	27	Overburden Thickness:	20
Well Depth:	310	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29747		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29747		

74
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000035499**

Well #:	67653	Drill Date:	13-SEP-99
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	20	Overburden Thickness:	5
Well Depth:	720	Well Yield (GPM):	Not Reported
Yield Date:	13-SEP-99	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	300
Vein Yield:	2	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported		
Comments:	YIELD 2+ GPMAFTER FRAC TEST PUMED WITH MORE FROM 300-720 FT		
Hydrofracture:	YES		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=67653		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=67653		

W75
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS40000419625**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 101	Type:	Well
Description:	Not Reported	HUC:	01060002

Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1956
Well Depth:	110	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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V76
NW
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018628**

Well #:	29749	Drill Date:	01-JAN-70
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	0	Overburden Thickness:	0
Well Depth:	103	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29749		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29749		

W77
ESE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000034192**

Well #:	64532	Drill Date:	10-JUL-99
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	OTHER	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	70	Overburden Thickness:	63
Well Depth:	202	Well Yield (GPM):	Not Reported
Yield Date:	10-JUL-99	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	20 GPM BETWEEN 189-197 FT
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=64532		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=64532		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

X78
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000419620**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 57A	Type:	Well
Description:	Not Reported	HUC:	01060002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1961
Well Depth:	100	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-09-13
Feet below surface:	21.50	Feet to sea level:	Not Reported
Note:	Not Reported		

79
West
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000066789**

Well #:	130041	Drill Date:	03-AUG-18
Drill Date Estimated:	NO	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	30	Overburden Thickness:	20
Well Depth:	200	Well Yield (GPM):	Not Reported
Yield Date:	03-AUG-18	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	0022
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=130041		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=130041		

W80
ESE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018654**

Well #:	29775	Drill Date:	01-JAN-61
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	42	Overburden Thickness:	35
Well Depth:	99	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	22
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0

Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29775		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29775		

81
North
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018632**

Well #:	29753	Drill Date:	01-JAN-48
Drill Date Estimated:	YES	Drilling Company:	D. W. FORD CO., INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	0	Overburden Thickness:	0
Well Depth:	100	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Y-65
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29753		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29753		

82
ESE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018649**

Well #:	29770	Drill Date:	01-JAN-69
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	10	Overburden Thickness:	3
Well Depth:	95	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	9
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29770		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29770		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

83
NNE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018633**

Well #:	29754	Drill Date:	01-JAN-66
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	168	Overburden Thickness:	160
Well Depth:	238	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	12
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29754		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29754		

X84
SE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000029183**

Well #:	52286	Drill Date:	20-SEP-95
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	COMMERCIAL	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	32	Overburden Thickness:	20
Well Depth:	264	Well Yield (GPM):	Not Reported
Yield Date:	20-SEP-95	Static Water Level:	8
SWL Measured:	20-SEP-95	Vein Depth:	110
Vein Yield:	2	Vein 2 Depth:	205
Vein 2 Yield:	1	Vein 3 Depth:	250
Vein 3 Yield:	10	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=52286		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=52286		

85
NW
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018627**

Well #:	29748	Drill Date:	01-JAN-70
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	33	Overburden Thickness:	27
Well Depth:	103	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	0

SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29748		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29748		

86
NNE **FED USGS** **USGS40000419672**
1/2 - 1 Mile
Higher

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 65	Type:	Well
Description:	Not Reported	HUC:	01060002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1948
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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Y87
SSW **ME WELLS** **MEMGS2000019505**
1/2 - 1 Mile
Higher

Well #:	31287	Drill Date:	28-MAR-89
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	22	Overburden Thickness:	18
Well Depth:	140	Well Yield (GPM):	Not Reported
Yield Date:	28-MAR-89	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	35
Vein Yield:	5	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=31287		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=31287		

88
SE **FED USGS** **USGS40000419619**
1/2 - 1 Mile
Higher

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 602	Type:	Well
Description:	Not Reported	HUC:	01060001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Sand and gravel aquifers (glaciated regions)		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	40
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Z89
SSE **ME WELLS** **MEMGS2000062873**
1/2 - 1 Mile
Higher

Well #:	124725	Drill Date:	07-OCT-16
Drill Date Estimated:	NO	Drilling Company:	STANLEY E HILLOCK WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	20	Overburden Thickness:	10
Well Depth:	440	Well Yield (GPM):	Not Reported
Yield Date:	07-OCT-16	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	YES		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=124725		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=124725		

Z90
SSE **ME WELLS** **MEMGS2000049109**
1/2 - 1 Mile
Higher

Well #:	100811	Drill Date:	11-SEP-06
Drill Date Estimated:	Not Reported	Drilling Company:	WESTERN MAINE WATER INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	5
Well Depth:	125	Well Yield (GPM):	Not Reported
Yield Date:	11-SEP-06	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	97
Vein Yield:	20	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=100811		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=100811		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

AA91
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018648**

Well #:	29769	Drill Date:	01-JAN-69
Drill Date Estimated:	YES	Drilling Company:	HILLOCK & SON WELLS, INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	12	Overburden Thickness:	4
Well Depth:	170	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	10
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	MOST EXPENSIVE BUILDING
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29769		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29769		

Y92
SSW
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000018557**

Well #:	29678	Drill Date:	01-JAN-48
Drill Date Estimated:	YES	Drilling Company:	D. W. FORD CO., INC.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	DRILLED	Flow Improved By:	Not Reported
Casing Length (ft):	16	Overburden Thickness:	9
Well Depth:	99	Well Yield (GPM):	Not Reported
Yield Date:	Not Reported	Static Water Level:	35
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Y-274
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=29678		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=29678		

Y93
SSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000419604**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 500	Type:	Well
Description:	Not Reported	HUC:	01060001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Sand and gravel aquifers (glaciated regions)		
Formation Type:	Not Reported	Aquifer Type:	Not Reported

Construction Date:	Not Reported	Well Depth:	12
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

AB94
ESE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000036457**

Well #:	70119	Drill Date:	14-OCT-00
Drill Date Estimated:	Not Reported	Drilling Company:	HANSEN'S WELL DRILLING INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	60	Overburden Thickness:	48
Well Depth:	200	Well Yield (GPM):	Not Reported
Yield Date:	14-OCT-00	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=70119		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=70119		

95
ESE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000021242**

Well #:	35758	Drill Date:	10-JAN-91
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	COMMERCIAL	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	5
Well Depth:	122	Well Yield (GPM):	Not Reported
Yield Date:	10-JAN-91	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	96
Vein Yield:	5	Vein 2 Depth:	112
Vein 2 Yield:	20	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	IS NELSON & WRIGHT INC. A CONTRACTOR ?
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=35758		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=35758		

96
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000073300**

Well #:	137701	Drill Date:	10-SEP-20
Drill Date Estimated:	Not Reported	Drilling Company:	WELL DONE WATER SYSTEMS
Well Use:	DOMESTIC	Well Type:	BEDROCK

Well Construction:	Not Reported	Flow Improved By:	NONE
Casing Length (ft):	30	Overburden Thickness:	20
Well Depth:	420	Well Yield (GPM):	Not Reported
Yield Date:	10-SEP-20	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	NO		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=137701		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=137701		

AA97
East
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000019828**

Well #:	31967	Drill Date:	28-APR-90
Drill Date Estimated:	Not Reported	Drilling Company:	RANDY DYER WELL DRILLING CO.
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	Not Reported
Casing Length (ft):	20	Overburden Thickness:	6
Well Depth:	122	Well Yield (GPM):	Not Reported
Yield Date:	28-APR-90	Static Water Level:	2
SWL Measured:	28-APR-90	Vein Depth:	60
Vein Yield:	2	Vein 2 Depth:	105
Vein 2 Yield:	10	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	Not Reported		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=31967		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=31967		

AB98
ESE
1/2 - 1 Mile
Higher

ME WELLS **MEMGS2000073061**

Well #:	137442	Drill Date:	05-JAN-21
Drill Date Estimated:	Not Reported	Drilling Company:	WESTERN MAINE WATER INC
Well Use:	DOMESTIC	Well Type:	BEDROCK
Well Construction:	Not Reported	Flow Improved By:	AIR
Casing Length (ft):	20	Overburden Thickness:	8
Well Depth:	145	Well Yield (GPM):	Not Reported
Yield Date:	05-JAN-21	Static Water Level:	0
SWL Measured:	Not Reported	Vein Depth:	0
Vein Yield:	0	Vein 2 Depth:	0
Vein 2 Yield:	0	Vein 3 Depth:	0
Vein 3 Yield:	0	Vein 4 Depth:	0
Vein 4 Yield:	0	Replacement Well:	Not Reported
Geothermal Well:	Not Reported	Comments:	Not Reported
Hydrofracture:	NO		
Well Correction URL:	https://www.mgs-collect.site/mgs-survey/well_correction_view.php?addNew_x=1&wellid=137442		
Well URL:	https://www.mgs-collect.site/mgs-collect/hooks/wells_print_well_card_mapviewer.php?id=137442		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

99
SE
1/2 - 1 Mile
Higher

ME WELLS **ME6000000000178**

Database:	Public Water Supply Wells		
PWS ID:	94569101	Type:	Transient
Source Water Assessment Report ID:	94569101.pdf		

100
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000419603**

Organization ID:	USGS-ME	Organization Name:	USGS Maine Water Science Center
Monitor Location:	YW 274	Type:	Well
Description:	Not Reported	HUC:	01060002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1948
Well Depth:	99	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: ME Radon

Radon Test Results

Zip	City	Floor	Results
04042		B	3.2
04042		B	3.2
04042		F	2.5
04042		B	3.2
04042		F	2.5
04042		B	3.2
04042	Hollis	B	10.9
04042	Hollis	B	10.9
04042		B	0.5
04042	Hollis	B	0.9
04042	Hollis	B	0.9
04042		B	1.1
04042		B	0.7
04042	Hollis	B	0.8
04042	Hollis	B	0.8
04042	5/1/03 0:00:00	5	10562
04042	Hollis	B	1.5
04042	Hollis	B	1.5
04042	Hollis	B	12.4
04042	Hollis Center	B	7.1

Federal EPA Radon Zone for YORK County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 04042

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.400 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	4.050 pCi/L	50%	50%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MEGIS
Telephone: 207-287-6144

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Maine Geological Survey Water Well Database
Source: Maine Geological Survey
Telephone: 207-287-3200
Contains over 50,000 located wells is available for download. This file contains information on all wells in the database which could be geographically located. Data points have been located by GPS, by street address locations, and by using tax maps in combination with air photos so location accuracy varies. The database includes coordinates and descriptive information such as well yield, depth, overburden thickness, well use, and well type.

Public Water Supply Wells Database
Source: Department of Human Services, Drinking Water Program
Telephone: 207-287-6196
There are 3 types of public water systems in Maine: Transient Systems; Community Systems and Non-transient Non-community Systems.

OTHER STATE DATABASE INFORMATION

RADON

Maine Radon Test Results
Source: Department of Human Services
Telephone: 207-287-5698
The state of Maine Radiation Control Program's - Radon/Indor Air Quality Section's position on radon map, is that they should be used neither to predict the presence of high nor low values in any given geographic or geologic area. The only conclusion that should be drawn from this data is that radon in omnipresent in the soil gasses in the state of Maine, and therefore all residences and buildings that come in contact with the ground should be tested for radon.

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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Appendix B:
Historical Research Documentation

DRAFT

Bar Mills Hydroelectric Project

Bar Mills Road

Hollis, ME 04042

Inquiry Number: 7321371.3

April 27, 2023

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/27/23

Site Name:

Bar Mills Hydroelectric Project
Bar Mills Road
Hollis, ME 04042
EDR Inquiry # 7321371.3

Client Name:

TRC
6 Ashley Drive
Scarborough, ME 04074
Contact: Zack Bonin

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by TRC were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 83E3-47AA-B5B5

PO # 510195

Project 510195.0000.0000 / 000001

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 83E3-47AA-B5B5

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Bar Mills Hydroelectric Project

Bar Mills Road

Hollis, ME 04042

Inquiry Number: 7321371.4

April 27, 2023

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

04/27/23

Site Name:	Client Name:
Bar Mills Hydroelectric Project	TRC
Bar Mills Road	6 Ashley Drive
Hollis, ME 04042	Scarborough, ME 04074
EDR Inquiry # 7321371.4	Contact: Zack Bonin

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by TRC were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:		*Coordinates:*	
P.O.#	510195	**Latitude:**	43.611847 43° 36' 43" North
Project:	510195.0000.0000 / 000001	**Longitude:**	-70.552084 -70° 33' 8" West
		UTM Zone:	Zone 19 North
		UTM X Meters:	374753.91
		UTM Y Meters:	4829933.28
		Elevation:	137.51' above sea level

Maps Provided:

2018
2014
1983
1944
1942
1893
1892
1891

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2018 Source Sheets



Bar Mills
2018
7.5-minute, 24000



Standish
2018
7.5-minute, 24000

2014 Source Sheets



Bar Mills
2014
7.5-minute, 24000



Standish
2014
7.5-minute, 24000

1983 Source Sheets



Standish
1983
7.5-minute, 24000
Aerial Photo Revised 1978



Bar Mills
1983
7.5-minute, 24000
Aerial Photo Revised 1978

1944 Source Sheets



Buxton
1944
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1942 Source Sheets



Buxton
1942
15-minute, 62500

1893 Source Sheets



Buxton
1893
15-minute, 62500

1892 Source Sheets



Buxton
1892
15-minute, 62500

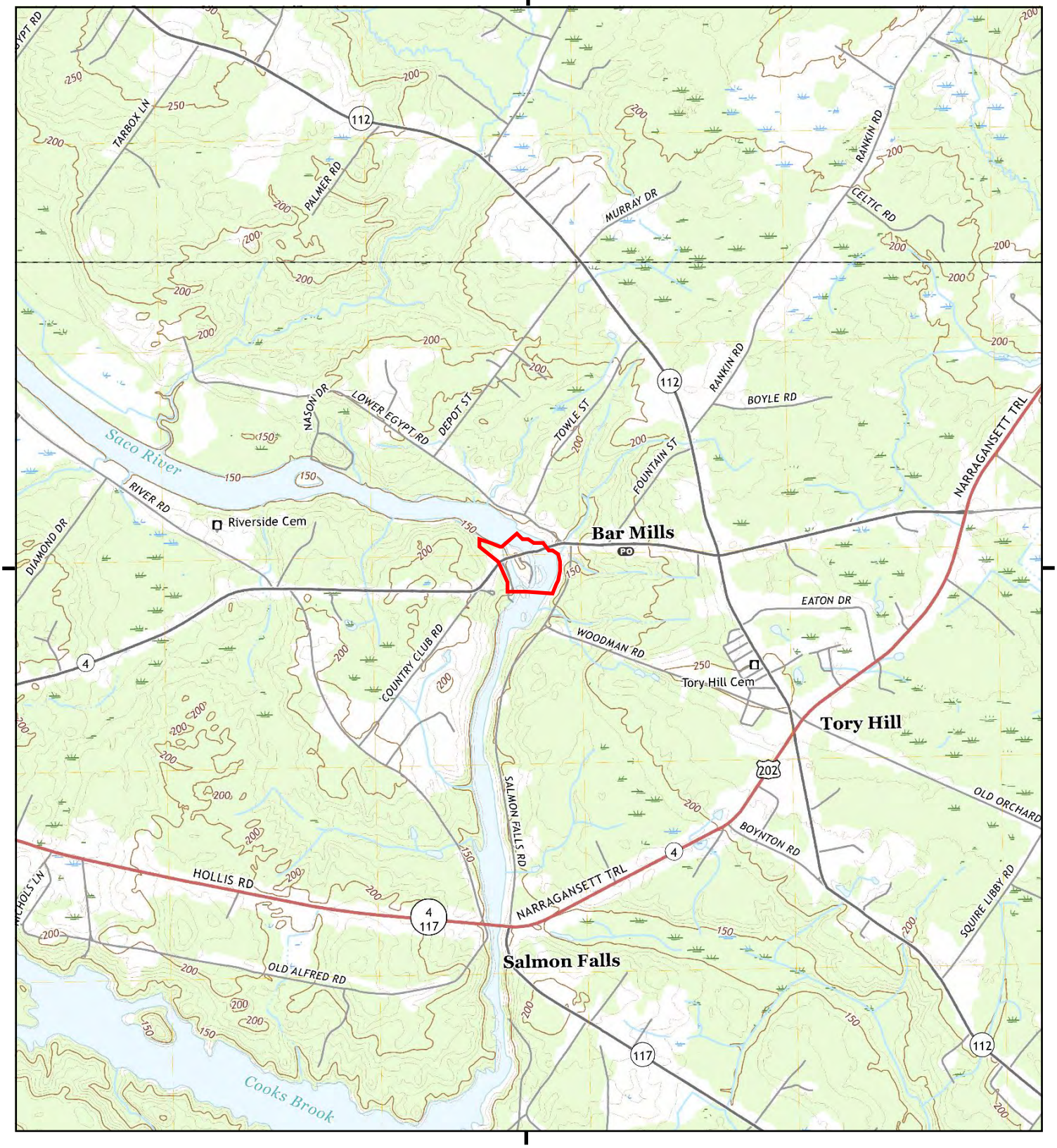
1891 Source Sheets



Buxton
1891
15-minute, 62500

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

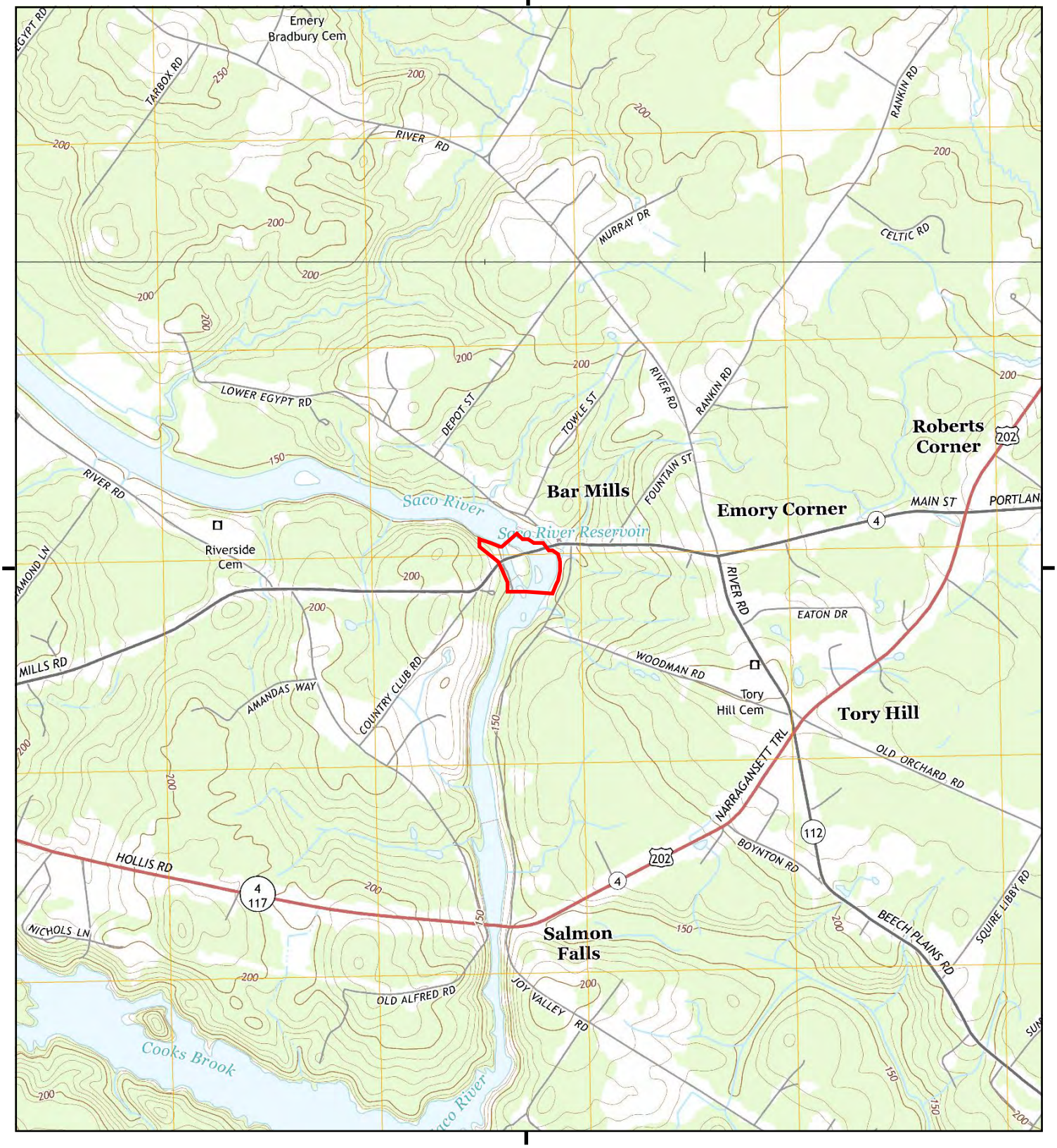
TP, Bar Mills, 2018, 7.5-minute
N, Standish, 2018, 7.5-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N

Historical Topo Map

2014



This report includes information from the following map sheet(s).

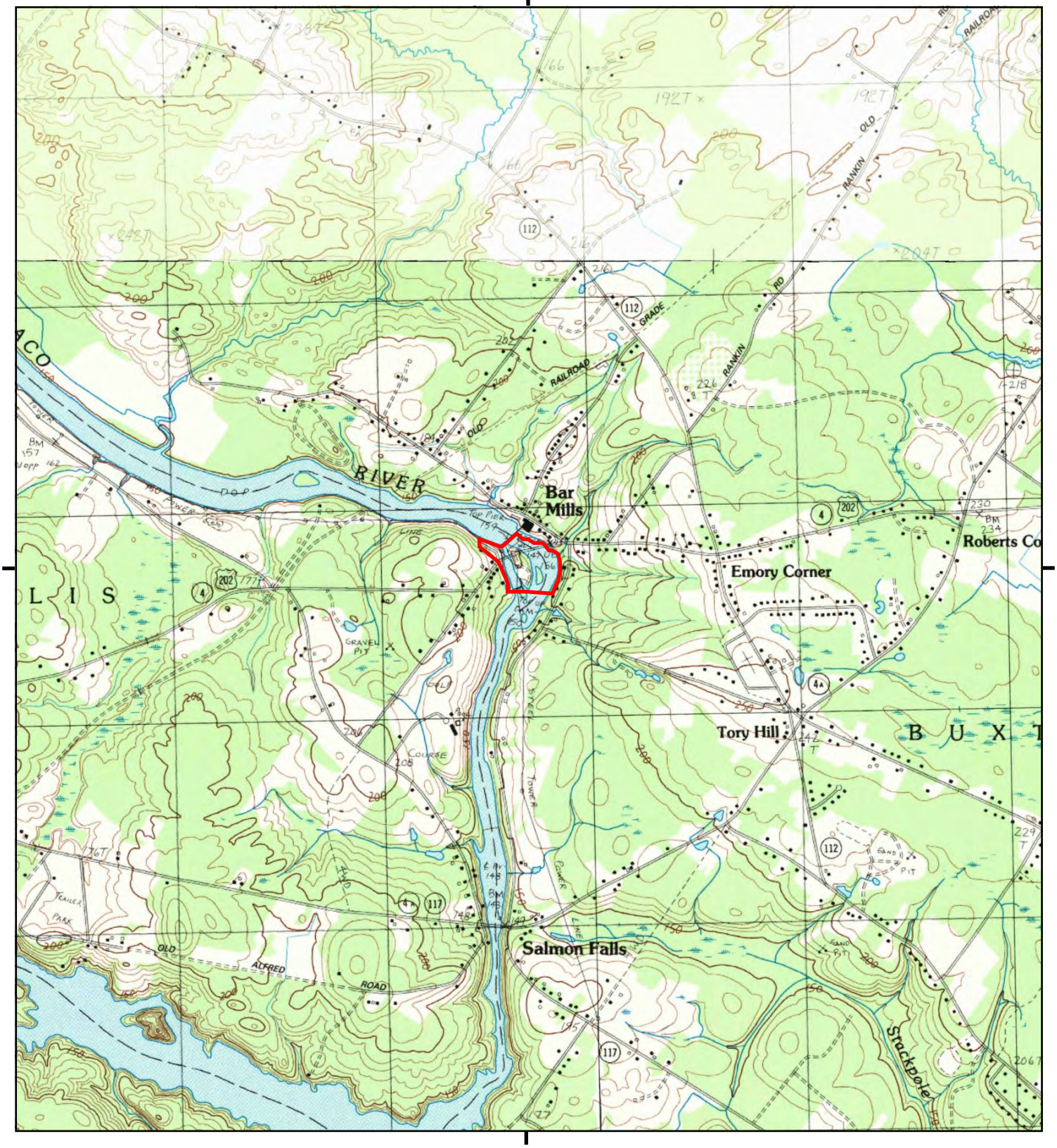
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bar Mills, 2014, 7.5-minute
N, Standish, 2014, 7.5-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N



This report includes information from the following map sheet(s).

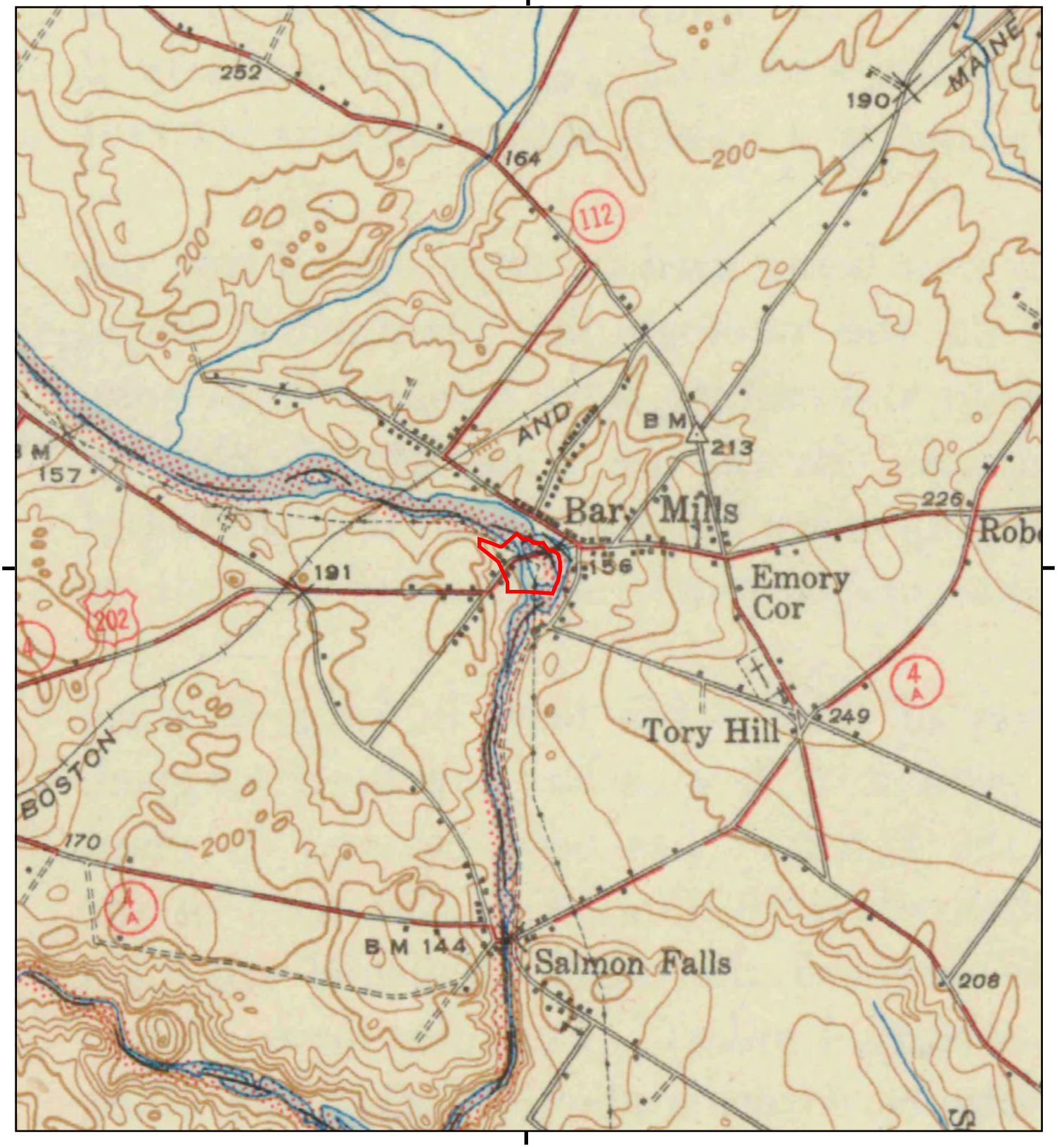
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bar Mills, 1983, 7.5-minute
N, Standish, 1983, 7.5-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

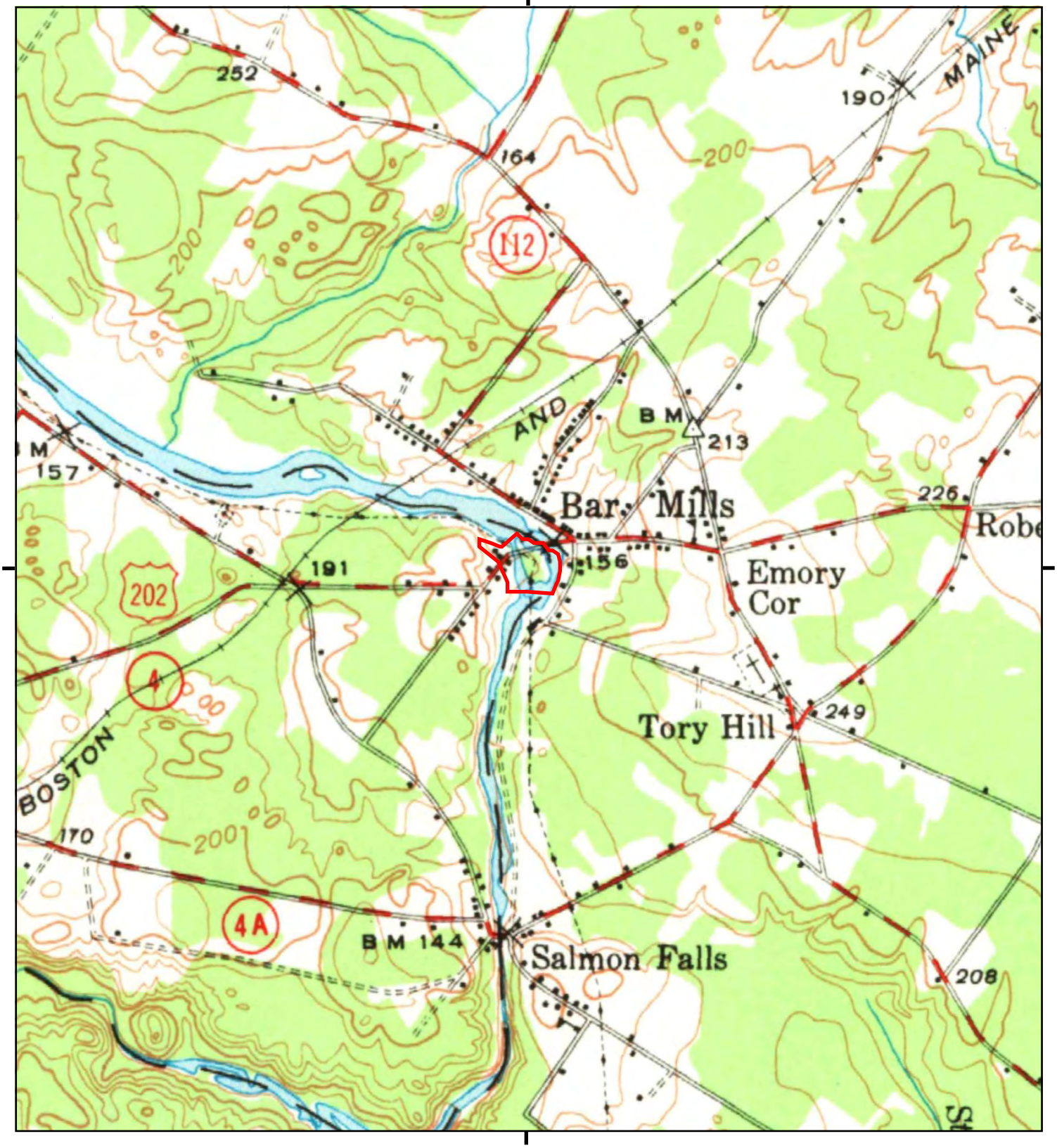
TP, Buxton, 1944, 15-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N

Historical Topo Map

1942



This report includes information from the following map sheet(s).

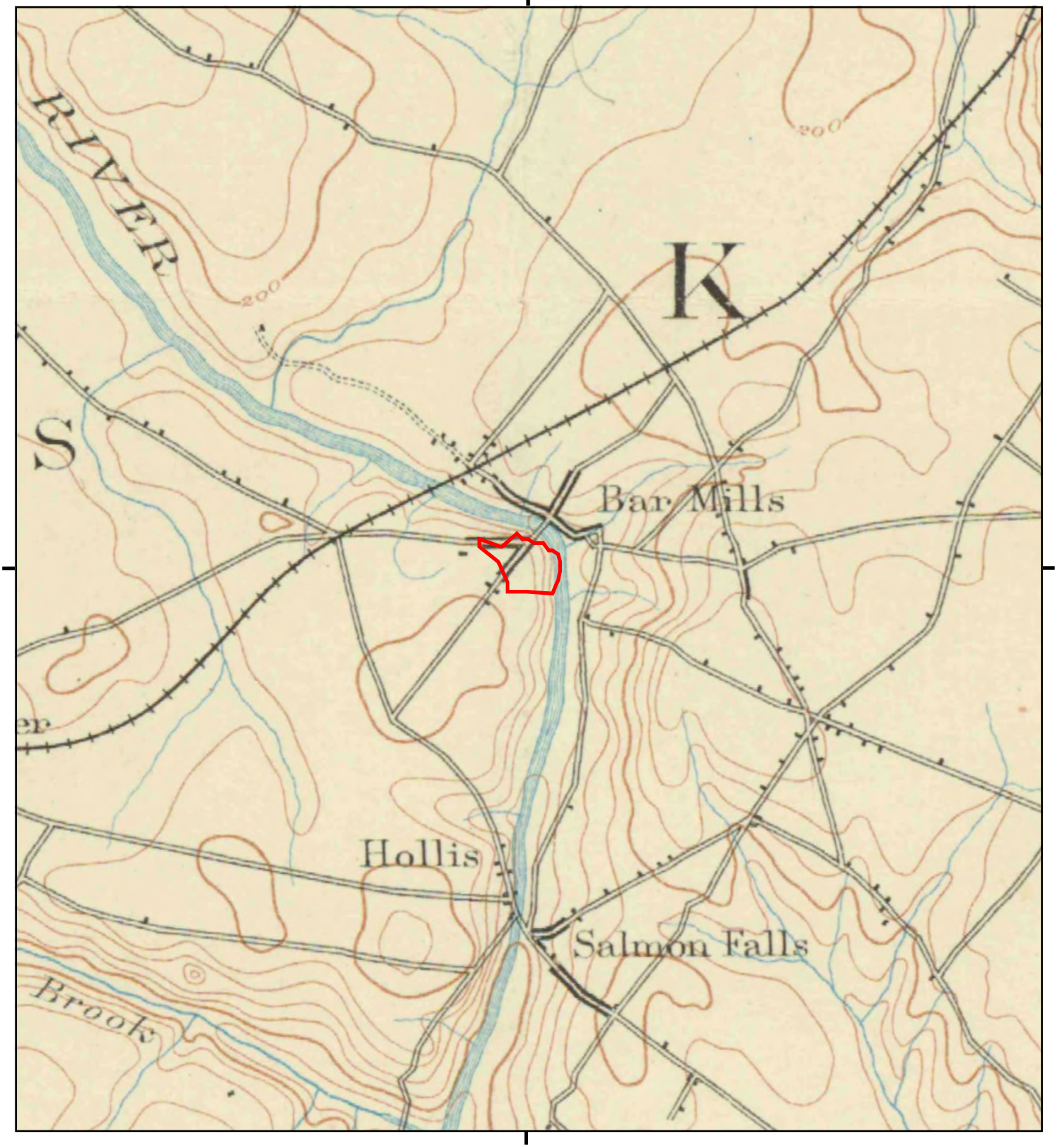
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buxton, 1942, 15-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N



This report includes information from the following map sheet(s).

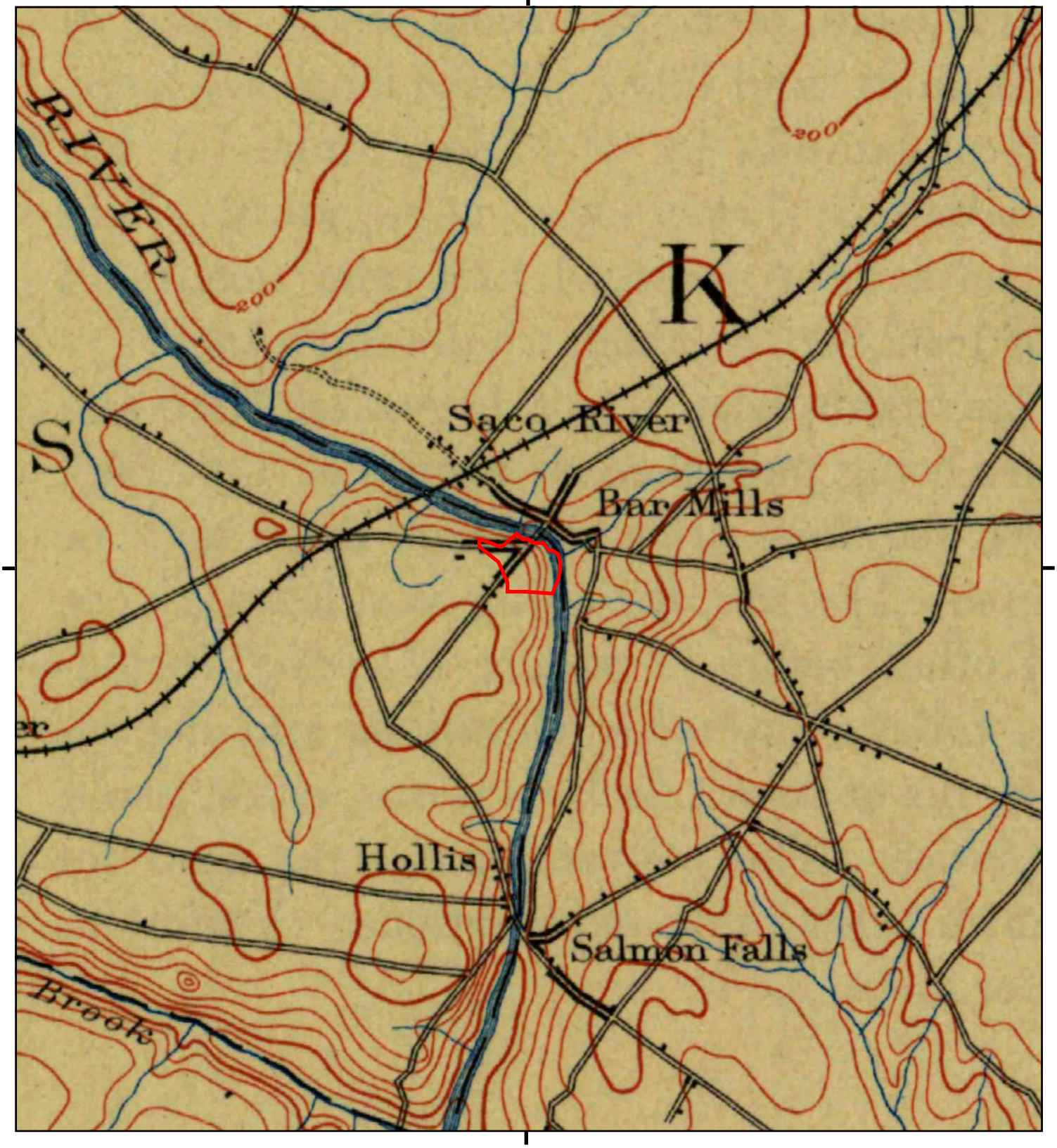
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buxton, 1893, 15-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N



This report includes information from the following map sheet(s).

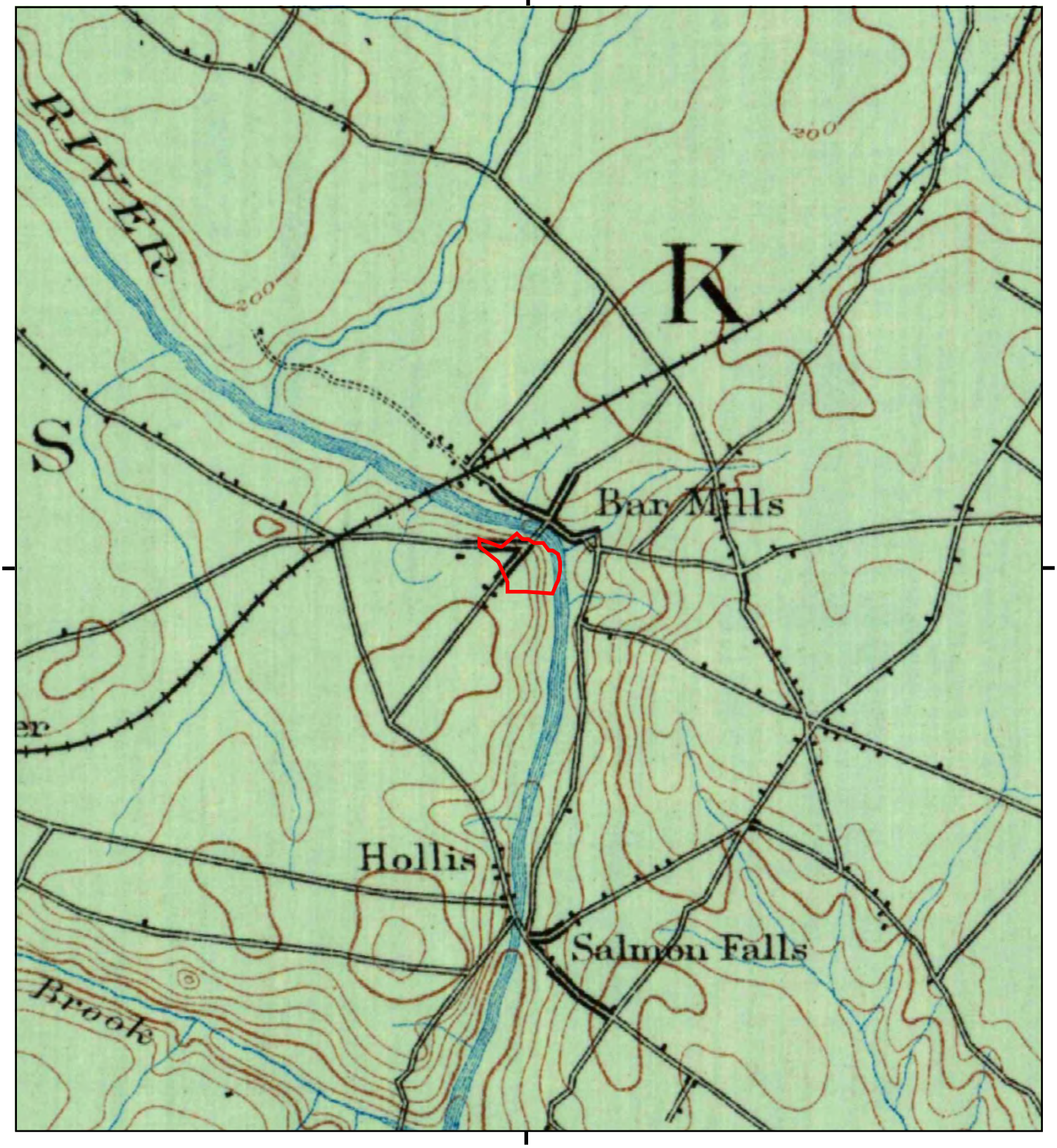
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buxton, 1892, 15-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buxton, 1891, 15-minute

SITE NAME: Bar Mills Hydroelectric Project
ADDRESS: Bar Mills Road
Hollis, ME 04042
CLIENT: TRC

N

Bar Mills Hydroelectric Project
Bar Mills Road
Hollis, ME 04042

Inquiry Number: 7321371.5
May 01, 2023

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2020	☑	☐	EDR Digital Archive
2017	☑	☐	Cole Information
2014	☑	☐	Cole Information
2010	☑	☐	Cole Information
2005	☑	☐	Cole Information

FINDINGS

TARGET PROPERTY STREET

Bar Mills Road
Hollis, ME 04042

Year	*CD Image*	*Source*
BAR MILLS RD		
2020	pg A2	EDR Digital Archive
2017	pg A5	Cole Information
2014	pg A6	Cole Information
2010	pg A7	Cole Information
2005	pg A8	Cole Information

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BAR MILLS RD 2020

9	AARON BAGLIEN
	ANNA BAGLIEN
	SARAH FLUET
13	ROBIN NICKERSON
17	FAY PARKER
	LAURIE PARKER
	RICHARD ELWELL
	ROBERT PARKER
23	DEBORA WALSH
	STEPHEN WALSH
	TERRY CRAM
29	MARIE RAMSEY
	PLUMMER GARRETT
	TROY PLUMMER
62	HEATHER SULLIVAN
	SCOTT CRAWFORD
63	KAREN ROWELL
81	JEANNETTE MARTINEAU
	RICHARD TUCKER
82	BERTRAND GIRARD
	SHARANN CRESSEY
	SUSANNA GIRARD
85	ANDREW WARREN
88	LYNN HALL
97	CECIL BENSON
	DANIEL VELA
	REBECCA BENSON
98	KEITH SNOW
	SANDRA SNOW
110	MELISSA LAFRANCE
	SHAWN LAFRANCE
116	ANDREW SHORTILL
117	JEAN GREEN
	MARION GREEN
	SHAWN HARRINGTON
142	BARBARA LAWSON
	RICHARD LAWSON
146	FRANK FEENEY
	MELISSA FEENEY
155	DEMOULTON DESIGNS
	HELEN GOLDING
	PAMELA NUNES
	THOMAS NUNES
164	CATHY MCKINNON
	MAXINE WHITEHOUSE
165	DELIA MURPHY
175	ANGELA DAY
179	GREGORY DOWNS
	JENNIFER DOWNS
	STACY MAYBERRY

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BAR MILLS RD 2020 (Cont'd)

180	CAROL MESERVE
	MICHELLE MESERVE
	RICHARD MESERVE
	SCOTT MESERVE
185	RICHARD MAYBERRY
	SHARYL MAYBERRY
	STACY MAYBERRY
188	PAMELA DUFRESNE
	PATRICK DUFRESNE
236	STEPHEN CRAM
247	BARBARA WILLIAMSON
	BLAKE WILLIAMSON
267	CATHERINE TOPPI
	CHARLES TOPPI
	ERICA CHADWICK
270	AMBER MORANG
	ANDREW KING
	ASHLEY GOULET
	BRYANT SEGLER
	CHRIS STANLEY
	CHRISTOPHER HUNTER
	CODY BRYANT
	CYNTHIA STOVER
	DEBORAH GRANGER
	JAIME ROGERS
	NATASHA HOLYOKE
	NICOLE PISCIOTTA
	SABRINA DIPPOLITO
	SHAWN CRAM
	SUSAN THIBODEAU
	TAMMIE RANDALL
	TINA ROBERGE
	ZACK LEWIS
303	ANDY MORGAN
	DONALD YOUNG
	MICHELLE CORMIER
	PAUL FROMAN
304	DONNA HANSON
335	SCOTT HANSON
353	DEBBIE REALI
	DONALD THOMPSON
	EVELYN THOMPSON
	STEVEN REALI
386	LORA DRUMMOND
395	KIMBERLY OBRION
	LUKE VASHON
422	CYNTHIA BUCK
442	GARY EBERT
	IRMA EBERT
	LARRY EBERT

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BAR MILLS RD 2020 (Cont'd)

442 MELISSA EBERT
SANDRA EBERT
443 BRENT WENNER
RHONDA BARNES

Target Street	Cross Street	Source
✓	-	Cole Information

BAR MILLS RD 2017

9	BAGLIEN, AARON C
13	SEEKINS, GARY
17	SCHRIVER, TIMOTHY P
23	WALSH, STEPHEN J
29	RAMSEY, MARIE B
62	SULLIVAN, HEATHER A
63	ROWELL, ALLAN W
81	MARTINEAU, JENNETTE M
82	GIRARD, BERTRAND F
85	WARREN, ANDREW B
110	LAFRANCE, SHAWN R
116	SHORTILL, ANDREW
117	HARRINGTON, SHAWN A
142	LAWSON, RICHARD C
146	FEENEY, FRANCIS R
155	NUNES, THOMAS E
164	WHITEHOUSE, DOUGLAS M
165	MURPHY, MICHAEL X
179	MAYBERRY, STACY R
180	MESERVE, RICHARD L
188	DUFRESNE, PATRICK S
236	CRAM, STEPHEN L
247	WILLIAMSON, MICHAEL A
267	TOPPI, CHARLES A
270	BEHRE, KIMBERLY
	CRAM, KEN
	GARNER, CATHERINE
	GOULET, ASHLEY
	HUNTER, ROBERTA
	MORANG, AMBER
	PELLETIER, SHANE
	RANDALL, TAMMIE J
	SEGLER, MICHELE
	THOMAS, LARRY
285	RITTENHOUSE, BEVERLY J
303	FROMAN, PAUL D
304	HANSON, DONNA M
335	HANSON, SCOTT S
395	VASHON, LUKE I
422	BUCK, CYNTHIA L
446	WILSON, GREG J

Target Street	Cross Street	Source
✓	-	Cole Information

BAR MILLS RD 2014

9	GRAY, CASEY
13	SEEKINS, GARY
17	SCHRIVER, TIMOTHY P
23	WALSH, STEPHEN J
29	RAMSEY, MARIE B
62	SULLIVAN, HEATHER A
63	ROWELL, ALLAN W
81	MARTINEAU, JENNETTE M
82	GIRARD, BERTRAND F
85	WARREN, ANDREW B
97	BENSON, CECIL A
98	SNOW, SANDRA E
110	LAFRANCE, SHAWN R
116	SHORTILL, ANDREW
117	GREEN, JEAN M
142	LAWSON, RICHARD C
146	FEENEY, MELISSA
155	NUNES, THOMAS E
164	WHITEHOUSE, MAXINE B
165	MURPHY, MICHAEL X
179	MAYBERRY, RICHARD W
180	MESERVE, RICHARD L
185	OCCUPANT UNKNOWN,
188	LINK, JESSICA S
236	OCCUPANT UNKNOWN,
237	OCCUPANT UNKNOWN,
247	OCCUPANT UNKNOWN,
253	OCCUPANT UNKNOWN,
267	CHADWICK, ERICA J
270	COBB, WALTER H
	LANDRY, ROSLYN M
	LINDSAY, M M
	RUDDEN, WILLIAM
	SMITH, KATHLEEN L
	STANLEY, CHRIS
	THIBODEAU, BRUCE A
	WILLIAMSON, MICHAEL K
303	FROMAN, PAUL D
304	HANSON, DONNA M
335	HANSON, SCOTT L
378	OCCUPANT UNKNOWN,
395	OBRION, KIM J
422	BUCK, CYNTHIA L
437	OCCUPANT UNKNOWN,
443	BREWER, AMANDA
	MAYTON, KEITH J
	WENNER, BRENT W
446	WILSON, GREG J

Target Street	Cross Street	Source
✓	-	Cole Information

BAR MILLS RD 2010

9	FLUET, SARAH E
13	SEEKINS, GARY
14	US POST OFFICE
17	ELWELL, RICHARD V
23	WALSH, STEPHEN J
29	RAMSEY, MARIE
62	SULLIVAN, BRUCE
63	ROWELL, ALLAN W
81	TUCKER, RICHARD A
82	GIRARD, SUSANNA
85	WARREN, ANDREW B
97	BENSON, CECIL A
110	LAFRANCE, SHAWN R
116	SHORTILL, ANDREW
117	DUBOIS, CALEB C
142	LAWSON, BARBARA J
146	YERXA, STEVEN
155	NUNES, THOMAS E
164	OCCUPANT UNKNOWN,
165	MURPHY, MICHAEL X
175	BUSHLEY, STEVEN
179	MAYBERRY, STACY R
180	MESERVE, RICHARD L
185	OCCUPANT UNKNOWN,
188	OCCUPANT UNKNOWN,
236	CRAM, STEPHEN L
237	ADAMS, NEAL A
267	OCCUPANT UNKNOWN,
270	BAKER, JASON E
	COBB, WALTER H
	GRANGER, RICHARD F
	MCLEOD, VICTOR J
	MORTON, NATASHA
	STANLEY, CHRIS
	STOVER, CINDY A
	WILLIAMSON, WILLIAM H
304	HANSON, DONNA M
335	HANSON, SCOTT L
378	GALE, BRYAN
395	OBRION, KIM J
422	BUCK, CYNTHIA L
437	FROST, YVONE B
443	TRIPP, ANDREW B
446	WILSON, GREG J

Target Street	Cross Street	Source
✓	-	Cole Information

BAR MILLS RD 2005

17	ELWELL, RICHARD V
62	SULLIVAN, BRUCE
63	ROWELL, ALLAN W
81	TUCKER, RICHARD A
85	WARREN, ANDREW B
110	LAFRANCE, SHAWN R
116	FORBES, TRINA L
142	LAWSON, BARBARA J
146	OCCUPANT UNKNOWN,
155	OCCUPANT UNKNOWN,
164	OCCUPANT UNKNOWN,
165	SANBORN, SUMNER E
175	BUSHLEY, STEVEN
180	MESERVE, RICHARD L
185	MAYBERRY, RICHARD W
188	GOSSOM, CYNTHIA E
236	OCCUPANT UNKNOWN,
237	CHAPMAN, MICHAEL L
267	OCCUPANT UNKNOWN,
270	BAKER, JASON E
	BELANGER, J
	BUZZELL, HARRY W
	COBB, WALTER H
	DAVIS, ASHLEY
	GRANGER, DEBORAH J
	GRIZZARD, LINDA
	HARRIMAN, LAURA
	HUDDY, APRIL
	LANDRY, MARK A
	SMITH, ZACHERY
	STOVER, CINDY A
	WEST, TIMOTHY S
285	OCCUPANT UNKNOWN,
303	OCCUPANT UNKNOWN,
335	OCCUPANT UNKNOWN,
378	OCCUPANT UNKNOWN,
422	BUCK, CYNTHIA L
446	OCCUPANT UNKNOWN,

Bar Mills Hydroelectric Project

Bar Mills Road

Hollis, ME 04042

Inquiry Number: 7321371.8

April 28, 2023

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

04/28/23

Site Name:

Bar Mills Hydroelectric Project
Bar Mills Road
Hollis, ME 04042
EDR Inquiry # 7321371.8

Client Name:

TRC
6 Ashley Drive
Scarborough, ME 04074
Contact: Zack Bonin

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Search Results:

Year	*Scale*	*Details*	*Source*
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2015	1"=500'	Flight Year: 2015	USDA/NAIP
2011	1"=500'	Flight Year: 2011	USDA/NAIP
2007	1"=500'	Flight Year: 2007	USDA/NAIP
2003	1"=500'	Flight Date: May 05, 2003	USGS
1998	1"=500'	Acquisition Date: April 29, 1998	USGS/DOQQ
1992	1"=500'	Flight Date: September 25, 1992	USGS
1987	1"=500'	Flight Date: May 13, 1987	USDA
1978	1"=500'	Flight Date: April 23, 1978	USGS
1975	1"=500'	Flight Date: October 21, 1975	USGS
1960	1"=500'	Flight Date: June 01, 1960	USGS
1940	1"=500'	Flight Date: November 11, 1940	USGS

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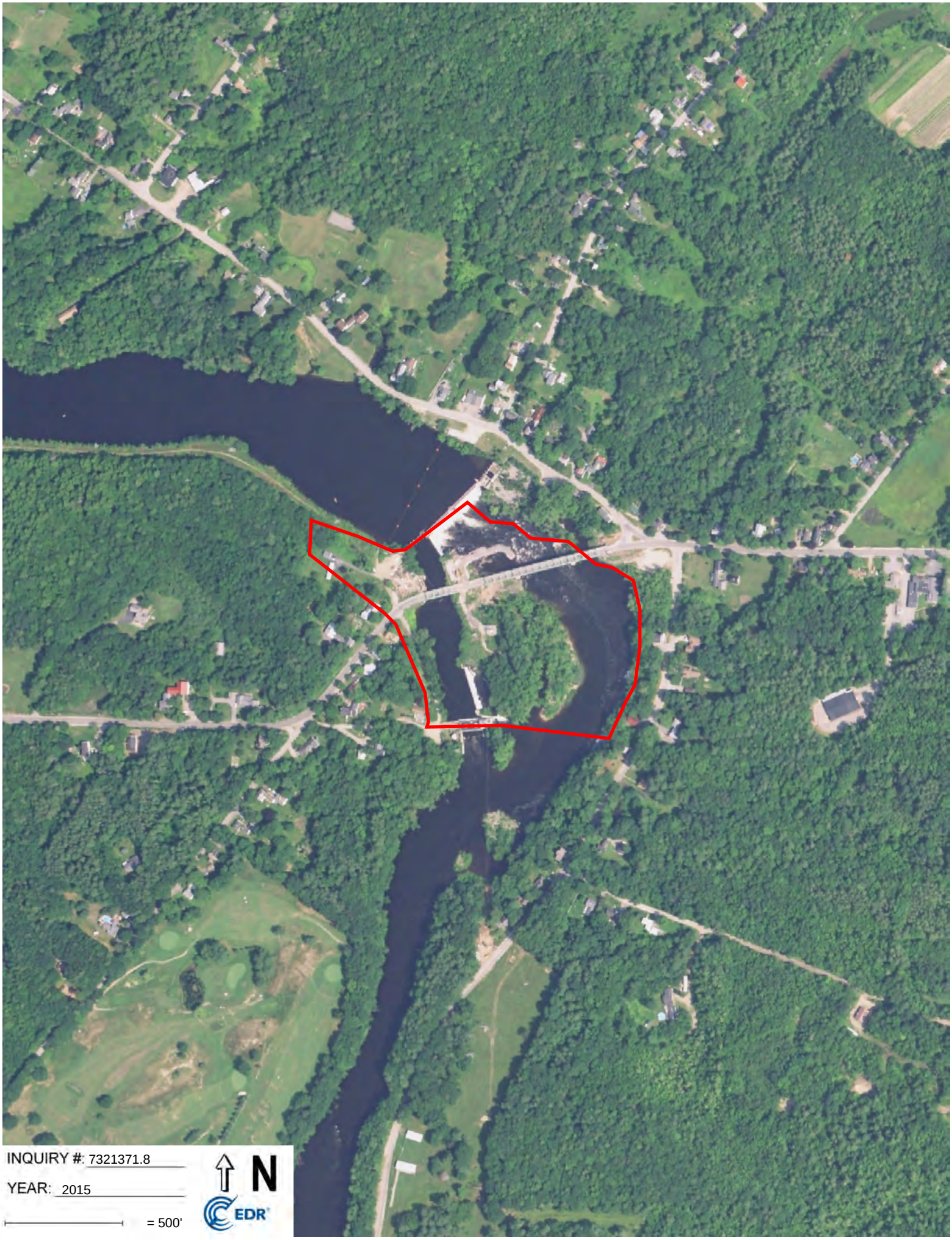
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INQUIRY #: 7321371.8
YEAR: 2018
= 500'
N
EDR


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YEAR: 2015
= 500'
N
EDR


INQUIRY #: 7321371.8
YEAR: 2011
= 500'
N
EDR


INQUIRY #: 7321371.8
YEAR: 2007
= 500'
N
EDR


5-5-03
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EDR
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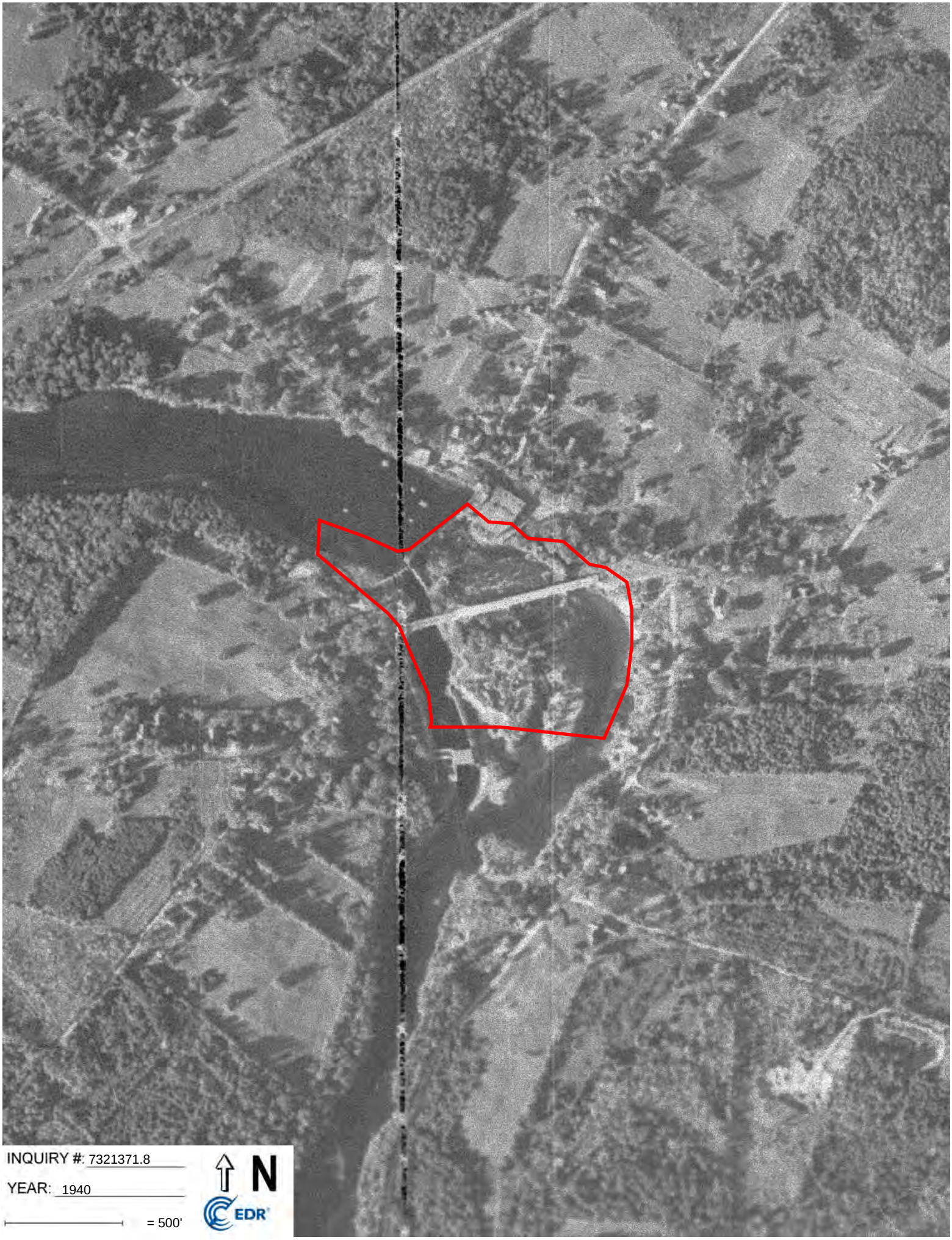

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EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


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= 500'
N
EDR


INQUIRY #: 7321371.8
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 7321371.8
YEAR: 1975
= 500'
N
EDR


INQUIRY #: 7321371.8
YEAR: 1960
= 500'
N
EDR


INQUIRY #: 7321371.8
YEAR: 1940
= 500'
N
EDR

Appendix C:
Other Reference Information

DRAFT

Appendix D:
Photograph Log

DRAFT

Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
1	5/18/2023

Description:
Overview of Bar Mills Dam, viewed looking north from canal bridge. Canal Headworks, Spillway, Bridges, and West Spillway and Abutment are to be removed.



Photo No.	Date
2	5/18/2023

Description:
Bar Mills Dam viewed looking northwest from Bar Mills Bridge. Dam Bridge, West Spillway and Abutment are to be removed. East Spillway is to remain.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
3	5/18/2023

Description:
Eastern portion of Bar Mills Dam viewed looking southwest from the remains of the demolished Rogers Fibre Mill. Dam Bridge and Flashboards are to be removed. East Spillway is to remain.



Photo No.	Date
4	5/18/2023

Description:
Western portion of Bar Mills Dam viewed looking northeast. Dam Bridge, Flashboards, and West Spillway and Abutment are to be removed.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
5	5/18/2023

Description:
Concrete Spillway (to be removed) and Canal viewed looking south from the Canal Headworks.



Photo No.	Date
6	5/18/2023

Description:
Dam Bridge (to be removed) viewed looking southwest.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
7	5/18/2023

Description:
Dam Building located in the center of the bridge atop Bar Mills Dam (to be removed).



Photo No.	Date
8	5/18/2023

Description:
Motor-driven gate opener (oil-containing equipment) situated below the Dam Bridge in the middle of its span across the river (to be removed).



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
9	5/18/2023

Description:
Electrical panel on western portion of the dam bridge (to be removed).



Photo No.	Date
10	5/18/2023

Description:
Saco River looking upstream from Bar Mills Dam. Portions of a former timber crib dam exist within a few hundred feet upstream of, and parallel with, the current dam.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
11	5/18/2023

Description:
Parking lot situated west of Bar Mills Dam, viewed looking northeast towards the dam.



Photo No.	Date
12	5/18/2023

Description:
Boat launch located north of the parking lot, viewed looking northeast.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
13	5/18/2023

Description:
Transmission line right-of-way located northwest of Bar Mills Dam, viewed looking northwest from the parking lot.



Photo No.	Date
14	5/18/2023

Description:
Remains of demolished Rogers Fibre Mill, viewed from the bridge atop the Bar Mills Dam.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
15	5/18/2023

Description:
Interior of the remains of the demolished Rogers Fibre Mill.



Photo No.	Date
16	5/18/2023

Description:
Powerhouse and transmission line structures located downstream of Bar Mills Dam, viewed looking south from the Canal Bridge.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
17	5/18/2023

Description:
Canal viewed looking north from the Powerhouse. Removal of the eastern spillway is pending.



Photo No.	Date
18	5/18/2023

Description:
Canal Road leading to Powerhouse, viewed looking south.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
19	5/18/2023

Description:
Powerhouse (to remain), Derrick Crane and Crane Building (removal pending), viewed looking east from the access gate off Canal Road. Note: this portion of the Project is not included in the subject property; however, removal of the crane and crane building are pending.



Photo No.	Date
20	5/18/2023

Description:
Interior of the Crane Building and three motor-operated winch systems (each containing up to 1 quart of oil).



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
21	5/18/2023

Description:
Eastern portion of the Powerhouse and Spillway, viewed looking west from Usher Island.



Photo No.	Date
22	5/18/2023

Description:
CMP-owned substation on Usher Island.



Photograph Log

Client Name:	Site Location:	Project No.:
Kleinschmidt Associates	Bar Mills Project Hollis and Buxton, Maine	510195

Photo No.	Date
23	5/18/2023

Description:
Three pole-mounted electrical transformers adjacent to the parking lot.



Appendix E:
TRC Staff and Environmental Professional Qualifications/Resumes

DRAFT

QUALIFICATIONS OF PROJECT STAFF

Thomas R. Eschner, PG (Senior Project Manager): Tom is a licensed Professional Geologist and Senior Project Manager with over 30 years of experience in site assessments, site characterization, and engineering feasibility studies pertaining to groundwater, soil, and surface water and sediment impacts from hazardous waste sites related to both organic and inorganic contamination. In particular, he has expertise managing large, long-duration, multi-media projects and the associated volumes of chemical, hydrogeologic, spatial, and engineering data. Mr. Eschner has served as site manager for several Comprehensive Environmental Response, Compensation Liability Act (CERCLA) investigations, New York State Superfund remedial investigations/feasibility studies, and site manager or technical lead for numerous other investigations, closure studies, and environmental site assessments for property acquisition and divestiture both in the U.S. and abroad. In addition, he has extensive experience in environmental permitting, environmental insurance settlement and litigation support, and environmental management systems development and implementation.

Zachary E. Bonin, PG (Project Manager / Geologist): Mr. Bonin is a Project Manager/Geologist with TRC and holds a dual Bachelor of Science degree in Environmental Geology and Chemistry from Northeastern University (2012). He has over 10 years of experience assisting and managing environmental projects, including ASTM Phase I/Phase II Environmental Site Assessments (ESAs), site remediation/restoration programs, federal/state permitting, emergency response and spill prevention planning, construction management, and emergency spill response oversight. Mr. Bonin has completed projects for a broad range of clients, including developers, lenders, corporations, energy transmission/distribution companies, utilities, state agencies, and municipalities. Mr. Bonin has held a Professional Geologist license since 2020.

Meg O'Brien (Staff Geologist): Mrs. Meg O'Brien is a Staff Geologist with TRC and holds a Bachelor of Science in Geology from Bates College (2022). Mrs. O'Brien has one year of environmental experience at TRC and has previously held a position as a Research Assistant for the Plum Island Ecosystems Long Term Ecological Monitoring Project at the Marine Biological Laboratory in Woods Hole, MA. She currently assists with performance of Phase I and Phase II Environmental Site Assessments and she has assisted with long-term environmental oversight projects.

APPENDIX D

WETLAND, BOTANICAL, AND SHORELINE EROSION STUDY

Wetland, Botanical, and Shoreline Erosion Study

Bar Mills Project
FERC No. 2194



Prepared for:
Brookfield Renewable

Prepared by:
Kleinschmidt Associates

August 2025

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1.0 INTRODUCTION

The Bar Mills Project (FERC No. 2194) is a run-of-river hydroelectric facility on the Saco River in Hollis, Maine. It is downstream of the West Buxton Dam and upstream of the Skelton Dam. The Bar Mills Project is one of six hydroelectric projects on the Saco River that are owned and operated by Brookfield White Pine Hydro (BWPH), LLC, a Brookfield Renewable company. On November 30, 2020, BWPH notified the Federal Energy Regulatory Commission (FERC) of its intent to surrender its FERC license for the Bar Mills Project. BWPH is considering alternatives of partial and full spillway removal as part of balancing operational, environmental, and future dam safety needs.

BWPH issued a Draft Study Plan on May 31, 2023, to provide federal and state agencies, stakeholders, and the public with a description of studies and methods that BWPH intended to conduct in support of the Application for License Surrender and Decommissioning Plan that will be filed with FERC for the proposed partial breach of the Bar Mills Dam. Following submittal of the study plan, BWPH conducted studies to evaluate potential project effects of both partial and full spillway removal, identify mitigation measures, and provide information necessary for state and federal permit applications (e.g., Maine Department of Environmental Projection's Maine Waterway Development and Conservation Act and U.S. Army Corps of Engineers (USACE) Section 401 permit applications).

As outlined in the study plan, the goal of the Wetland, Botanical Resources, and Shoreline Erosion studies included:

- Characterizing existing wildlife, botanical, and wetland resources, including invasive botanical species to the extent they have the potential to occur, and evaluate the effects of lowered water levels upstream of Bar Mills Dam on these resources.
- Determining areas of the shoreline along the Bar Mills impoundment that may have higher erosion potential in the post-partial or full removal conditions that could warrant enhancement or mitigation measures to be incorporated into the Surrender Application and Decommissioning Plan.

Field studies were conducted on July 16, 17, and 18, 2024. Prior to the field studies, the Bar Mills impoundment was drawn down 5 feet from its normal impoundment level to the approximate post-breach water level. The elevation of the impoundment elevation during the surveys was 141.75 ft NGVD 29.

1.1 Study Area

The Bar Mills Project consists of a dam structure, an impoundment, a powerhouse, and appurtenant features. The entire hydroelectric project, including the impoundment and upstream flowage easements, extends approximately 5.3 miles along the Saco River from river mile 19, which is approximately 0.3 miles downstream Bar Mills Dam, to river mile 24.3, which is the downstream extent of the West Buxton Project tailrace. The study area for the Wetland, Botanical Resources, and Shoreline Erosion Studies was primarily the Bar Mill impoundment shoreline. Invasive botanical species were also documented along the shoreline and on the island directly downstream of the Bar Mills Dam (Figure 1-1).



Figure 1-1 Bar Mills Project Study Area

1.2 Methods

1.2.1 Data Collection

1.2.1.1 Wetlands, Watercourses, and Invasive Plant Species

BWPH conducted an initial desktop investigation to map and describe wetlands known to occur adjacent to the Saco River within the project boundary. Prior to the field survey, a preliminary map was created in ArcGIS Online using layers containing maps from the National Wetlands Inventory (USFWS 2024), Natural Resource Conservation Service soil maps (NRCS 2024), U.S. Geological Survey 7.5-minute quadrangles, and aerial imagery. This map was used during field data collection, in conjunction with the Esri ArcGIS Field Maps mobile application, to assist with the identification of potential wetlands in the study area.

Under drawdown conditions, a field survey was conducted via boat and on foot on July 16 and 17, 2024, to characterize, classify, and verify wetland communities along the immediate shoreline of the project boundary. Wetland areas were identified based on visual observation using standard methods including signs of hydrology (e.g., drainage patterns, standing water), hydrophytic vegetation, and soils in accordance with the USACE 1987 Wetlands Delineation Manual (USACE 1987) and the 2012 Northcentral and Northeast Region Regional Supplement (Version 2.0) (USACE 2012). Potential effects of post-breach conditions on wetlands, shoreline vegetation, and tributary streams were assessed. During the field efforts, invasive botanical species were documented as part of a baseline assessment of existing conditions. Wetlands, watercourses (and associated culverts), and invasive botanical species were photo-documented, and mapping was completed using an Android mobile device equipped with the Esri ArcGIS Field Maps application. Field data were transferred to the GIS database to create figures describing the location, type, and extent of wetlands in the study area.

1.2.1.2 Bank Erosion

During drawdown conditions on July 18, 2024, a bank erosion survey was conducted along the exposed shoreline of the Saco River. The stream banks of three perennial tributaries (Smith Brook, Crockett Brook, and Casper Brook) were also investigated up to where the impoundment influence was no longer present (i.e., no substantial drawdown of water levels). Bank conditions were assessed using the Bank Erosion Hazard Index (BEHI) method developed by Rosgen (2009). BEHI data were collected along the shoreline in the study area whenever there were significant changes in bank conditions. The BEHI model

evaluates the susceptibility of a stream bank to erosion to indicate its potential to erode, if necessary hydraulic forces (i.e., water shear stress and water velocity) are present. Various factors, which are presented below, were evaluated in the field, and a rank was assigned to each reach of stream bank based on the interaction of those factors and the known susceptibility of similar banks based on prior evaluations of stream bank stability in the U.S. (Rosgen 2009).

The BEHI evaluation was done considering the anticipated bank conditions post-dam breach. Thus, there was minimal vegetation on the lower portions of the banks that was evaluated and there were many areas of sand deposition along the shoreline that tended to increase the BEHI scores, as the banks were evaluated for the immediately post-drawdown condition. The ranking did not consider vegetation re-growth on the banks, which is known to occur very rapidly if a drawdown occurs during the growing season, given the presence of seed banks in the sediment, water available in the riverbank, and sunlight during the growing season. Further, no probing of the sediment or bank material occurred, but the Saco River is known to have a cobble and bedrock bed (i.e., erosion resistant materials underlying the softer sand/silt on the stream banks deposited due to current impounded condition). This was the most conservative case, and the banks will likely stabilize within 1 year after the drawdown, once re-vegetation occurs.

For each change in bank conditions/reach, the following data were collected (Figure 1-2):

Bank Height/Bankfull[1] Height Ratio: The ratio of bank height to bankfull height.

Root Depth/Bank Height Ratio: The depth of root penetration relative to bank height.

Root Density: The density of roots within the bank material.

Bank Angle: The angle of the bank slope from horizontal.

Surface Protection: The extent of surface protection provided by vegetation and other materials.

Bank Material: The composition and cohesiveness of the bank material.

[1] This is a commonly used term in geomorphology and generally corresponds to the point at which water spills into the floodplain on a stable system, often corresponding to the 1–2-year return interval river flow event.

Bank conditions at each reach were photo-documented, and mapping was completed using an Android mobile device equipped with Esri ArcGIS Field Maps application. Field data were transferred to the GIS database to create shoreline erosion figures including BEHI rating, location, extent.

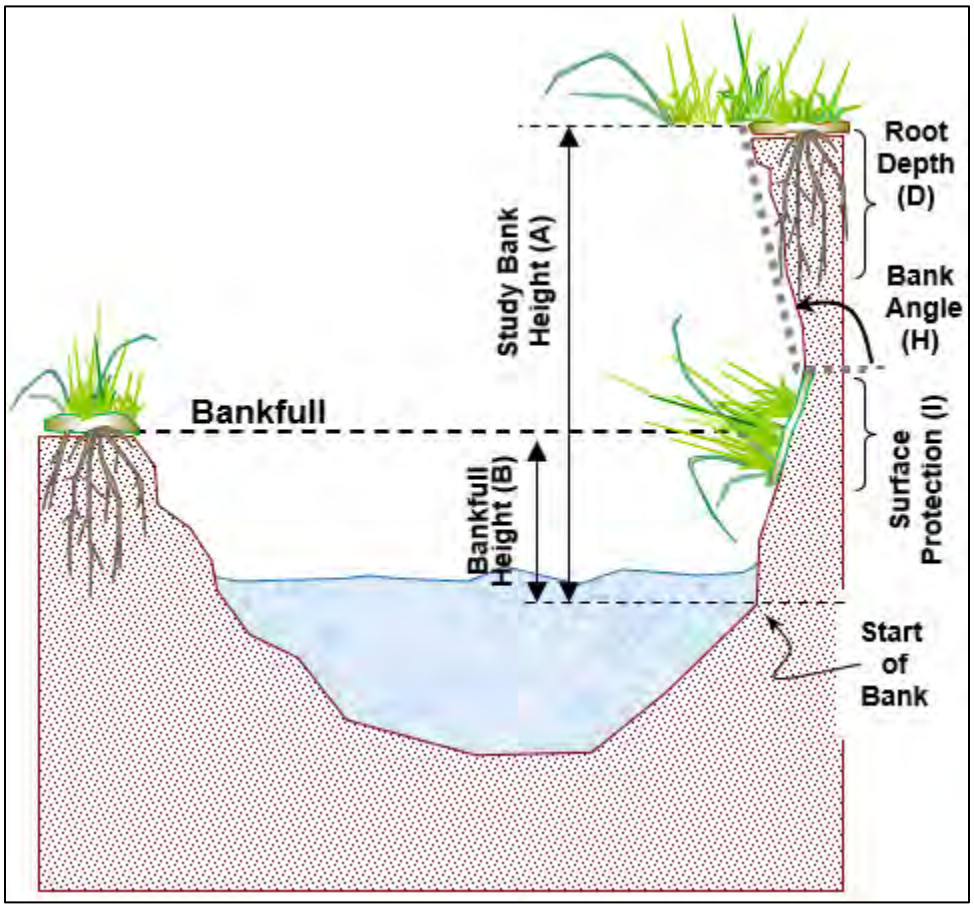


Figure 1-2 Diagram Depicting Bank Erosion Hazard Index Variables
Source: Rosgen 2009

1.2.2 Data Analysis

1.2.2.1 Wetlands

Following field surveys, GIS-based maps were developed depicting wetland habitats and watercourses. The field data were geo-referenced as polygons and overlaid on a base map. Wetland areas were approximated based on field observations, topography, National Wetland Inventory (NWI) data, soils information, and aerial imagery interpretation. The approximate acreage for each wetland type was calculated in ArcGIS Pro. Field data were then subjected to quality assurance and quality control procedures, including comparison of GIS maps with field notes, photographs, and ariel imagery to

verify the locations and extent of identified wetlands. Wetland functions and values were evaluated according to the standard USACE descriptive approach (i.e., the USACE Highway Methodology) (USACE 1999). This is a descriptive (qualitative) approach for evaluating the functions and values of wetlands based on the presence or absence of certain characteristics. For each wetland type, standard data were recorded for the most important biotic and abiotic characteristics to identify important wetland functions and values. This assessment was completed holistically for each wetland type. Investigators identified the principal functions and values associated with each wetland type.

1.2.2.2 Bank Erosion

The BEHI score for each river segment was calculated based on parameters collected in the field. Each parameter was scored according to the criteria outlined by Rosgen (2009), and the scores were summed to obtain the total BEHI score for each segment. Based on these scores, ratings were assigned to each river segment (see Table 1-1, from Rosgen 2009). Shorelines with higher BEHI ratings indicate a greater susceptibility to erosion while lower BEHI ratings indicate shorelines less vulnerable to bank erosion. The data and BEHI rating were then reviewed with a Rosgen Level IV-trained staff member to confirm appropriate rankings were applied. GIS-based maps were developed depicting the BEHI rating for each shoreline segment.

Table 1-1 Bank Erosion Hazard Index Rating Scale

BEHI Rating	BEHI Score
Very Low	5-9.5
Low	10-19.5
Moderate	20-29.5
High	30–39.5
Very High	40-45
Extreme	46-50

2.0 RESULTS

2.1 Wetlands

Excluding the Saco River itself, which is considered a riverine wetland, the study area contains approximately 76 acres of wetland habitat including palustrine emergent (PEM), palustrine scrub-shrub (PSS), palustrine forested (PFO), and palustrine unconsolidated bottom (PUB) wetlands (Table 2-1). Figure 2-1 through Figure 2-4 show the locations of verified wetlands and watercourses within and directly adjacent to the Bar Mills impoundment. A summary of expected changes to the existing wetlands at post-breach water levels can be found in Table 2-2 and Figure 2-5 through Figure 2-7. A complete list of wetland plant species observed in the study area is provided in Table 2-3 and photographs of each wetland are provided in Appendix A.

Table 2-1 Field Verified Wetlands Occurring within the Study Area

Wetland Type	Approximate Area (Acres)	Percent of Total Wetlands
Palustrine Emergent	15	20
Palustrine Scrub-Shrub	6	7
Palustrine Forested	54	72
Palustrine Unconsolidated Bottom	1	1
Total	**76**	**100**

Table 2-2 Summary of Expected Changes to Wetlands at Post-Breach Water Levels

Wetland ID	Current Resource Classification	Approximate Area (SF)	Approximate Area (AC)	Expected Resource Classification	Type of Expected Change	Notes
Wetlands With No Expected Change						
Wet A	PSS	5,942	0.1	PSS	No Change	This wetland occurs on an island directly below the West Buxton Dam. Because this wetland is found so far upstream of the Bar Mills Dam, it is unlikely that post-breach water levels will change its hydrological conditions
Wet B	PFO/PEM/PUB	120,542	2.8	PFO/PEM/PUB	No Change	This wetland is fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation
Wet C	PFO/PEM	149,227	3.4	PFO/PEM	No Change	This wetland is fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation
Wet E	PFO/PSS/PEM	1,349,858	31.0	PFO/PSS/PEM	No Change	This wetland is fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation
Wet F	PFO/PSS/PEM	28,845	0.7	PFO/PSS/PEM	No Change	This wetland is fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation

Wetland ID	Current Resource Classification	Approximate Area (SF)	Approximate Area (AC)	Expected Resource Classification	Type of Expected Change	Notes
Wet H	PFO	41,326	0.9	PFO	No Change	This wetland occurs in the floodplain of the river and is only affected by impoundment water levels during flood conditions
Wet I	PSS	570	0.0	PSS	No Change	This wetland is fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation
Wet L	PFO	1,093,496	25.1	PFO	No Change	This wetland is fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation
Wet M	PFO	24,151	0.6	PFO	No Change	This wetland is fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation
Wet N	PFO	17,989	0.4	PFO	No Change	This wetland occurs in the floodplain of the river and is only affected by impoundment water levels during flood conditions
Wet O	PFO	1,640	0.0	PFO	No Change	This wetland occurs in the floodplain of the stream and is only affected by impoundment water levels during flood conditions
Wet P	PFO	2,264	0.1	PFO	No Change	This wetland occurs in the floodplain of the river and is only affected by impoundment water levels during flood conditions

Wetland ID	Current Resource Classification	Approximate Area (SF)	Approximate Area (AC)	Expected Resource Classification	Type of Expected Change	Notes
Wet Q	PFO	385,730	8.9	PFO	No Change	This wetland occurs in the floodplain of the river and is only affected by impoundment water levels during flood conditions
Wetlands with Expected Changes						
Wet D	PEM	3,775	0.1	PEM	Shift towards new water elevation	The wicking of water though the exposed alluvial sand and silt will keep the upper layers of the wetland saturated. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks and open up space for other wetland species to spread vegetatively.
Wet G	PEM	25,218	0.6	PEM	Shift towards new water elevation	The wicking of water though the exposed alluvial sand and silt will keep the upper layers of the wetland saturated. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks and open up space for other wetland species to spread vegetatively.
Wet J	PSS	1,202	0.0	PSS	Shift towards new water elevation	The wicking of water though the exposed alluvial sand and silt will keep the upper layers of the wetland saturated. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks and open up space for other wetland species to spread vegetatively.

Wetland ID	Current Resource Classification	Approximate Area (SF)	Approximate Area (AC)	Expected Resource Classification	Type of Expected Change	Notes
Wet K	PEM	1,844	0.0	PEM	Shift towards new water elevation	The wicking of water though the exposed alluvial sand and silt will keep the upper layers of the wetland saturated. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks and open up space for other wetland species to spread vegetatively.
Wet R	PEM	840	0.0	PEM	Shift towards new water elevation	The wicking of water though the exposed alluvial sand and silt will keep the upper layers of the wetland saturated. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks and open up space for other wetland species to spread vegetatively.
Wet T	PEM	6,229	0.1	PEM	Shift towards new water elevation	The wicking of water though the exposed alluvial sand and silt will keep the upper layers of the wetland saturated. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks and open up space for other wetland species to spread vegetatively.

Wetland ID	Current Resource Classification	Approximate Area (SF)	Approximate Area (AC)	Expected Resource Classification	Type of Expected Change	Notes
Wet S	PUB	24,507	0.6	PEM	Wetland type conversion	This wetland receives hydrologic input from higher in the watershed and it is likely that the soils will remain hydric after the breach. The exposed soils are expected to quickly become vegetated with herbaceous species. Consequently, it is anticipated that this wetland will transition from a palustrine unconsolidated bottom to a palustrine emergent wetland

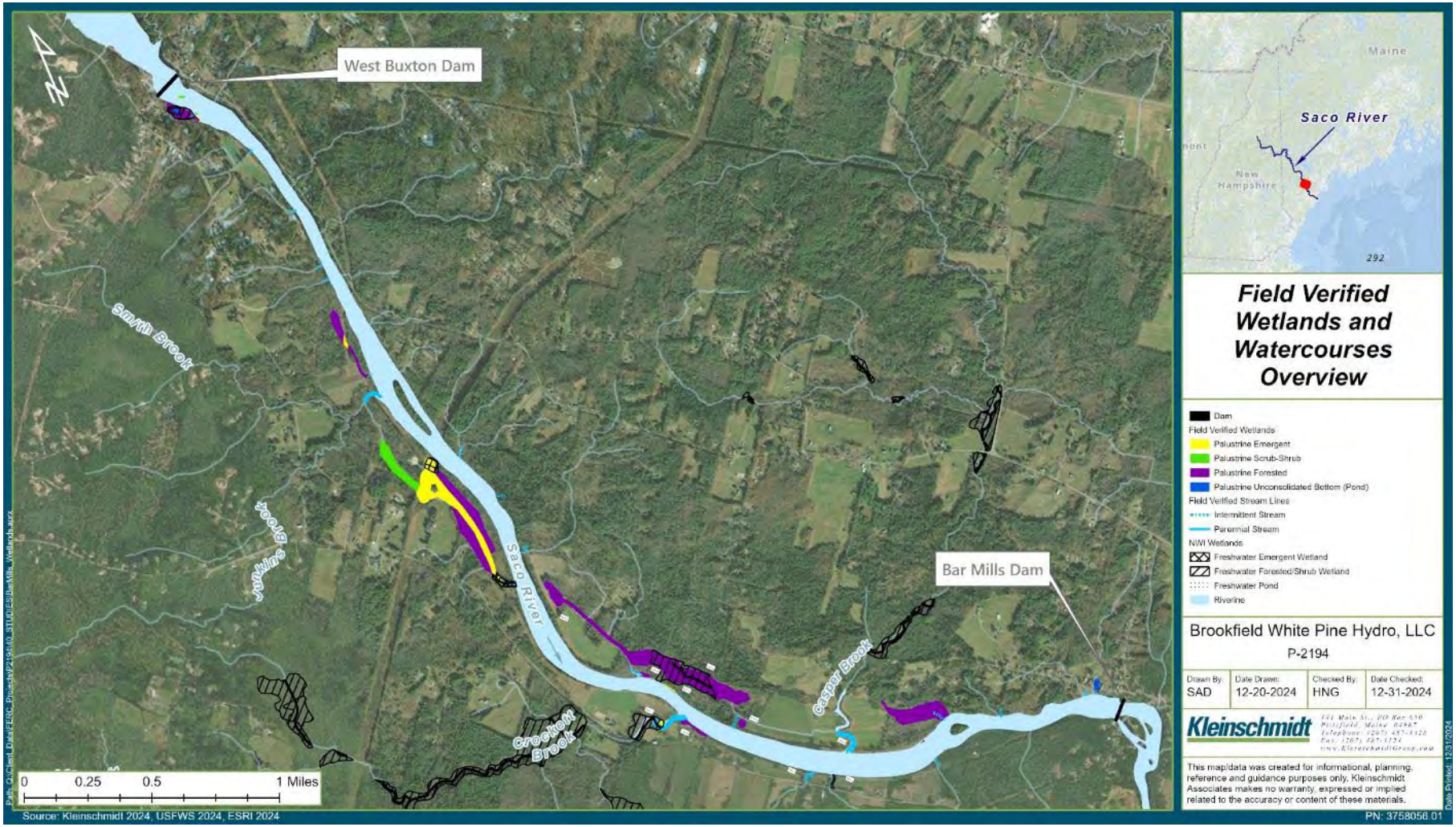


Figure 2-1 Overview of Field Verified Wetlands and Watercourses in the Study Area

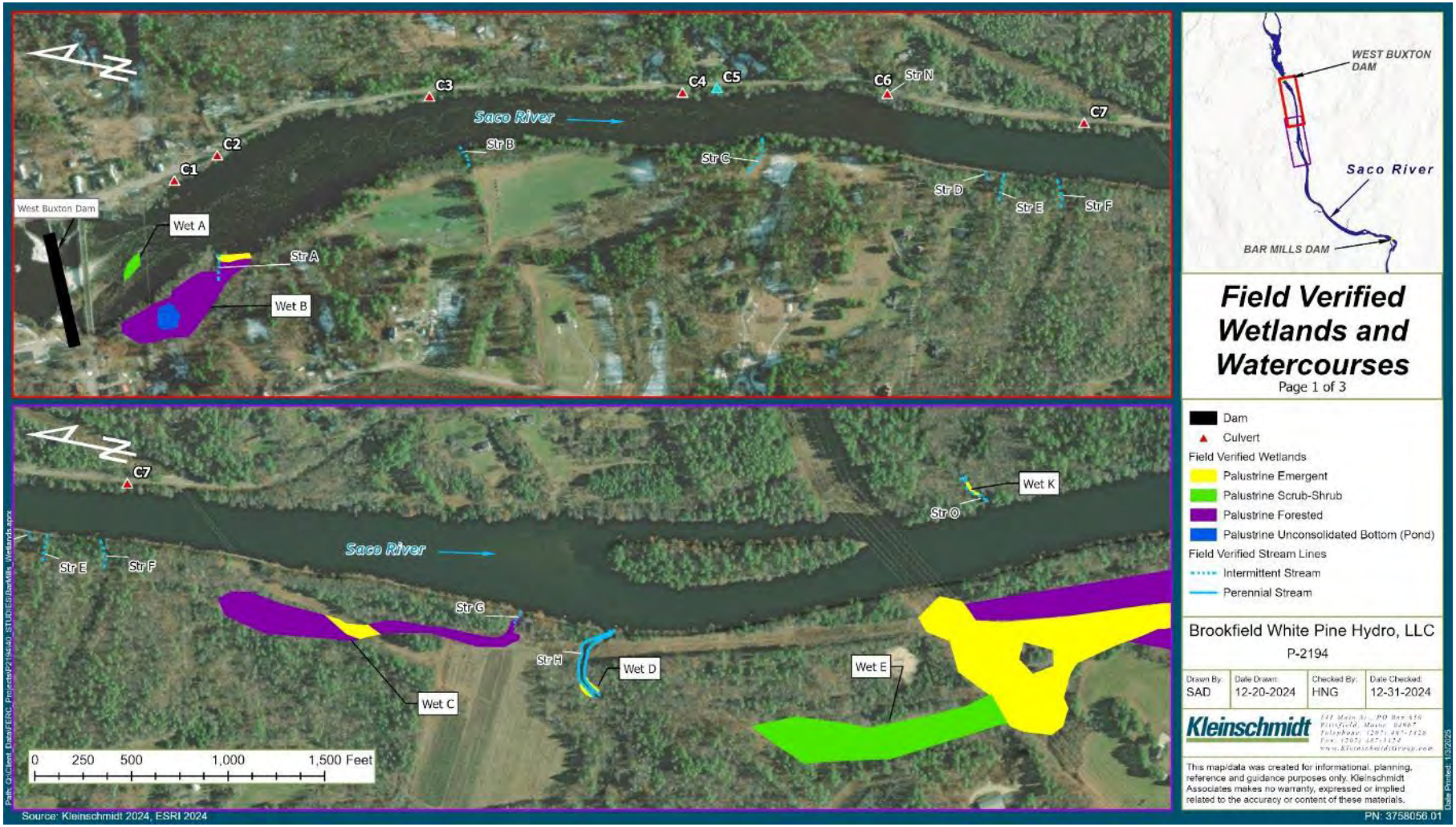


Figure 2-2 Field Verified Wetlands and Watercourses (Northern Part of the Study Area)

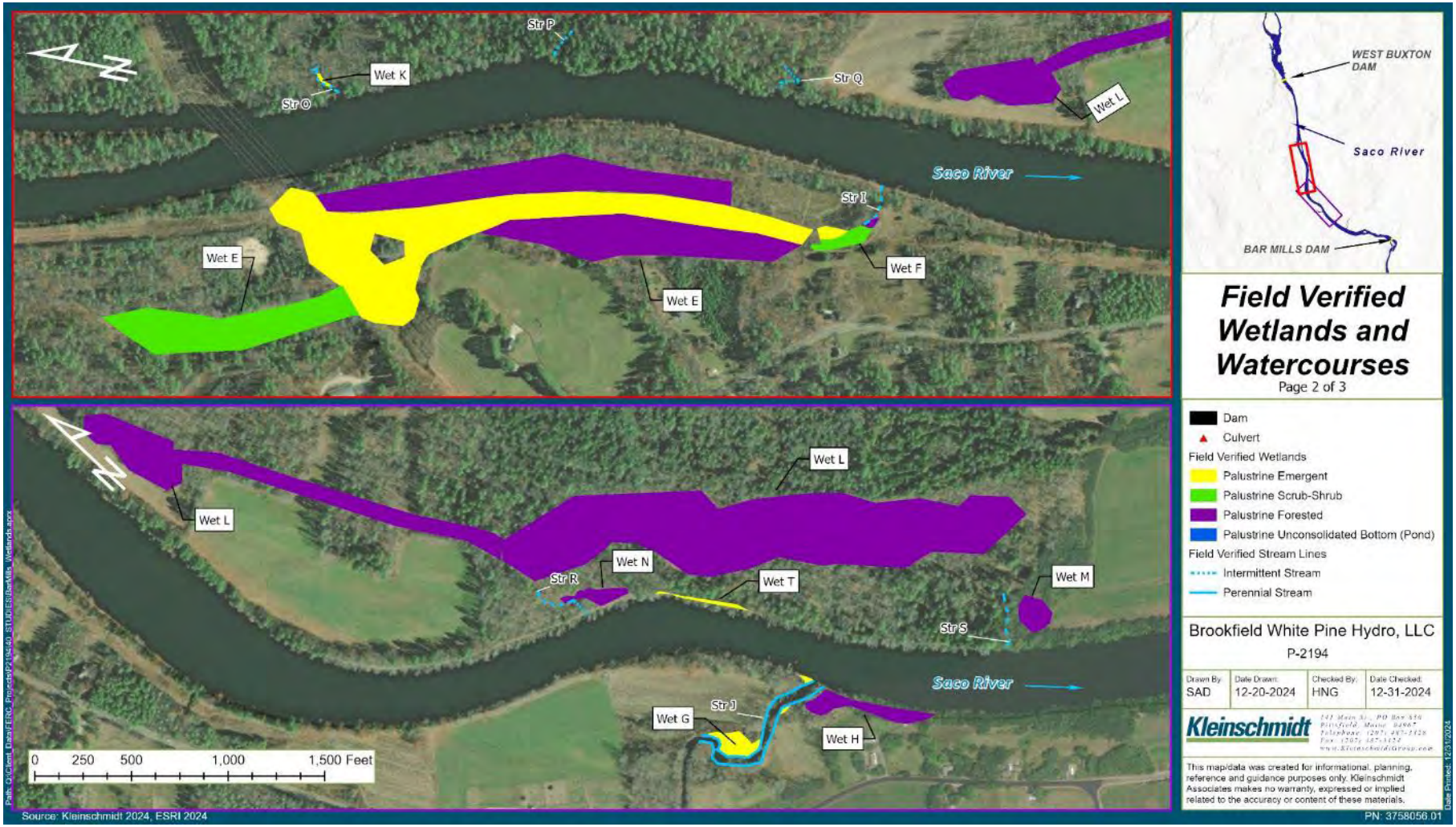


Figure 2-3 Field Verified Wetlands and Watercourses (Central Part of the Study Area)

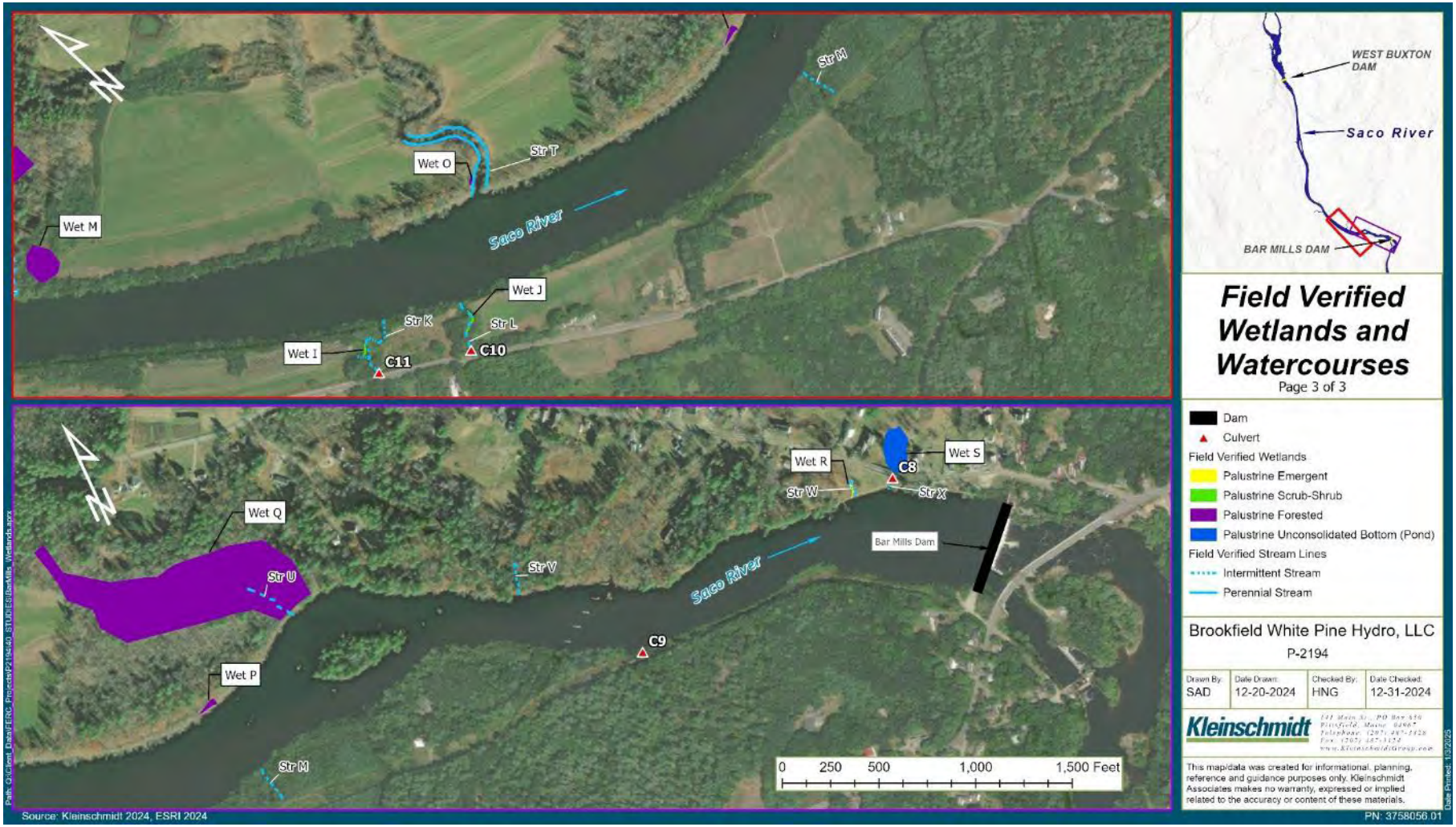


Figure 2-4 Field Verified Wetlands and Watercourses (Southern Part of the Study Area)

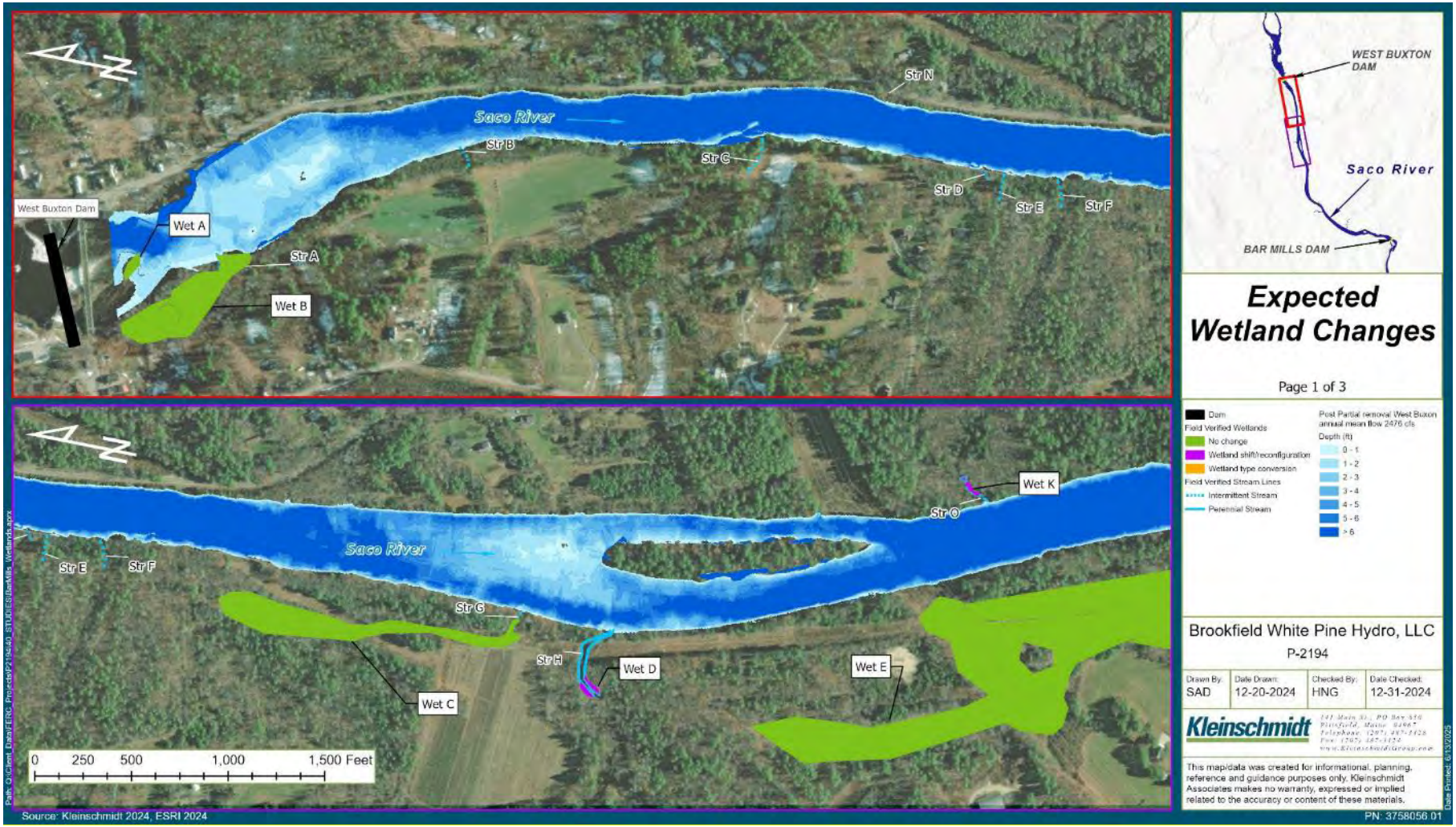


Figure 2-5 Expected Changes to Wetlands at Post-Breach Water Levels (Northern Part of the Study Area)

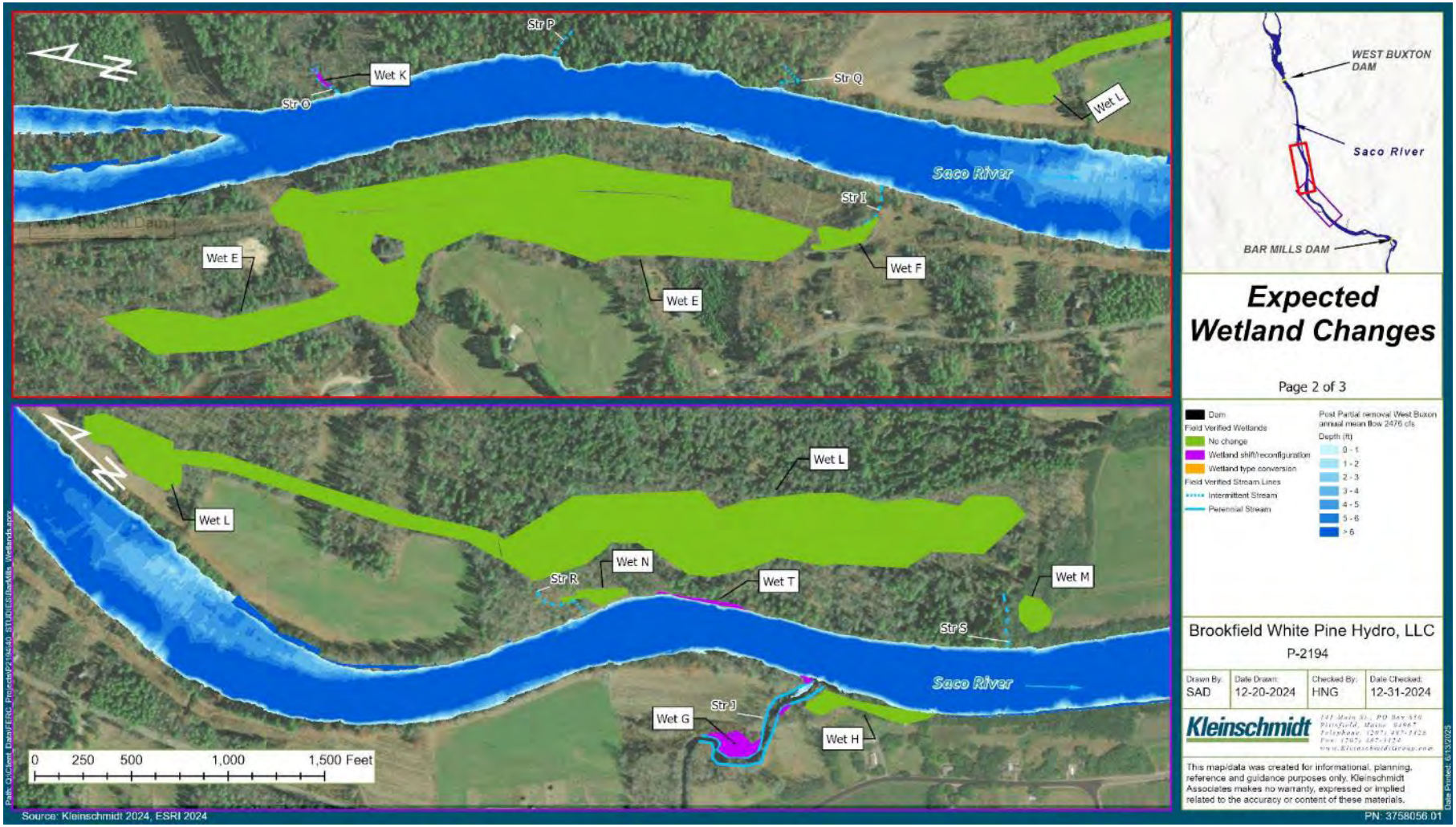


Figure 2-6 Expected Changes to Wetlands at Post-Breach Water Levels (Central Part of the Study Area)

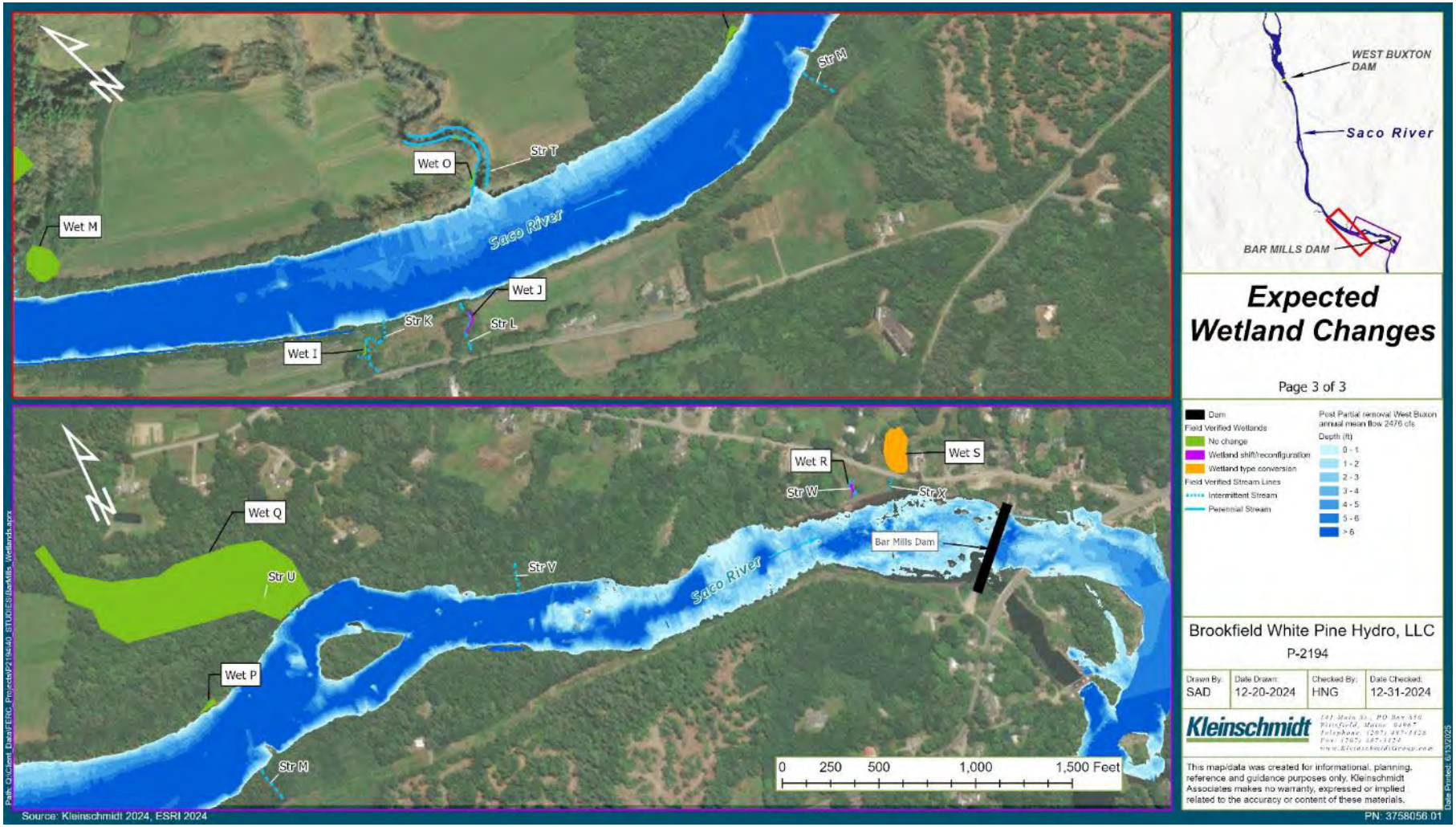


Figure 2-7 Expected Changes to Wetlands at Post-Breach Water Levels (Southern Part of the Study Area)

Table 2-3 List of Botanical Species Observed in Project Wetlands

Scientific Name	Common Name
Acer rubrum	red maple
Acer saccharinum	silver maple
Acorus americanus	sweetflag
Alnus incana	speckled alder
Amphicarpaea bracteata	hog-peanut
Apios americana	American groundnut
Apocynum cannabinum	Indianhemp
Athyrium filix-femina	lady fern
Betula alleghaniensis	yellow birch
Calamagrostis canadensis	Canadian bluejoint
Carex crinita	fringed sedge
Carex intumescens	greater bladder sedge
Carex lupulina	hop sedge
Carex stricta	upright sedge
Carya cordiformis	bitternut hickory
Carya ovata	shagbark hickory
Cephalanthus occidentalis	common buttonbush
Ceratophyllum demersum	coontail
Cornus sericea	red osier dogwood
Dulichium arundinaceum	threeway sedge
Erythronium americanum	trout lily
Eutrochium maculatum	Joe Pye weed
Frangula alnus	glossy buckthorn
Fraxinus nigra	black ash
Fraxinus pennsylvanica	green ash
Geum canadense	white avens
Glyceria canadensis	rattlesnake mannagrass
Ilex verticillata	winterberry

Scientific Name	Common Name
Impatiens capensis	jewelweed
Juncus effusus	soft rush
Laportea canadensis	Canadian woodnettle
Lonicera morrowii	Morrow's honeysuckle
Lonicera tatarica	Tatarian honeysuckle
Lycopus americanus	American water horehound
Lysimachia ciliata	fringed loosestrife
Lysimachia nummularia	creeping jenny
Lysimachia terrestris	swamp candles
Mimulus ringens	Allegheny monkeyflower
Myosotis scorpioides	true forget-me-not
Myrica gale	sweetgale
Nuphar lutea	yellow pond-lily
Onoclea sensibilis	sensitive fern
Osmunda claytoniana	interrupted fern
Osmunda regalis	royal fern
Osmundastrum cinnamomeum	cinnamon fern
Phalaris arundinacea	reed canary grass
Pinus strobus	Eastern white pine
Platanthera lacera	green fringed orchid
Polygonum cuspidatum	Japanese knotweed
Pontederia cordata	pickerelweed
Quercus bicolor	swamp white oak
Sagittaria graminea	grass-leaved arrowhead
Sagittaria latifolia	broadleaf arrowhead
Salix nigra	black willow
Schoenoplectus tabernaemontani	soft-stem bullrush
Scirpus cyperinus	woolgrass
Sium suave	Hemlock waterparsnip
Solidago sp.	goldenrod sp.

Scientific Name	Common Name
Spiraea alba	white meadowsweet
Spiraea tomentosa	steeplebush
Streptopus amplexifolius	claspleaf twistedstalk
Thalictrum pubescens	king of the meadow
Thelypteris palustris	marsh fern
Tilia americana	American basswood
Toxicodendron radicans	poison ivy
Tsuga canadensis	eastern hemlock
Ulmus americana	American elm
Urtica dioica	stinging nettle
Viburnum dentatum	arrow-wood viburnum
Viburnum lentago	nannyberry viburnum

2.1.1 Palustrine Emergent Wetlands (PEM)

The study area includes about 15 acres of PEM wetlands found along the shoreline of the river channel and perennial streams (Photo 2-1). They are also part of larger wetland complexes where woody vegetation is managed, such as in transmission rights-of-way (Photo 2-2). Common species include sensitive fern (*Onoclea sensibilis*), woolgrass (*Scirpus cyperinus*), fringed sedge (*Carex crinita*), and upright sedge (*Carex stricta*). The wetlands associated with streams showed signs of water marks and sediment staining related to seasonal high water. The PEM wetlands within the study area provide several functions including wildlife habitat, flood flow alteration, sediment and shoreline stabilization, nutrient removal, and sediment and toxicant retention.

While the main hydrologic inputs for emergent wetlands found along the shoreline of the river channel is inundation from the river or stream, these wetlands will likely not be negatively affected by post-breach water levels. The wicking of water though the exposed alluvial sand and silt will keep the upper layers of the wetland saturated. The exposure of new substrate will likely allow emergent species to germinate from existing seed banks or to spread vegetatively. It is anticipated that these wetlands will migrate and reconfigure closer to the new water elevation. While wetland area may change--either increasing or decreasing—the overall quality of these wetlands is expected to improve as restoring the more natural hydrologic conditions supports the physical, chemical, and biological

processes characteristic of higher quality wetlands. Emergent wetlands in the study area that are part of larger wetland complexes are fed primarily by hydrologic inputs from the contributing watershed. These wetland complexes are mostly found at elevations several feet higher than the normal, full pond Bar Mills impoundment elevation. As such, it is unlikely that these wetlands will be affected by post-breach water levels.



Photo 2-1 View of Palustrine Emergent Wetland (Wetland D) along Steam Edge



Photo 2-2 View of Palustrine Emergent Wetland within Transmission Right-of-way(Wetland F)

2.1.2 Palustrine Scrub-Shrub Wetlands (PSS)

PSS wetlands comprise approximately 6 acres of the study area (Photo 2-3). This wetland type is found on a small island within the Saco River (Wetland A) or associated with larger, forested, wetland complexes. Dominant shrub vegetation includes speckled alder (*Alnus incana*), common buttonbush (*Cephalanthus occidentalis*), red osier dogwood (*Cornus sericea*), and white meadowsweet (*Spiraea alba*). Herbaceous vegetation varies depending on light penetration, but often includes sensitive fern, royal fern (*Osmunda regalis*), and

Joe Pye weed (*Eutrochium maculatum*). Common hydrologic indicators include surface water, saturation, and water-stained leaves. Functionally, these wetlands provide wildlife habitat, nutrient removal, and sediment and toxicant retention.

The primary hydrologic input for PSS wetlands on the island is inundation from the Saco River. This island occurs directly below the West Buxton Dam. Because this wetland is found so far upstream of the Bar Mills Dam, it is unlikely that post-breach water levels will change its hydrological conditions. The PSS wetlands associated with the larger complexes occur in areas that are at a higher elevation than the normal full pond elevation of the impoundment. As such, it is unlikely that they will be affected by the post-breach water levels.



Photo 2-3 View of Representative Palustrine Scrub-Shrub Wetland (Wetland A)

2.1.3 Palustrine Forested Wetlands (PFO)

PFO wetlands are the most frequently occurring wetland type, covering approximately 54 acres of the study area (Photo 2-4). These wetlands occur throughout the study area,

along the shoreline, and as part of larger wetland complexes. The overstory is primarily dominated by deciduous hardwood species including silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), and yellow birch (*Betula alleghaniensis*). The shrub layer in these wetlands is generally sparse, primarily composed of saplings from overstory species. White meadowsweet, winterberry (*Ilex verticillata*) and steeplebush (*Spiraea tomentosa*) occur occasionally. Herbaceous vegetation varies depending on canopy closure, but common species include sensitive fern, royal fern, and king of the meadow (*Thalictrum pubescens*). The swamp white oak (*Quercus bicolor*), which is a threatened species in the state of Maine, was observed in three forested wetlands along the eastern shore of the impoundment (Wetland L, M, and Q; Photo 2-5).

Common indicators of hydrology for palustrine forested wetlands include water-stained leaves and microtopographic relief. Forested wetland systems within the study area provide several important functions and services including flood storage, wildlife habitat, sediment and shoreline stabilization, sediment and toxicant retention, recreation, and visual quality. These wetlands occur either in the floodplain of the river (i.e., only affected by river water levels during flood conditions) or are fed primarily by hydrologic inputs from the contributing watershed as they occur several feet higher than the elevation of the Bar Mills impoundment at its normal, full pond elevation. As such, these wetlands, including those that contained the state-threatened swamp white oak, are not expected to be negatively affected by post-breach water levels.



Photo 2-4 View of Representative Forested Wetland (Wetland E)



Photo 2-5 Swamp White Oak in Forested Wetland (Wetland L)

2.1.4 Palustrine Unconsolidated Bottom (PUB)

There were two freshwater ponds (i.e., PUB wetlands) comprising approximately 1 acre of the study area. These open water habitats are largely unvegetated; however, they provide several functions including wildlife habitat, flood flow alteration, and sediment and toxicant retention. Wetland B (Photo 2-6) occurs within a larger forested wetland complex at the northern end of the study area. At the time of the survey (i.e., during the drawn down condition), there was at least 12 inches of water in this wetland. This wetland occurs several feet above the normal, full pond elevation of the Bar Mills impoundment and, as

such, it is unlikely that it will be affected by post-breach water levels. Wetland S (Photo 2-7) occurs at the lower end of the impoundment near the Bar Mills Dam. This wetland receives hydrologic input from the Bar Mills impoundment through a culvert that runs under Depot Street. At the time of the survey, much of the water in this wetland had receded; however, it still received hydrologic input from higher in the watershed and it is likely that the soils will remain hydric after the breach. The exposed soils are expected to quickly become vegetated with herbaceous species. Consequently, it is anticipated that this wetland will transition from a palustrine unconsolidated bottom to a palustrine emergent wetland.



Photo 2-6 View of Palustrine Unconsolidated Bottom Wetland (Wetland B)



Photo 2-7 View of Palustrine Unconsolidated Bottom Wetland (Wetland S)

2.2 Watercourses

In addition to wetlands, there were 22 intermittent and 3 perennial streams that flow into the Saco River within the project boundary (Figure 2-1 through Figure 2-4; Table 2-4). Many of the tributaries in the upper part of the impoundment had a relatively high gradient and stream elevation rose quickly above full pond elevation (Photo 2-8). As a result, impoundment influence was quickly lost within a few feet of the shoreline. Appendix B includes photos of the streams observed during the field survey.

The three perennial streams in the study area [(Smith Brook (Stream H), Crockett Brook (Stream J), and Casper Brook (Stream T)] had either stagnant water (Crockett and Casper brooks) or flowing water (Smith Brook) in the thalweg during the survey at the drawn down water elevation. Water in Crockett Brook and Casper Brook was stagnant for a distance of over 150 feet upstream from their confluence with the Saco River (Photo 2-11). The drawn down impoundment elevation reduced water depth and exposed shoreline banks at all three tributary confluences (Photo 2-9, Photo 2-10, Photo 2-12, Photo 2-13, and Photo 2-14). The confluence of Crockett and Casper brooks with the Saco River remained at approximately 1 foot of depth at the drawn down impoundment elevation. Smith Brook had a continuous thalweg of flowing water with depths ranging from 0.5 to 1 foot (Photo 2-13 and Photo 2-14). Field staff noted that water flowing from Smith Brook was significantly colder than the Saco River under the observed conditions, and that the tributary confluence area contained a mix of substrates including sand, silt, and gravel.

From previous studies in the Bar Mills impoundment, smallmouth and largemouth bass were found to be the most abundant warmwater fish species (FPLE Maine 2003). These studies concluded that impoundment fluctuations were not adversely affecting smallmouth bass spawning because fish would likely move to deeper water, and substrates exposed under normal impoundment fluctuations were fine grained (i.e., sand and silt), which are not preferred by spawning bass (FPLE Maine 2003). In 2024, field staff observed one remnant fish nest (presumed to be a fallfish nest) that was dewatered under the drawn down impoundment elevation; however, other fish nests were observed in 1 to 2 feet of water at the drawn down impoundment elevation, indicating that it is unlikely that spawning by fallfish and other species would be adversely affected by the dam breach (Photo 2-15).

Eleven culverts were observed during the field survey (Figure 2-1 and Figure 2-4; Appendix C). Three culverts (C2, C3, and C5) observed in the study area were above the normal, full pond elevation and conveyed water from high gradient streams or overland runoff under River Road into the Saco River. The culvert associated with Stream N, L, and K (C6, C10, and C11) were located upstream and outside of impoundment influence, however, the culverts are perched which may impede fish movement. There were 5 culverts (C1,C4, C7,C8, and C9) that were found around or below the normal, full pond elevation. C1 was observed just downstream of the West Buxton Dam. Water level elevation at this location was not greatly affected by the drawn down. This culvert was mostly blocked by sediment; however, it is not associated with a stream and will likely not affect fish movement. The remaining four were dewatered at the drawn down impoundment elevation. While

channels will likely form in exposed sediment, the culverts may become perched and fish movements may be impeded after the dam is breached.

Table 2-4 Summary of Watercourses within the Project Boundary

Stream ID	Stream Type	Notes
Str A	Intermittent	Occurs in upper part of the impoundment. Little to no effect is expected
Str B	Intermittent	Occurs in upper part of the impoundment. Little to no effect is expected
Str C	Intermittent	Occurs in upper part of the impoundment. Little to no effect is expected
Str D	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected
Str E	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected
Str F	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected
Str G	Intermittent	Conveys water from Wetland C to impoundment. Little to no effect is expected
Str H	Perennial	Smith Brook. Flowing water in the thalweg during drawdown conditions. Little to no effect is expected
Str I	Intermittent	Conveys water from Wetland F to impoundment. Little to no effect is expected
Str J	Perennial	Crockett Brook. Water was stagnant for a distance of over 150 feet upstream from their confluence with the Saco River, however, the confluence with the Sacor River remined at approximately 1 foot of depth at the drawn down impoundment elevation
Str K	Intermittent	Associated with culvert (C11) which conveys water under River Road. The culvert is located upstream and outside of impoundment influence; however, the culverts are perched which may impede fish movement
Str L	Intermittent	Associated with culvert (C10) which conveys water under River Road. The culvert is located upstream and outside of impoundment influence; however, the culverts are perched which may impede fish movement
Str M	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected

Stream ID	Stream Type	Notes
Str N	Intermittent	Associated with culvert (C6) which conveys water under River Road. The culvert is located upstream and outside of impoundment influence; however, the culverts are perched which may impede fish movement
Str O	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected
Str P	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected
Str Q	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected
Str R	Intermittent	Conveys water from Wetland L to impoundment. Little to no effect is expected
Str S	Intermittent	Conveys water from Wetland L to impoundment. Little to no effect is expected
Str T	Perennial	Casper Brook. Water was stagnant for a distance of over 150 feet upstream from their confluence with the Saco River, however, the confluence with the Sacor River remined at approximately 1 foot of depth at the drawn down impoundment elevation
Str U	Intermittent	Conveys water from Wetland Q to impoundment. Little to no effect is expected
Str V	Intermittent	Stream elevation rises quickly above full pond elevation. Little to no effect is expected
Str W	Intermittent	Stream elevation rises quickly above full pond elevation. Stream Associated with Wetland R. Little to no effect is expected
Str X	Intermittent	Associated with culvert (C8). Conveys water between impoundment and Wet S. Hydrological connection will remain, however there will likely be fewer days with flowing water after dam breach



Photo 2-8 View of Representative Intermittent Stream (Stream E)



Photo 2-9 Upstream View of Crockett Brook (Steam J) near Saco River Confluence



Photo 2-10 Crockett Brook (Steam J) Confluence with Saco River



Photo 2-11 Stagnant Area of Crockett Brook (Steam J) about 120 feet from Confluence with Saco River



Photo 2-12 Casper Brook (Stream T) at Confluence with the Saco River



Photo 2-13 Smith Brook at Confluence with the Saco River



Photo 2-14 Upstream View of Smith Brook



Photo 2-15 Fallfish Nest Dewatered along Saco River Shoreline

2.3 Invasive Botanical Species

BWPH documented 15 invasive botanical species throughout the study area (Table 2-5; Appendix D). Upstream of the Bar Mills Dam, most invasive species were found at trace amounts with low coverage. Downstream of the Bar Mills Dam, invasive species were found at moderate to high densities along the shore and on the island (Figure 2-8). The most common invasives were woody shrubs, including autumn olive (*Elaeagnus umbellata*), glossy buckthorn (*Frangula alnus*), and Morrow's honeysuckle (*Lonicera morrowii*), with lower densities of multiflora rose (*Rosa multiflora*) and Japanese barberry

(*Berberis thunbergia*). Oriental bittersweet (*Celastrus orbiculatus*), a woody vine species, was prevalent as well.

Japanese knotweed (*Fallopia japonica*) was also observed in the study area, appearing in trace amounts upstream of the Bar Mills Dam but forming dense thickets along the shoreline downstream of the dam. Although this species can be found in wetlands, it typically thrives in upland areas and at higher elevations along shorelines.

Curly pondweed (*Potamogeton crispus*), an aquatic invasive species, was observed in trace amounts at the lower end of the impoundment. This species was found as individual stems along the water's edge, with no other aquatic plant species found concurrently. The stems were hand-pulled by the field crew during the survey.

Table 2-5 Invasive Botanical Species Observed in the Study Area

Scientific Name	Common Name	Status[1,2]
Artemisia vulgaris	common mugwort	4
Berberis thunbergii	Japanese barberry	1
Celastrus orbiculatus	Oriental bittersweet	1
Centaurea stoebe	spotted knapweed	3
Cirsium arvense	Canada Thistle	1
Cynanchum louiseae	black swallowwort	1
Elaeagnus umbellata	autumn olive	2
Euonymus alatus	winged euonymous	1
Fallopia japonica	Japanese knotweed	1
Frangula alnus	glossy buckthorn	1
Lonicera morrowii	Morrow's honeysuckle	1
Lonicera tatarica	Tartarian honeysuckle	1
Phalaris arundinacea	reed canary grass	1
Potamogeton crispus	curly pondweed	1
Rosa multiflora	multiflora rose	2

[1] Source: Maine Department of Agriculture, Conservation and Forestry, 2019

[2] Status rankings from Maine Advisory List of Invasive Plants: 1 – Severely invasive; 2 – Very invasive; 3 – Invasive, habitat-specific threats; 4 – Potential to be invasive, monitor

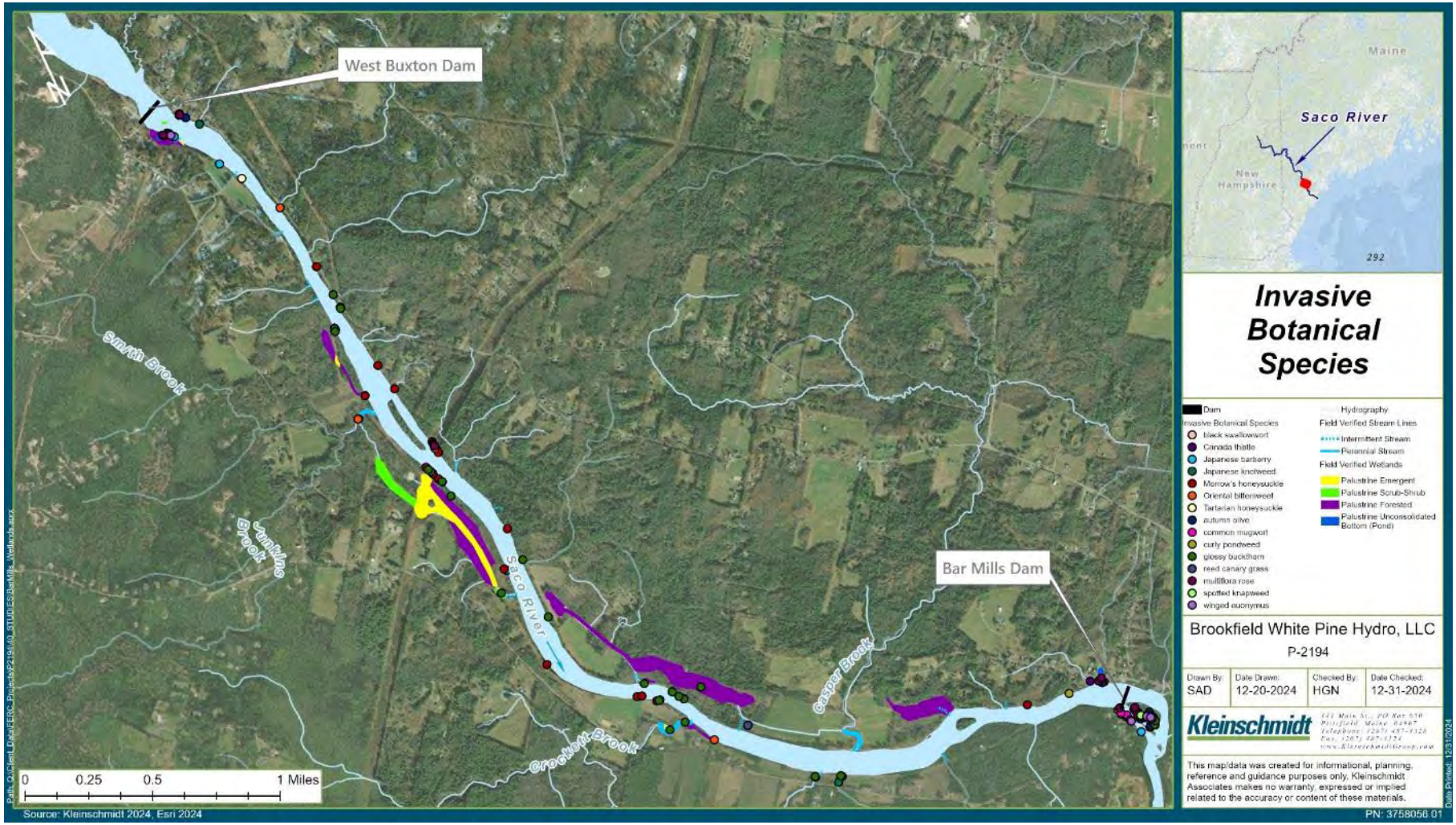


Figure 2-8 Invasive Botanical Species Observed in the Study Area

2.4 Shoreline Erosion

Approximately 11.7 miles of riverbank was evaluated upstream of Bar Mills Dam, including the shoreline of islands and portions of perennial tributaries (Photo 2-16 through Photo 2-20). Of the shoreline investigated, approximately 70.5 percent had a high BEHI rating, 18.2 percent had a moderate BEHI rating, and 9.7 percent had a low or very low BEHI rating. Only 1.6 percent of the shoreline had a very high rating and there were no shoreline areas with extreme BEHI ratings (typically indicating actively failing banks; Table 2-6, Figure 2-9), Reaches with low and very low ratings mainly occurred upstream, near the West Buxton Dam (where there was minimal change in water level and the banks are already stable) and downstream near the Bar Mills Dam (where substrates are mostly cobble and bedrock). The shoreline along the middle reach of the river had mainly moderate to high BEHI ratings. The two shoreline reaches with very high ratings occurred downstream, close to the Bar Mills Dam. Field forms and photographs can be found in Appendix E.

The BEHI ratings reflect resultant conditions that would occur immediately following the dam breach. Many of the high ratings were due to the unvegetated sediments and sand deposits that were exposed during the drawdown. The newly exposed sediments resulted in elevated BEHI scores for root depth, root density, surface protection, and bank material, as the BEHI method is based on evaluating stream banks in their current condition. When water levels are lowered, many of the natural bank stabilizing features (e.g., vegetation, surface protection, and deeper roots) will not be present, but will quickly establish or are just below the currently deposited sand/sediment. Once the dam is breached, it is anticipated the sandy banks will adjust to the new water elevation and become vegetated relatively quickly, which will lower the BEHI rating. Many of the existing banks (above the normal water line in the impoundment) appeared to be relatively stable with well-established vegetation and no evidence of undercut banks, bank slumping, leaning trees, or visible cracks or fissures. Stable bank conditions are expected to develop in the Bar Mills impoundment following dam breach.

Table 2-6 Summary of Bank Erosion Hazard Index (BEHI) Ratings for Study Shorelines

BEHI Rating	BEHI Score	Shoreline Length (feet.)	Percent of Shoreline Evaluated
Very Low	5-9.5	3,407	5.5
Low	10-19.5	2,601	4.2
Moderate	20-29.5	11,238	18.2
High	30–39.5	43,545	70.5
Very High	40-45	978	1.6
Extreme	46-50	0	0.0
	Total	**61,769**	**100**



Figure 2-9 Bank Erosion Hazard Index (BEHI) Ratings Along Study Shoreline



Photo 2-16 Example of Shoreline with Very Low BEHI Rating



Photo 2-17 Example of Shoreline with Low BEHI Rating



Photo 2-18 Example of Shoreline with Moderate BEHI Rating



Photo 2-19 Example of Shoreline with High BEHI Rating



Photo 2-20 Example of Shoreline with Very High BEHI Rating

3.0 SUMMARY

Excluding the Saco River mainstem, which is classified as a riverine wetland, the study area contains approximately 76 acres of wetland habitat including palustrine emergent, scrub-shrub, forested, and unconsolidated bottom wetlands. Forested wetlands were the most common type (approximately 54 acres, 72 percent of the total). Important functions of these wetlands include flood storage, wildlife habitat, and sediment and toxicant retention.

Wetlands are not expected to be adversely impacted by post-breach water levels. One freshwater pond (PUB; Wetland S) adjacent to the lower impoundment is influenced by the full pond levels. At post-breach water elevations, much of the standing water in the pond receded. However, the wetland will continue to receive hydrologic input from higher in the watershed, likely maintaining hydric soil conditions. The newly exposed soils are expected to quickly become vegetated with herbaceous species following the dam breach. Consequently, the wetland is anticipated to transition from an open-water freshwater pond to an emergent wetland community.

The larger wetland complexes were found either at elevations several feet higher than the existing, normal Bar Mills impoundment level or in the floodplain. These wetlands are primarily fed by hydrologic inputs from the contributing watershed or are only affected by river water levels during seasonal flooding events.

Emergent wetlands along shoreline primarily receive hydrologic input through periodic inundation from the river or stream. Water wicking through exposed alluvial sand and silt are expected to maintain saturation in the upper soil layers. The exposure of new substrate will likely enable emergent species to germinate from existing seed banks or to spread vegetatively. It is anticipated that these wetlands will reconfigure and shift towards the new water elevation. Wetlands formed as a result of artificial impoundments often exhibit poor water quality due to disruptions in physical, chemical, and biological processes caused by altered stream hydrology. With the restoration of more natural stream flows following dam breach, it is expected that higher-quality wetlands will re-establish within the former impoundment footprint.

Several watercourses (i.e., 22 intermittent and three perennial streams) flow into the Saco River within the project boundary. At the post-breach water elevation, all three perennial tributaries were observed to have a stagnant water or flowing water 0.5 to 1 foot deep. Smith Brook was flowing at its confluence with the Saco River at the drawn down

condition and may provide cold water refuge or habitat for cold water fish species. Previous studies and field observations of fallfish spawning indicate that the post-breach impoundment level is not likely to adversely affect spawning resident fish.

Fifteen invasive botanical species were observed in the study area. While invasive species were ubiquitous throughout the study area, in many areas, there densities were low. It is unlikely that the woody invasive species will revegetate the newly exposed shores at high densities. Although woody invasive species thrive in disturbed areas, many typically prefer drier environments (Native Plant Trust, 2024). The newly exposed shorelines will likely support herbaceous species. The invasive species most likely to colonize newly exposed areas is reed canary grass. This herbaceous species thrives in wetlands and can spread rapidly. However, reed canary grass was found in two areas at trace levels. Japanese knotweed was also observed at trace levels above the dam but in dense thickets along the shoreline downstream of the dam. While this species can be found in wetlands, it usually occurs in upland and at higher elevations along shorelines. However, this species is highly aggressive and may take advantage of newly opened habitat, Following the dam breach, the shoreline should be monitored for invasive botanical infestations while they are still relatively easy to treat and manage.

While the BEHI ratings indicate that much of the shoreline in the study area is at high risk of erosion, the results of this study reflect the proposed interim condition immediately following the dam breach. These conditions are expected to stabilize quickly once the spillway is partially or fully removed, with many of the sandy banks adjusting to the new water elevation and becoming vegetated rapidly. Due to the newly exposed sandy banks, there will be some movement of this finer material in the system; however, historically, this was a cobble/boulder-dominated stream, and the general channel form, shape, and extent are not anticipated to change substantially following the dam breach. This study assessed BEHI rankings independently of other hydraulic forces (e.g., turbulent water, scour/shear energy, etc.). Using Rosgen's methods (2009), this ranking also requires a driving force to mobilize materials from the banks; thus, a high or very high rank does not mean the bank will immediately start failing following dam breach. Because the shoreline reach is relatively straight, inflows are provided from the West Buxton dam, and it is a relatively undeveloped watershed (leading to less drastic peak river flows), lower hydraulic forces are expected, resulting in lower erosion rates and smaller adjustments of the banks post-breach. Further, the presence of a cobble and bedrock dominated riverbed in the upper reach and downstream of the Bar Mills Dam indicates that the channel bed is relatively stable and, once decommissioning occurs, the river will settle back into its

historical, pre-dam channel form. However, if there is critical infrastructure or property located near a bank that is more susceptible to erosion, a site-specific review of potential adjustments to the bank post-breach may be necessary.

4.0 REFERENCES

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APPENDIX A

WETLAND PHOTOGRAPHS



Photograph 1: View of Wetland A (PSS)



Photograph 2: View of Wetland B (PEM)



Photograph 3: View of Wetland B (PUB)



Photograph 4: View of Wetland C (PFO)



Photograph 5: View of Wetland D (PEM)



Photograph 6: View of Wetland E (PEM)



Photograph 7: View of Wetland E (PFO)



Photograph 8: View of Wetland F (PEM)



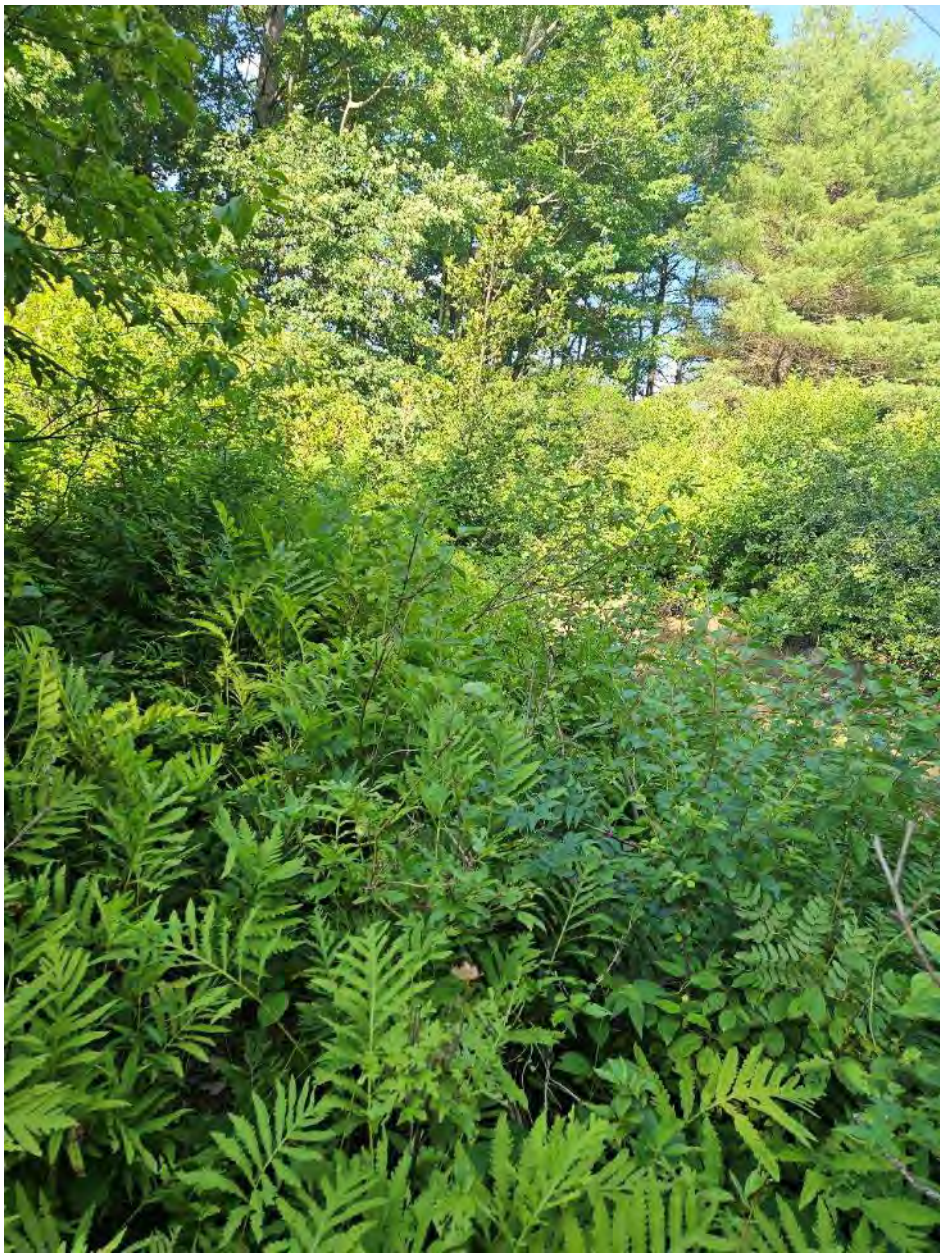
Photograph 9: View of Wetland F (PSS)



Photograph 10: View of Wetland G (PEM)



Photograph 11: View of Wetland H (PFO)



Photograph 12: View of Wetland I (PSS)



Photograph 13: View of Wetland J (PSS)



Photograph 14: View of Wetland K (PEM)



Photograph 15: View of Wetland L (PFO) with swamp white oak



Photograph 16: View of Wetland M(PFO) with swamp white oak



Photograph 17: View of Wetland N (PFO)



Photograph 18: View of Wetland O(PFO)



Photograph 19: View of Wetland P(PFO)



Photograph 20: View of Wetland Q (PFO)



Photograph 21: View of Wetland R (PEM)



Photograph 22: View of Wetland S (PUB)



Photograph 23: View of Wetland T (PEM)

APPENDIX B

STREAM PHOTOGRAPHS



Figure B-1. Photographs of Stream A : **A)** View upstream within wetland **B)** View along shoreline at post-breach water elevations



Figure B-2. Photographs of Stream B : **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-3. Photographs of Stream C : **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-4. Photographs of Stream D : **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-5. Photographs of Stream E : **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-6. Photographs of Stream F : **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-7. Photographs of Stream G: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-8. Photographs of Stream H(Smith Brook): **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-9. Photographs of Stream I: **A)** View upstream **B)** View downstream at post-breach water elevations





Figure B-10. Photographs of Stream J (Crockett Brook) : **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-11. Photographs of Stream K: **A)** View upstream **B)** View downstream at post-breach water elevations **C)** Stream K culvert



Figure B-12. Photographs of Stream L: **A)** View upstream **B)** View downstream at post-breach water elevations **C)** Stream L culvert

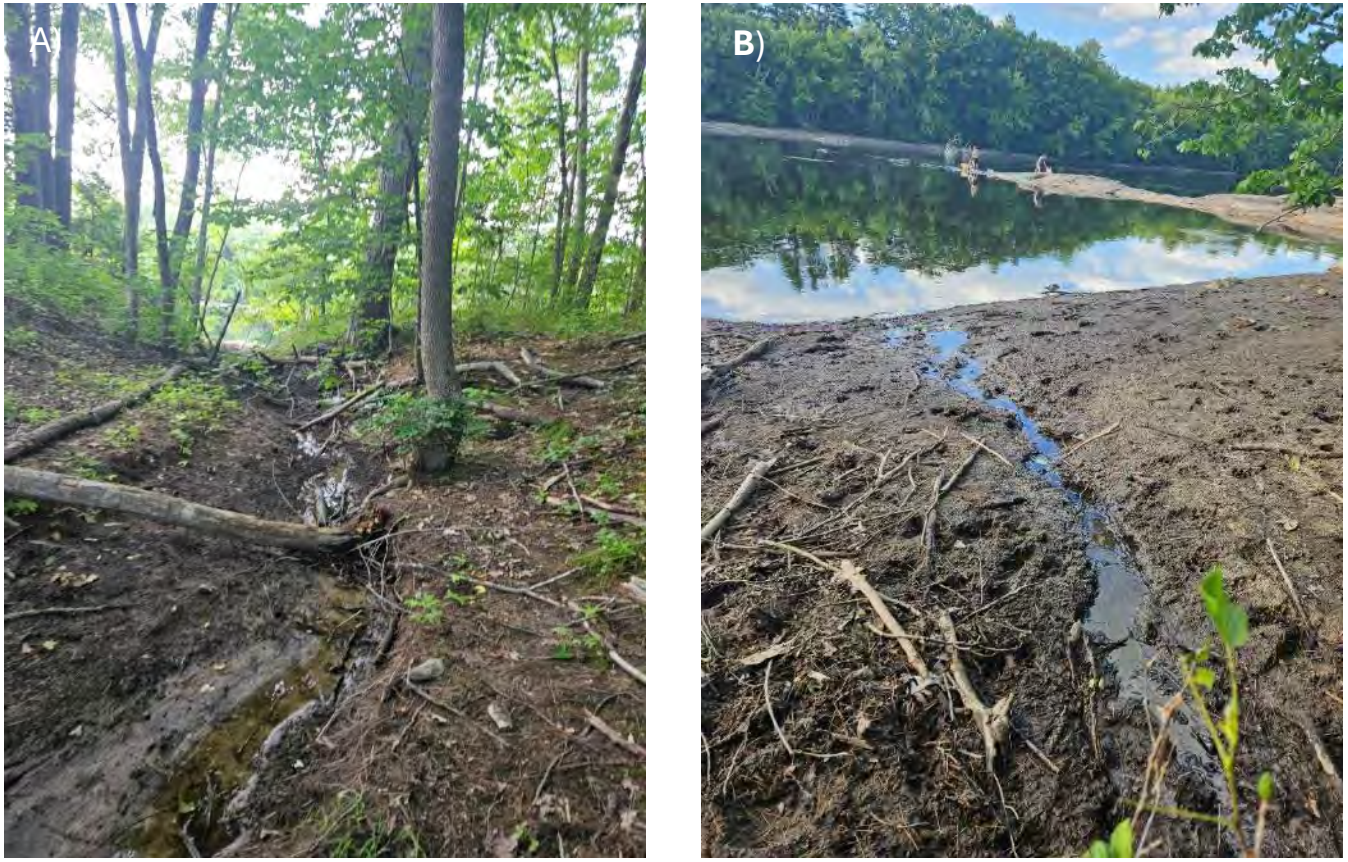


Figure B-13. Photographs of Stream M: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-14. Photographs of Stream N: **A)** View upstream **B)** View along shoreline at post-breach water elevations **C**) View of culvert



Figure B-15. Photographs of Stream O: **A)** View upstream



Figure B-16. Photographs of Stream P: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-17. Photographs of Stream Q: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-18. Photographs of Stream R: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-19. Photographs of Stream S: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-20. Photograph of Stream T (Casper Brook)at Saco River confluence



Figure B-21. Photographs of Stream U: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-22. Photographs of Stream V: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-23. Photographs of Stream W: **A)** View upstream **B)** View downstream at post-breach water elevations



Figure B-24. Photographs of Stream X: **A)** View upstream **B)** View downstream at post-breach water elevations **C)** Stream X culvert

APPENDIX C

CULVERT PHOTOGRAPHS



Photograph C-1: View of Culvert 1



Photograph C-2: View of Culvert 2



Photograph C-3: View of Culvert 3



Photographs C-4: Views of Culvert 4



Photograph C-5: View of Culvert 5



Photographs C-6: Views of Culvert 6 (Associated with Stream N)



Photograph C-7: View of Culvert 7



Photograph C-8: View of Culvert 8 (Associated with Stream X)



Photographs C-9: Views of Culvert 9



Photographs 10: Views of Culvert 10 (Associated with Stream L)



Photographs 11: Views of Culvert 11 (Associated with Stream K)

APPENDIX D

INVASIVE BOTANICAL SPECIES PHOTOGRAPHS



Photograph 1: Common Name: common mugwort **Scientific Name:** *Artemisia vulgaris*



Photograph 2: Common Name: Japanese barberry **Scientific Name:** *Berberis thunbergii*



Photograph 3: Common Name: Oriental bittersweet **Scientific Name:** *Celastrus orbiculatus*



Photograph 4: Common Name: spotted knapweed **Scientific Name:** *Centaurea stoebe*



Photograph 5: Common Name: Canada thistle **Scientific Name:** *Cirsium arvense*



Photograph 6: Common Name: black swallowwort **Scientific Name:** *Cynanchum louiseae*



Photograph 7: Common Name: autumn olive **Scientific Name:** *Elaeagnus umbellata*



Photograph 8: Common Name: winged euonymous **Scientific Name:** *Euonymus alatus*



Photograph 9: Common Name: Japanese knotweed **Scientific Name:** *Fallopia japonica*



Photograph 10: Common Name: glossy buckthorn **Scientific Name:** *Frangula alnus*



Photograph 11: Common Name: Morrow's honeysuckle **Scientific Name:** *Lonicera morrowii*



Photograph 12: Common Name: Tartarian honeysuckle **Scientific Name:** *Lonicera tatarica*



Photograph 13: Common Name: reed canary grass **Scientific Name:** *Phalaris arundinacea*



Photograph 14: Common Name: curly pondweed **Scientific Name:** *Potamogeton crispus*



Photograph 15: Common Name: multiflora rose **Scientific Name:** *Rosa multiflora*

APPENDIX E

BANK EROSION HAZARD INDEX (BEHI) FIELD FORMS AND PHOTOGRAPHS

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**A**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	7.00 (A)	Bankfull Height (ft) =	3.00 (B)	(A) / (B) =	2.33 (C)	BEHI Score (Fig. 3-7) 8.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	6.00 (D)	Study Bank Height (ft) =	7.00 (A)	(D) / (A) =	0.86 (E)	2.2

Weighted Root Density (G)

Root Density as % =	60.00 (F)	(F) × (E) =	51.4 (G)	4.0

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	70% (I)	2.4

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

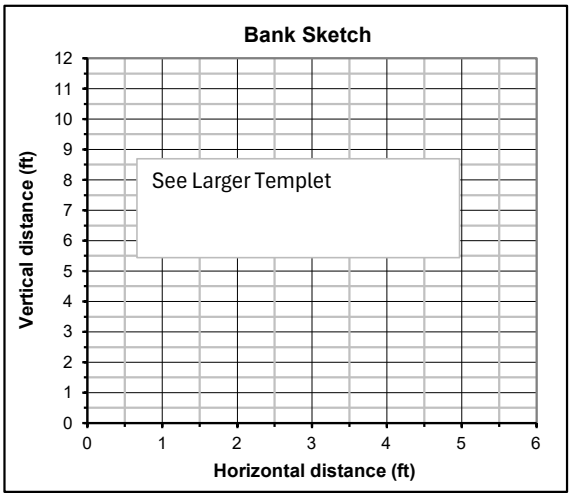
Bank Material Adjustment 5

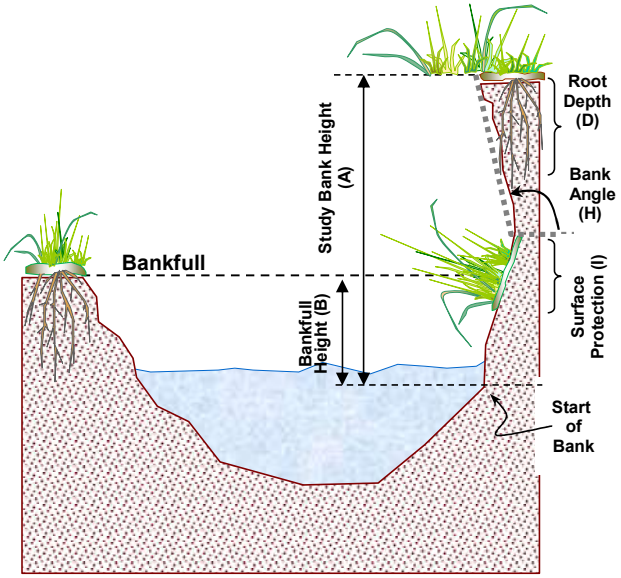
ratification Adjustme

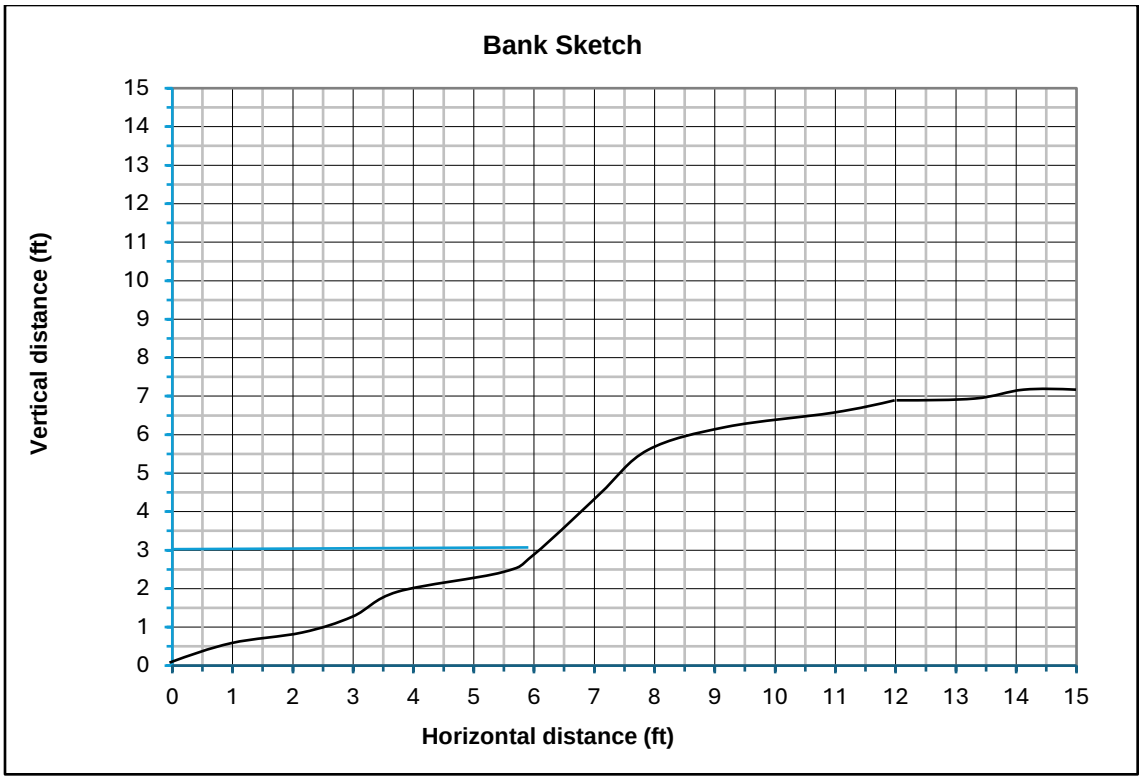
Add 5–10 points, depending on position of unstable layers in 0

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 24.1







Station A: Bank Sketch



Station A: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**B**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	4.00 (A)	Bankfull Height (ft) =	4.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	4.00 (A)	(D) / (A) =	0.50 (E)	4.0

Weighted Root Density (G)

Root Density as % =	60.00 (F)	(F) × (E) =	30 (G)	6.0

Bank Angle (H)

Bank Angle as *Degrees*	20 (H)	2.0

Surface Protection (I)

Surface Protection as % =	40% (I)	5.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

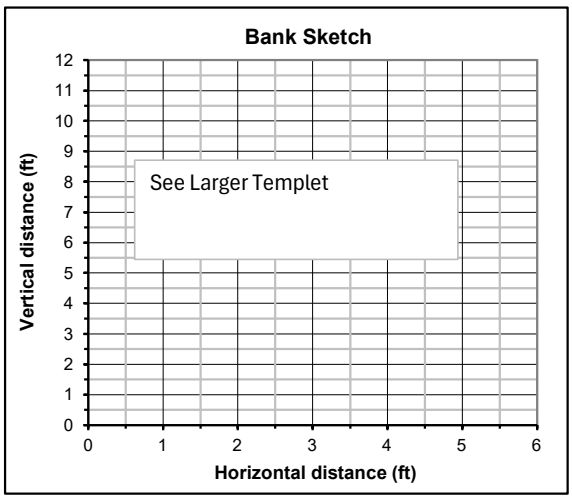
Bank Material Adjustment 10

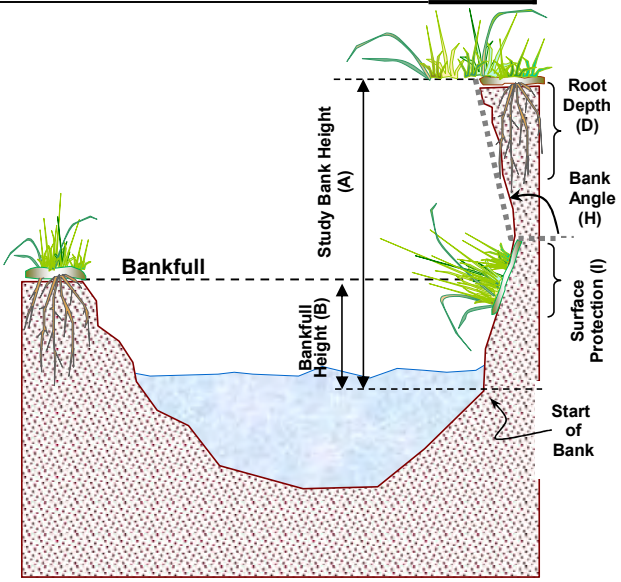
Stratification Adjustment

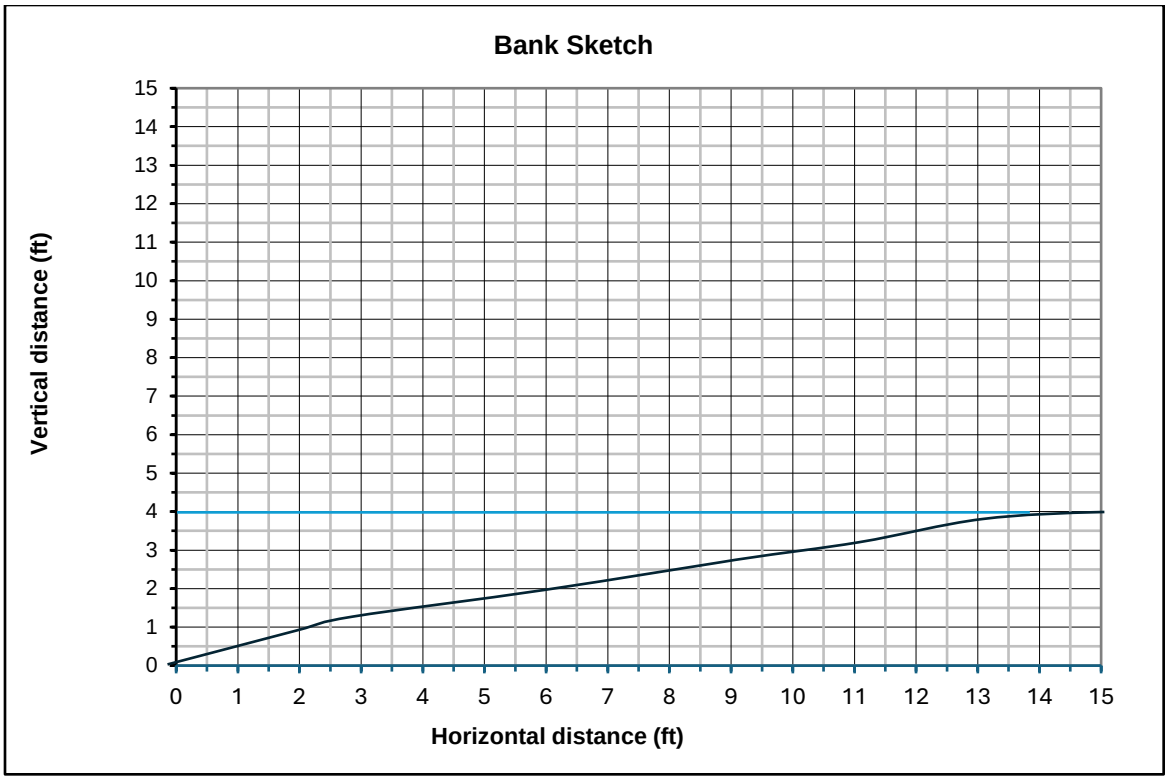
Add 5–10 points, depending on position of unstable layers in 0

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 27.0







Station B**:** Bank Sketch



Station B: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**C**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	3.00 (A)	Bankfull Height (ft) =	3.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7)
						0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	1.00 (D)	Study Bank Height (ft) =	3.00 (A)	(D) / (A) =	0.33 (E)	
						5.0

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	26.667 (G)	
				6.0

Bank Angle (H)

Bank Angle as *Degrees*	50 (H)	
		3.0

Surface Protection (I)

Surface Protection as % =	10% (I)	
		9.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

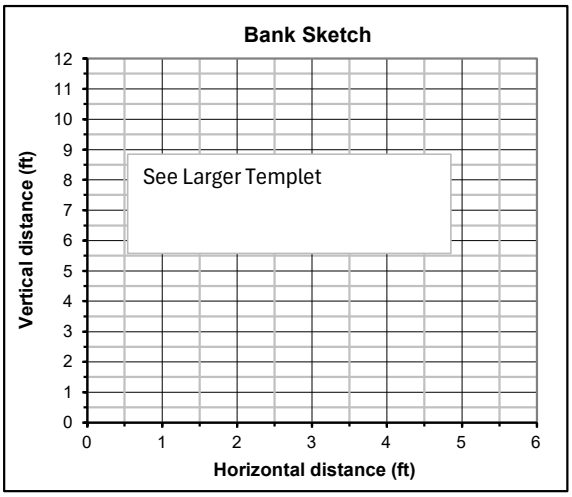
Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

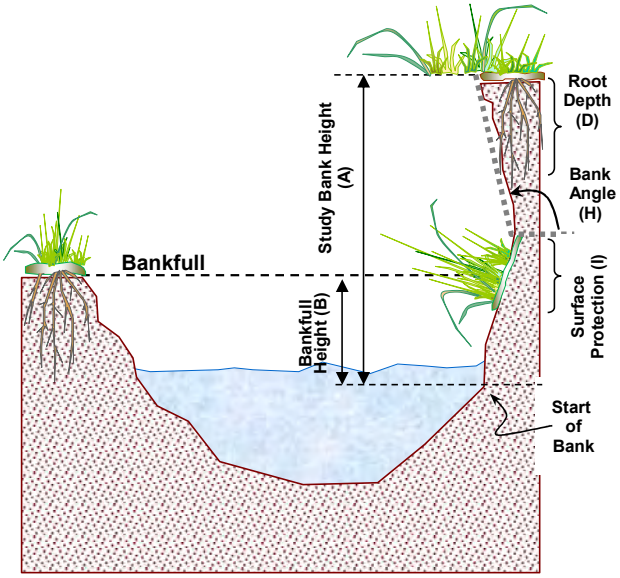
Bank Material Adjustment → 10

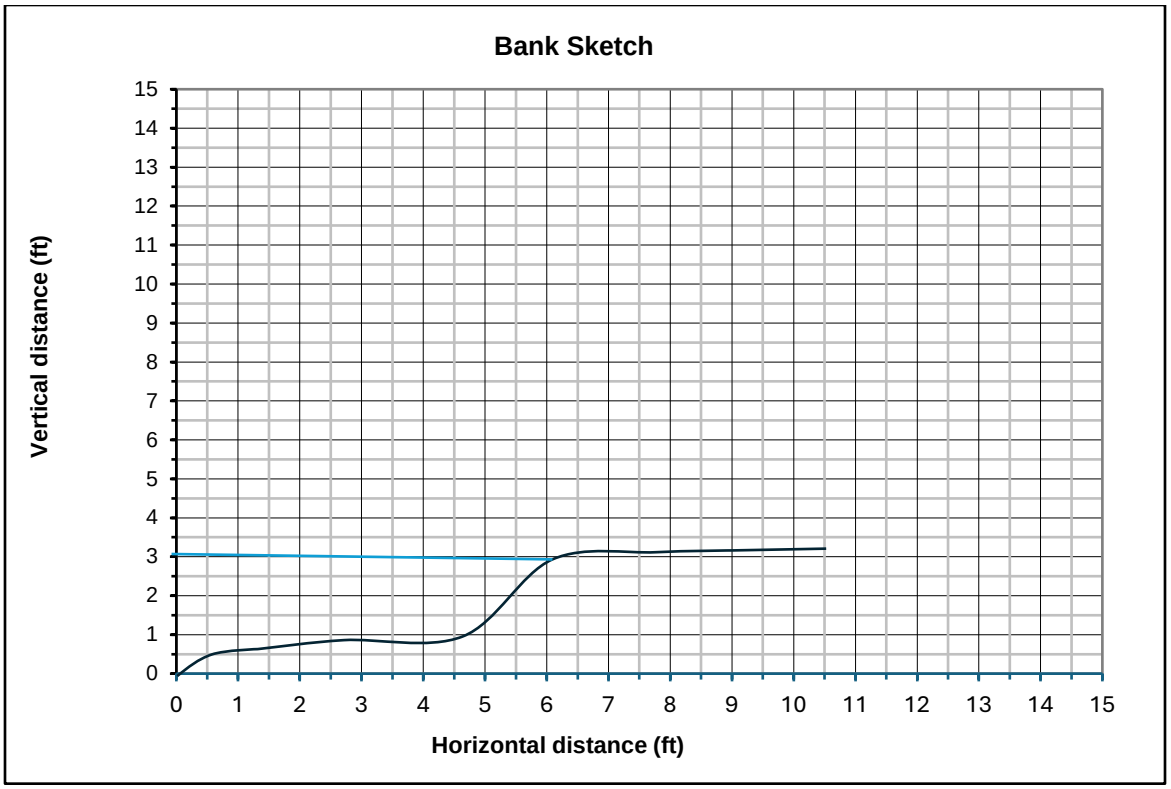
Stratification Adjustment

Add 5–10 points, depending on position of unstable layers in → 0

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*	Adjective Rating and Total Score
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50	33.0







Station C: Bank Sketch



Station C: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**D**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	4.00 (A)	Bankfull Height (ft) =	4.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 1.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	4.00 (A)	(D) / (A) =	0.50 (E)	4.0

Weighted Root Density (G)

Root Density as % =	90.00 (F)	(F) × (E) =	45 (G)	5.0

Bank Angle (H)

Bank Angle as *Degrees*	60 (H)	4.0

Surface Protection (I)

Surface Protection as % =	50% (I)	5.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

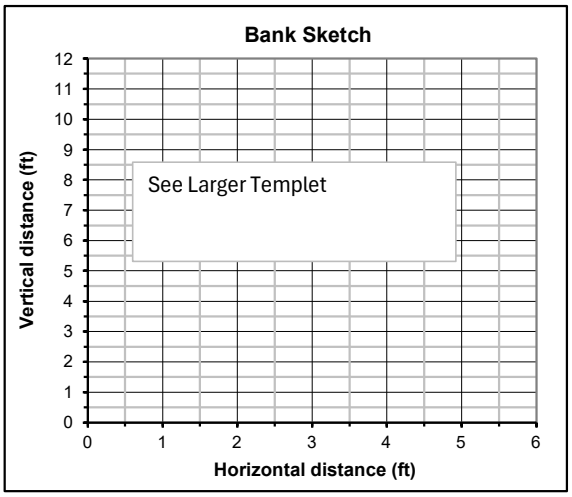
Bank Material Adjustment → **-10**

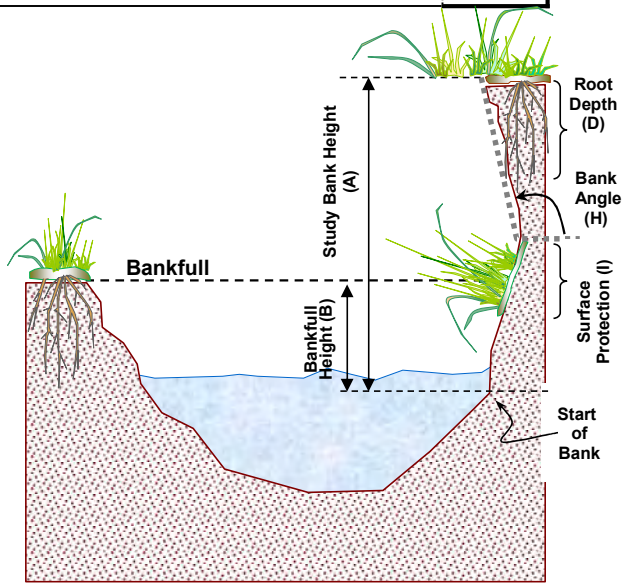
Stratification Adjustment

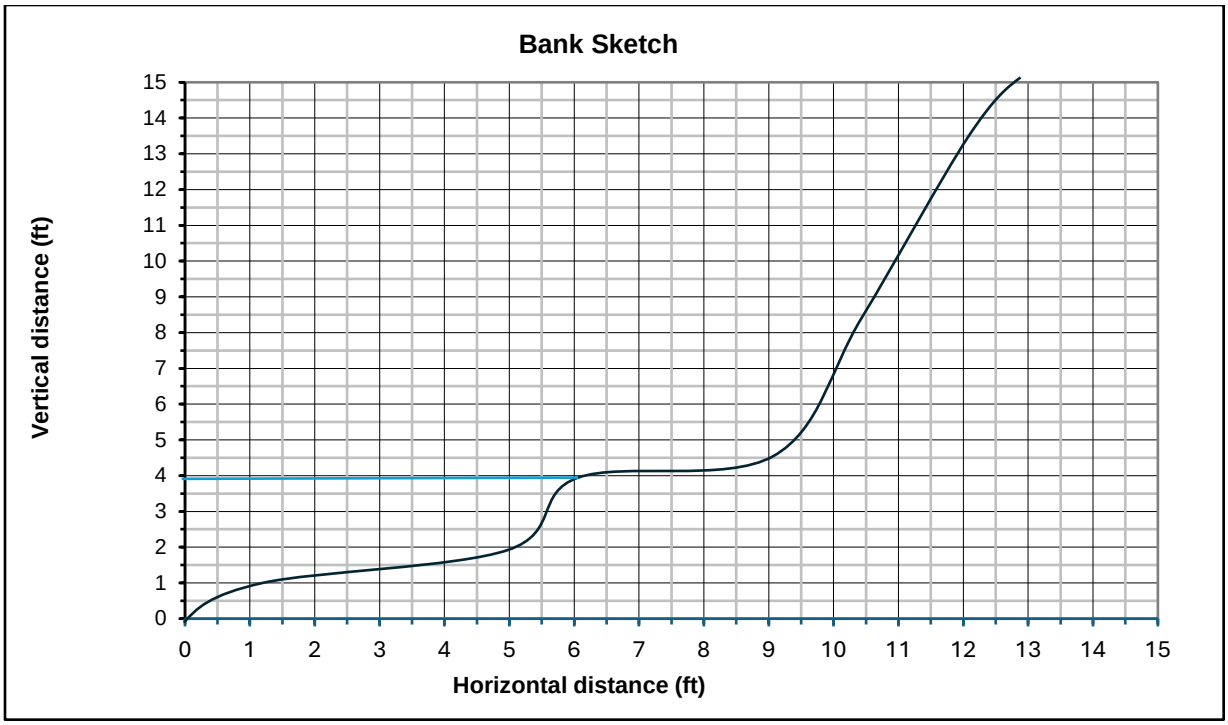
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score → **9.0**







Station D: Bank Sketch



Station DD: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**E**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	4.00 (A)	Bankfull Height (ft) =	4.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 1.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	3.00 (D)	Study Bank Height (ft) =	4.00 (A)	(D) / (A) =	0.75 (E)	3.0

Weighted Root Density (G)

Root Density as % =	90.00 (F)	(F) × (E) =	67.5 (G)	3.0

Bank Angle (H)

Bank Angle as *Degrees*	50 (H)	3.0

Surface Protection (I)

Surface Protection as % =	10% (I)	9.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

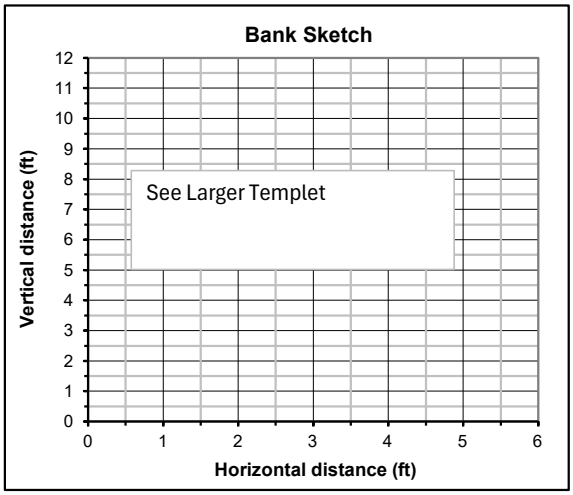
Bank Material Adjustment 5

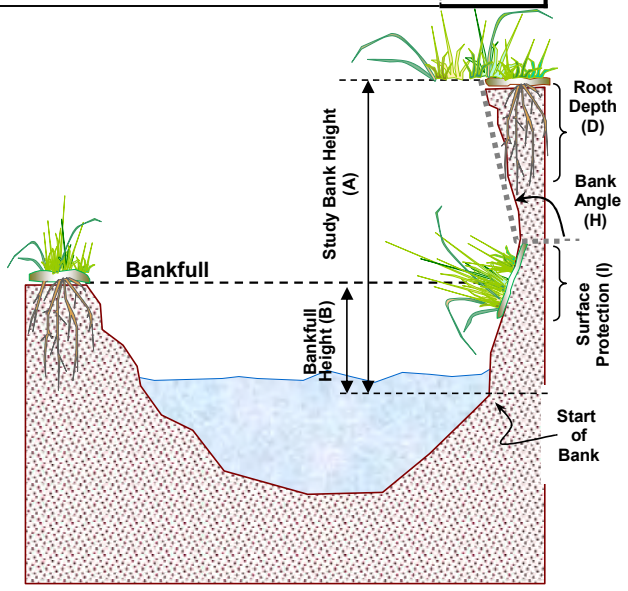
Stratification Adjustment

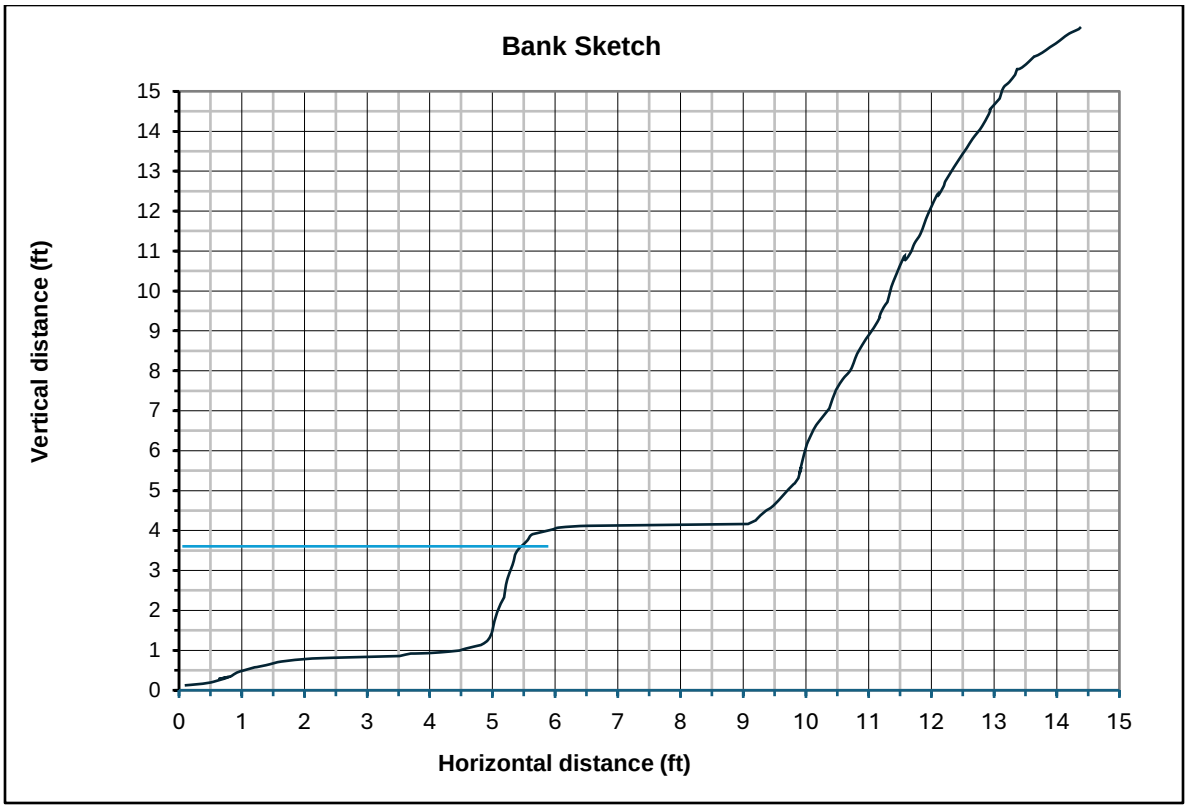
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 24.0







Station E: Bank Sketch



Station E: Bank View



Station E: Downstream Bank View

Stream: **Saco** Location: **Bar Mills Impoundment**

Station: **F** Observers: **Sarah Drahovzal, Matthew Brewer**

Date: **7/18/2024** Stream Type: **Perennial** Landscape Type:

Study Bank Height to Bankfull Height (C)

BEHI Score (Fig. 3-7)

Study Bank Height (ft) =	10.00 (A)	Bankfull Height (ft) =	10.00 (B)	(A) / (B) =	1.00 (C)

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	10.00 (A)	(D) / (A) =	0.20 (E)

Weighted Root Density (G)

Root Density as % =	80.00 (F)	F) × (E) =	16 (G)

Bank Angle (H)

Bank Angle as *Degrees*	50 (H)

Surface Protection (I)

Surface Protection as % =	0% (I)

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

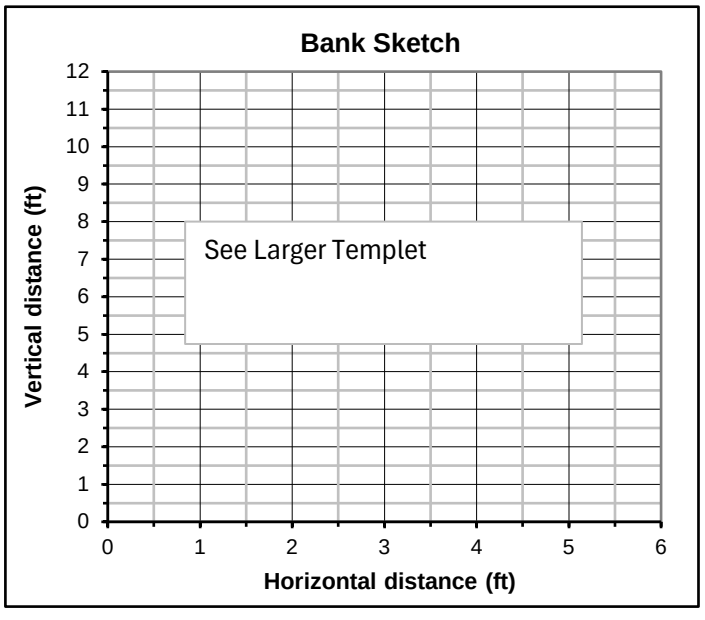
Bank Material Adjustment → **Bedrock**

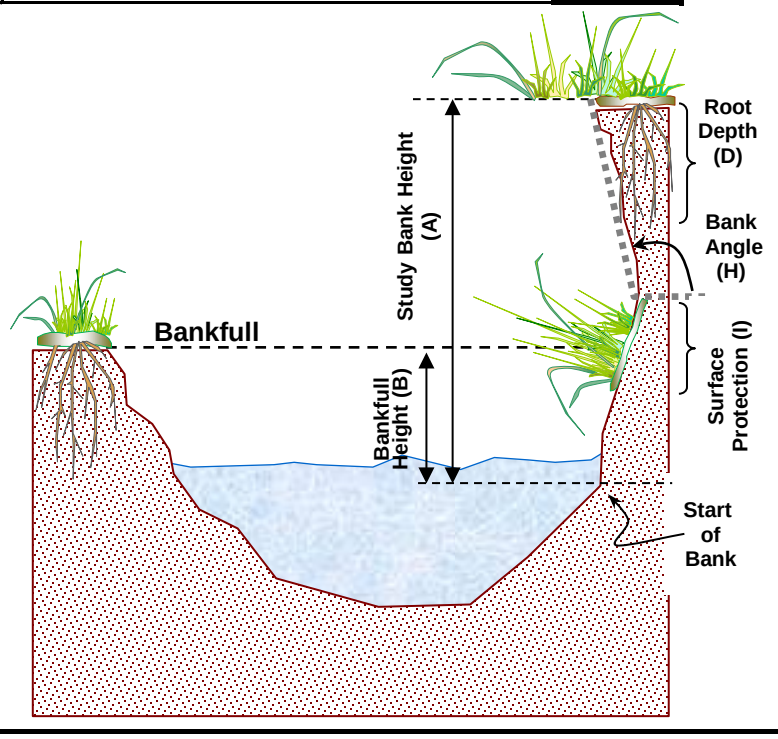
Stratification Adjustment

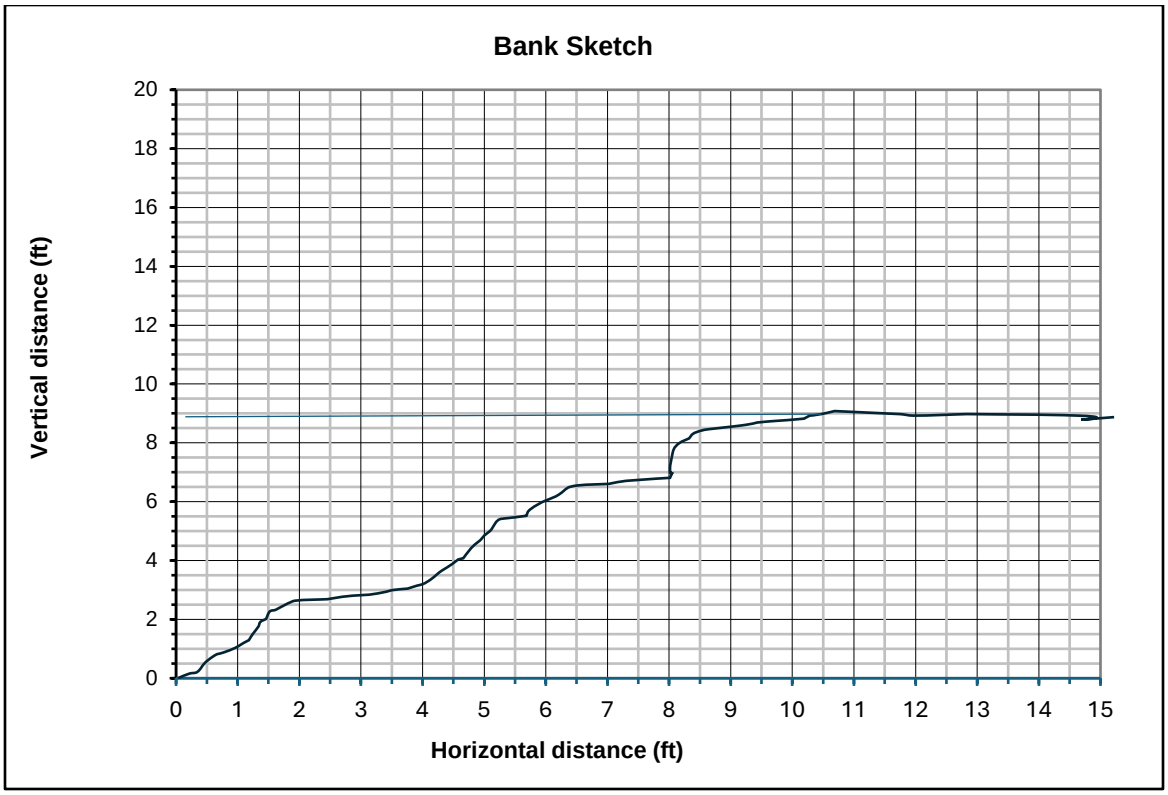
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

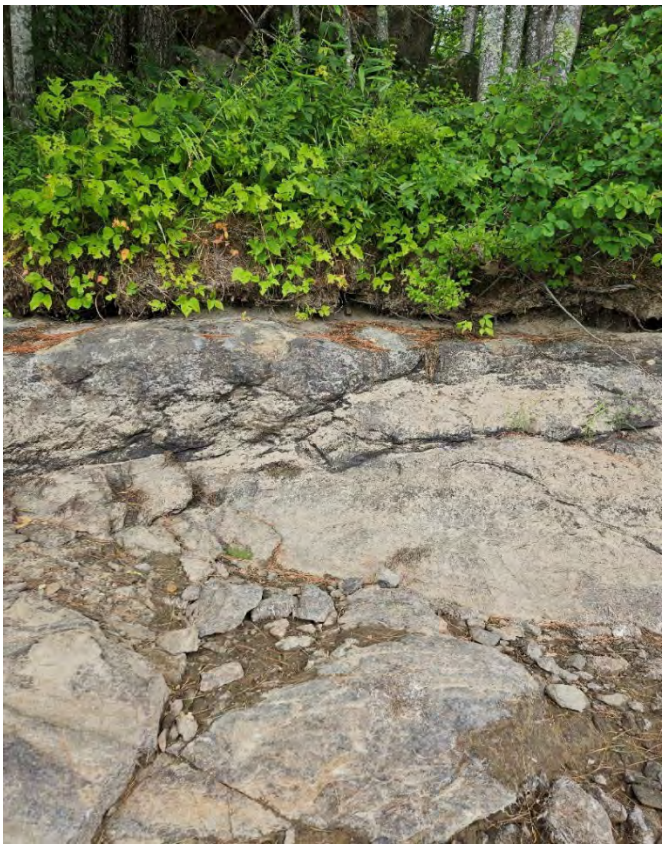
Adjective Rating and Total Score → **N/A**







Station F: Bank Sketch



Station F: Bank View



Station F: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**G**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	7.00 (A)	Bankfull Height (ft) =	7.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	3.00 (D)	Study Bank Height (ft) =	7.00 (A)	(D) / (A) =	0.43 (E)	4.5

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	34.29 (G)	5.3

Bank Angle (H)

Bank Angle as *Degrees*	55 (H)	3.5

Surface Protection (I)

Surface Protection as % =	20% (I)	9.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

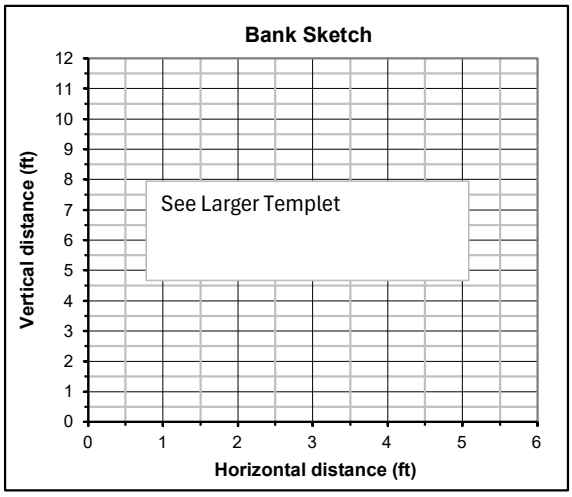
Bank Material Adjustment 7

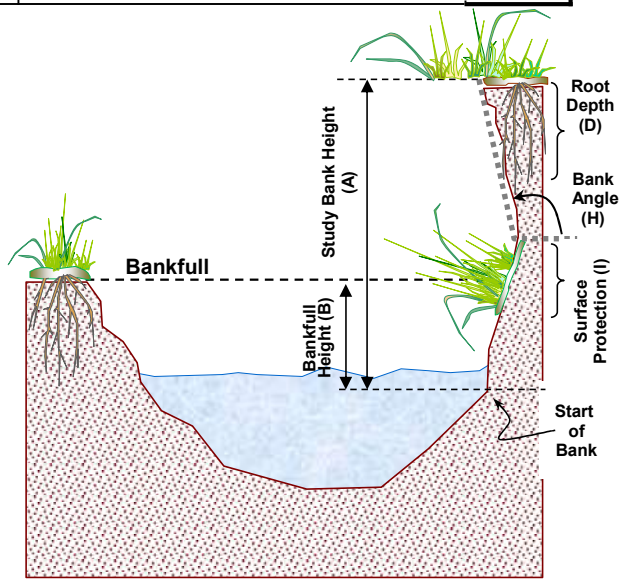
Stratification Adjustment

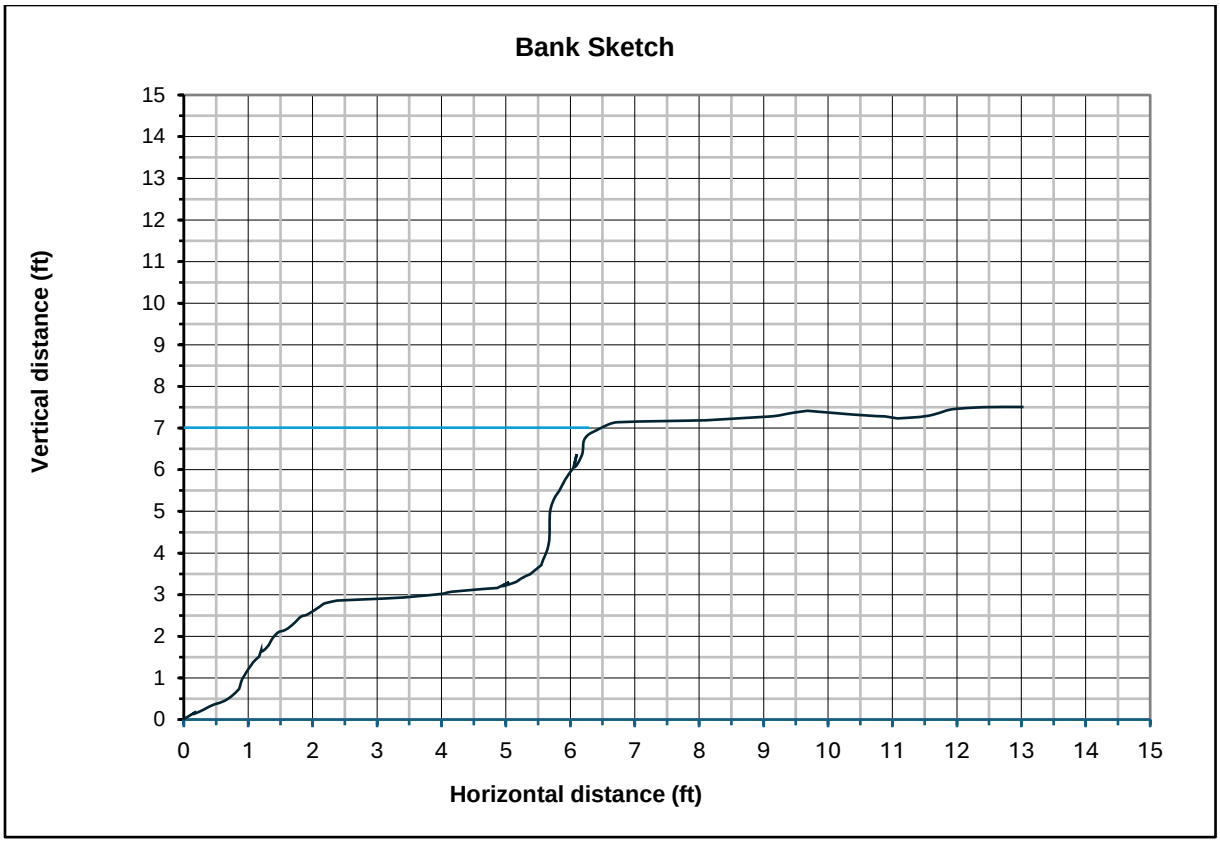
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 29.3







Station G: Bank Sketch



Station G: Bank View



Station G: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**H**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	15.00 (A)	Bankfull Height (ft) =	6.00 (B)	(A) / (B) =	2.50 (C)	BEHI Score (Fig. 3-7) 9.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	5.00 (D)	Study Bank Height (ft) =	15.00 (A)	(D) / (A) =	0.33 (E)	5.5

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	26.67 (G)	2.0

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	10% (I)	9.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

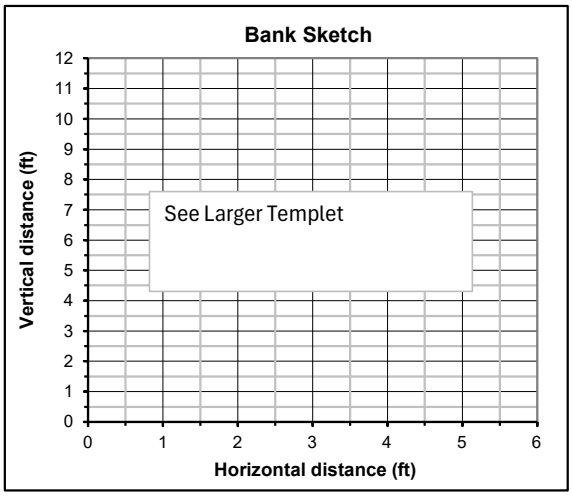
Bank Material Adjustment 8

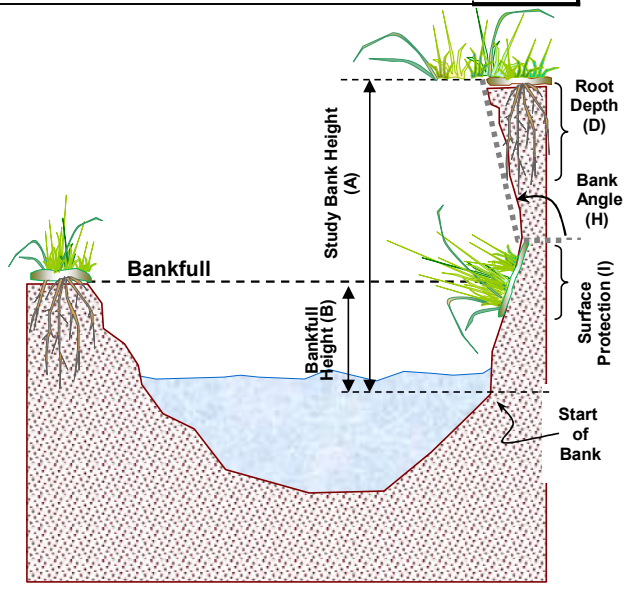
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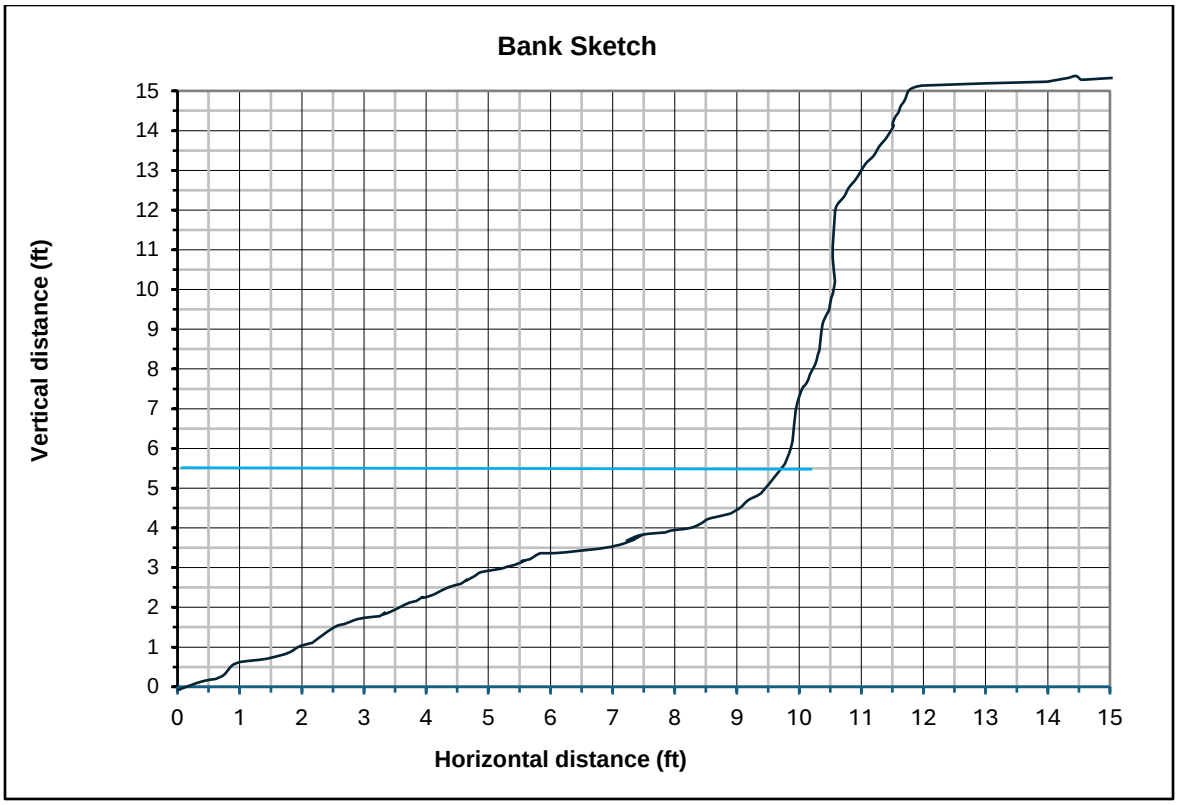
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 36.0







Station H: Bank Sketch



Station H: Bank View



Station H: Downstream Bank View

Stream: **Saco** Location: **Bar Mills Impoundment**

Station: **I** Observers: **Sarah Drahovzal, Matthew Brewer**

Date: **7/18/2024** Stream Type: **Perennial** Landscape Type:

						BEHI Score (Fig. 3-7)
Study Bank Height (ft) =	8.00 (A)	**Bankfull Height (ft) =**	5.00 (B)	(A) / (B) =	1.60 (C)	**6.0**
Root Depth (ft) =	4.00 (D)	**Study Bank Height (ft) =**	8.00 (A)	(D) / (A) =	0.50 (E)	**4.0**
Root Density as % =		80.00 (F)		(F) × (E) =	40 (G)	**5.0**
Bank Angle as *Degrees*					40 (H)	**3.0**
Surface Protection as %					15% (I)	**8.0**

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

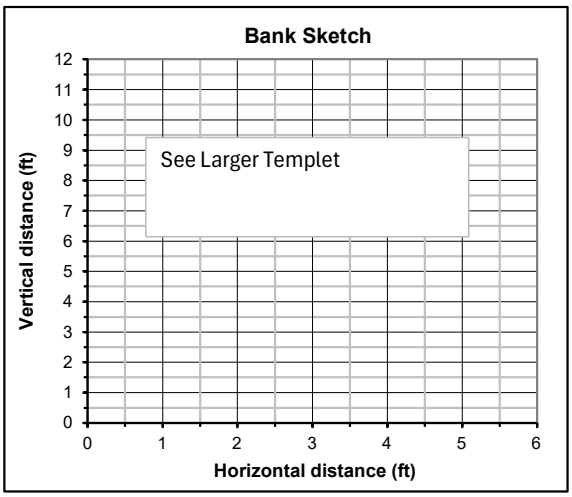
Bank Material Adjustment **8**

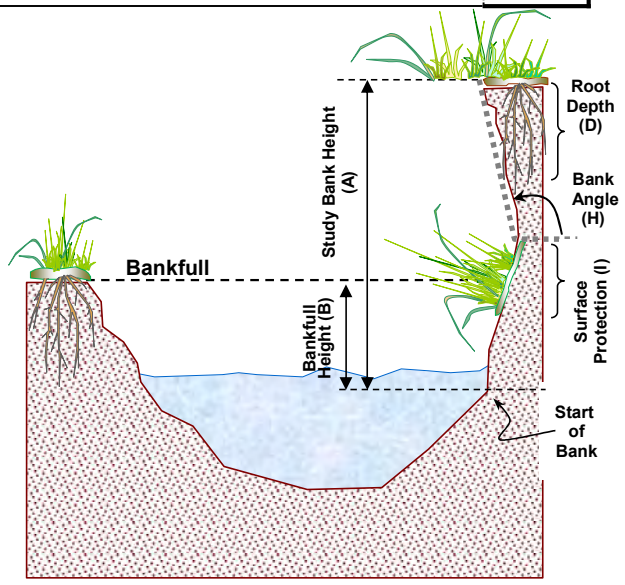
ratification Adjustme

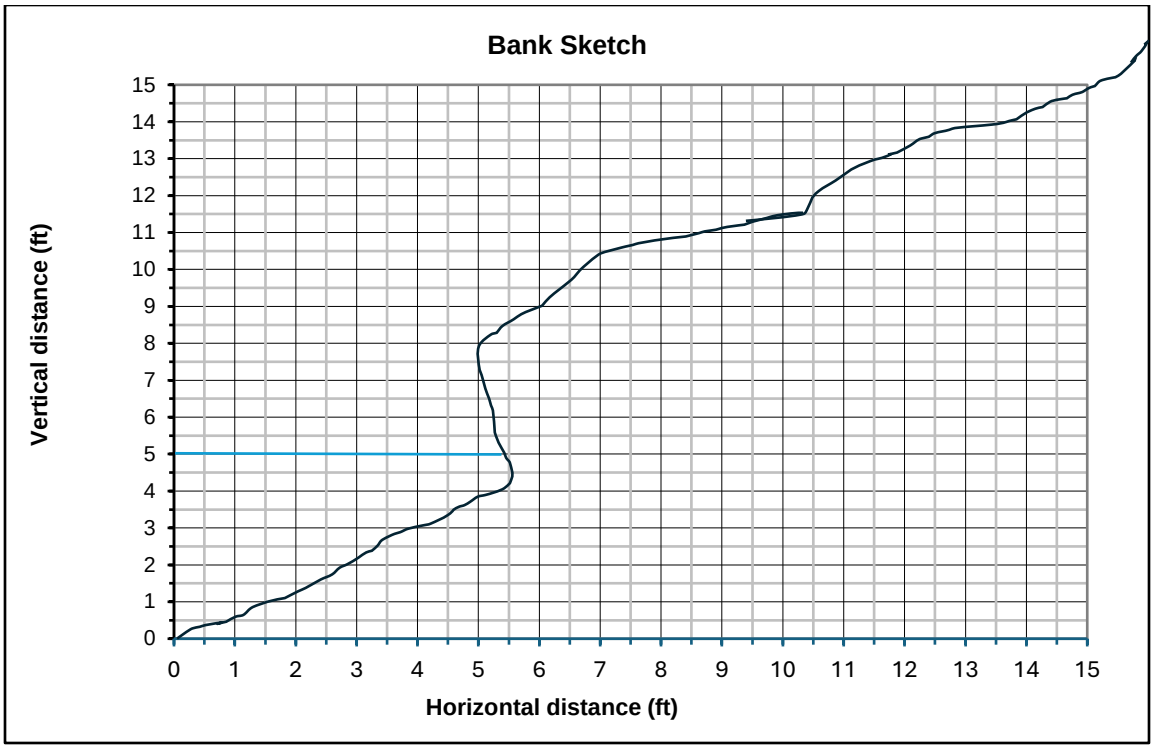
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score **34.0**







Station I: Bank Sketch



Station I: Bank View



Station I: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**J**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	15.00 (A)	Bankfull Height (ft) =	5.00 (B)	(A) / (B) =	3.00 (C)	BEHI Score (Fig. 3-7) 9.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	6.00 (D)	Study Bank Height (ft) =	15.00 (A)	(D) / (A) =	0.40 (E)	4.7

Weighted Root Density (G)

Root Density as % =	70.00 (F)	(F) × (E) =	28 (G)	1.5

Bank Angle (H)

Bank Angle as *Degrees*	55 (H)	3.8

Surface Protection (I)

Surface Protection as % =	10% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

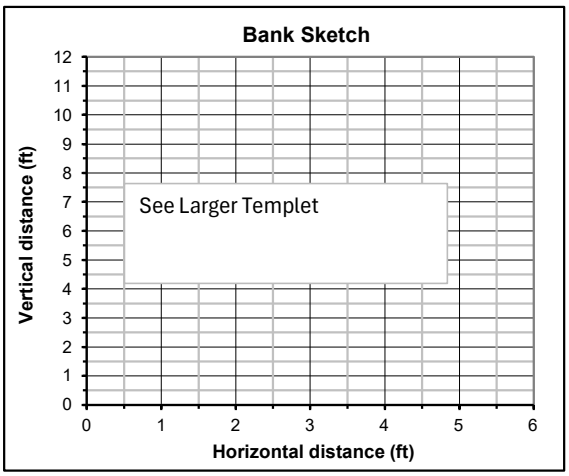
Bank Material Adjustment → **9**

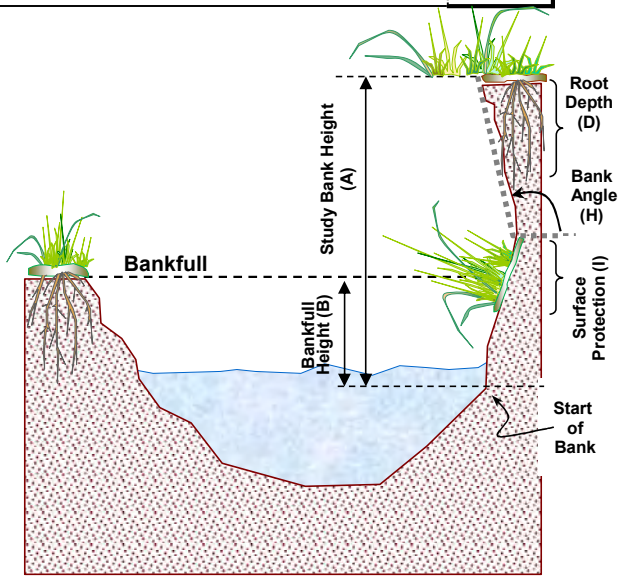
ratification Adjustme

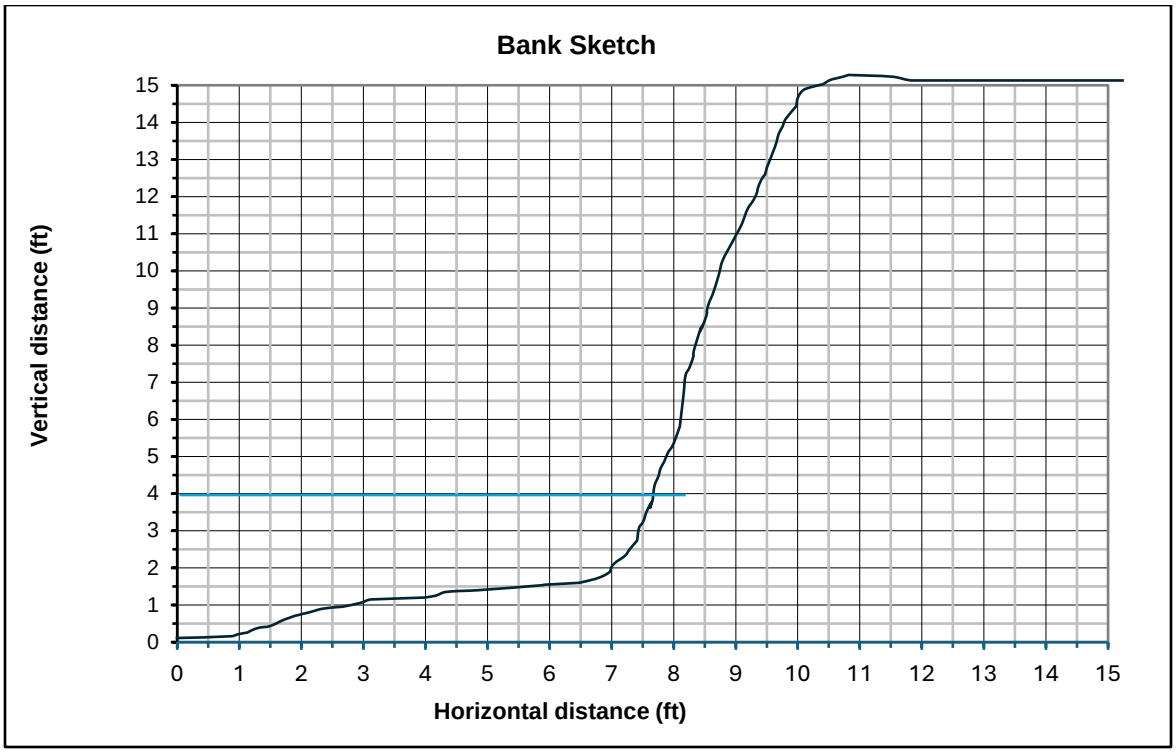
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score → **38.0**







Station J: Bank Sketch



Station J: Bank View



Station J: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**K**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	15.00 (A)	Bankfull Height (ft) =	10.00 (B)	(A) / (B) =	1.50 (C)	BEHI Score (Fig. 3-7) 6.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	6.00 (D)	Study Bank Height (ft) =	15.00 (A)	(D) / (A) =	0.40 (E)	5.0

Weighted Root Density (G)

Root Density as % =	60.00 (F)	F) × (E) =	24 (G)	6.5

Bank Angle (H)

Bank Angle as *Degrees*	75 (H)	5.5

Surface Protection (I)

Surface Protection as % =	40% (I)	5.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

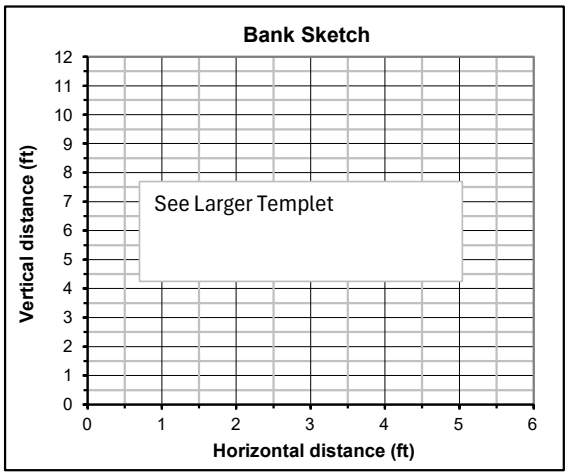
Bank Material Adjustment 10

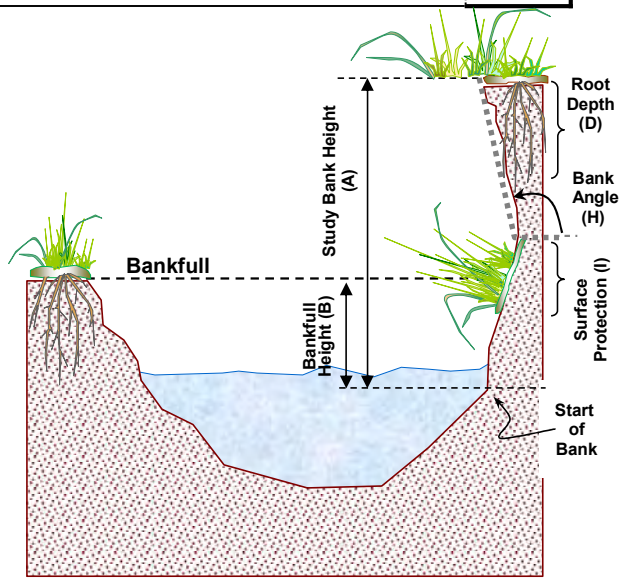
ratification Adjustme

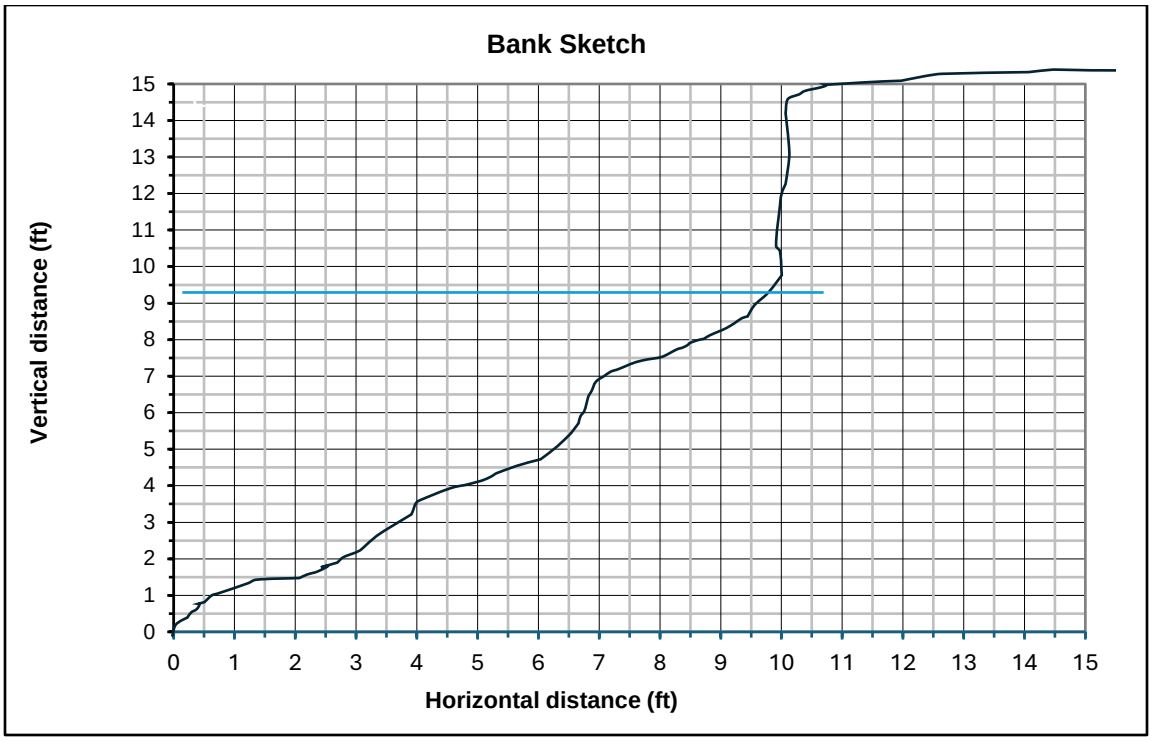
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and **Total Score** 38.0







Station K: Bank Sketch



Station K: Bank View



Station K: Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**L**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	7.00 (A)	Bankfull Height (ft) =	4.00 (B)	(A) / (B) =	1.75 (C)	BEHI Score (Fig. 3-7) 7.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	3.00 (D)	Study Bank Height (ft) =	7.00 (A)	(D) / (A) =	0.43 (E)	4.5

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	34.29 (G)	5.5

Bank Angle (H)

Bank Angle as *Degrees*	45 (H)	3.0

Surface Protection (I)

Surface Protection as % =	25% (I)	6.2

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

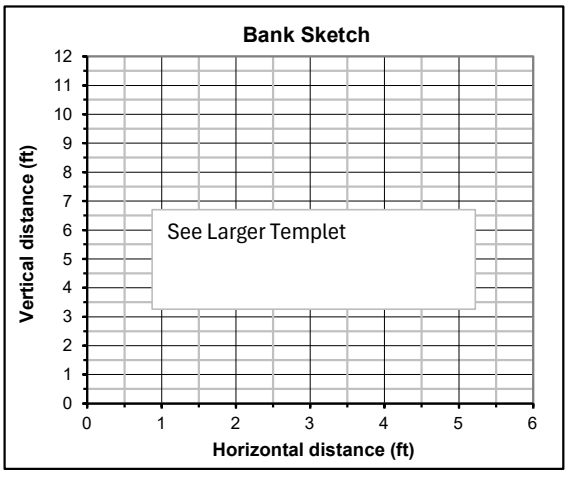
Bank Material Adjustment 8

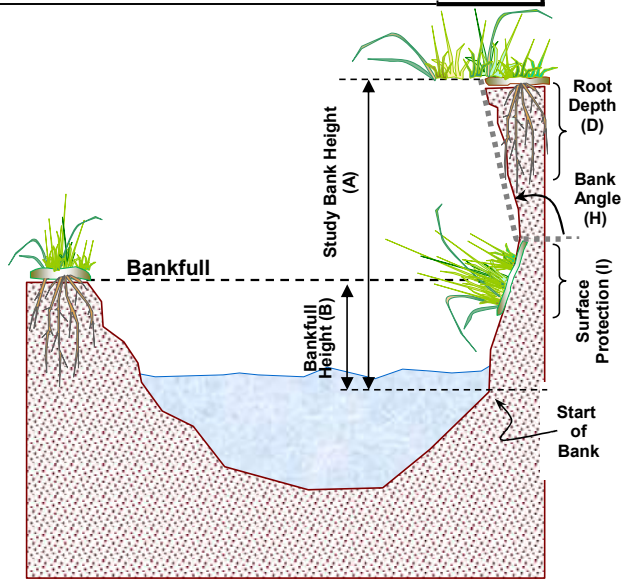
Stratification Adjustment

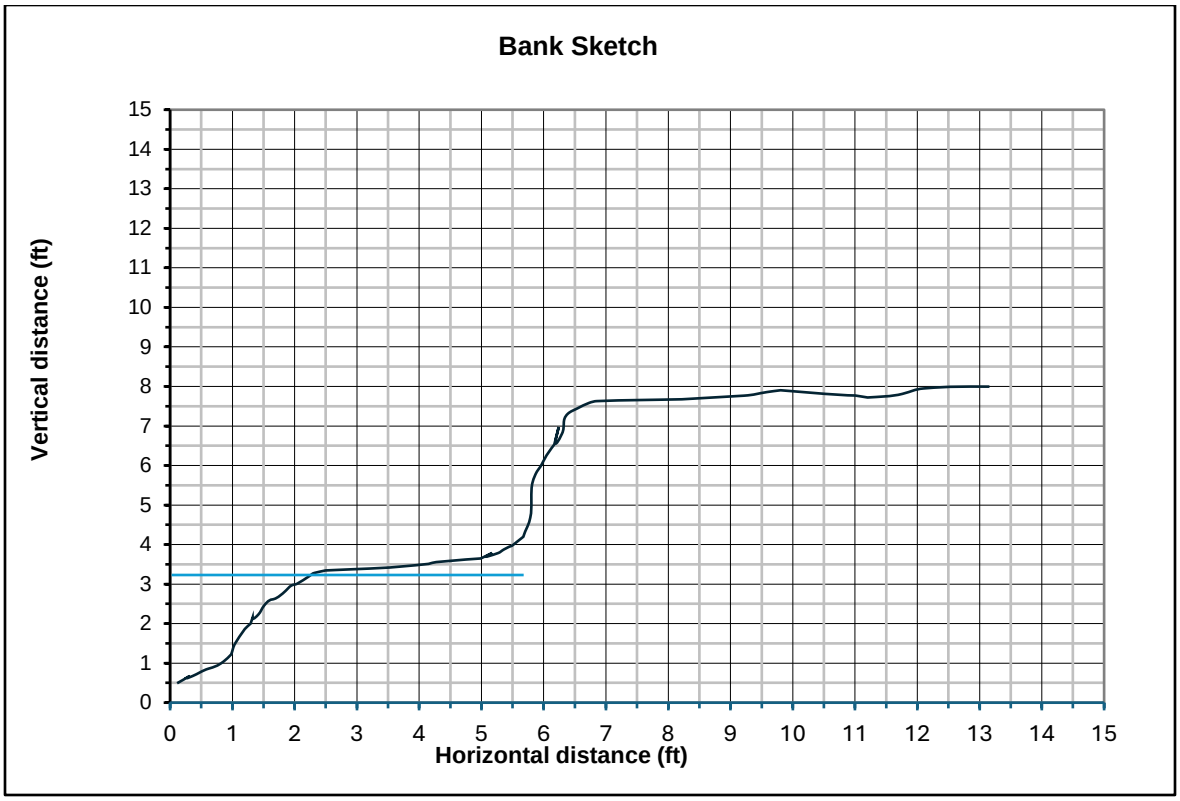
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 34.2







Station L: Bank Sketch



Station L: Bank View



Station L: Downstream Bank View

Stream:	**Smith Brook**	Location:	**Bar Mills Impoundment**
Station:	**M**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	15.00 (A)	Bankfull Height (ft) =	8.00 (B)	(A) / (B) =	1.88 (C)	BEHI Score (Fig. 3-7) 7.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	5.00 (D)	Study Bank Height (ft) =	15.00 (A)	(D) / (A) =	0.33 (E)	5.5

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	26.67 (G)	5.5

Bank Angle (H)

Bank Angle as *Degrees*	75 (H)	5.0

Surface Protection (I)

Surface Protection as % =	60% (I)	3.5

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

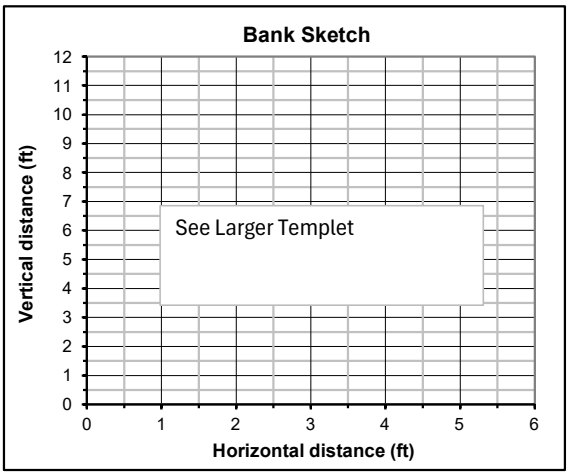
Bank Material Adjustment 7

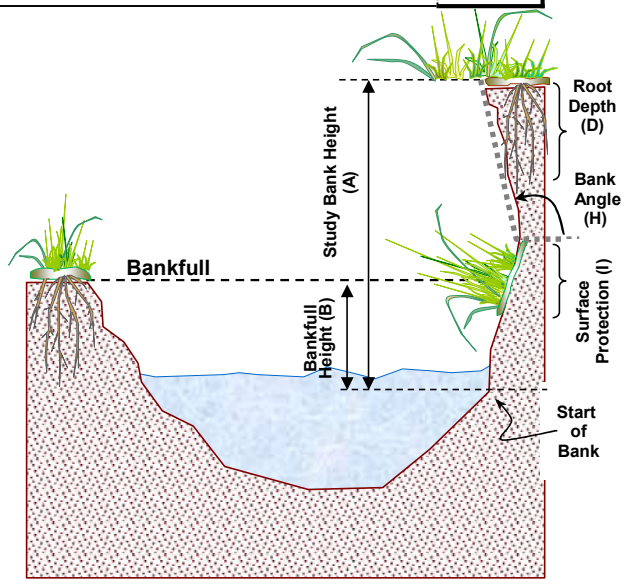
Stratification Adjustment

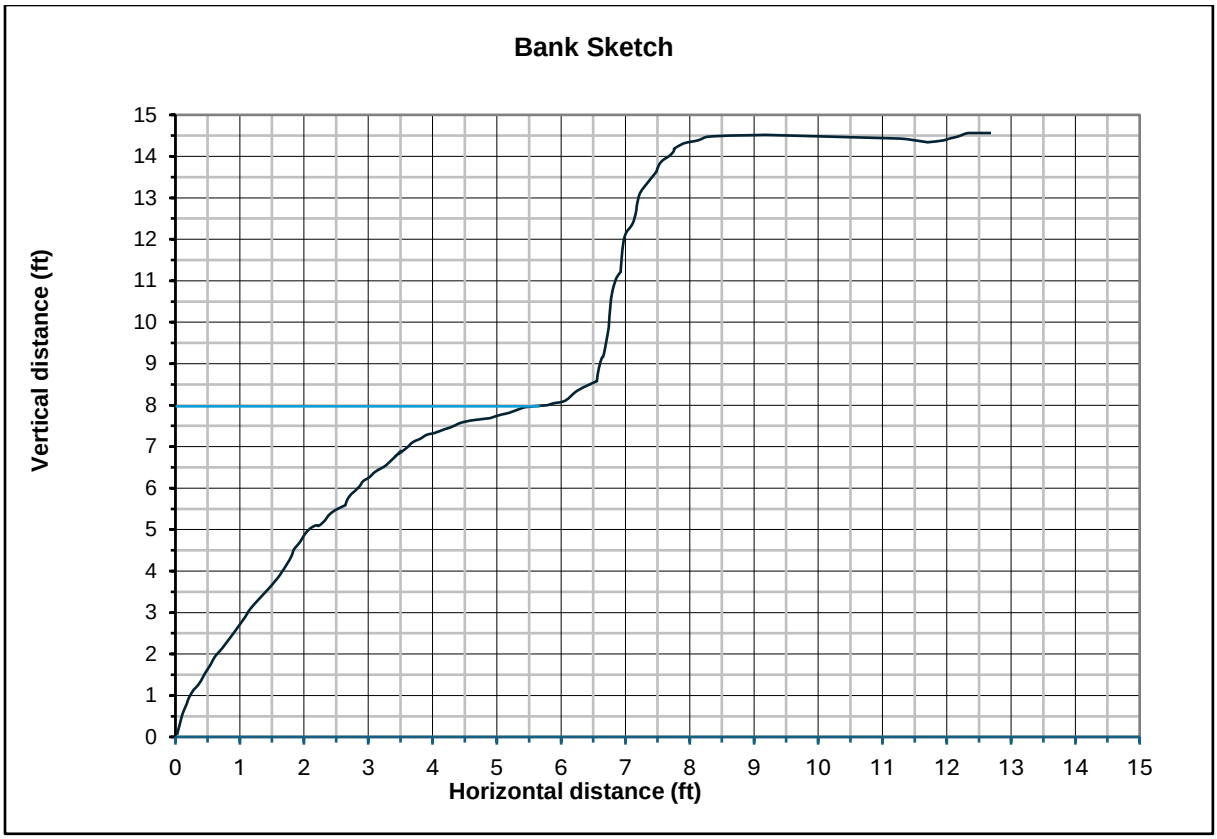
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 33.5







Station M: Bank Sketch



Station M: Bank View



Station M: Upstream Bank View

Stream:	**Smith Brook**	Location:	**Bar Mills Impoundment**
Station:	**N**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	5.00 (A)	Bankfull Height (ft) =	5.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	3.00 (D)	Study Bank Height (ft) =	5.00 (A)	(D) / (A) =	0.60 (E)	3.2

Weighted Root Density (G)

Root Density as % =	90.00 (F)	(F) × (E) =	54 (G)	4.0

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	60% (I)	3.2

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

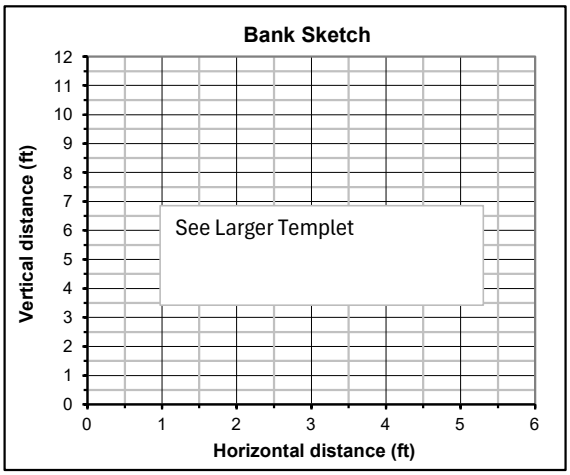
Bank Material Adjustment 7

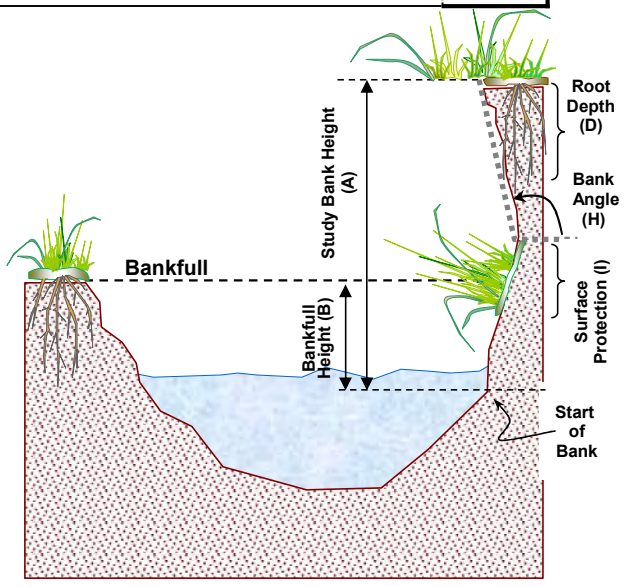
Stratification Adjustment

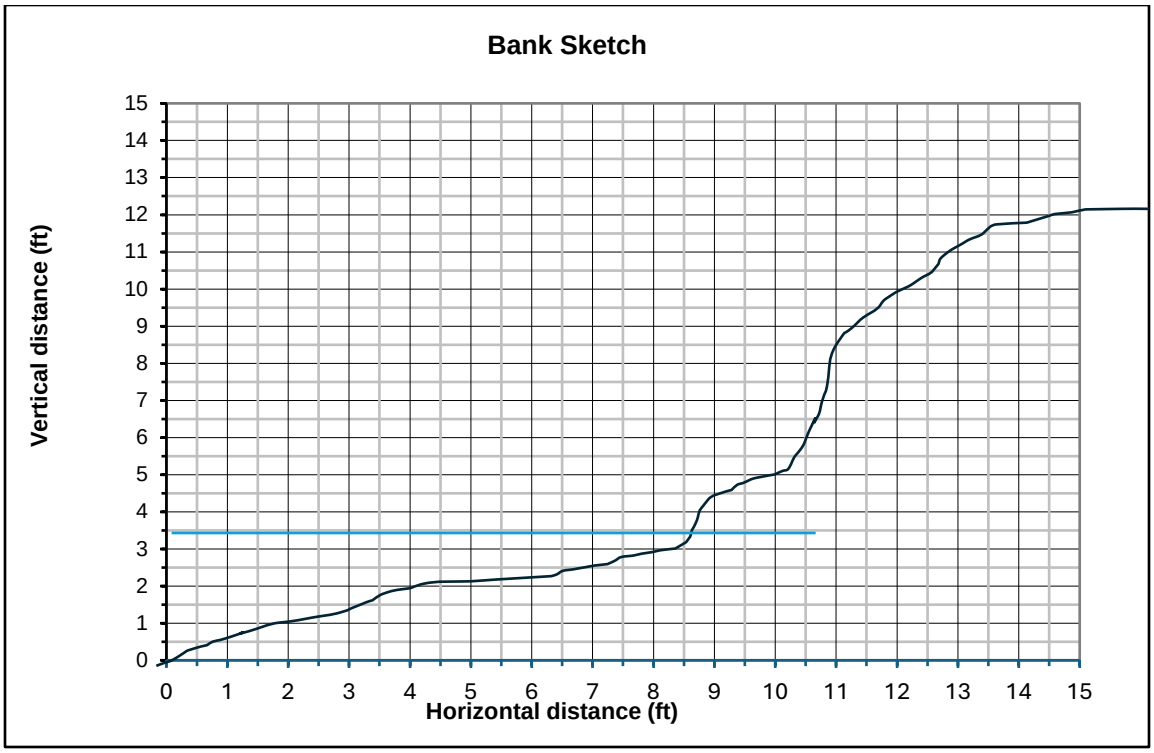
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 19.9







Station N: Bank Sketch



Station N: Bank View



Station N: Upstream Bank View

Stream:	**Smith Brook**	Location:	**Bar Mills Impoundment**
Station:	**O**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	3.00 (A)	Bankfull Height (ft) =	3.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	3.00 (A)	(D) / (A) =	0.67 (E)	3.0

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	53.33 (G)	1.9

Bank Angle (H)

Bank Angle as *Degrees*	40 (H)	3.0

Surface Protection (I)

Surface Protection as % =	15% (I)	9.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

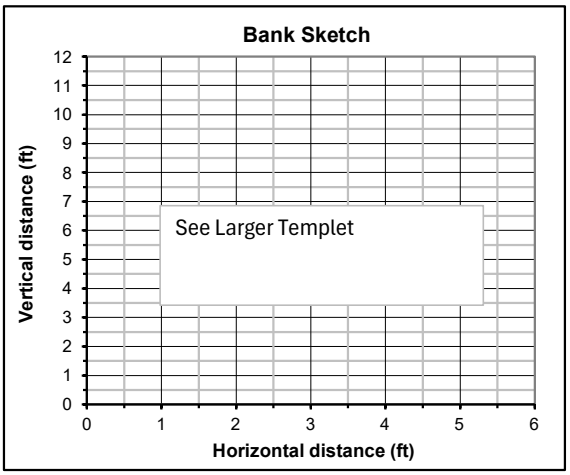
Bank Material Adjustment 10

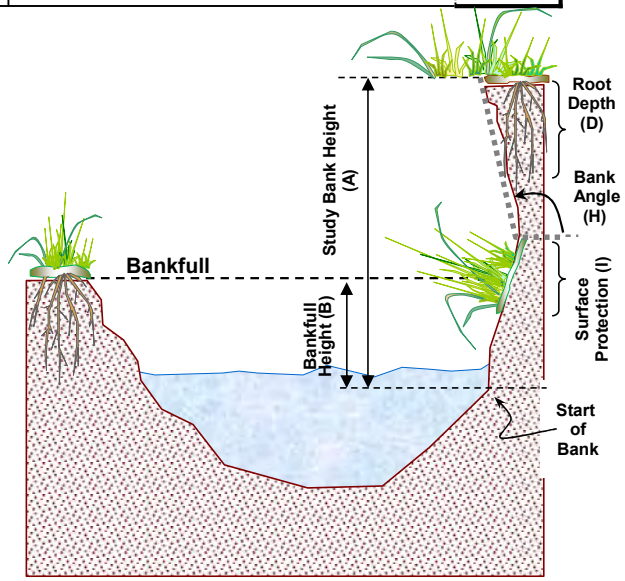
Stratification Adjustment

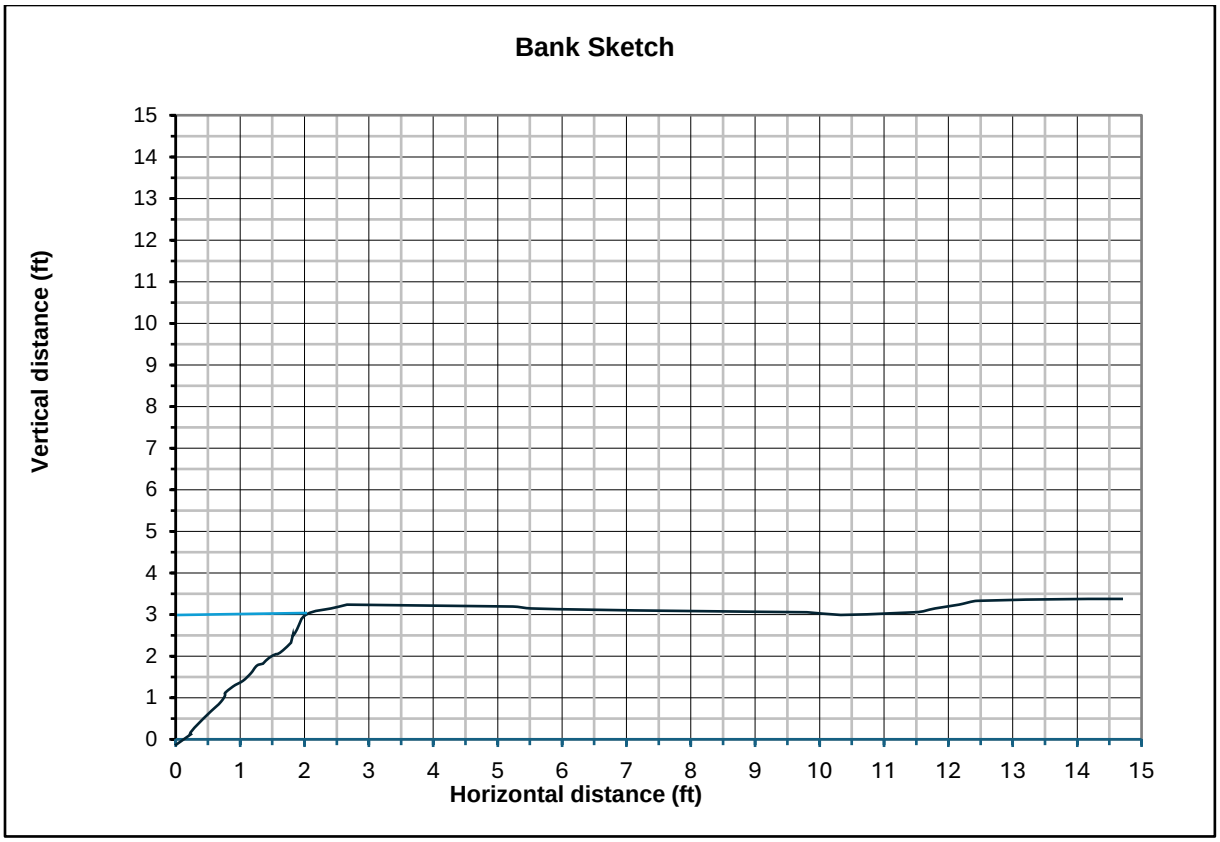
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 26.9







Station O: Bank Sketch



Station O: Bank View



Station O: Upstream Bank View

Stream:	**Smith Brook**	Location:	**Bar Mills Impoundment**
Station:	**P**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	10.00 (A)	Bankfull Height (ft) =	10.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	5.00 (D)	Study Bank Height (ft) =	10.00 (A)	(D) / (A) =	0.50 (E)	3.9

Weighted Root Density (G)

Root Density as % =	30.00 (F)	(F) × (E) =	15 (G)	8.0

Bank Angle (H)

Bank Angle as *Degrees*	80 (H)	6.0

Surface Protection (I)

Surface Protection as % =	0% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

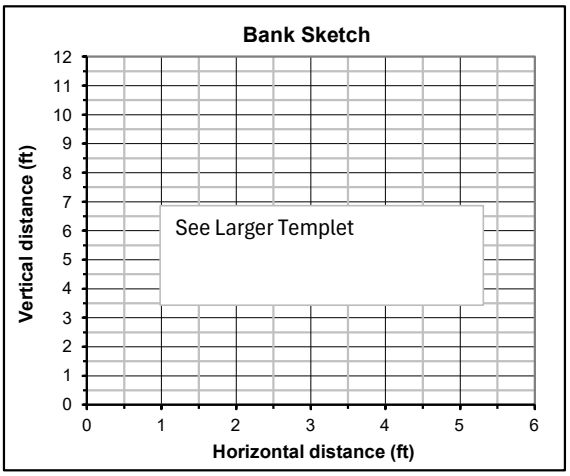
Bank Material Adjustment 10

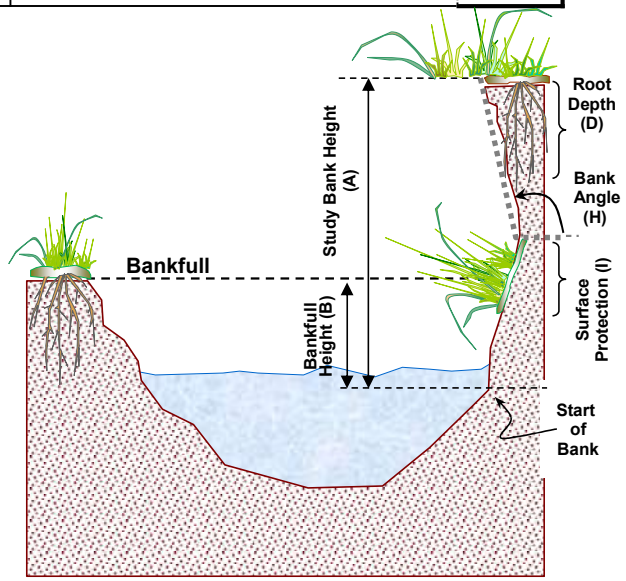
Stratification Adjustment

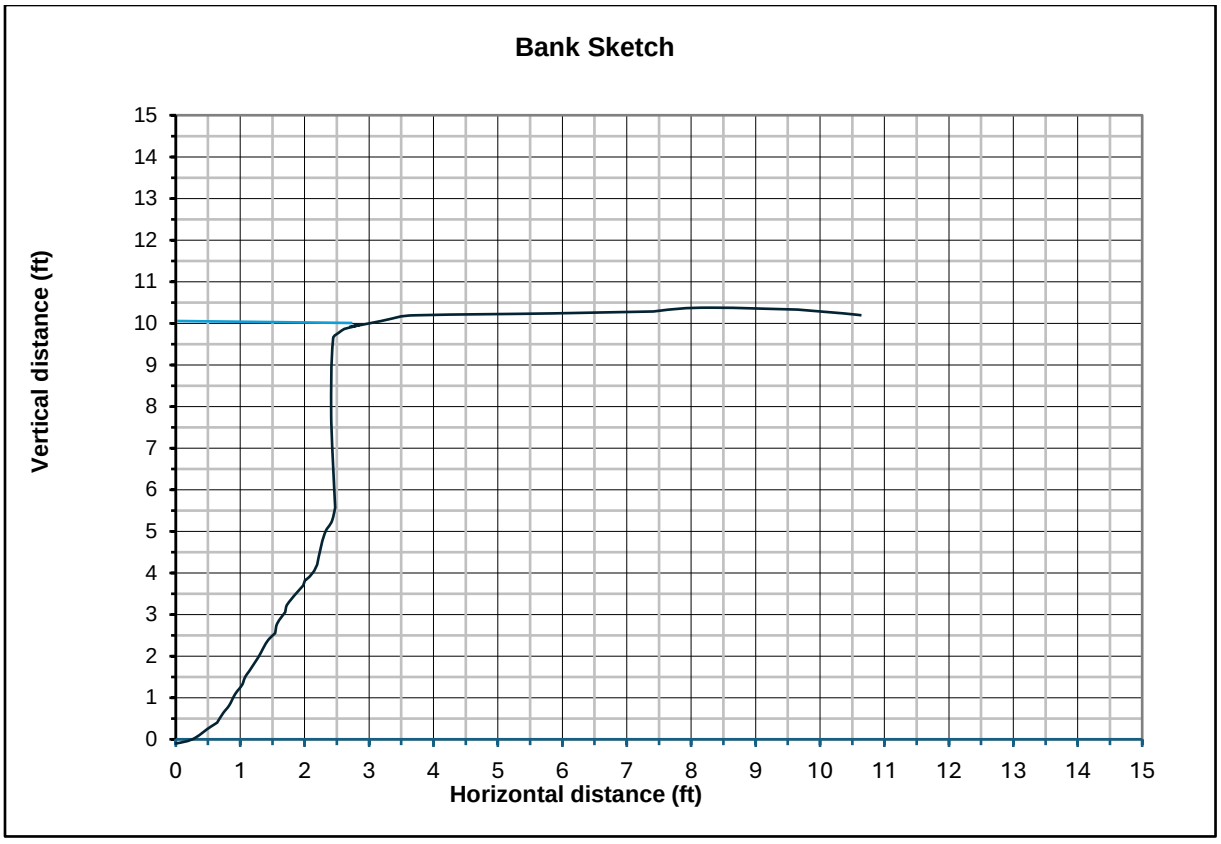
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 37.9







Station P: Bank Sketch



Station P: Bank View



Station P: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**Q**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	5.00 (A)	Bankfull Height (ft) =	5.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	5.00 (A)	(D) / (A) =	0.40 (E)	5.0

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	32 (G)	5.5

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	10% (I)	9.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

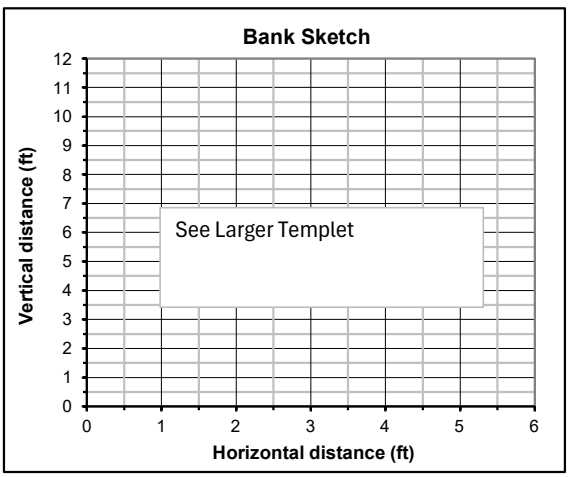
Bank Material Adjustment 10

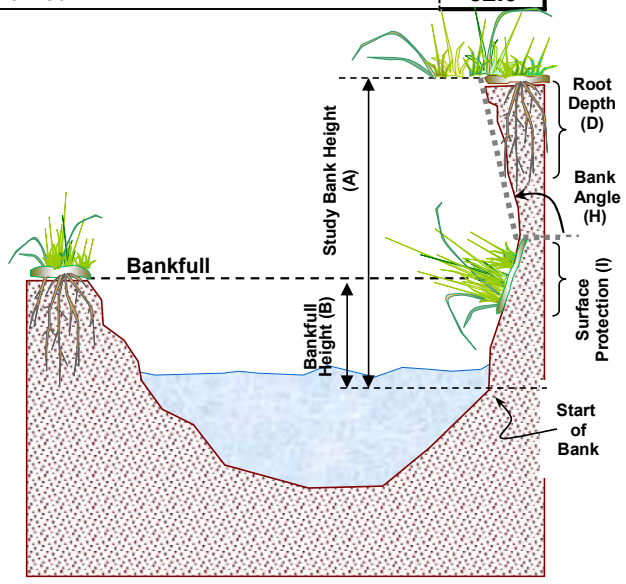
Stratification Adjustment

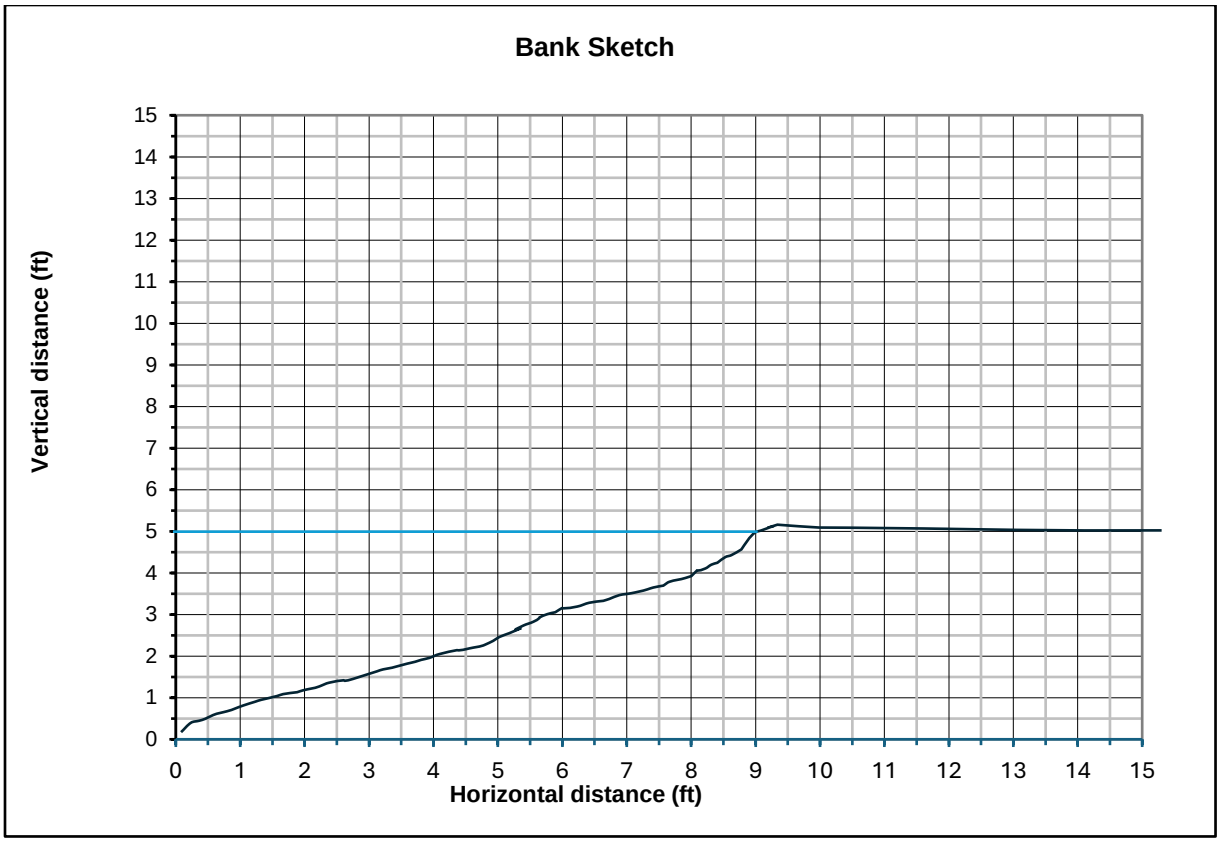
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 32.0







Station Q: Bank Sketch



Station Q: Bank View



Station Q: Downstream Bank View

Stream:	**Crockett Brook**	Location:	**Bar Mills Impoundment**
Station:	**R**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	8.00 (A)	Bankfull Height (ft) =	5.00 (B)	(A) / (B) =	1.60 (C)	BEHI Score (Fig. 3-7) 6.5

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	8.00 (A)	(D) / (A) =	0.25 (E)	6.5

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	20 (G)	7.0

Bank Angle (H)

Bank Angle as *Degrees*	50 (H)	3.3

Surface Protection (I)

Surface Protection as % =	10% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

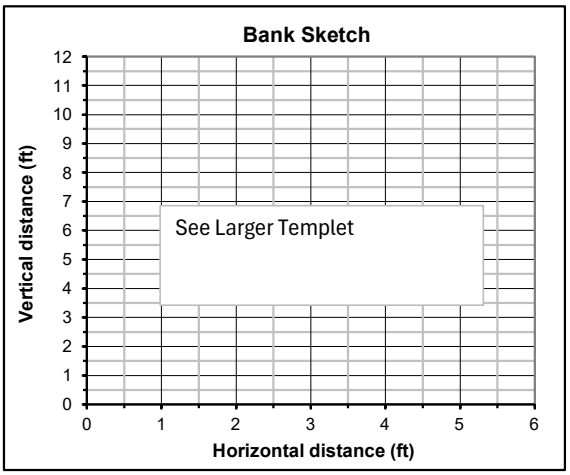
Bank Material Adjustment 8

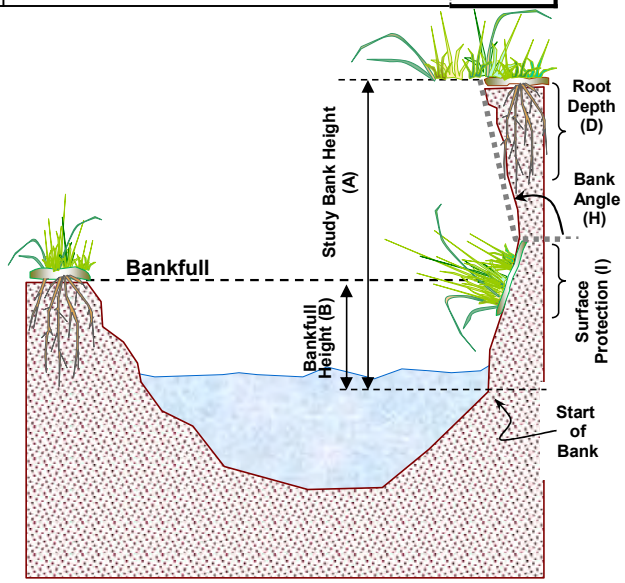
Stratification Adjustment

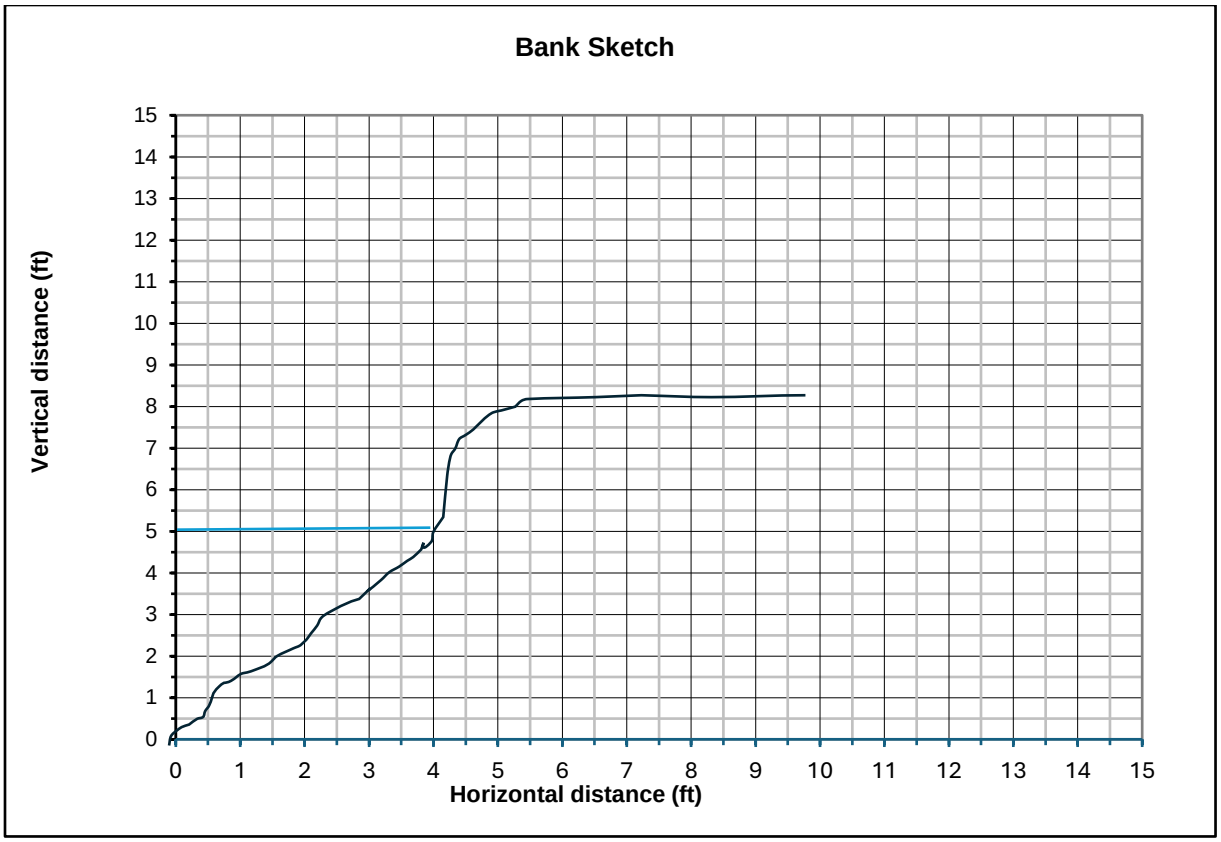
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 41.3







Station R: Bank Sketch



Station R: Bank View



Station R: Upstream Bank View

Stream:	**Casper Brook**	Location:	**Bar Mills Impoundment**
Station:	**S**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	10.00 (A)	Bankfull Height (ft) =	6.00 (B)	(A) / (B) =	1.67 (C)	BEHI Score (Fig. 3-7) 7.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	4.00 (D)	Study Bank Height (ft) =	10.00 (A)	(D) / (A) =	0.40 (E)	4.8

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	32 (G)	5.6

Bank Angle (H)

Bank Angle as *Degrees*	50 (H)	3.5

Surface Protection (I)

Surface Protection as % =	10% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

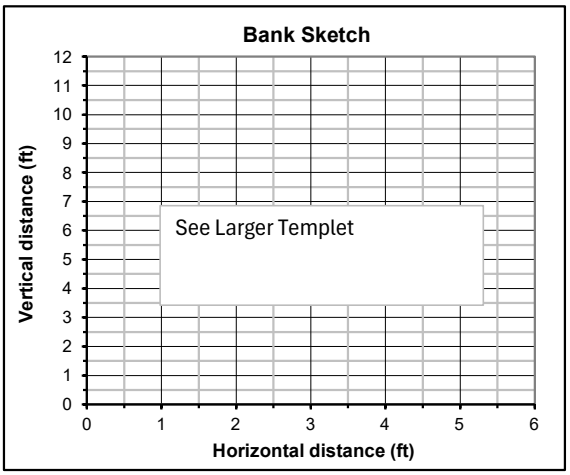
Bank Material Adjustment 9

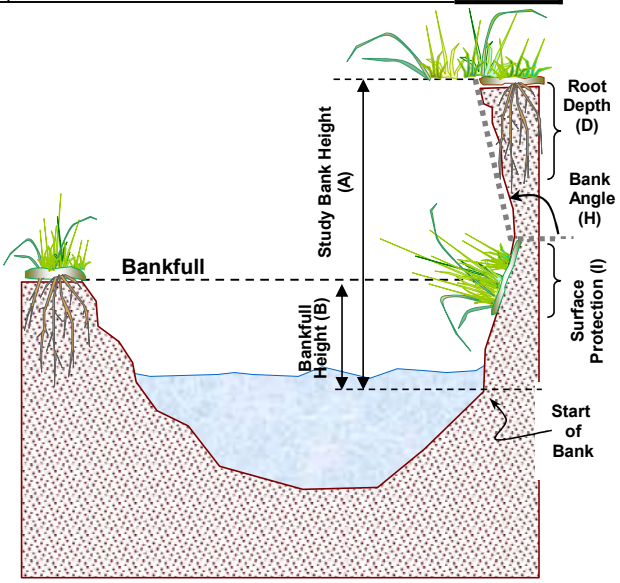
Stratification Adjustment

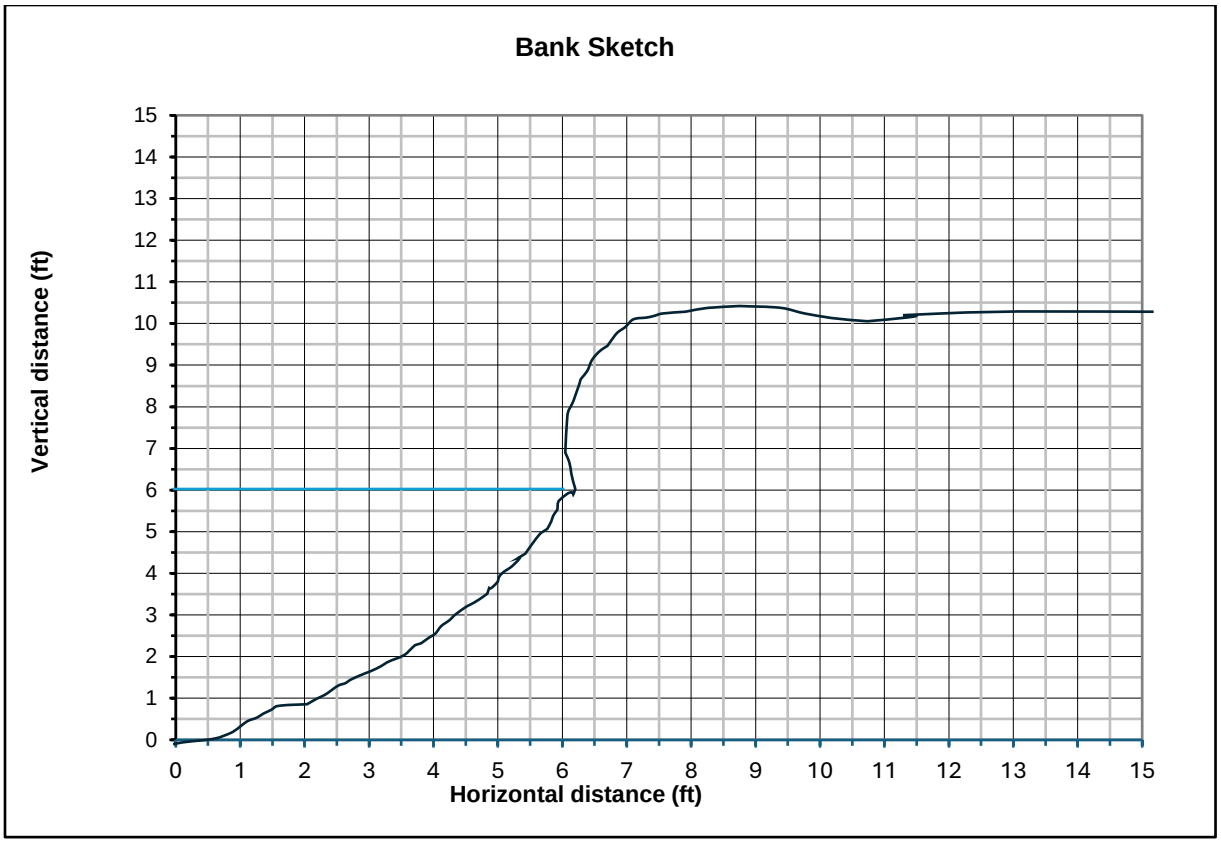
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 39.9







Station S: Bank Sketch



Station S: Bank View



Station S: Upstream Bank View

Stream:	**Casper Brook**	Location:	**Bar Mills Impoundment**
Station:	**T**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	15.00 (A)	Bankfull Height (ft) =	10.00 (B)	(A) / (B) =	1.50 (C)	BEHI Score (Fig. 3-7) 6.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	5.00 (D)	Study Bank Height (ft) =	15.00 (A)	(D) / (A) =	0.33 (E)	5.5

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	26.67 (G)	6.5

Bank Angle (H)

Bank Angle as *Degrees*	80 (H)	5.6

Surface Protection (I)

Surface Protection as % =	10% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

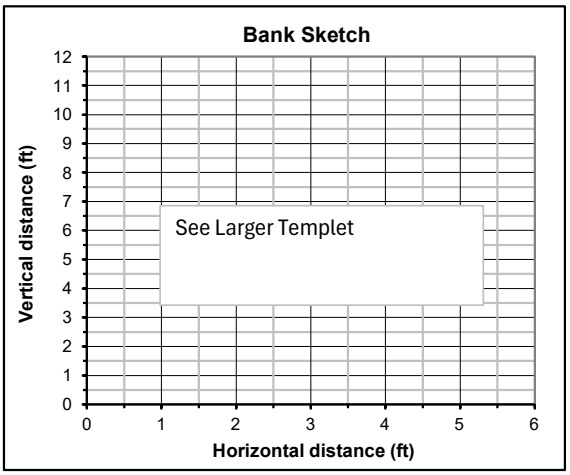
Bank Material Adjustment 10

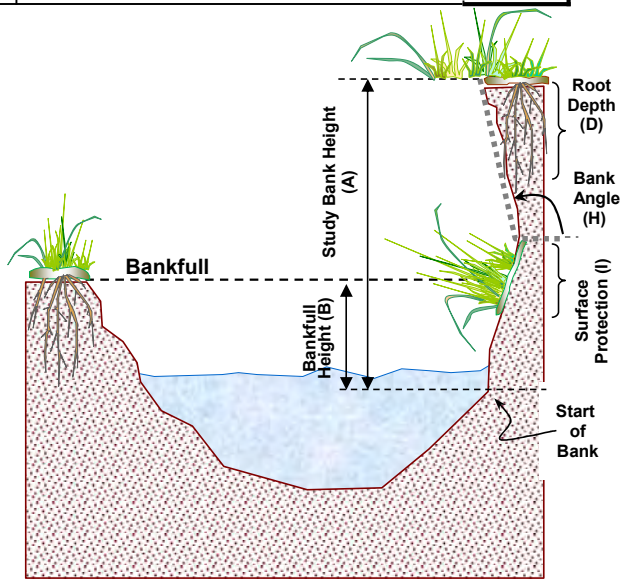
Stratification Adjustment

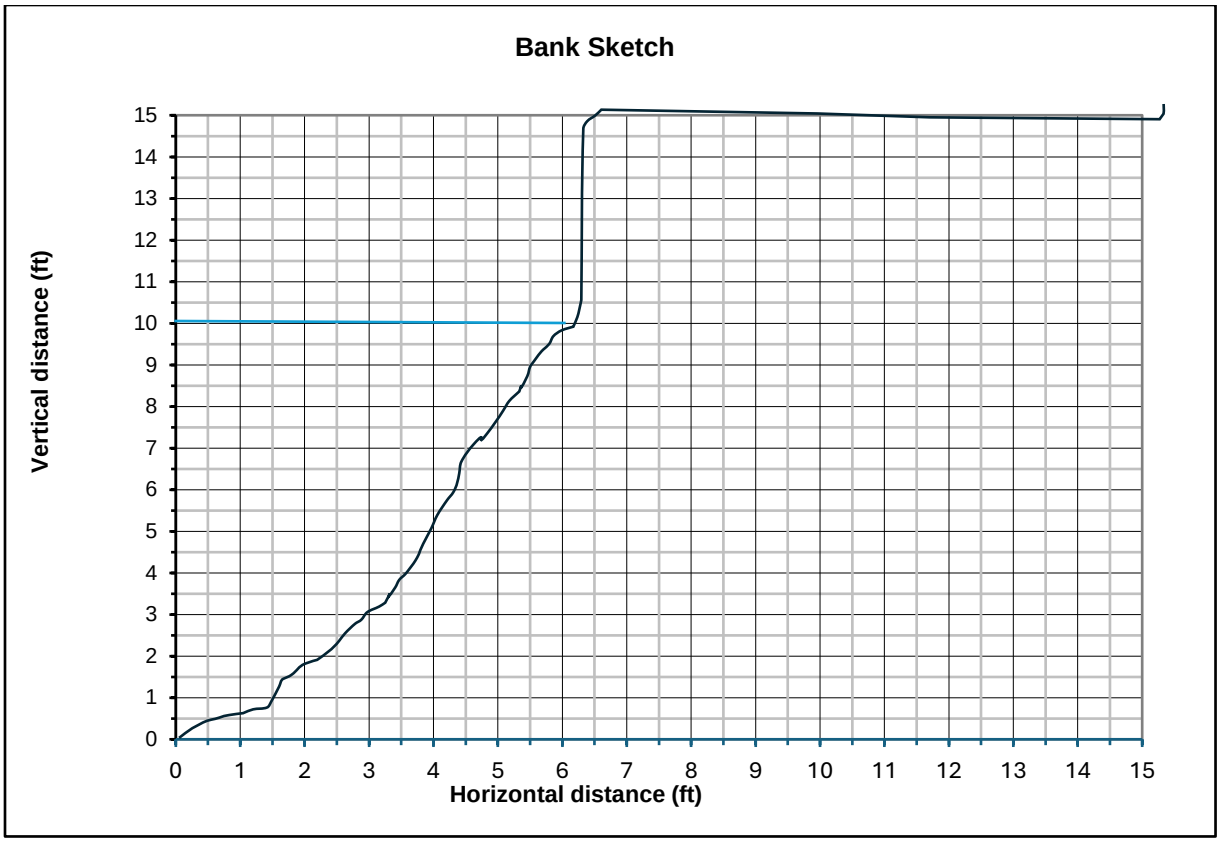
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 43.6







Station T: Bank Sketch



Station T: Downstream Bank View

Stream:	**Caspter Brook**	Location:	**Bar Mills Impoundment**
Station:	**U**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	6.00 (A)	Bankfull Height (ft) =	6.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	6.00 (A)	(D) / (A) =	0.33 (E)	5.5

Weighted Root Density (G)

Root Density as % =	60.00 (F)	(F) × (E) =	20 (G)	7.0

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	10% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

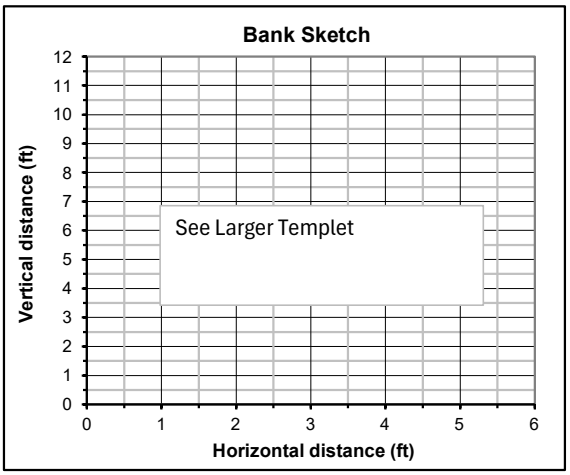
Bank Material Adjustment 10

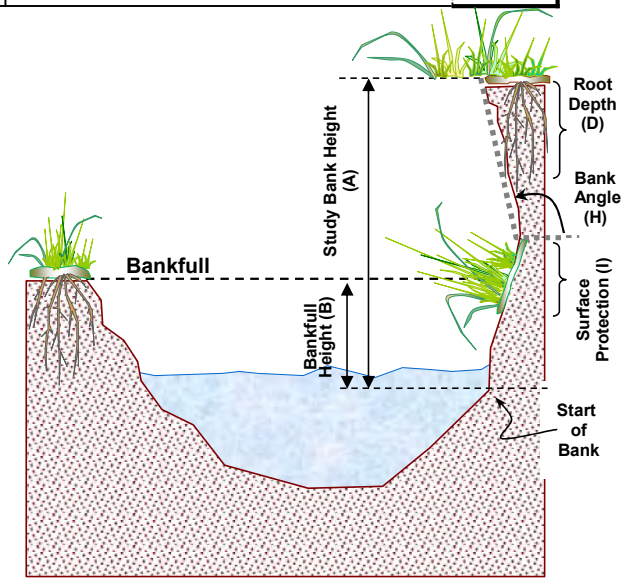
Stratification Adjustment

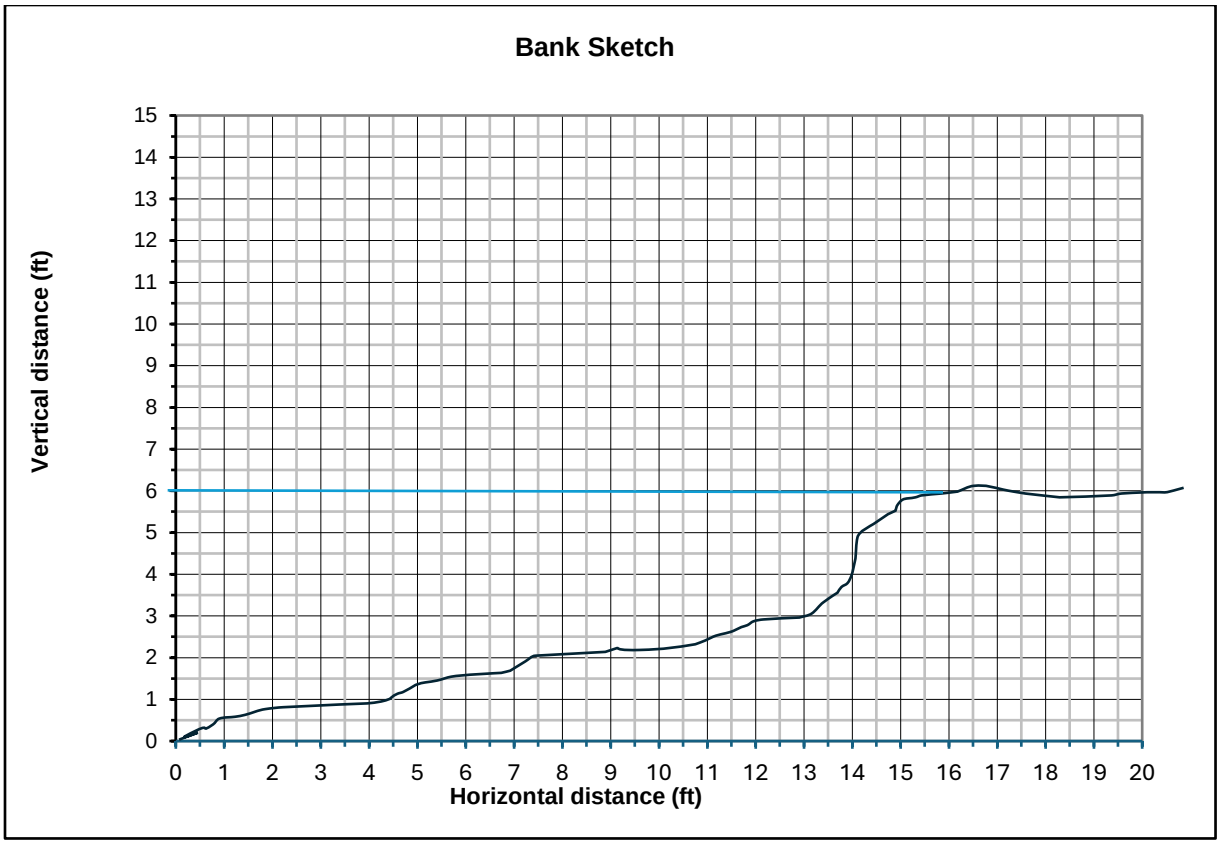
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 35.0







Station U: Bank Sketch



Station U: Bank View



Station U: Upstream Bank View

Stream:	**Casper Brook**	Location:	**Bar Mills Impoundment**
Station:	**V**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	7.00 (A)	Bankfull Height (ft) =	7.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	7.00 (A)	(D) / (A) =	0.29 (E)	6.0

Weighted Root Density (G)

Root Density as % =	30.00 (F)	(F) × (E) =	8.57 (G)	9.0

Bank Angle (H)

Bank Angle as *Degrees*	40 (H)	3.0

Surface Protection (I)

Surface Protection as % =	5% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

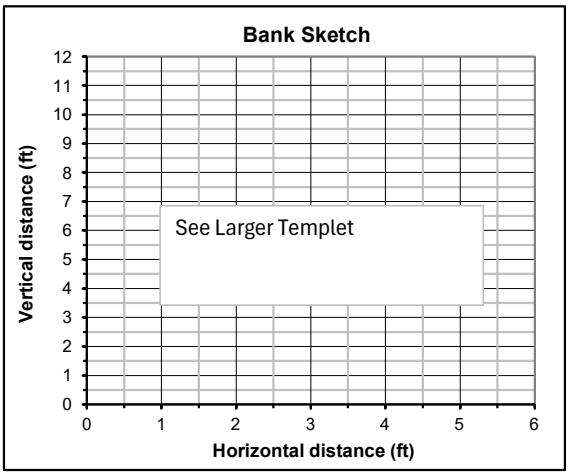
Bank Material Adjustment 10

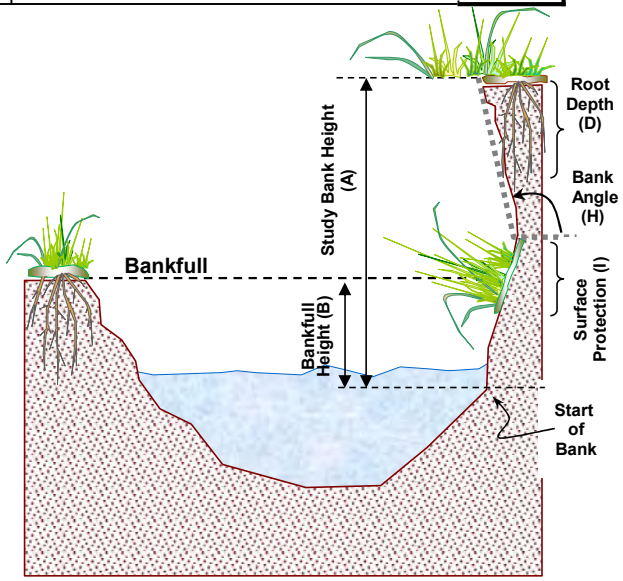
Stratification Adjustment

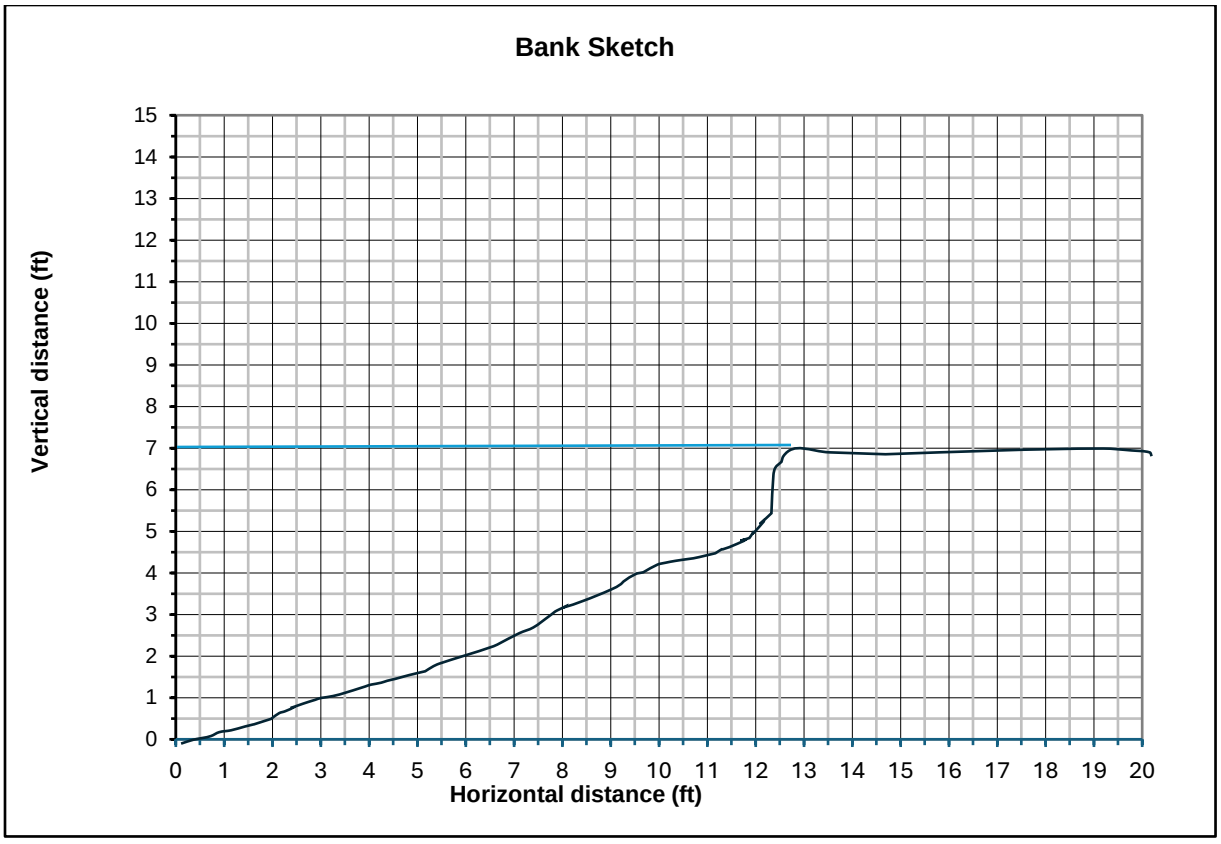
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 38.0







Station V: Bank Sketch



Station V: Bank View



Station V: Upstream Bank View

Stream: **Saco** Location: **Bar Mills Impoundment**

Station: **W** Observers: **Sarah Drahovzal, Matthew Brewer**

Date: **7/18/2024** Stream Type: **Perennial** Landscape Type:

						BEHI Score (Fig. 3-7)
Study Bank Height (C)						
Study Bank Height (ft) =	12.00 (A)	Bankfull Height (ft) =	12.00 (B)	(A) / (B) =	1.00 (C)	0.0
Root Depth to Study Bank Height (E)						
Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	12.00 (A)	(D) / (A) =	0.17 (E)	7.2
Weighted Root Density (G)						
		Root Density as % =	60.00 (F)	(F) × (E) =	10 (G)	8.5
Bank Angle (H)						
				Bank Angle as *Degrees*	45 (H)	3.0
Surface Protection (I)						
				Surface Protection as % =	30% (I)	5.5

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

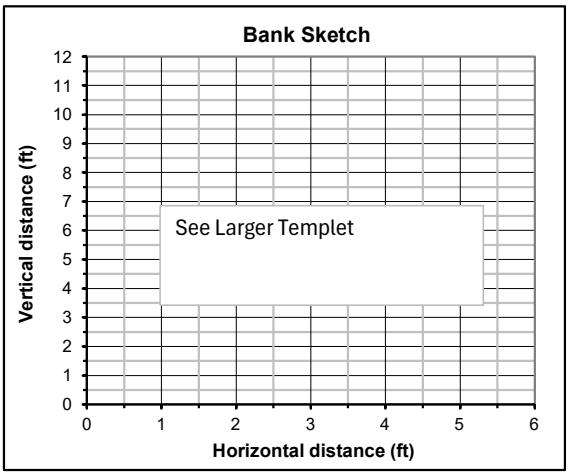
Bank Material Adjustment 8

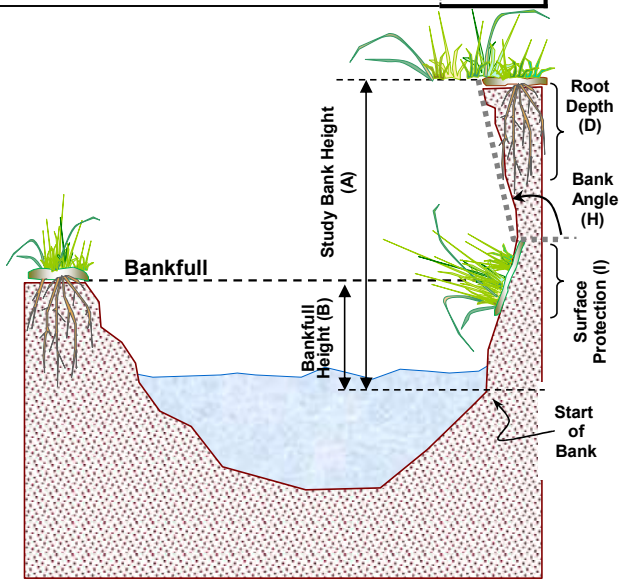
Stratification Adjustment

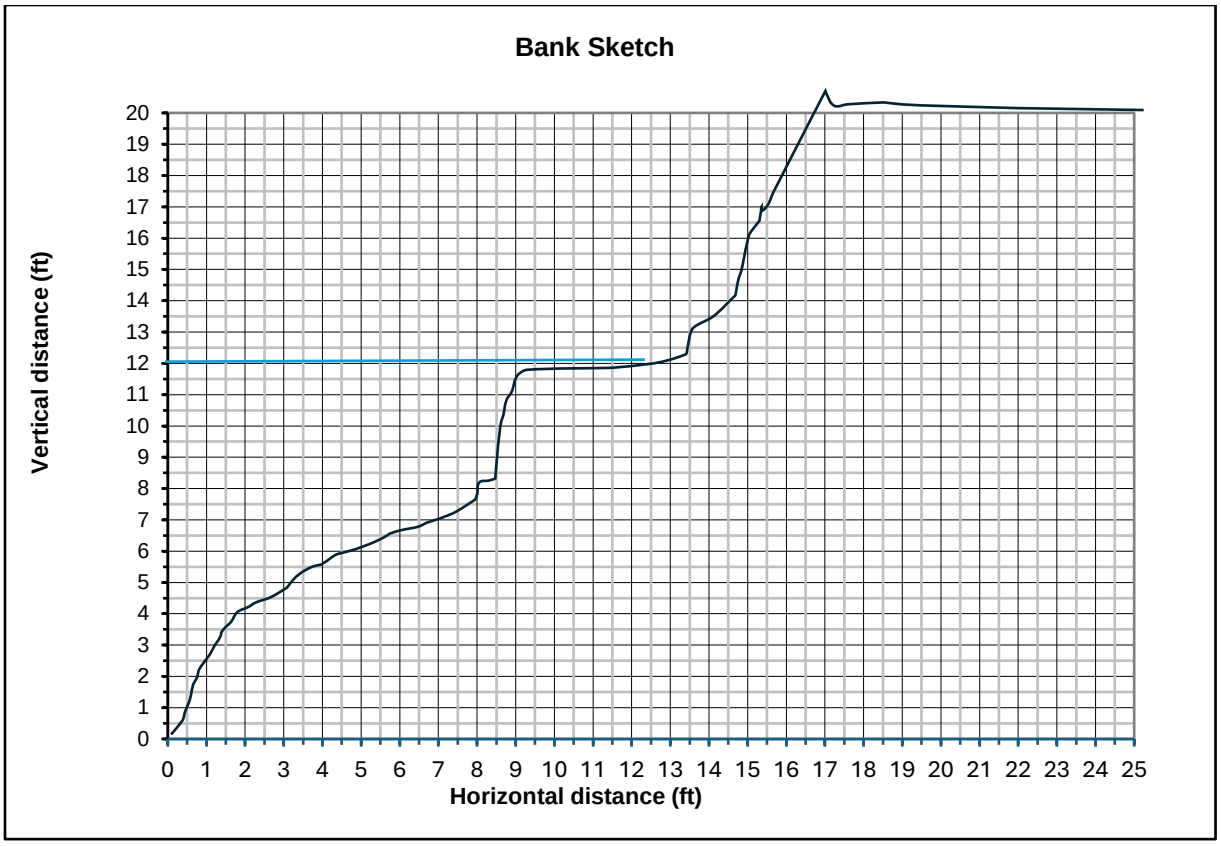
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 32.2







Station W: Bank Sketch



Station W: Bank View



Station W: Upstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**X**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	12.00 (A)	Bankfull Height (ft) =	7.00 (B)	(A) / (B) =	1.71 (C)	BEHI Score (Fig. 3-7) 7.5

Root Depth to Study Bank Height (E)

Root Depth (ft) =	3.00 (D)	Study Bank Height (ft) =	12.00 (A)	(D) / (A) =	0.25 (E)	6.5

Weighted Root Density (G)

Root Density as % =	60.00 (F)	(F) × (E) =	15 (G)	9.0

Bank Angle (H)

Bank Angle as *Degrees*	50 (H)	3.5

Surface Protection (I)

Surface Protection as % =	20% (I)	7.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

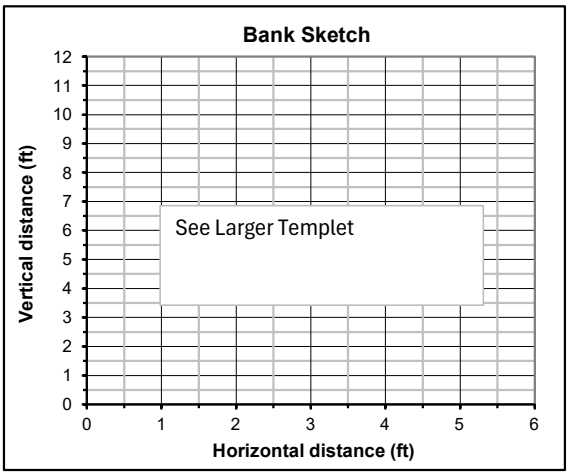
Bank Material Adjustment 5

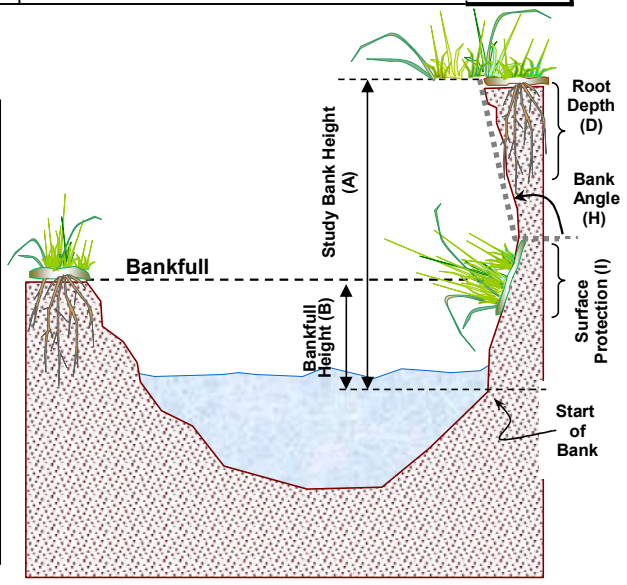
Stratification Adjustment

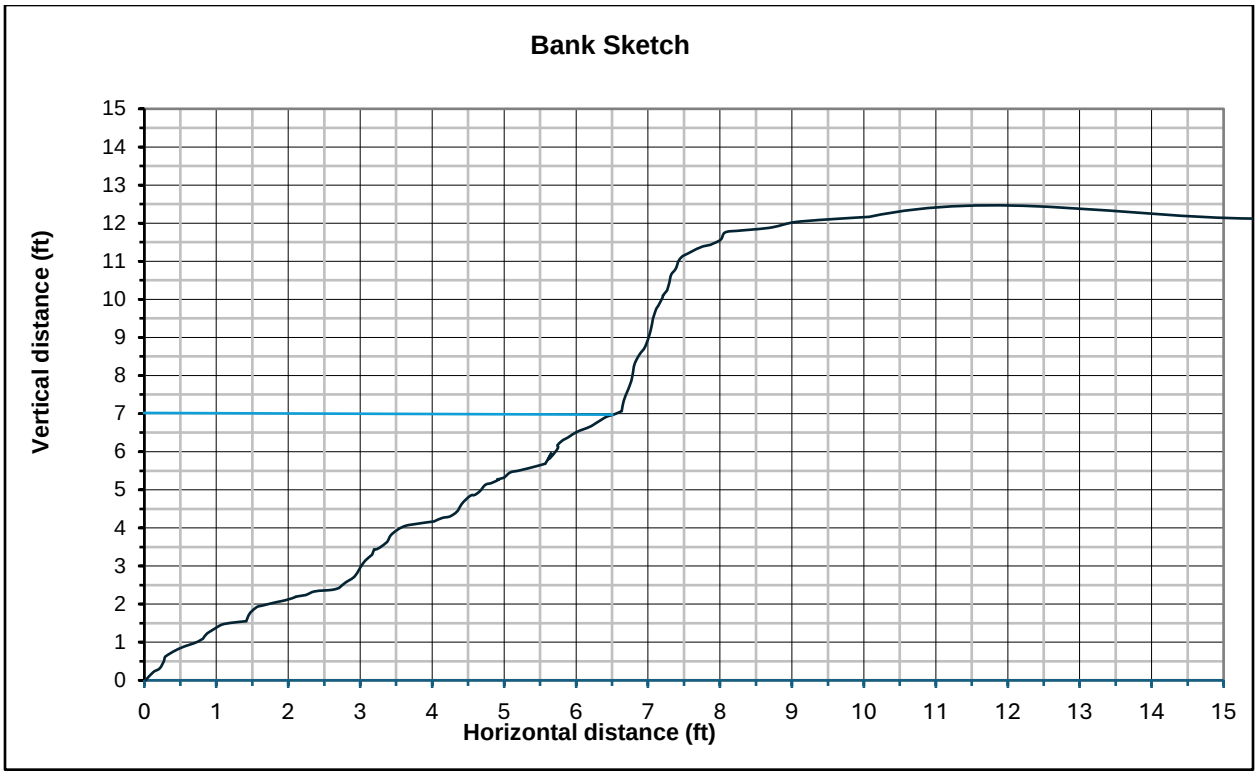
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 38.5







Station X: Bank Sketch



Station X: Bank View



Station X: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**Y**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	10.00 (A)	Bankfull Height (ft) =	10.00 (B)	(A) / (B) =	1.00 (C)

BEHI Score (Fig. 3-7): **0.0**

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	10.00 (A)	(D) / (A) =	0.20 (E)

Weighted Root Density (G)

Root Density as % =	50.00 (F)	(F) × (E) =	10 (G)

Bank Angle (H)

Bank Angle as *Degrees*	45 (H)

Surface Protection (I)

Surface Protection as % =	bedrock (I)

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

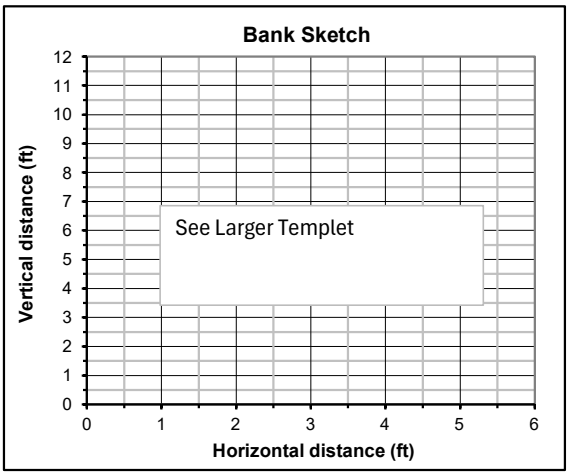
Bank Material Adjustment: **Bedrock**

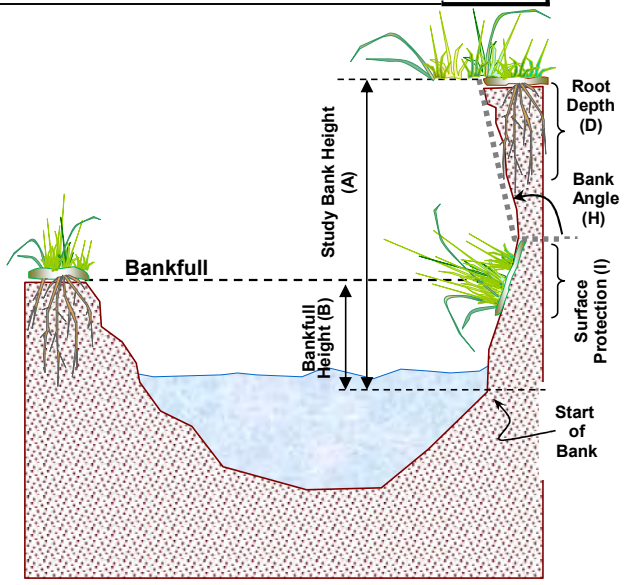
Stratification Adjustment

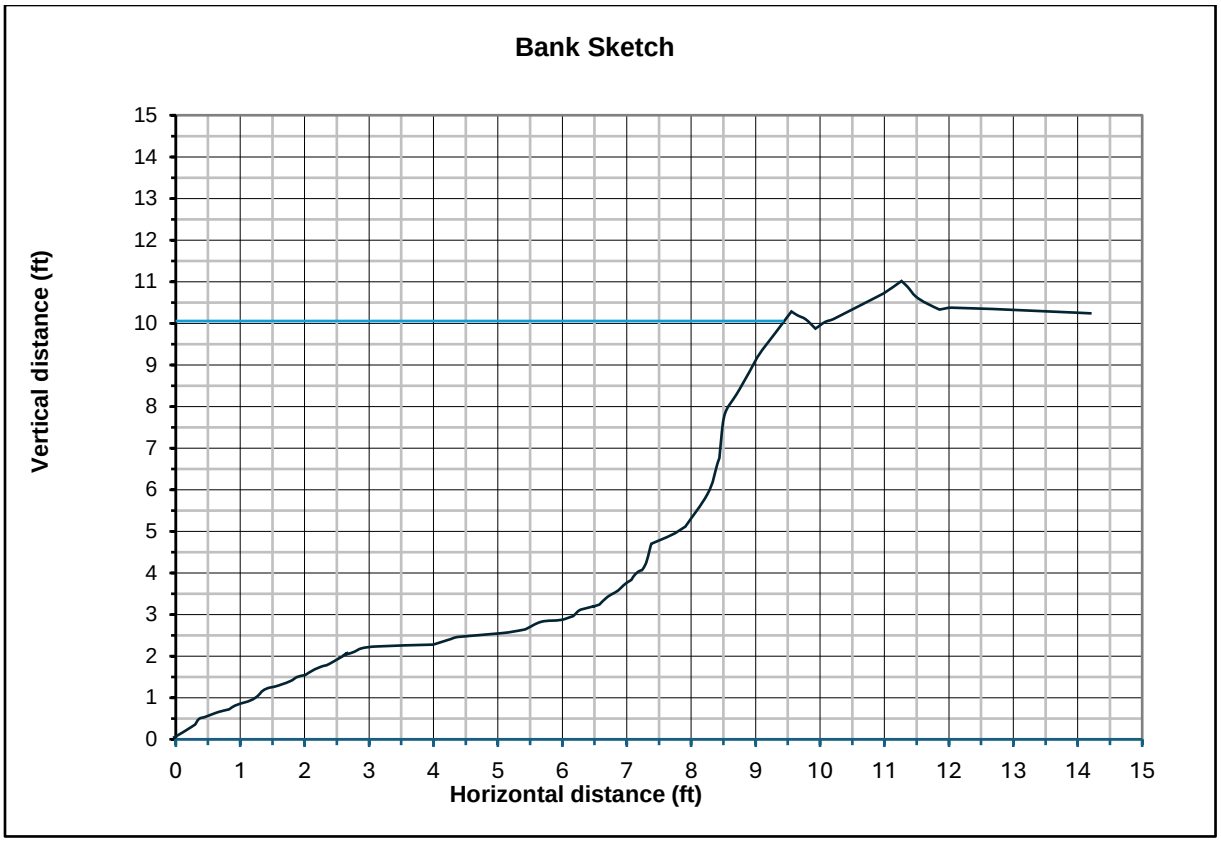
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score: **N/A**







Station Y: Bank Sketch



Station Y: Bank View



Station Y: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**Z**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

BEHI Score (Fig. 3-7)

Study Bank Height (ft) =	7.00 (A)	Bankfull Height (ft) =	7.00 (B)	(A) / (B) =	1.00 (C)	0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	3.00 (D)	Study Bank Height (ft) =	7.00 (A)	(D) / (A) =	0.43 (E)	4.5

Weighted Root Density (G)

Root Density as % =	80.00 (F)	(F) × (E) =	34.29 (G)	5.3

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	20% (I)	7.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

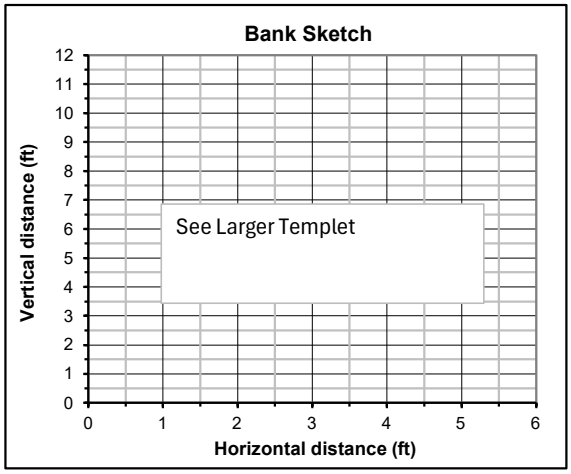
Bank Material Adjustment — 10

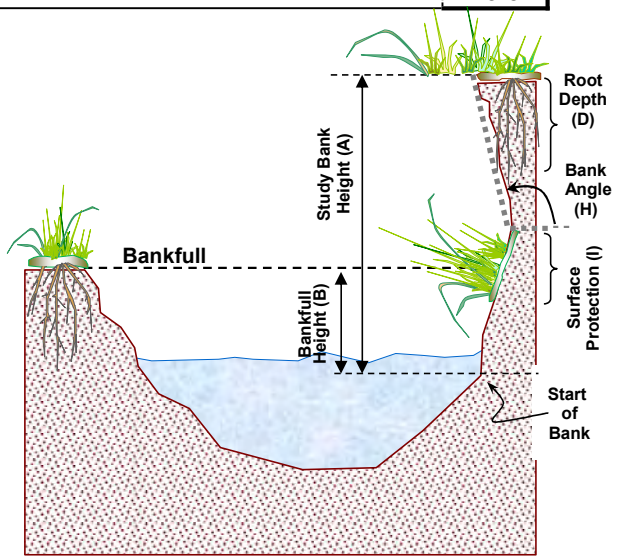
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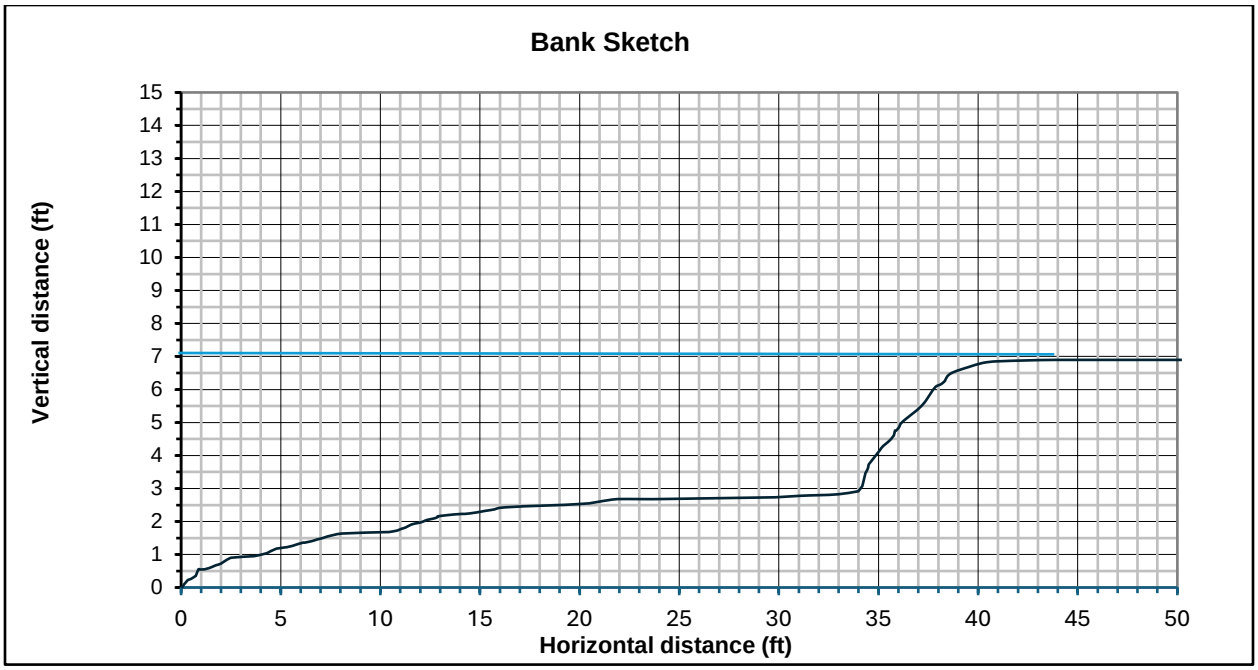
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score — 29.3







Station Z: Bank Sketch



Station Z: Bank View



Station Z: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**AA**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

BEHI Score (Fig. 3-7)

Study Bank Height (ft) =	6.00 (A)	Bankfull Height (ft) =	4.00 (B)	(A) / (B) =	1.50 (C)	6.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	1.00 (D)	Study Bank Height (ft) =	6.00 (A)	(D) / (A) =	0.17 (E)	7.5

Weighted Root Density (G)

Root Density as % =	50.00 (F)	(F) × (E) =	8.33 (G)	9.0

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	0% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

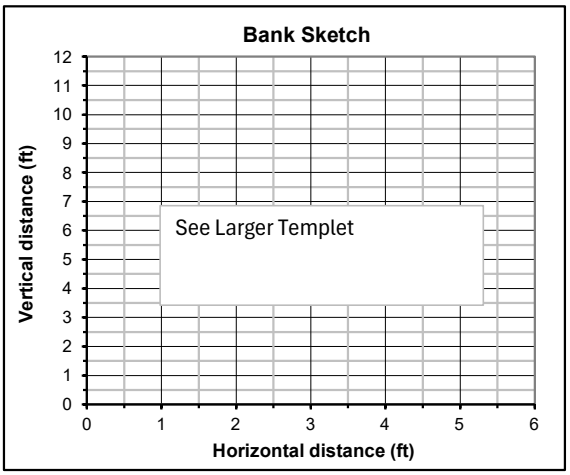
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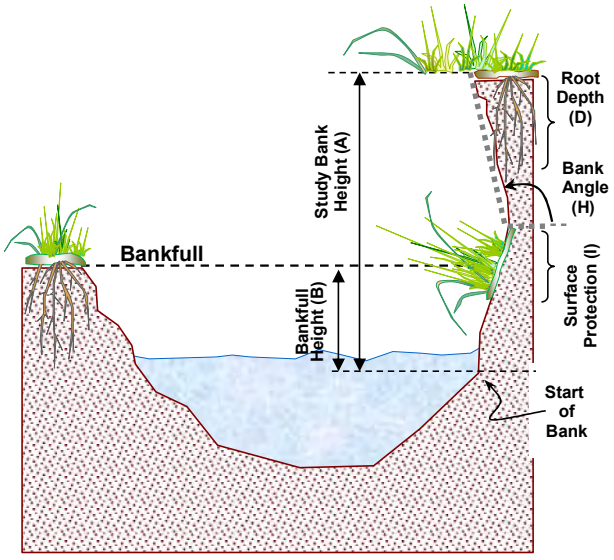
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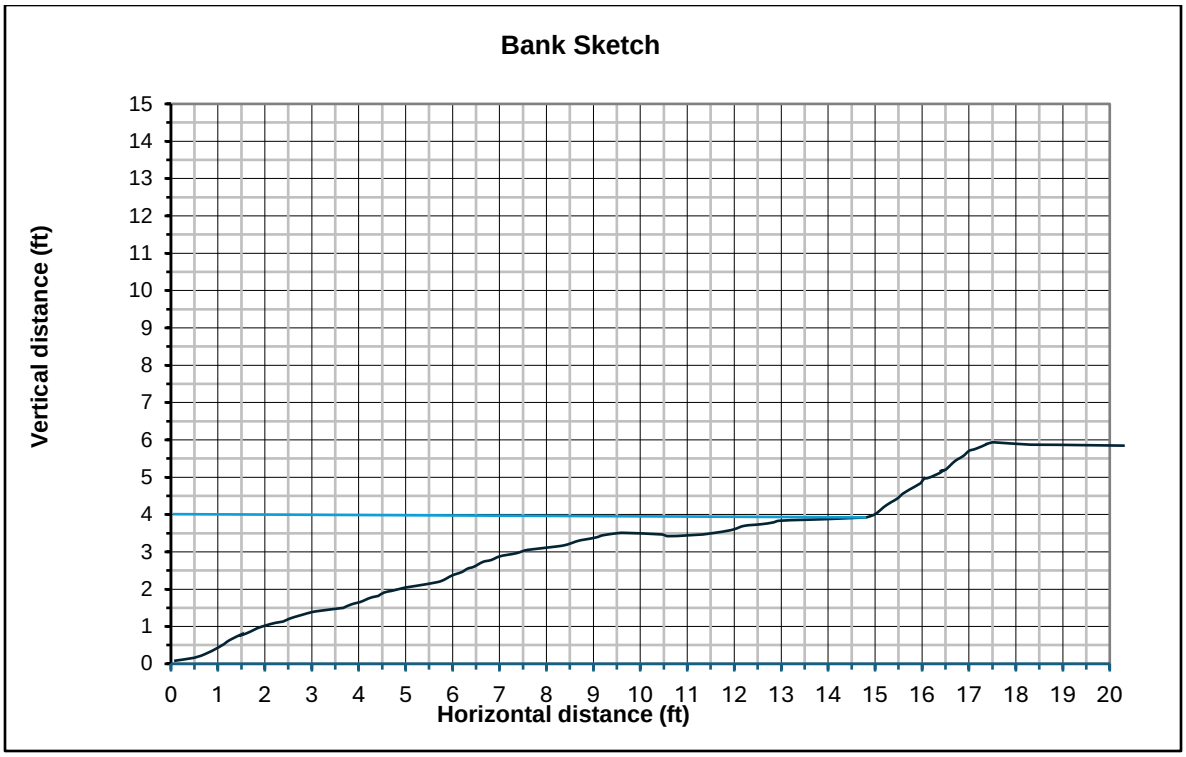
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 45.0







Station AA: Bank Sketch



Station AA: Bank View



Station AA: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**BB**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	7.00 (A)	Bankfull Height (ft) =	7.00 (B)	(A) / (B) =	1.00 (C)	BEHI Score (Fig. 3-7) 0.0

Root Depth to Study Bank Height (E)

Root Depth (ft) =	2.00 (D)	Study Bank Height (ft) =	7.00 (A)	(D) / (A) =	0.29 (E)	6.0

Weighted Root Density (G)

Root Density as % =	60.00 (F)	(F) × (E) =	17.14 (G)	8.0

Bank Angle (H)

Bank Angle as *Degrees*	45 (H)	4.5

Surface Protection (I)

Surface Protection as % =	20% (I)	7.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

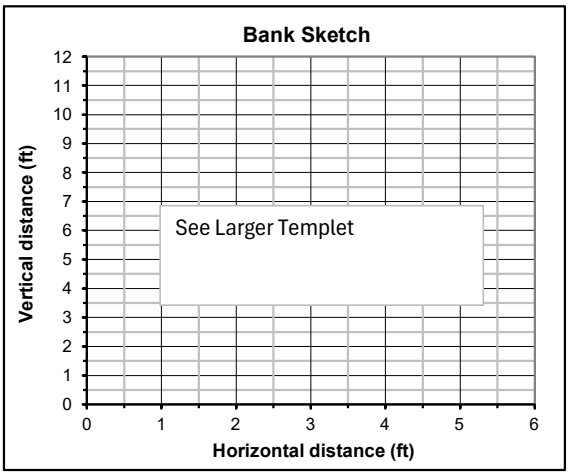
Bank Material Adjustment 10

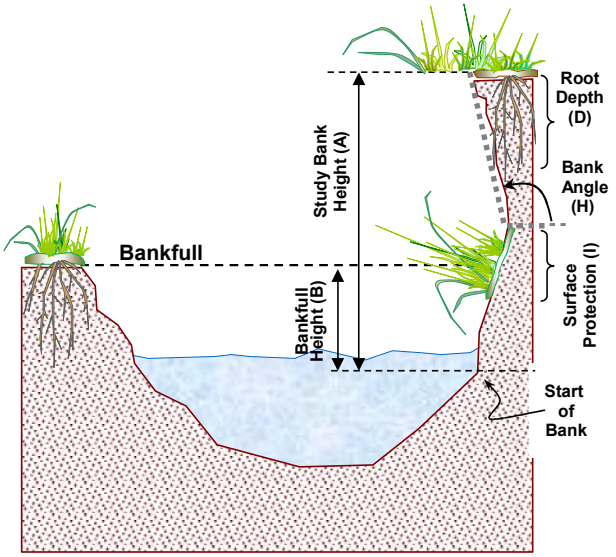
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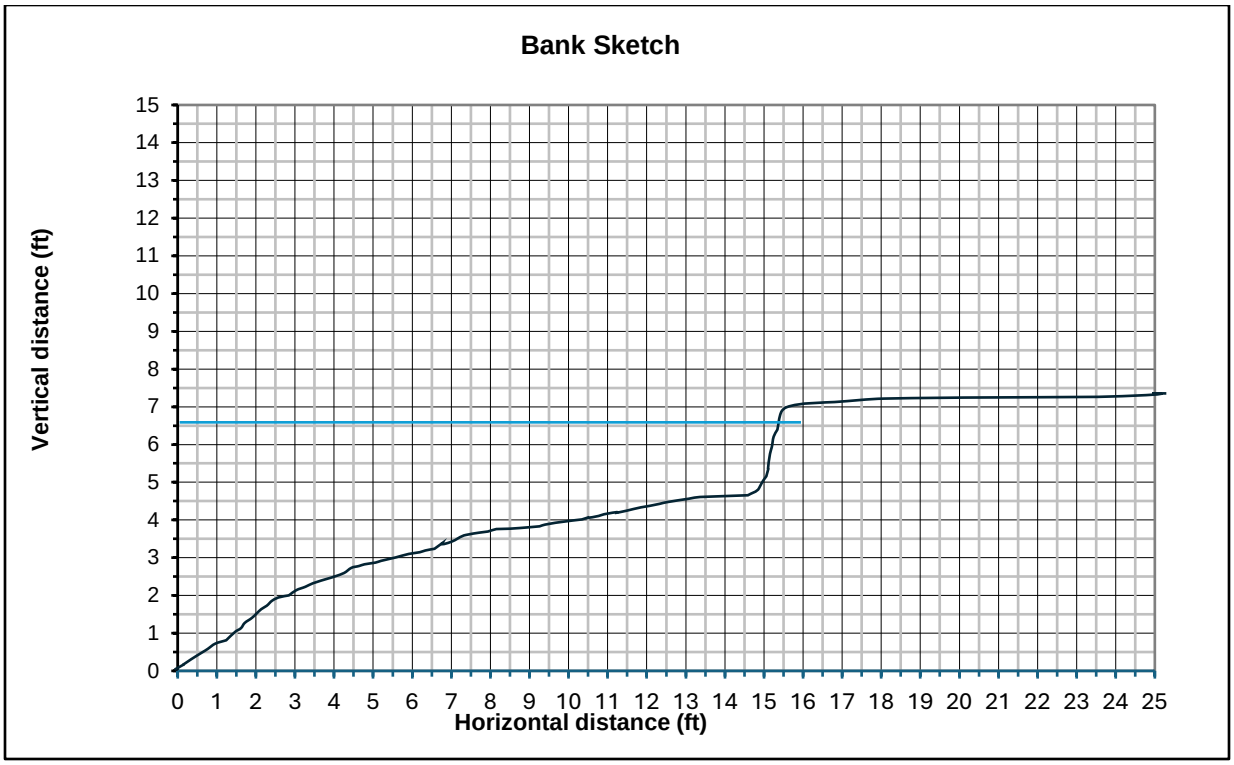
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 35.5







Station BB: Bank Sketch



Station BB: Bank View



Station BB: Downstream Bank View

Stream:	**Saco**	Location:	**Bar Mills Impoundment**
Station:	**CC**	Observers:	**Sarah Drahovzal, Matthew Brewer**
Date:	**7/18/2024**	Stream Type: **Perennial**	Landscape Type:

Study Bank Height to Bankfull Height (C)

Study Bank Height (ft) =	8.00 (A)	Bankfull Height (ft) =	6.00 (B)	(A) / (B) =	1.33 (C)	BEHI Score (Fig. 3-7) 4.5

Root Depth to Study Bank Height (E)

Root Depth (ft) =	3.00 (D)	Study Bank Height (ft) =	8.00 (A)	(D) / (A) =	0.38 (E)	8.0

Weighted Root Density (G)

Root Density as % =	60.00 (F)	(F) × (E) =	22.5 (G)	9.0

Bank Angle (H)

Bank Angle as *Degrees*	30 (H)	2.5

Surface Protection (I)

Surface Protection as % =	0% (I)	10.0

Bank Material Adjustment:

Bedrock (Overall *Very Low* BEHI)

Boulders (Overall *Low* BEHI)

Cobble (Subtract 10 points if uniform medium to large cobble)

Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand)

Sand (Add 10 points)

Silt/Clay (Add 10 points if uniform silt; No adjustment if silt with a mixture of clay; Subtract 10 points if silt/clay mixture with high % of clay; Subtract 20 points if clay)

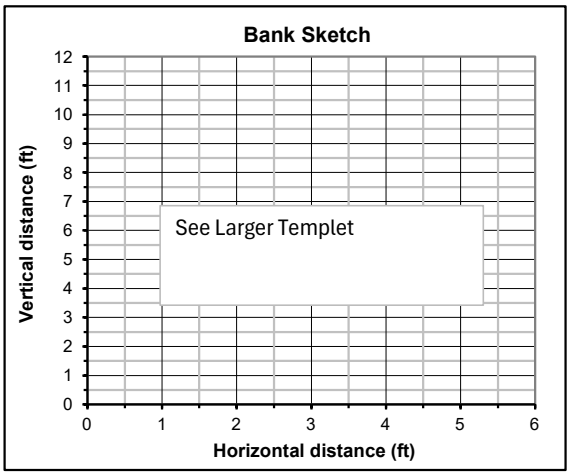
Bank Material Adjustment 10

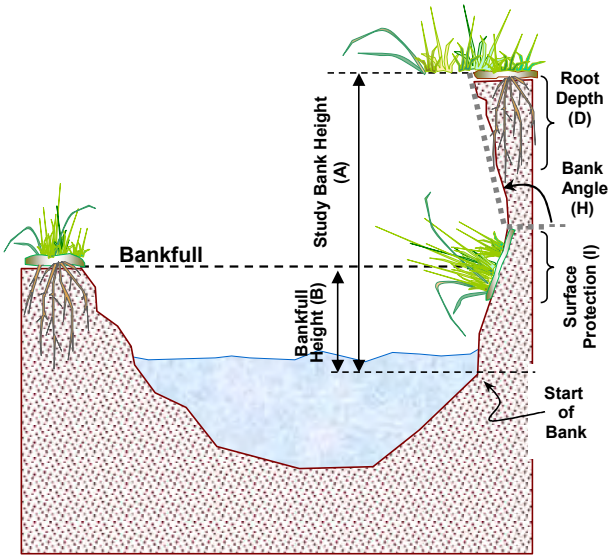
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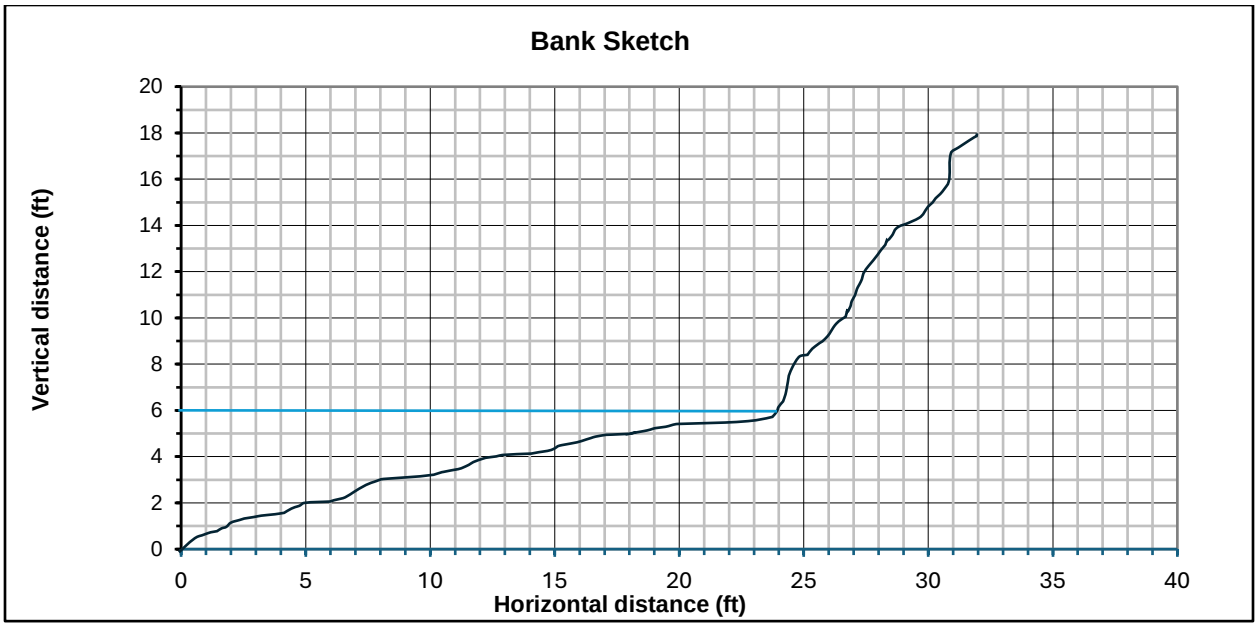
Add 5–10 points, depending on position of unstable layers in

Very Low	*Low*	*Moderate*	*High*	*Very High*	*Extreme*
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50

Adjective Rating and Total Score 44.0







Station CC: Bank Sketch



Station CC: Bank View



Station CC: Downstream Bank View

APPENDIX E

OSI'S SURVEY REPORT SUBBOTTOM PROFILING

MARINE AND FRESHWATER
SURVEY SERVICES

OCEAN SURVEYS, INC.
129 MILL ROCK ROAD EAST
OLD SAYBROOK, CT 06475

TEL. (860) 388-4631 FAX (860) 388-5879
www.oceansurveys.com

1 July 2024

Mr. Kevin Cooley
Kleinschmidt Group
141 Main Street
Pittsfield, ME 04967

SUBJECT: SURVEY REPORT (OSI REPORT NO. 24ES011)
SUBBOTTOM PROFILING SURVEY
SACO RIVER, BAR MILLS, ME

Dear Mr. Cooley:

Ocean Surveys, Inc. (OSI) is pleased to submit this report documenting a subbottom profiling survey performed in the Saco River in Bar Mills, ME. This investigation was performed on 4 June 2024 with the purpose of documenting current subsurface conditions upstream of the Bar Mills Dam to aid in the planning of a follow-up sediment sampling program designed to delineate sediment infill thicknesses prior to the demolition of the dam.

Summary of Field Investigation and Equipment

The survey investigation was performed within an approximately 2,200-foot reach of the Saco River upstream of the Bar Mills Dam boat barrier. The upstream limit of the survey area coincided with the remnants of a relic bridge. Within the survey area, sounding and subbottom profiling data were acquired along a series of survey tracklines oriented parallel to the river and spaced 50 feet apart. The survey line program was developed (Figure 1) based on a PDF file provided to OSI from Kleinschmidt Group (Kleinschmidt) entitled “Bar Mills Scope for Sub Bottom Survey and Sediment Sampling”, dated 5/2/2024. To supplement the primary subbottom tracklines, additional data were acquired along a series of cross river tie-lines oriented perpendicular (north-south) to the primary survey tracks and spaced approximately 500 feet apart. Additional tie-lines and supplemental survey lines were added to the program, as time permitted, to aid in the subbottom interpretation. Actual data collection during the survey was based on vessel accessibility related to shallow water conditions, obstructions, and dam safety measures (boat barrier).

Based upon experience working in the general area, OSI utilized a dual frequency depth sounder (24 -200kHz), high-resolution Chirp (2-16kHz), and a lower frequency Boomer type (0.5-8kHz) subbottom profiler to acquire data. The intent of deploying the three subbottom profilers was that the instruments would provide a broad range of energy and frequency to investigate the variable sequence of sediments expected in the survey area. Since site conditions (specifically the nearsurface sediments) control the success of the subbottom penetration and data developed, employing multiple systems maximized the probability of acquiring the most informative data on site.

Shallow site conditions, generally less than 10 feet, allowed for the ground truthing technique of manual push probing. Push probes were performed by the OSI crew while the vessel was

surveying on-line and consisted of pushing a 1-inch diameter, thick-walled aluminum pipe into the bottom and interpreting the "feel" of the sediments through the probe. The relatively simple task of push probing while surveying provided immediate information to the field team and allowed for a basic understanding/ground truthing of surficial sediment types within the survey area. During each push probe attempt, position information, sediment characterization, and often a comment/description of the sediment encountered were logged. Probe-based sediment classifications adhered to a four-class scheme (1=Silt/Clay, 2=Sand, 3=Gravel, 4=Hardbottom (Bedrock or Glacial Till)). In addition to push probing and the geophysical survey work, OSI targeted existing obstructions (by means of the onboard navigation system) during the survey, many of which are outlined on the Project drawings.

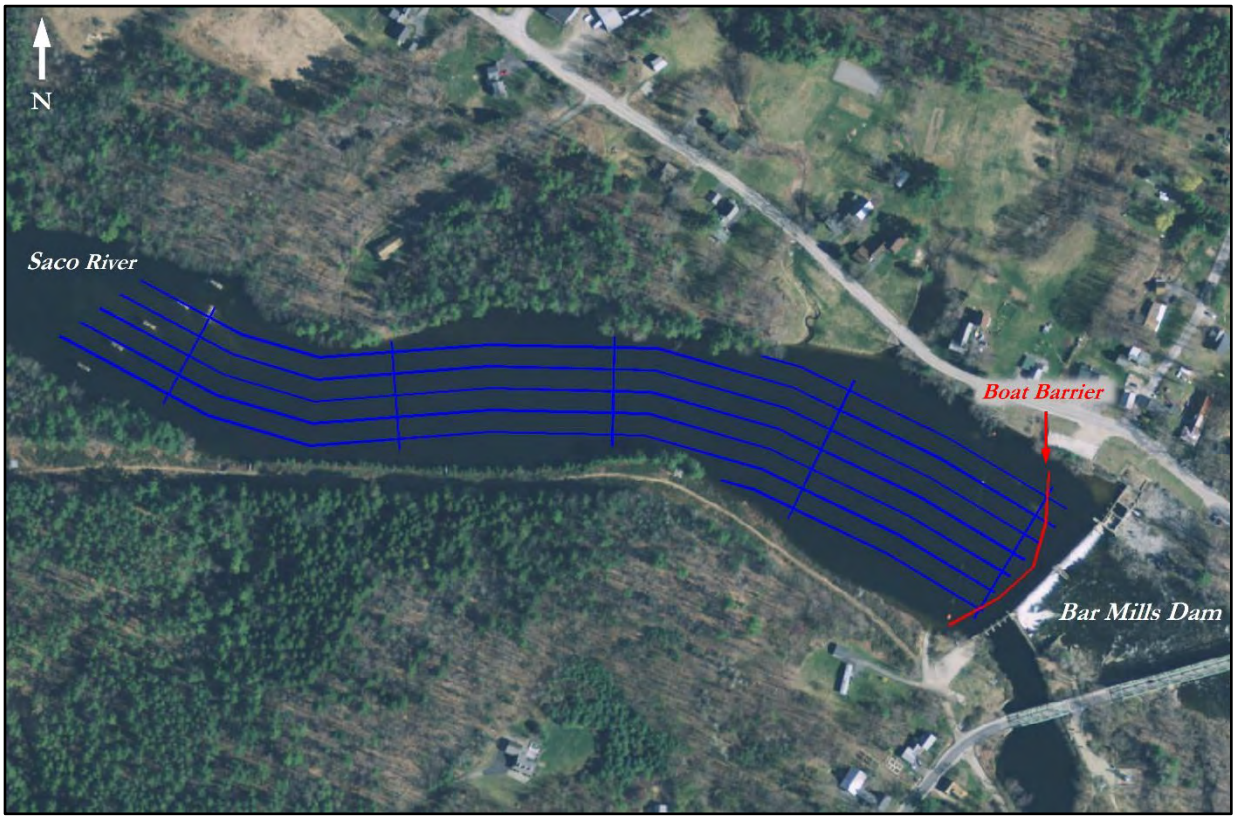


Figure 1. Site location map illustrating the subbottom survey line plan (blue lines). Background image based on Google Image provided by Kleinschmidt. The boat barrier is shown in its approximate location at the time of the survey (red line).

All work was completed under the supervision of a Professional Geologist (PG) and an ACSM Certified Hydrographer. Survey operations were performed by a two-person field crew consisting of a geologist/geophysical survey specialist and hydrographer/vessel captain onboard the OSI survey vessel *R/V Skimmer*. This vessel is a 25-foot fiberglass survey vessel equipped with a fully enclosed cabin, dual-outboard motors, bow mounted A-Frame, and all USCG safety equipment required to safely complete the survey.

The primary equipment employed to complete the investigation included:

- Trimble MPS865 Global Positioning System (GPS) operating in RTK GPS mode, employing correctors from the ME-CORS Network provided by MaineDOT
- HYPACK navigation and data-logging computer system

- ODOM dual frequency survey grade depth sounder (24-200kHz)
- EdgeTech Chirp subbottom profiling system with 2-16 kHz transducer
- Applied Acoustics 200J 0.5-8 kHz high-resolution "Boomer" subbottom profiling system interfaced with Coda Octopus DA4G shallow seismic processor/data logger

*Manufacturer specification sheets for systems utilized on this project are available upon request.

Prior to the start of the investigation, Brookfield Renewable U.S. (Brookfield) conducted a "Hydro Operating Procedures" meeting with representatives from Kleinschmidt and OSI, which included discussions related to over water health and safety and a water rescue plan. Once completed, OSI continued with a brief project safety meeting, during which time a discussion took place regarding potential hazards that may be encountered during survey operations. All field investigations were conducted in accordance with OSI's Over Water Health & Safety Plan (HASP) and vessel operations manual (OSI, 2024), as well as Brookfield's Hydro Operating Procedures document.

Horizontal and Vertical Control

Project horizontal reference was Maine State Plane Coordinate System, West Zone (1802), NAD83, US Survey Feet. Project vertical reference was the North American Vertical Datum of 1988 (NAVD88), feet. Precision navigation on this Project was achieved via a Network Real Time Kinematic (NRTK) GNSS employing correctors from the Maine CORS Network, a service of the Maine Department of Transportation (MDOT). Three-dimensional (3-D) positioning of the survey vessel and equipment was accomplished by interfacing the NRTK GNSS with a computer running a HYPACK® navigation and data logging software package. Pre and post survey river elevations were measured using an NRTK GNSS rover (Trimble R8 w/TSC3 Data Collector), and all water level variations were noted and subsequently incorporated in post-processing of the sounding data.

Prior to surveying, the OSI crew established a temporary control point at the boat ramp utilizing the rover and NGS's Online Positioning Users Service (OPUS). A navigation check was performed at this control point both at the start and end of the survey day to ensure the positioning system onboard the vessel was functioning properly and delivering the horizontal and vertical accuracy required for the project.

Data Products

During the field investigation, the crew reviewed data onsite to ensure data quality and survey coverage. Following completion of the field investigation, the acquired data sets were fully processed by OSI. Table 1 provides a summary of the software packages used to process each data set.

Table 1 – Data Processing Software

Data Set	Processing Software
Navigation & Hydrographic Data	HYPACK single beam editor software (tracklines and depth soundings). QuickSurf digital terrain modeling and Blue Marble's Geographics Global Mapper software packages were used to generate the hydrographic contours and the colorized sounding surface.
Chirp & Boomer Subbottom Profile Data	Chesapeake Technologies, Inc. SonarWiz subbottom processing software.

Final data are presented on one three-panel plan and profile drawing sheet (Arch D – 24" by 36") constructed at a horizontal scale of 1 inch = 100 feet and a vertical scale of 1 inch = 20 feet. On the Project drawing sheet, the uppermost panel presents the survey vessel trackline plot for all lines investigated and includes an overview of all push probes performed. The second panel presents hydrographic contours (contour interval of 2 feet) underlain by a sun-illuminated shaded-relief image created from the sounding data. Contours and colorized riverbed elevations represent generalized riverbed conditions and may not reflect riverbed irregularities (isolated rocks with greater elevations than the surrounding riverbed) that exist throughout the survey area. Debris piles identified prior to and during the survey have been outlined on the first two panels based on low water level aerial imagery and targeting information attained in the field. The lowermost panel of the drawing sheet presents a constructed centerline profile of the route underlain by chirp subbottom profile data.

A digital drawing file (DWG & PDF format), Chirp and Boomer subbottom profiles (JPG format), processed soundings (ASCII format), and the survey report (PDF format) are provided on digital media presented with the original copy of this report. All raw digital data files acquired during the survey (HYPACK and subbottom profiles) will be archived in-house.

Data Analysis and Results

Geophysical data sets were reviewed individually and analyzed in conjunction with each other to develop a fuller understanding of surface and subsurface conditions in the river. Multiple push probes provided ground truthing of the interpreted surficial sediment types inferred via review of the geophysical data. The following sections present a synopsis of conditions documented within the survey area.

Stationing (STA) throughout the survey area is in feet and originates at the westernmost extent (STA 0+00) and proceeds east to the Bars Mills Dam boat barrier (approximately STA 21+50). All depths reported are in feet and are referenced to the water level at the time of the survey (148.2 feet, NAVD 88). Seasonal variations, storm events, and/or human influence since the time of the surveys may have altered conditions reported herein.

Surface Conditions

Measured water depths within the survey area range from less than 4 feet along the shoreline to greater than 14 feet along several sections of the survey centerline. Multiple obstructions were identified throughout the survey area, primarily along the shorelines (rock outcrops or fallen trees) and within 400 feet of the dam (debris piles). At the presurvey meeting, the debris piles were discussed as known entities to be aware of during operations. OSI confirmed the locations of these obstructions and have been outlined on the Project drawing. Similarly, water depths shoaled near the northwestern extent of the survey area from STA 0+00 to STA 3+20, where a small island inhibited survey operations (Figure 2). Water depths, northwest of the relic bridge structures, were also inaccessible to the survey vessel and are called out on the Project drawings.



Figure 2. Small island and remnant bridge piers located at the westernmost extent of the survey area, limiting survey accessibility.

Push probes were conducted, where depth permitted, to provide a basic understanding/ground truthing of surficial sediment types within the survey area. Sixty-six (66) total push probes were conducted, of which fifty-four (54) documented hardbottom were interpreted as bedrock or glacial till. The remaining twelve (12) probes were interpreted as gravel and sand or silt/clay and only appear on the northern and southern shorelines, respectively. An overview of the probes and their associated characterization are depicted on the Project drawing.

Subsurface Conditions

The dual frequency depth sounder, chirp, and boomer subbottom profile records were reviewed together with push probe results to gain an understanding of subsurface conditions in the river. Subbottom penetration was inhibited primarily due to hardbottom interpreted as bedrock or glacial till exposed on the riverbed. Since the subbottom profiling systems do not have the energy to penetrate deposits like bedrock and/or glacial till, recognition of subbottom reflectors (indicative of sediment changes or sediment thicknesses) throughout the survey site could not be resolved. Figure 3 provides an example of the subbottom data acquired by the chirp and boomer profilers along the centerline of the survey area and is representetive of the majority of the site. Note, the riverbed multiples identified in the profiles; an indicator of energy reverberating in the water column and not penetrating into the subsurface.

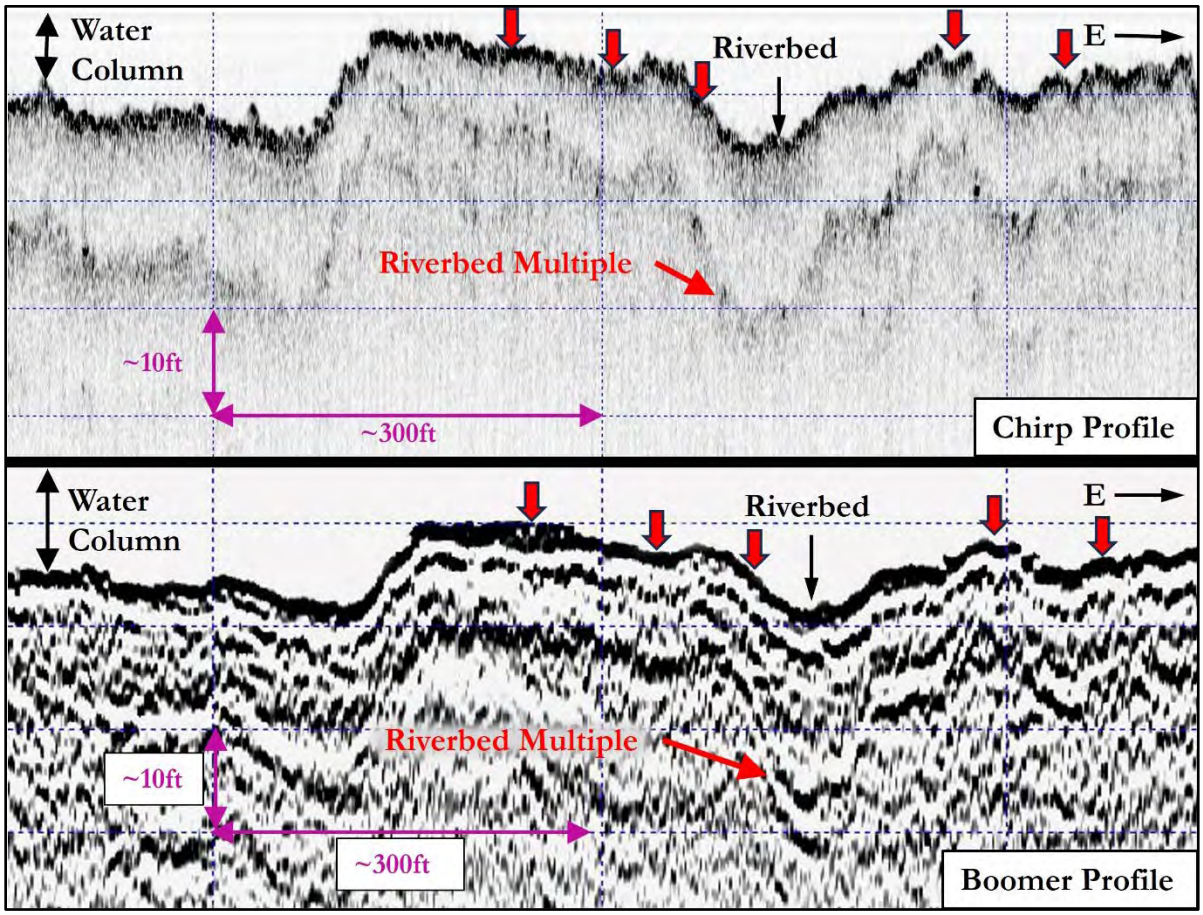


Figure 3. Representative sections of Chirp (upper) and Boomer (lower) profile data acquired along same survey line. Profiles provide an illustration of an area where interpreted hardbottom was resolved on the riverbed, inhibiting penetration in both subbottom profilers. Note: five probes (red arrows) conducted along the profiles shown, all interpreted as hardbottom.

Although surficial bedrock is prevalent throughout the survey area, unconsolidated sediments were identified, to a lesser extent, along the northern and southern shorelines and were ground truthed by multiple probes. Interpreted compacted sand/gravel and silt/clay (possibly containing organics) were identified along the northern (STA 14+00 to STA 19+00) and southern (STA 15+00 to STA 20+00) shorelines, respectively, however minimal subbottom penetration was attained. Both compact sediments and organic-rich sediments (sediments containing gas generated as a by-product of the decomposition of organic matter) attenuate the subbottom profilers' signal and its ability to penetrate the riverbed and resolve information regarding deeper stratigraphy.

Figure 4 provides two representative sections of chirp subbottom profile data acquired along the northern and southern shorelines. Similar to the majority of the survey area, riverbed multiples were observed indicative of inhibited acoustic penetration. Although subbottom penetration could not be attained, identification of these surficial sediments may be helpful in determining future sediment sampling locations used to determine sediment infill thicknesses.

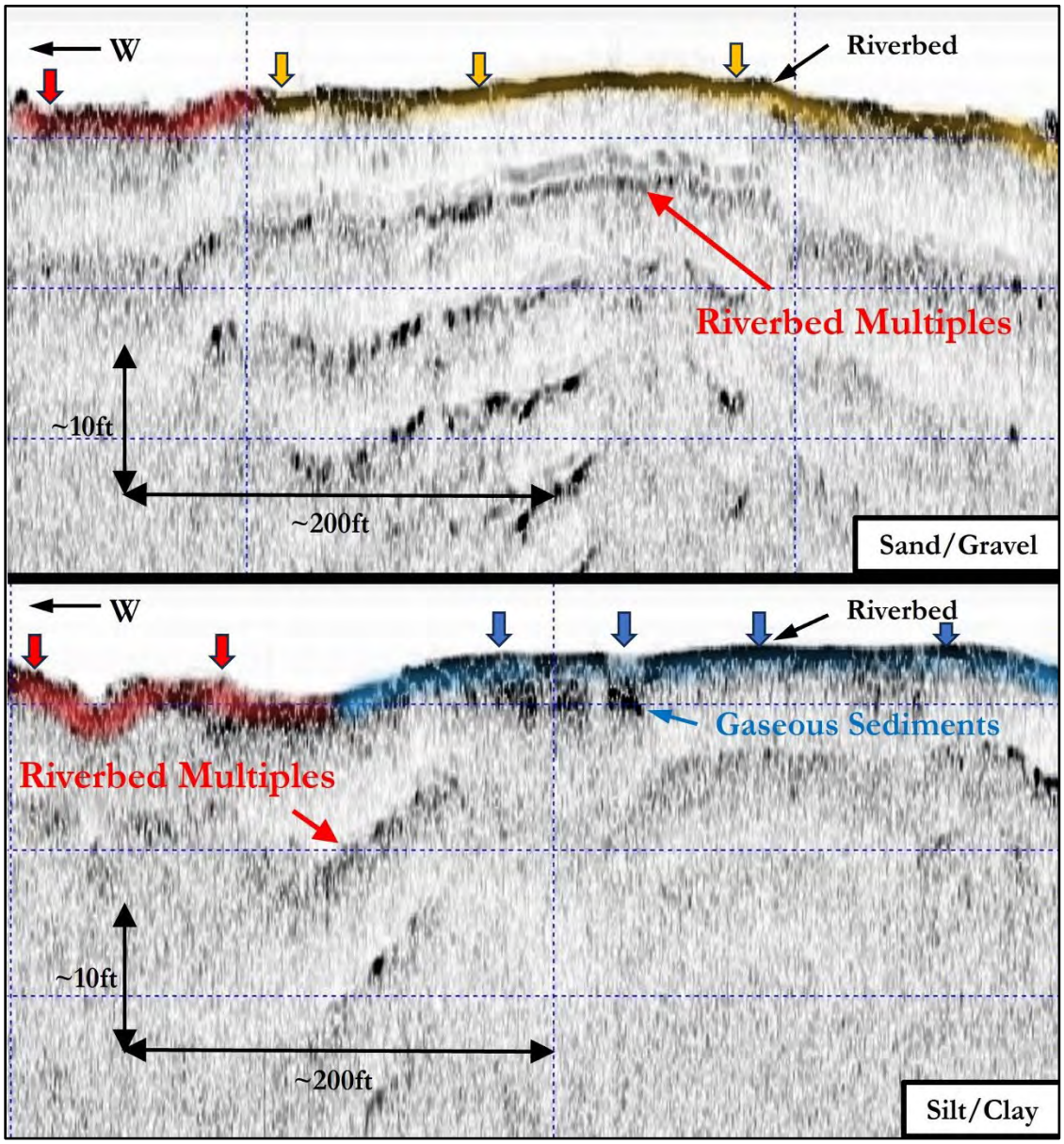


Figure 4. Two sections of chirp subbottom profile data acquired within the survey area. The upper profile shows data indicative of interpreted sand/gravel (orange) along the northern shoreline from STA 14+00 to STA 19+00. The lower profile shows data interpreted as silt/clay (blue) along the southern shoreline from STA 15+00 to STA 20+00. Multiple probes (red, orange, and blue arrows) conducted along the profiles shown, interpreted as hardbottom, gravel/sand, and silt/clay, respectively. Note: bedrock/gravel identified in each profile (red).

Summary and Recommendations

A subbottom survey was performed in the Saco River in Bar Mills, ME, just upstream of the Bar Mills Dam. This investigation has provided data to characterize and document current subsurface conditions upstream of the dam to aid in delineating recent sediment infill thicknesses.

Measured water depths ranged from less than 4 feet near the shorelines to 14 feet in multiple areas in the center of the river. Multiple obstructions were identified or confirmed throughout the survey area related to debris from relic structures, shallow water rock outcrops, and fallen trees along the shorelines. Subbottom profiling and probe interpretations suggest the survey area investigated is underlain by surficial hardbottom (bedrock/glacial till) throughout the river, with the exception of

small portions of sand/gravel and silt/clay along the northern and southern shorelines, respectively. Areas of hardbottom, compacted sands, or gaseous sediments inhibited subbottom penetration and resolution of subbottom reflectors throughout the survey area. In summary, subbottom penetration was not achieved and no interpretable subbottom data could be attained regarding the sediment infill thickness upstream of the Bar Mills Dam.

We appreciate the opportunity to support Kleinschmidt on this project and look forward to continuing this working relationship in the future. If you have any questions regarding any aspect of the survey, or we can be of service in any other capacity, please do not hesitate to contact me.

Sincerely,

OCEAN SURVEYS, INC.

Justin A. Kuntz
Geophysical Project Manager
JAK

APPENDIX F

TRC MEMO TITLED PRELIMINARY LIMITED SEDIMENT/SOIL CHARACTERIZATION

DRAFT

Memorandum

To:	Mr. Kevin Cooley (Kleinschmidt Associates)
From:	Zachary Bonin, PG (TRC)
Subject:	Preliminary Limited Sediment/Soil Characterization and Response to Town of Buxton July 11, 2024 Request Brookfield White Pine Hydro Bar Mills Dam – Saco River Buxton and Hollis, Maine
Date:	January 8, 2025
Project No.:	510195.5

TRC has prepared this preliminary limited sediment and soil characterization summary memorandum for the proposed decommissioning of the Brookfield While Pine Hydro LLC (Brookfield) Bar Mills Project located in Buxton and Hollis, Maine (the Project Site). The sampling was completed in July and September 2024 to characterize the river sediments and adjacent soil in the proposed area of removal/disturbance both upstream and downstream of the Bar Mills dam for the purpose of providing preliminary information for future permit preparation, reporting to state and federal regulatory authorities, and preliminary evaluation of either on-site reuse or off-site disposal. This memorandum also includes TRC's preliminary response to the Town of Buxton's letter requesting revisions to the Final Study Plan for the Bar Mills Project.

Preliminary Limited Sediment/Soil Characterization

Project Description

TRC understands that Brookfield holds a license issued by the Federal Energy Regulatory Commission (FERC) to operate the Bar Mills Project, which consists of a dam structure, an impoundment, a powerhouse, an intake canal, and appurtenant features. The concrete dam extends from Buxton, on the east side of the Saco River adjacent to the site of the former Rogers Fibre Mill, to the Project canal headworks in Hollis, on the west side of the river. Flowage easements and the impoundment extend the Project well upstream.

Kleinschmidt's Bar Mills Decommissioning Document (Brookfield, 2022) proposes decommissioning the Project through a partial breach as the most viable approach to decommissioning the dam. With partial removal of the dam, which is about 15 feet tall, with flashboards, and has an average pool depth of 10 to 15 feet, flows and water levels are potentially affected, and sediment may also be remobilized. Brookfield is aware of the potential that the sediment in the Saco River is contaminated from both upstream sources on the river and the adjacent Rogers Fibre Mill, as documented by historical investigations and removal actions performed by the United States Environmental Protection Agency (EPA) in the late 1990s, and that the sediment removed during decommissioning may require off-site disposal. Because of the potential presence of contamination, Brookfield is also seeking support in developing an approach and schedule for sediment testing and reporting of results in a manner that will neither negatively affect the schedule nor prompt unnecessary concern regarding the nature of the sediment. The assessment summarized in this memo provides preliminary data that can be utilized to develop a detailed sampling and analysis plan in coordination with applicable regulatory agencies to support these goals and to assist ongoing decommissioning planning.

Sampling and Analytical Methods

On July 18, 2024, following the lowering of the water level in the impoundment area upstream of the dam, TRC collected a total of four sediment samples (identified as SED-1 through SED-4) from the western and eastern banks of the river upstream of the dam and one soil sample (identified as SS-1) from the "island" downstream from and contiguous with the former Rogers Fibre Mill. On September 23, 2024, following the dewatering of the power canal, TRC collected an additional three surficial sediment samples (identified as SED-5 through SED-7) from the power canal. It is noted that sampling proposed immediately upstream of the dam was determined not to be necessary due to the absence of substantive sediment in this portion of the Project Site. Sampling locations are shown in **Figure 1**.

Both the sediment and soil samples were collected using hand tools (a combination of hand auger and shovel) from depths ranging between 0 to 0.5 feet and 0 to 2 feet below ground surface (bgs). The samples were submitted to Alpha Analytical in Westborough, Massachusetts (a Pace Analytical Services company) for laboratory analysis of the following parameters:

- Volatile organic compounds (VOCs) via EPA Method 8260C;
- Semi-volatile organic compounds (SVOCs) via EPA Method 8270C-Selective Ion Monitoring (SIM);
- Polychlorinated biphenyl (PCB) Aroclors via EPA Method 8082A;
- Total Petroleum Hydrocarbons via EPA Method 8015D(M);
- Priority Pollutant 13 Metals via EPA Method 6010B;
- Pesticides via EPA Method 8081B;
- Herbicides via EPA Method 8151A;
- Reactive Cyanide and Sulfur via EPA Method 7.3;
- Conductivity via EPA Method 120.1;
- Corrosivity via EPA Method 9045D;
- pH via EPA Method 9045;
- Ignitability via EPA Method 1030;
- Total Cyanide via EPA Method 9010; and
- Sulfate via EPA Method 9038;

Furthermore, three of the seven sediment samples were analyzed for the following supplemental analytical parameters:

- Hexavalent Chromium via EPA Method 7196A;
- Total organic carbon (TOC) via Lloyd Kahn Method; and
- Grain Size (Sieve) via ASTM Method D422.

In addition, each sample was submitted to TRC's Industrial Hygiene Laboratory in Windsor, Connecticut for analysis of asbestos via Polarized Light Microscopy (PLM).

The analytical list described above is typical of requirements for off-site facilities that may be available for this project and incorporates known contaminants of concern based on the operations at the former Rogers Fibre Mill, as well as the former mill operations associated with the upstream West Buxton Dam. In addition, one duplicate sample was submitted for analysis. It is noted that contaminants such as Dioxans/Furans and Per- and Polyfluoroalkyl Substances (PFAS) are not known to be contaminants of concern for the operations at these facilities; for this reason, these analyses were not performed. Because requirements for on-site disposal or reuse

of removed material may be subject to negotiation with the Maine Department of Environmental Protection (MEDEP)/US Army Corps of Engineers (USACE), future sampling may require additional analysis not included in the list above.

Summary of Sampling and Analytical Results

No visual and/or olfactory indications of significant environmental impacts were identified during the sediment sampling activities conducted on July 28 and September 23, 2024. Sediment consisted primarily of brown to gray clayey silt and fine-to-medium sand, as verified by particle size distribution analysis performed on samples SED-2, SED-3, and SED-6, in addition to some gravel and cobble. Soil conditions at sample SS-1 consisted of brown to gray fine-to-coarse grain sand with some fines, trace cobbles, and trace anthropogenic material such as glass, brick, and ceramic fragments. The area of sample SS-1 was noted to be stabilized by large cobble- to boulder-sized material, which prevented sampling beyond approximately 6 inches bgs.

A summary of the sediment analytical results is presented in **Table 1** and a summary of the soil analytical results is presented in **Table 2**. Laboratory analytical documentation for the submitted sediment and soil samples is included as **Attachment A**. A data usability assessment (DUA) is provided as **Attachment B.**

Sediment Results

The sediment analytical results were compared to the EPA Region 3 Biological Technical Assistance Group (BTAG) Freshwater Sediment Screening Benchmarks (August 2006). The following polycyclic aromatic hydrocarbons (PAHs) and metals were detected above the EPA Region 3 BTAG Freshwater Sediment Screening Benchmarks: Acenaphthene (SED-1), Benzo(a)anthracene (SED-1), Benzo(b)fluoranthene (SED-1 and SED-3), Acenaphthylene (SED-1), Indeno(1,2,3-cd)Pyrene (SED-1), Pyrene (SED-1), High Molecular Weight PAHs (SED-1 and SED-5), Low Molecular Weight PAHs (SED-1), and Selenium (All sediment samples).

Additionally, in consideration of potential future permitting through the USACE in connection with the decommissioning project, the laboratory reporting limits (RLs) for the sediment samples were compared to reporting limits established in the USACE *Regional Implementation Manual (RIM) for the Evaluation of Dredged Material Proposed for Disposal in New England Waters* (April 2004). As shown by the gray-shaded values in Table 1, the laboratory RLs did not meet all the USACE RIM RLs during this investigation; it is noted that these RLs likely will be a requirement for future assessment work should USACE permitting be anticipated. However, it is also noted that sediment samples frequently exhibit interferences that can make achievement of the desired reporting limits difficult.

Soil Results

The soil analytical results at SS-1 were compared to the MEDEP Remedial Action Guidelines (RAGs) for the Residential, Commercial Worker, and Construction Worker Scenarios for soil. As shown in **Table 2**, there were no exceedances of these RAGs.

It is noted that the concentration of total chromium detected in sample SS-1 exceeds the Residential RAG for hexavalent chromium; however, as subsequent hexavalent chromium analysis of the soil sample (a certain sediment samples) did not identify detectable concentrations of chromium in this valence state, the total chromium results have been compared to the RAGs for the less toxic trivalent chromium.

Conclusions and Recommendations

Sediment

Results of the preliminary limited sediment sampling investigation do not indicate that sediment at the sampled locations exhibit hazardous waste characteristics. Furthermore, asbestos was not detected in any of the submitted sediment samples.

Several PAH analytes (or combinations thereof) in certain sediment samples and selenium in all sediment samples exceed their respective Freshwater Screening Benchmarks established by the EPA Region 3 BTAG. In general, PAHs were highest at sediment sampling location SED-1, which is situated upstream of the dam on the eastern bank of the Saco River, in the vicinity of the former Rogers Fibre Mill. However, the other two BTAG exceedances for PAHs were identified at SED-3 and SED-5, which were collected on the western bank, one upstream of the dam (SED-3) and the other in the power canal (SED-5). It is also noted that sediment collected at SED-2, on the same side of the river as the former Rogers Fibre Mill, and downstream from SED-1, did not exhibit detectable concentrations of PAHs.

It is noted that the BTAG values are not regulatory standards, rather they are used to provide consistency in screening level (i.e., preliminary) ecological risk assessments. The BTAG exceedances of the compounds noted above are not unexpected at the Project Site given the historical industrial operations both at the Rogers Fibre Mill and other upstream sources on the river; however, they will require proper management of the sediment during the decommissioning project so as to not entrain the sediment and allow it to migrate off-site.

In addition, while not directly applicable at this time, as the sampled material currently constitutes river sediments, comparison of the analytical results for the sediment samples to the MEDEP RAGs for the Residential, Commercial Worker, and Construction Worker Scenarios for soil indicate that the concentrations of the analyzed compounds are below the RAGs for these exposure scenarios. As it is anticipated that future water levels will be lowered following decommissioning of the Bar Mills Dam, and that the sampled areas of sediment will likely be exposed, these sampling results, while limited in overall extent, suggest that human exposure is not likely to be a significant pathway of concern in the sampled areas. Furthermore, in light of comments by the Town of Buxton presented in its July 11, 2024 letter to Brookfield, it is further noted that the sampling included the area near the entrance to the former penstocks of the mill dam (i.e., SED-2).

Soil

Results of the preliminary limited soil sampling investigation do not indicate that soil sampled from the “island” downstream from and contiguous with the former Rogers Fibre Mill contains concentrations of the above-listed analytes at concentrations exceeding the MEDEP RAGs for either the Residential, Commercial Worker, or Construction Worker exposure scenarios. Further, the sampled soil does not exhibit hazardous waste characteristics and did not contain detectable amounts asbestos.

As was previously noted above, TRC observed the area of sample SS-1 to be stabilized by large cobble- to boulder-sized material, which prevented sampling beyond approximately 6 inches bgs. It is therefore uncertain whether potentially impacted soils are still present below these stabilizing materials.

General Recommendations

On-site disposal or reuse of excavated material may be allowed pending MEDEP/USACE approval. As previously noted, the foregoing assessment was intended to provide preliminary data that can be utilized to develop a detailed sampling and analysis plan in coordination with these regulatory agencies. Therefore, prior to additional sampling, TRC has proposed a conference call with MEDEP and USACE (either separately or concurrently) to discuss both the proposed sampling and analytical program and the potential reuse options so that the concept can be modified, if necessary, prior to initiation of plan preparation.

TRC understands that Brookfield is continuing the process for decommissioning the Bar Mills Project. To facilitate discussion with MEDEP/USACE, it is recommended that the partial removal configuration be presented to the agencies and reviewed for possible reuse scenarios and/or disposal options. Following these discussions with MEDEP/USACE, Brookfield, and Kleinschmidt, TRC will prepare a Sampling and Analysis Plan outlining activities and procedures for the sample collection work prior to its initiation.

In developing its decommissioning program, TRC recommends that Brookfield conduct the work in the dry, to the extent that it is feasible, so as to not entrain sediment and allow it to migrate off-site. Furthermore, implementation of methods that allow the work to be done in the dry is anticipated to reduce the need for additional sampling specifically for the purposes of evaluating ecological risk.

TRC also recommends that Brookfield limit disturbance to soil and/or sediment outside the Project Site to the extent feasible during decommissioning through the use of physical barriers, such as matting or temporary access roads underlain by geotextile fabric. If soil disturbance cannot be avoided during decommissioning, it is recommended that soil in these areas be sampled to ensure worker health and safety during the project.

Response to Town of Buxton July 11, 2024 Request

In a July 11, 2024 letter issued to Brookfield by the Town of Buxton (**Attachment C**), the Town of Buxton states:

> *EPA modified one of the 12-inch diameter pipes (Figure 1) to pass water through the remaining dam/foundation of the Rogers Fibre Mill. Water flowing from the pipe was intended to improve the dissolved oxygen content in the narrower stream channel (Figure 2) minimizing the migration of contamination from the tailrace (Tsang, 1999).*

The Town notes that the Final Study Plan suggests that water levels in the Saco River following removal of the Bar Mills Dam will result in the influent area for the pipe being disconnected from the river and requests that BWPH assess the consequences of the lower river level on the pipe and ask EPA and MEDEP whether flow the narrow stream channel is still necessary.

TRC has reviewed the EPA correspondence referenced in the Town's letter. Although this correspondence confirms the construction of a narrower stream channel to improve flows through the former tailrace area to increase the dissolved oxygen (DO) content in the channel, it does not appear that this effort was undertaken for the purpose of minimizing migration of contamination from the tailrace. Excerpts of pertinent EPA correspondence related to this matter are provided as **Attachment D**.

In correspondence dated June 1, 1999, EPA On-Scene Coordination (OSC) Janis Tsang notes that, following the completed EPA removal action, sediment containing elevated concentrations of metals (chromium, copper, lead, and zinc) remained in the tailrace area downstream of the mill dam within an area measuring approximately 80 feet by 110 feet. However, it appears that budget constraints prevented further removal of the sediment and thus alternatives for how to best utilize the remaining project funding were considered at that time.

In this same correspondence, it is noted that representatives for the US Fish and Wildlife Service (USFWS) had reported low dissolved oxygen (DO) content in the tailrace area (suggested by the presence of algae and observed de-gasing), which was believed to be the result of a "failing septic system discharging septage into the river." As there was minimal flow through the tailrace area at that time, EPA noted that "migratory fish may die as a result of the low DO. (And general public may think the site contamination kill (sic) the fish instead.)"

Based on this and subsequent correspondence from EPA/USACE, it appears that the selected alternative to removal of the contaminated sediment was to stabilize the contaminated area with rock to prevent migration to the Saco River and to separately "re-contour the channel in order to have a narrow stream of water to flow and improve the DO content."

Therefore, based on the available correspondence, it does not appear that the channel in the former tailrace area was intended to minimize migration of contamination, but rather to increase DO to improve the health of migratory fish. If water levels are likely to drop below the level of the existing channel in the former tailrace area, it would seem that the channel would no longer serve its intended purpose (i.e., to receive flow) and thus a connection between the influent area would no longer be necessary.

TRC recommends presenting this information to EPA and MEDEP, as the Town has suggested, making sure the original context of these efforts is clear, to confirm that flow through the engineered stream channel is no longer necessary.

If you have any questions concerning this submittal, please do not hesitate to contact Zachary Bonin at (207) 298-0785 or via email at zbonin@trccompanies.com.

Sincerely,

Zachary E. Bonin, PG
Project Manager/Geologist

Thomas R. Eschner
Senior Project Manager

Attachments:

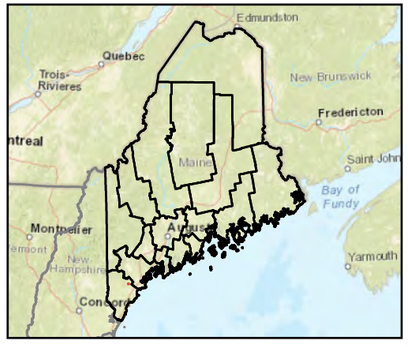
Figure 1 – Sediment and Subsurface Soil Sampling Locations
Table 1 – Summary of Analytical Results for Sediment Samples – July & September 2024
Table 2 – Summary of Analytical Results for Soil Samples – July 2024
Attachment A – Laboratory Reports
Attachment B – Data Usability Assessment
Attachment C – Town of Buxton Letter dated July 11, 2024
Attachment E – EPA/USACE Correspondence

Figures



LEGEND

- SEDIMENT SAMPLING LOCATION (HAND AUGER AND SHOVEL)
- SEDIMENT SAMPLING LOCATION (SHOVEL)
- SOIL SAMPLING LOCATION (HAND AUGER AND SHOVEL)



1:1,800
1" =150'

0 150 300
Feet

BROOKFIELD RENEWABLE
LEWISTON, MAINE

PROJECT: BAR MILLS HYDROELECTRIC PROJECT DECOMMISSIONING

TITLE:

SEDIMENT AND SUBSURFACE SOIL SAMPLING LOCATIONS

DRAWN BY:	J. CORSO	PROJ NO.:	510195.0000.0000
CHECKED BY:	J. FREDENBURG		**FIGURE 1**
APPROVED BY:	A. BURNS		
DATE:	APRIL 2024		

TRC COMPANIES
63 MARGINAL WAY
PORTLAND, MAINE
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FILE NO.: Bar_Mills_Sediment_Sampling.mxd

TRC - GIS

Map Rotation: 0

Coordinate System: NAD 1983 UTM Zone 19N Foot US (Foot US)

Plot Date: 4/4/2024, 14:07:12 PM by JCORSO -- LAYOUT: ANSI B(11"x17")

Path: T:\1-PROJECTS\Brookfield_Renewable_Energy_Group\510195_Buxton_Dam_Due_Diligence\2-APRX\Bar_Mills_Sediment_Sampling.aprx

Tables

Table 1 - Summary of Analytical Results for Sediment Samples -- July and September 2024
Bar Mills Dam
Buxton/Hollis, Maine

					Sample Location:		SED-1		SED-2		SED-3		SED-3		SED-4		SED-5		SED-6		SED-7	
					Sample Name:		SED-1 (0-1)		SED-2 (0-2)		SED-3 (0-2)		DUP		SED-4 (0-1.5)		SED-5		SED-6		SED-7	
					Lab Sample ID~:		L2440510-01/ L2447107-01		L2440510-02		L2440510-03		L2440510-06		L2440510-04		L2454546-01		L2454546-02		L2454546-03	
					Sample Depth:		0-1 ft		0-2 ft		0-2 ft		0-2 ft		0-1.5 ft		0-1 ft		0-1 ft		0-0.5 ft	
					Sample Date:		07/18/2024		07/18/2024		07/18/2024		07/18/2024		07/18/2024		09/23/2024		09/23/2024		09/23/2024	
Analysis	Analyte	Unit	Reporting Limit (RL)*	BTAG**									Field Dup									
VOCs																						
	Methylene chloride	mg/kg	NRL	N/A	0.0057	U	0.011	U	0.0096	U	0.01	U	0.0080	U	0.01	U	0.014	U	0.013	U		
	1,1-Dichloroethane	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Chloroform	mg/kg	NRL	N/A	0.0017	U	0.0034	U	0.0029	U	0.0031	U	0.0024	U	0.0030	U	0.0041	U	0.0039	U		
	Carbon tetrachloride	mg/kg	NRL	0.0642	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	1,2-Dichloropropane	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Dibromochloromethane	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	1,1,2-Trichloroethane	mg/kg	NRL	1.24	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Tetrachloroethene	mg/kg	NRL	0.468	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	Chlorobenzene	mg/kg	NRL	0.00842	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	Trichlorofluoromethane	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	1,2-Dichloroethane	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	1,1,1-Trichloroethane	mg/kg	NRL	0.0302	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	Bromodichloromethane	mg/kg	NRL	N/A	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	trans-1,3-Dichloropropene	mg/kg	NRL	0.0000509(a)	0.0011	U^	0.0023	U^	0.0019	U^	0.0020	U^	0.0016	U^	0.0020	U^	0.0027	U^	0.0026	U^		
	cis-1,3-Dichloropropene	mg/kg	NRL	0.0000509(a)	0.00057	U^	0.0011	U^	0.00096	U^	0.0010	U^	0.00080	U^	0.0010	U^	0.0014	U^	0.0013	U^		
	1,3-Dichloropropene, Total	mg/kg	NRL	0.0000509	0.00057	U^	0.0011	U^	0.00096	U^	0.0010	U^	0.00080	U^	0.0010	U^	0.0014	U^	0.0013	U^		
	1,1-Dichloropropene	mg/kg	NRL	N/A	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	Bromoform	mg/kg	NRL	0.654	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	1,1,2,2-Tetrachloroethane	mg/kg	NRL	1.36	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	Benzene	mg/kg	NRL	N/A	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	Toluene	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Ethylbenzene	mg/kg	NRL	1.1	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Chloromethane	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	Bromomethane	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	Vinyl chloride	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Chloroethane	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,1-Dichloroethene	mg/kg	NRL	0.031	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	trans-1,2-Dichloroethene	mg/kg	NRL	1.05	0.0017	U	0.0034	U	0.0029	U	0.0031	U	0.0024	U	0.0030	U	0.0041	U	0.0039	U		
	Trichloroethene	mg/kg	NRL	0.0969	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	1,2-Dichlorobenzene	mg/kg	NRL	0.0165	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,3-Dichlorobenzene	mg/kg	NRL	4.43	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,4-Dichlorobenzene	mg/kg	NRL	0.599	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	Methyl tert butyl ether	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	p/m-Xylene	mg/kg	NRL	0.0252(b)	0.0023	U	0.0046	U	0.0038	U	**0.0045**		**0.0038**		0.0041	U	0.0055	U	0.0052	U		
	o-Xylene	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	**0.0020**		**0.0016**		0.0020	U	0.0027	U	0.0026	U		
	Xylenes (Total)	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	**0.0065**		**0.0054**		0.0020	U	0.0027	U	0.0026	U		
	cis-1,2-Dichloroethene	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	1,2-Dichloroethene (total)	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Dibromomethane	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,4-Dichlorobutane	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	1,2,3-Trichloropropane	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	Styrene	mg/kg	NRL	0.559	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Dichlorodifluoromethane	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	Acetone	mg/kg	NRL	N/A	**0.028**		**0.058**		**0.048**		**0.057**		**0.058**		**0.082**		**0.1**		**0.16**			
	Carbon disulfide	mg/kg	NRL	0.000851	0.011	U^	0.023	U^	0.019	U^	0.02	U^	0.016	U^	0.02	U^	0.027	U^	0.026	U^		
	2-Butanone	mg/kg	NRL	N/A	**0.011**		**0.028**		**0.019**		0.02	U	**0.017**		0.02	U	**0.027**		**0.037**			
	Vinyl Acetate	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	4-Methyl-2-pentanone	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	2-Hexanone	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	Ethyl methacrylate	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	Acrylonitrile	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	Bromochloromethane	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	Tetrahydrofuran	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	2,2-Dichloropropane	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,2-Dibromoethane	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	1,3-Dichloropropane	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,1,1,2-Tetrachloroethane	mg/kg	NRL	N/A	0.00057	U	0.0011	U	0.00096	U	0.0010	U	0.00080	U	0.0010	U	0.0014	U	0.0013	U		
	Bromobenzene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	n-Butylbenzene	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	sec-Butylbenzene	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	tert-Butylbenzene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,3,5-Trichlorobenzene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	o-Chlorotoluene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	p-Chlorotoluene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,2-Dibromo-3-chloropropane	mg/kg	NRL	N/A	0.0034	U	0.0069	U	0.0057	U	0.0062	U	0.0048	U	0.0061	U	0.0082	U	0.0078	U		
	Hexachlorobutadiene	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	Isopropylbenzene	mg/kg	NRL	0.086	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	p-Isopropyltoluene	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	Naphthalene	mg/kg	0.01	0.176	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	n-Propylbenzene	mg/kg	NRL	N/A	0.0011	U	0.0023	U	0.0019	U	0.0020	U	0.0016	U	0.0020	U	0.0027	U	0.0026	U		
	1,2,3-Trichlorobenzene	mg/kg	NRL	0.858	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,2,4-Trichlorobenzene	mg/kg	NRL	2.1	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,3,5-Trimethylbenzene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,2,4-Trimethylbenzene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	trans-1,4-Dichloro-2-butene	mg/kg	NRL	N/A	0.0057	U	0.011	U	0.0096	U	0.01	U	0.0080	U	0.01	U	0.014	U	0.013	U		
	Ethyl ether	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	Methyl Acetate	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	Ethyl Acetate	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	Isopropyl Ether	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	Cyclohexane	mg/kg	NRL	N/A	0.011	U	0.023	U	0.019	U	0.02	U	0.016	U	0.02	U	0.027	U	0.026	U		
	Ethyl-Tert-Butyl-Ether	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	Tertiary-Amyl Methyl Ether	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,4-Dioxane	mg/kg	NRL	N/A	0.091	U	0.18	U	0.15	U	0.16	U	0.13	U	0.16	U	0.22	U	0.21	U		
	Methyl cyclohexane	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	1,1,2-Trichloro-1,2,2-Trifluoroethane	mg/kg	NRL	N/A	0.0046	U	0.0092	U	0.0076	U	0.0082	U	0.0064	U	0.0081	U	0.011	U	0.01	U		
	1,4-Diethylbenzene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	p-Ethyltoluene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
	1,2,4,5-Tetramethylbenzene	mg/kg	NRL	N/A	0.0023	U	0.0046	U	0.0038	U	0.0041	U	0.0032	U	0.0041	U	0.0055	U	0.0052	U		
SVOCs																						
	Benzidine	mg/kg	NRL	N/A	0.69	U	0.86	U	0.9	U	0.83	U	0.87	U	1.1	U	1.1	U	1.2	U		
	1,2,4-Trichlorobenzene	mg/kg	NRL	2.1	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	Bis(2-chloroethyl)ether	mg/kg	NRL	N/A	0.19	U	0.23	U	0.24	U	0.23	U	0.24	U	0.3	U	0.31	U	0.32	U		
	1,2-Dichlorobenzene	mg/kg	NRL	0.0165	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	1,3-Dichlorobenzene	mg/kg	NRL	4.43	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	1,4-Dichlorobenzene	mg/kg	NRL	0.599	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	3,3'-Dichlorobenzidine	mg/kg	NRL	0.127	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	2,4-Dinitrotoluene	mg/kg	NRL	0.0416	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	2,6-Dinitrotoluene	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	Azobenzene	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	4-Chlorophenyl phenyl ether	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	4-Bromophenyl phenyl ether	mg/kg	NRL	1.23	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		

Table 1 - Summary of Analytical Results for Sediment Samples -- July and September 2024
Bar Mills Dam
Buxton/Hollis, Maine

					Sample Location:		SED-1		SED-2		SED-3		SED-3		SED-4		SED-5		SED-6		SED-7	
					Sample Name:		SED-1 (0-1)		SED-2 (0-2)		SED-3 (0-2)		DUP		SED-4 (0-1.5)		SED-5		SED-6		SED-7	
					Lab Sample ID~:		L2440510-01/ L2447107-01		L2440510-02		L2440510-03		L2440510-06		L2440510-04		L2454546-01		L2454546-02		L2454546-03	
					Sample Depth:		0-1 ft		0-2 ft		0-2 ft		0-2 ft		0-1.5 ft		0-1 ft		0-1 ft		0-0.5 ft	
					Sample Date:		07/18/2024		07/18/2024		07/18/2024		07/18/2024		07/18/2024		09/23/2024		09/23/2024		09/23/2024	
Analysis	Analyte	Unit	Reporting Limit (RL)*	BTAG**									Field Dup									
	Bis(2-chloroisopropyl)ether	mg/kg	NRL	N/A	0.25	U	0.31	U	0.33	U	0.3	U	0.32	U	0.4	U	0.42	U	0.42	U		
	Bis(2-chloroethoxy)methane	mg/kg	NRL	N/A	0.23	U	0.28	U	0.29	U	0.27	U	0.29	U	0.36	U	0.38	U	0.38	U		
	Hexachlorocyclopentadiene	mg/kg	NRL	N/A	0.6	U	0.74	U	0.78	U	0.72	U	0.76	U	0.94	U	1	U	1	U		
	Isophorone	mg/kg	NRL	N/A	0.19	U	0.23	U	0.24	U	0.23	U	0.24	U	0.3	U	0.31	U	0.32	U		
	Nitrobenzene	mg/kg	NRL	N/A	0.19	U	0.23	U	0.24	U	0.23	U	0.24	U	0.3	U	0.31	U	0.32	U		
	NitrosoDiPhenylAmine(NDPA)/DPA	mg/kg	NRL	N/A	0.17	U	0.21	U	0.22	U	0.2	U	0.21	U	0.26	U	0.28	U	0.28	U		
	n-Nitrosodi-n-propylamine	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	Bis(2-Ethylhexyl)phthalate	mg/kg	0.05	0.18	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	Butyl benzyl phthalate	mg/kg	0.05	10.9	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	Di-n-butylphthalate	mg/kg	0.05	6.47	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	Di-n-octylphthalate	mg/kg	0.05	N/A	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	Diethyl phthalate	mg/kg	0.05	0.603	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	Dimethyl phthalate	mg/kg	0.05	N/A	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	Biphenyl	mg/kg	0.02	N/A	0.48	U^	0.59	U^	0.62	U^	0.57	U^	0.6	U^	0.75	U^	0.79	U^	0.81	U^		
	Aniline	mg/kg	NRL	N/A	0.25	U	0.31	U	0.33	U	0.3	U	0.32	U	0.4	U	0.42	U	0.42	U		
	4-Chloroaniline	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	2-Nitroaniline	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	3-Nitroaniline	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	4-Nitroaniline	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	Dibenzofuran	mg/kg	NRL	0.415	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	n-Nitrosodimethylamine	mg/kg	NRL	N/A	0.42	U	0.52	U	0.54	U	0.5	U	0.53	U	0.66	U	0.7	U	0.71	U		
	2,4,6-Trichlorophenol	mg/kg	NRL	0.213	0.12	U	0.16	U	0.16	U	0.15	U	0.16	U	0.2	U	0.21	U	0.21	U		
	P-Chloro-M-Cresol	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	2-Chlorophenol	mg/kg	NRL	0.0312	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	2,4-Dichlorophenol	mg/kg	NRL	0.117	0.19	U^	0.23	U^	0.24	U^	0.23	U^	0.24	U^	0.3	U^	0.31	U^	0.32	U^		
	2,4-Dimethylphenol	mg/kg	NRL	0.029	0.21	U^	0.26	U^	0.27	U^	0.25	U^	0.26	U^	0.33	U^	0.35	U^	0.35	U^		
	2-Nitrophenol	mg/kg	NRL	N/A	0.45	U	0.56	U	0.59	U	0.54	U	0.57	U	0.71	U	0.75	U	0.76	U		
	4-Nitrophenol	mg/kg	NRL	N/A	0.29	U	0.36	U	0.38	U	0.35	U	0.37	U	0.46	U	0.49	U	0.5	U		
	2,4-Dinitrophenol	mg/kg	NRL	N/A	1	U	1.2	U	1.3	U	1.2	U	1.3	U	1.6	U	1.7	U	1.7	U		
	4,6-Dinitro-o-cresol	mg/kg	NRL	N/A	0.54	U	0.68	U	0.71	U	0.66	U	0.69	U	0.86	U	0.9	U	0.92	U		
	Phenol	mg/kg	NRL	0.42	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	2-Methylphenol	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	3/4-Methylphenol	mg/kg	NRL	0.67(c)	0.3	U	0.37	U	0.39	U	0.36	U	0.38	U	0.48	U	0.5	U	0.51	U		
	2,4,5-Trichlorophenol	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	Benzoic Acid	mg/kg	NRL	N/A	0.68	U	0.84	U	0.88	U	0.82	U	0.86	U		R		R		R		
	Benzyl Alcohol	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	Carbazole	mg/kg	NRL	N/A	0.21	U	0.26	U	0.27	U	0.25	U	0.26	U	0.33	U	0.35	U	0.35	U		
	Pyridine	mg/kg	NRL	N/A	0.23	U	0.28	U	0.29	U	0.27	U	0.29	U	0.36	U	0.38	U	0.38	U		
	Acenaphthene	mg/kg	0.01	0.0067	**0.0088**		0.01	U^	0.011	U^	0.01	U^	0.01	U^	0.013	U^	0.014	U^	0.014	U^		
	Hexachlorobenzene	mg/kg	0.001	0.02	0.0084	U^	0.01	U^	0.011	U^	0.01	U^	0.01	U^	0.013	U^	0.014	U^	0.014	U^		
	2-Chloronaphthalene	mg/kg	NRL	N/A	0.0084	U	0.01	U	0.011	U	0.01	U	0.01	U	0.013	U	0.014	U	0.014	U		
	Fluoranthene	mg/kg	0.01	0.423	**0.3**		0.01	U	**0.034**		**0.024**		0.01	U	**0.054**		**0.029**		0.014	U^		
	Hexachlorobutadiene	mg/kg	NRL	N/A	0.0084	U	0.01	U	0.011	U	0.01	U	0.01	U	0.013	U	0.014	U	0.014	U		
	Hexachloroethane	mg/kg	NRL	1.027	0.0084	U	0.01	U	0.011	U	0.01	U	0.01	U	0.013	U	0.014	U	0.014	U		
	Naphthalene	mg/kg	0.01	0.176	0.0084	U	0.01	U	0.011	U^	0.01	U	0.01	U	0.013	U^	0.014	U^	0.014	U^		
	Benzo(a)anthracene	mg/kg	0.01	0.108	**0.11**		0.01	U	**0.015**		**0.011**		0.01	U	**0.024**		0.014	U^	0.014	U^		
	Benzo(a)pyrene	mg/kg	0.01	0.15	**0.12**		0.01	U	**0.02**		**0.013**		0.01	U	**0.023**		0.014	U^	0.014	U^		
	Benzo(b)fluoranthene	mg/kg	0.01	0.0272	**0.16**		0.01	U	**0.028**		**0.018**		0.01	U	**0.028**		**0.014**		0.014	U^		
	Benzo(k)fluoranthene	mg/kg	0.01	0.24	**0.051**		0.01	U	0.011	U^	0.01	U	0.01	U	0.013	U^	0.014	U^	0.014	U^		
	Chrysene	mg/kg	0.01	0.166	**0.12**		0.01	U	**0.019**		**0.011**		0.01	U	**0.02**		0.014	U^	0.014	U^		
	Acenaphthylene	mg/kg	0.01	0.0059	**0.022**		0.01	U^	0.011	U^	0.01	U^	0.01	U^	0.013	U^	0.014	U^	0.014	U^		
	Anthracene	mg/kg	0.01	0.0572	**0.036**		0.01	U	0.011	U^	0.01	U	0.01	U	0.013	U^	0.014	U^	0.014	U^		
	Benzo(ghi)perylene	mg/kg	0.01	0.17	**0.064**		0.01	U	**0.012**		0.01	U	0.01	U	**0.013**		0.014	U^	0.014	U^		
	Fluorene	mg/kg	0.01	0.0774	**0.018**		0.01	U	0.011	U^	0.01	U	0.01	U	0.013	U^	0.014	U^	0.014	U^		
	Phenanthrene	mg/kg	0.01	0.204	**0.16**		0.01	U	**0.011**		**0.012**		0.01	U	**0.023**		**0.019**		0.014	U^		
	Dibenzo(a,h)anthracene	mg/kg	0.01	0.033	**0.015**		0.01	U	0.011	U^	0.01	U	0.01	U	0.013	U^	0.014	U^	0.014	U^		
	Indeno(1,2,3-cd)Pyrene	mg/kg	0.01	0.017	**0.064**		0.01	U	**0.012**		0.01	U	0.01	U	**0.014**		0.014	U^	0.014	U^		
	Pyrene	mg/kg	0.01	0.195	**0.24**		0.01	U	**0.028**		**0.019**		0.01	U	**0.047**		**0.025**		0.014	U^		
	1-Methylnaphthalene	mg/kg	0.02	N/A	0.0084	U	0.01	U	0.011	U	0.01	U	0.01	U	0.013	U	0.014	U	0.014	U		
	2-Methylnaphthalene	mg/kg	0.02	0.0202	0.0084	U	0.01	U	0.011	U	0.01	U	0.01	U	0.013	U	0.014	U	0.014	U		
	Pentachlorophenol	mg/kg	NRL	0.504	0.034	U	0.042	U	0.044	U	0.04	U	0.042	U	0.053	U	0.056	U	0.057	U		
	PAHs, High Molecular Weight	mg/kg	NRL	0.19	***1.24***		*ND*		***0.168***		***0.096***		*ND*		***0.223***		***0.068***		*ND*			
	PAHs, Low Molecular Weight	mg/kg	NRL	0.076	***0.245***		*ND*		***0.011***		***0.012***		*ND*		***0.023***		***0.019***		*ND*			
	Total PAHs	mg/kg	NRL	1.61	***1.49***		*ND*		***0.179***		***0.108***		*ND*		***0.246***		***0.087***		*ND*			
PCBs																						
	Aroclor-1016	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1221	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1232	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1242	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1248	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1254	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1260	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1262	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Aroclor-1268	mg/kg	NRL	N/A	0.0602	U	0.0767	U	0.0769	U	0.0716	U	0.0782	U	0.185	U	0.183	U	0.193	U		
	Total PCBs	mg/kg	NRL	0.0598	0.0602	U^	0.0767	U^	0.0769	U^	0.0716	U^	0.0782	U^	0.185	U^	0.183	U^	0.193	U^		
Pesticides																						
	Delta-BHC	mg/kg	NRL	6.4	0.00195	U	0.00245	U	0.00257	U	0.00244	U	0.00245	U	0.00314	U	0.00324	U	0.00345	U		
	Lindane	mg/kg	0.001	0.00237	0.000813	U	0.00102	U^	0.00107	U^	0.00102	U^	0.00102	U^	0.00131	U^	0.00135	U^	0.00144	U^		
	Alpha-BHC	mg/kg	NRL	0.006	0.000813	U	0.00102	U	0.00107	U	0.00102	U	0.00102	U	0.00131	U	0.00135	U	0.00144	U		
	Beta-BHC	mg/kg	NRL	0.005	0.00195	U	0.00245	U	0.00257	U	0.00244	U	0.00245	U	0.00314	U	0.00324	U	0.00345	U		
	Heptachlor	mg/kg	0.001	0.068	0.000976	U	0.00122	U^	0.00128	U^	0.00122	U^	0.00122	U^	0.00157	U^	0.00162	U^	0.00172	U^		
	Aldrin	mg/kg	0.001	0.002	0.00195	U^	0.00245	U^	0.00257	U^	0.00244	U^	0.00245	U^	0.00314	U^	0.00324	U^	0.00345	U^		
	Heptachlor epoxide	mg/kg	0.001	0.00247	0.00366	U^	0.00460	U^	0.00482	U^	0.00457	U^	0.00459	U^	0.00589	U^	0.00607	U^	0.00647	U^		
	Endrin	mg/kg	0.001	0.00222	0.000813	U	0.00102	U^	0.00107	U^	0.00102	U^	0.00102	U^	0.00131	U^	0.00135	U^	0.00144	U^		
	Endrin aldehyde	mg/kg	NRL	N/A	0.00244	U	0.00306	U	0.00321	U	0.00305	U	0.00306	U	0.00393	U	0.00404	U	0.00431	U		
	Endrin ketone	mg/kg	NRL	N/A	0.00195	U	0.00245	U	0.00257	U	0.00244	U	0.00245	U	0.00314	U	0.00324	U	0.00345	U		
	Dieldrin	mg/kg	0.001	0.0019	0.00122	U^	0.00153	U^	0.00161	U^	0.00152	U^	0.00153	U^	0.00196	U^	0.00202	U^	0.00216	U^		
	4,4'-DDE	mg/kg	0.001	0.00316	0.00195	U^	0.00245	U^	0.00257	U^	0.00244	U^	0.00245	U^	0.00314	U^	0.00324	U^	0.00345	U^		
	4,4'-DDD	mg/kg	0.001	0.00488	0.00195	U^	0.00245	U^	0.00257	U^	0.00244	U^	0.00245	U^	0.00314	U^	0.00324	U^	0.00345	U^		
	4,4'-DDT	mg/kg	0.001	0.00416	0.00366	U^	0.00460	U^	0.00482	U^	0.00457	U^	0.00459	U^	0.00589	U^	0.00607	U^	0.00647	U^		
	Endosulfan I	mg/kg	0.001	0.0029	0.00195	U^	0.00245	U^	0.00257	U^	0.00244	U^	0.00245	U^	0.00314	U^	0.00324	U^	0.00345	U^		
	Endosulfan II	mg/kg	0.001	0.014	0.00195	U^	0.00245	U^	0.00257	U^	0.00244	U^	0.00245	U^	0.00314	U^	0.00324	U^	0.00345	U^		
	Endosulfan sulfate	mg/kg	NRL	0.0054	0.000813	U	0.00102	U	0.00107	U	0.00102	U	0.00102	U	0.00131	U	0.00135	U	0.00144	U		
	Methoxychlor	mg/kg	0.001	0.0187	0.00366	U^	0.00460	U^	0.00482	U^	0.00457	U^	0.00459	U^	0.00589	U^	0.00607	U^	0.00647	U^		
	Toxaphene	mg/kg	0.025	0.0001	0.0366	U^	0.0460	U^	0.0482	U^	0.0457	U^	0.0459	U^	0.0589	U^	0.0607	U^	0.0647	U^		
	Chlordane	mg/kg	NRL	0.00324	0.0162	U^	0.0204	U^	0.0214	U^	0.0203	U^	0.0204	U^	0.0262	U^	0.0270	U^	0.0288	U^		
	cis-Chlordane	mg/kg	0.001	0.00324(d)	0.00244	U^	0.00306	U^	0.00321	U^	0.00305	U^	0.00306	U^	0.00393	U^	0.00404	U^	0.00431	U^		
	trans-Chlordane	mg/kg	0.001	0.00324(d)	0.00244	U^	0.00306	U^	0.00321	U^	0.00305	U^	0.00306	U^	0.00393	U^	0.00404	U^	0.00431	U^		
Herbicides																						
	MCPP	mg/kg	NRL	N/A	4.28	U	5.16	U	5.46	U	5.06	U	5.35	U	6.52	U	6.98	U	7.06	U		
	MCPA	mg/kg	NRL	N/A	4.28	U	5.16	U	5.46	U	5.06	U	5.35	U	6.52	U	6.98	U	7.06	U		

Table 1 - Summary of Analytical Results for Sediment Samples -- July and September 2024
Bar Mills Dam
Buxton/Hollis, Maine

					Sample Location:		SED-1		SED-2		SED-3		SED-3		SED-4		SED-5		SED-6		SED-7	
					Sample Name:		SED-1 (0-1)		SED-2 (0-2)		SED-3 (0-2)		DUP		SED-4 (0-1.5)		SED-5		SED-6		SED-7	
					Lab Sample ID~:		L2440510-01/ L2447107-01		L2440510-02		L2440510-03		L2440510-06		L2440510-04		L2454546-01		L2454546-02		L2454546-03	
					Sample Depth:		0-1 ft		0-2 ft		0-2 ft		0-2 ft		0-1.5 ft		0-1 ft		0-1 ft		0-0.5 ft	
					Sample Date:		07/18/2024		07/18/2024		07/18/2024		07/18/2024		07/18/2024		09/23/2024		09/23/2024		09/23/2024	
Analysis	Analyte	Unit	Reporting Limit (RL)*	BTAG**									Field Dup									
	Dalapon	mg/kg	NRL	N/A	0.0428	U	0.0516	U	0.0546	U	0.0506	U			0.0535	U	0.0652	U	0.0698	U	0.0706	U
	Dicamba	mg/kg	NRL	N/A	0.0428	U	0.0516	U	0.0546	U	0.0506	U			0.0535	U	0.0652	U	0.0698	U	0.0706	U
	Dichloroprop	mg/kg	NRL	N/A	0.0428	U	0.0516	U	0.0546	U	0.0506	U			0.0535	U	0.0652	U	0.0698	U	0.0706	U
	2,4-D	mg/kg	NRL	N/A	0.214	U	0.258	U	0.273	U	0.253	U			0.268	U	0.326	U	0.349	U	0.353	U
	2,4-DB	mg/kg	NRL	N/A	0.214	U	0.258	U	0.273	U	0.253	U			0.268	U	0.326	U	0.349	U	0.353	U
	2,4,5-T	mg/kg	NRL	12.3	0.214	U	0.258	U	0.273	U	0.253	U			0.268	U	0.326	U	0.349	U	0.353	U
	2,4,5-TP (Silvex)	mg/kg	NRL	0.675	0.214	U	0.258	U	0.273	U	0.253	U			0.268	U	0.326	U	0.349	U	0.353	U
TPH																						
	Diesel Range Organics (C10-C28)	mg/kg	NRL	N/A	42	U	52	U	54	U	50	U			53	U	64	U	69	U	72	U
Metals, total																						
	Antimony	mg/kg	2.5	2	1.9	U	2.4	U^	2.6	U^	2.4	U^			2.5	U^	3.0	U^	3.3	U^	3.4	U^
	Arsenic	mg/kg	0.4	9.8	**4.4**		**2.4**		**3.0**		**2.6**				**2.5**		**6.3**		**3.8**		**3.8**	
	Beryllium	mg/kg	2.5	N/A	**0.66**		**1.3**		**1.1**		**1.1**				**1.3**		**1.3**		**2.2**		**1.5**	
	Cadmium	mg/kg	0.07	0.99	0.24	U^	**0.33**		0.32	U^	0.29	U^			**0.32**		**0.47**		**0.64**		0.42	U^
	Chromium	mg/kg	0.5	43.4	**14**		**11**		**14**		**13**				**11**		**14**		**15**		**13**	
	Copper	mg/kg	0.5	31.6	**7.2**		**6.6**		**5.6**		**6.0**				**6.0**		**12**		**9.3**		**7.4**	
	Lead	mg/kg	0.5	35.8	**12**		**14**		**10**		**9.8**				**9.1**		**12**		**15**		**11**	
	Mercury	mg/kg	0.02	0.18	0.081	U^	0.099	U^	0.105	U^	0.099	U^			0.102	U^	0.126	U^	0.136	U^	0.136	U^
	Nickel	mg/kg	0.5	22.7	**11**		**8.2**		**9.7**		**8.8**				**8.1**		**11**		**10**		**9.4**	
	Selenium	mg/kg	1	2	**3.2**		**5.6**		**5.0**		**4.8**				**5.8**		**4.0**		**5.3**		**4.6**	
	Silver	mg/kg	0.2	1	0.61	U^	0.76	U^	0.81	U^	0.74	U^			0.78	U^	0.96	U^	1.0	U^	1.1	U^
	Thallium	mg/kg	0.2	N/A	0.48	U^	0.61	U^	0.65	U^	0.59	U^			0.63	U^	0.76	U^	0.82	U^	0.85	U^
	Zinc	mg/kg	1	121	**51**		**68**		**61**		**59**				**67**		**77**		**110**		**78**	
Grain Size																						
	Cobbles	%	NRL	N/A	NA		ND		ND		NA				NA		NA		ND		NA	
	Coarse Gravel	%	4	N/A	NA		ND		ND		NA				NA		NA		ND		NA	
	Fine Gravel	%	10	N/A	NA		ND		ND		NA				NA		NA		ND		NA	
	Total Gravel	%	NRL	N/A	NA		ND		ND		NA				NA		NA		ND		NA	
	Coarse Sand	%	40	N/A	NA		ND		ND		NA				NA		NA		ND		NA	
	Medium Sand	%	NRL	N/A	NA		**1.00**		ND		NA				NA		NA		**3.00**		NA	
	Fine Sand	%	200	N/A	NA		**48.0**		**41.0**		NA				NA		NA		**34.0**		NA	
	Total Sand	%	NRL	N/A	NA		**49.0**		**41.0**		NA				NA		NA		**37.0**		NA	
	Fine Silt	%	NRL	N/A	NA		**46.0**		**54.0**		NA				NA		NA		**51.0**		NA	
	Fine Clay	%	NRL	N/A	NA		**5.00**		**5.00**		NA				NA		NA		**12.0**		NA	
	Total Fines	%	NRL	N/A	NA		**51.0**		**59.0**		NA				NA		NA		**63.0**		NA	
General Chemistry																						
	Ignitability		NRL	N/A	NI		NI		NI		NI				NI		NI		NI		NI	
	Specific Conductance	umhos/cm	NRL	N/A	10	U	10	U	10	U	10	U			10	U	**24**		**29**		10	U
	Cyanide	mg/kg	2	N/A	1.2	U	1.5	U	1.6	U	1.5	U			1.5	U	1.9	U	2.0	U	2.0	U
	pH	su	NRL	N/A	**7.72**		**6.25**		**6.34**		**6.76**				**6.39**		**7.90**		**6.85**		**7.13**	
	Sulfate	mg/kg	NRL	N/A	130	U	140	U	160	U	160	U			140	U	180	U	190	U	200	U
	Reactive Cyanide	mg/kg	NRL	N/A	10	U	10	U	10	U	10	U			10	U	10	U	10	U	10	U
	Reactive Sulfide	mg/kg	NRL	N/A	10	U	10	U	10	U	**17**				10	U	10	U	10	U	10	U
	Total Organic Carbon - 1	%	0.1	N/A	NA		**0.839**		**1.20**		NA				NA		NA		**2.24**		NA	
	Total Organic Carbon - 2	%	0.1	N/A	NA		**1.10**		**1.24**		NA				NA		NA		**2.41**		NA	
	Total Organic Carbon - Average	%	0.1	N/A	NA		**0.967**		**1.22**		NA				NA		NA		**2.32**		NA	
	Chromium (VI)	mg/kg	NRL	N/A	1.03	U	NA		NA		NA				NA		NA		1.70	U	NA	
Asbestos																						
	Asbestos	%	NRL	N/A	ND		ND		ND		ND				ND		ND		ND		ND	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NRL - No Reporting Limit.

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Value shown in bold and shaded type exceeds BTAG.

^ - Quantitation limit value exceeds the RL or BTAG.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PAHs - Polycyclic Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

* - US Army Corps of Engineers (ACE) Regional Implementation Manual for the
Evaluation of Dredged Material Proposed For Disposal in New England Waters, April 2004.

** - EPA Region 3 Biological Technical Assistance Group (BTAG) Freshwater Sediment Screening Benchmarks, August 2006.

~ - Lab Sample ID for other/hexavalent chromium analyses.

(a) - used criteria for 1,3-Dichloropropene.

(b) - used criteria for m-xylene.

(c) - used criteria for 4-methylphenol.

(d) - used criteria for chlordane.

Table 2 - Summary of Analytical Results for Soil Sample -- July 2024
Bar Mills Dam
Buxton/Hollis, Maine

						Sample Location:	**SS-1**	
						Lab Sample ID~:	L2440510-05 / L2447107-02	
						Sample Depth:	0-0.5 ft	
						Sample Date:	07/18/2024	
Analysis	Analyte	Unit	Residential*	Commercial Worker*	Construction Worker*			
VOCs								
	Methylene chloride	mg/kg	490	2,500	1,900	0.0085	U
	1,1-Dichloroethane	mg/kg	53	230	850	0.0017	U
	Chloroform	mg/kg	4.7	21	75	0.0026	U
	Carbon tetrachloride	mg/kg	9.7	43	160	0.0017	U
	1,2-Dichloropropane	mg/kg	23	99	32	0.0017	U
	Dibromochloromethane	mg/kg	110	530	3,000	0.0017	U
	1,1,2-Trichloroethane	mg/kg	2.2	9.4	68	0.0017	U
	Tetrachloroethene	mg/kg	120	160	84	0.00085	U
	Chlorobenzene	mg/kg	410	740	740	0.00085	U
	Trichlorofluoromethane	mg/kg	32,000	100,000	940	0.0068	U
	1,2-Dichloroethane	mg/kg	6.9	30	110	0.0017	U
	1,1,1-Trichloroethane	mg/kg	640	640	640	0.00085	U
	Bromodichloromethane	mg/kg	4.4	19	70	0.00085	U
	trans-1,3-Dichloropropene	mg/kg	27(b)	120(b)	120(b)	0.0017	U
	cis-1,3-Dichloropropene	mg/kg	27(b)	120(b)	120(b)	0.00085	U
	1,3-Dichloropropene, Total	mg/kg	27	120	120	0.00085	U
	1,1-Dichloropropene	mg/kg	NS	NS	NS	0.00085	U
	Bromoform	mg/kg	280	790	890	0.0068	U
	1,1,2,2-Tetrachloroethane	mg/kg	8.9	39	150	0.00085	U
	Benzene	mg/kg	17	75	240	0.00085	U
	Toluene	mg/kg	750	810	820	0.0017	U
	Ethylbenzene	mg/kg	86	380	470	0.0017	U
	Chloromethane	mg/kg	160	690	1,300	0.0068	U
	Bromomethane	mg/kg	10	45	120	0.0034	U
	Vinyl chloride	mg/kg	0.64	24	80	0.0017	U
	Chloroethane	mg/kg	2,100	2,100	2,000	0.0034	U
	1,1-Dichloroethene	mg/kg	340	1,200	4.2	0.0017	U
	trans-1,2-Dichloroethene	mg/kg	100	450	1,200	0.0026	U
	Trichloroethene	mg/kg	6.1	28	4.2	0.00085	U
	1,2-Dichlorobenzene	mg/kg	360	380	380	0.0034	U
	1,3-Dichlorobenzene	mg/kg	290	300	280	0.0034	U
	1,4-Dichlorobenzene	mg/kg	39	170	620	0.0034	U
	Methyl tert butyl ether	mg/kg	690	3,000	8,300	0.0034	U
	p/m-Xylene	mg/kg	260(a)	260(a)	260(a)	**0.0039**	
	o-Xylene	mg/kg	260(a)	260(a)	260(a)	0.0017	U
	Xylenes (Total)	mg/kg	260	260	260	**0.0039**	
	cis-1,2-Dichloroethene	mg/kg	90	540	800	0.0017	U
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	0.0017	U
	Dibromomethane	mg/kg	35	150	190	0.0034	U
	1,4-Dichlorobutane	mg/kg	NS	NS	NS	0.017	U
	1,2,3-Trichloropropane	mg/kg	0.07	1.5	4.3	0.0034	U
	Styrene	mg/kg	830	870	860	0.0017	U
	Dichlorodifluoromethane	mg/kg	130	550	730	0.017	U
	Acetone	mg/kg	96,000	100,000	100,000	0.043	U
	Carbon disulfide	mg/kg	690	740	720	0.017	U
	2-Butanone	mg/kg	20,000	28,000	11,000	0.017	U
	Vinyl Acetate	mg/kg	1,400	2,700	140	0.017	U
	4-Methyl-2-pentanone	mg/kg	3,400	3,400	3,300	0.017	U
	2-Hexanone	mg/kg	290	2,000	300	0.017	U
	Ethyl methacrylate	mg/kg	1,100	1,100	830	0.017	U
	Acrylonitrile	mg/kg	3.7	17	14	0.0068	U
	Bromochloromethane	mg/kg	220	940	330	0.0034	U
	Tetrahydrofuran	mg/kg	27,000	100,000	20,000	0.0068	U
	2,2-Dichloropropane	mg/kg	NS	NS	NS	0.0034	U
	1,2-Dibromoethane	mg/kg	0.54	2.4	8.9	0.0017	U
	1,3-Dichloropropane	mg/kg	2,100	32,000	68,000	0.0034	U
	1,1,1,2-Tetrachloroethane	mg/kg	30	130	480	0.00085	U
	Bromobenzene	mg/kg	380	650	620	0.0034	U
	n-Butylbenzene	mg/kg	5,400	80,000	34,000	0.0017	U
	sec-Butylbenzene	mg/kg	11,000	100,000	34,000	0.0017	U
	tert-Butylbenzene	mg/kg	11,000	100,000	34,000	0.0034	U
	1,3,5-Trichlorobenzene	mg/kg	NS	NS	NS	0.0034	U
	o-Chlorotoluene	mg/kg	2,100	32,000	800	0.0034	U
	p-Chlorotoluene	mg/kg	2,100	32,000	68,000	0.0034	U
	1,2-Dibromo-3-chloropropane	mg/kg	0.078	1	3.5	0.0051	U
	Hexachlorobutadiene	mg/kg	15	16	17	0.0068	U
	Isopropylbenzene	mg/kg	260	270	270	0.0017	U
	p-Isopropyltoluene	mg/kg	660(c)	3,500(c)	2,600(c)	0.0017	U
	Naphthalene	mg/kg	29	120	130	0.0068	U
	n-Propylbenzene	mg/kg	260	260	260	0.0017	U
	1,2,3-Trichlorobenzene	mg/kg	86	1,300	2,700	0.0034	U
	1,2,4-Trichlorobenzene	mg/kg	86	380	400	0.0034	U
	1,3,5-Trimethylbenzene	mg/kg	160	180	180	0.0034	U
	1,2,4-Trimethylbenzene	mg/kg	180	220	220	0.0034	U
	trans-1,4-Dichloro-2-butene	mg/kg	0.11	0.48	1.8	0.0085	U
	Ethyl ether	mg/kg	21,000	100,000	8,100	0.0034	U
	Methyl Acetate	mg/kg	100,000	100,000	740	0.0068	U
	Ethyl Acetate	mg/kg	NS	NS	NS	0.017	U
	Isopropyl Ether	mg/kg	2,300	2,300	2,000	0.0034	U
	Cyclohexane	mg/kg	120	120	120	0.017	U
	Ethyl-Tert-Butyl-Ether	mg/kg	1,900	2,900	2,900	0.0034	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	0.0034	U
	1,4-Dioxane	mg/kg	74	340	1,700	0.14	U
	Methyl cyclohexane	mg/kg	1,700(d)	11,000(d)	430(d)	0.0068	U
	1,1,2-Trichloro-1,2,2-Trifluoroethane	mg/kg	910	910	910	0.0068	U
	1,4-Diethylbenzene	mg/kg	660(c)	3,500(c)	2,600(c)	0.0034	U
	p-Ethyltoluene	mg/kg	660(c)	3,500(c)	2,600(c)	0.0034	U
	1,2,4,5-Tetramethylbenzene	mg/kg	660(c)	3,500(c)	2,600(c)	0.0034	U
SVOCs							
	Benzidine	mg/kg	NS	NS	NS	0.76	U
	1,2,4-Trichlorobenzene	mg/kg	86	380	400	0.23	U
	Bis(2-chloroethyl)ether	mg/kg	3.3	15	62	0.21	U
	1,2-Dichlorobenzene	mg/kg	360	380	380	0.23	U
	1,3-Dichlorobenzene	mg/kg	290	300	280	0.23	U
	1,4-Dichlorobenzene	mg/kg	39	170	620	0.23	U
	3,3'-Dichlorobenzidine	mg/kg	17	70	400	0.23	U
	2,4-Dinitrotoluene	mg/kg	24	100	600	0.23	U
	2,6-Dinitrotoluene	mg/kg	5	21	130	0.23	U
	Azobenzene	mg/kg	NS	NS	NS	0.23	U
	4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	0.23	U
	4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	0.23	U
	Bis(2-chloroisopropyl)ether	mg/kg	NS	NS	NS	0.28	U

Table 2 - Summary of Analytical Results for Soil Sample -- July 2024
Bar Mills Dam
Buxton/Hollis, Maine

						Sample Location:	**SS-1**	
						Lab Sample ID~:	L2440510-05 / L2447107-02	
						Sample Depth:	0-0.5 ft	
						Sample Date:	07/18/2024	
Analysis	Analyte	Unit	Residential*	Commercial Worker*	Construction Worker*			
	Bis(2-chloroethoxy)methane	mg/kg	NS	NS	NS		0.25	U
	Hexachlorocyclopentadiene	mg/kg	NS	NS	NS		0.66	U
	Isophorone	mg/kg	7,800	33,000	100,000		0.21	U
	Nitrobenzene	mg/kg	NS	NS	NS		0.21	U
	NitrosoDiPhenylAmine(NDPA)/DPA	mg/kg	1,500	6,400	37,000		0.18	U
	n-Nitrosodi-n-propylamine	mg/kg	NS	NS	NS		0.23	U
	Bis(2-Ethylhexyl)phthalate	mg/kg	530	2,200	26		0.23	U
	Butyl benzyl phthalate	mg/kg	3,900	17,000	99,000		0.23	U
	Di-n-butylphthalate	mg/kg	8,600	100,000	100,000		0.23	U
	Di-n-octylphthalate	mg/kg	860	11,000	26,000		0.23	U
	Diethyl phthalate	mg/kg	69,000	100,000	100,000		0.23	U
	Dimethyl phthalate	mg/kg	NS	NS	NS		0.23	U
	Biphenyl	mg/kg	71	300	400		0.52	U
	Aniline	mg/kg	610	5,500	1,700		0.28	U
	4-Chloroaniline	mg/kg	37	160	130		0.23	U
	2-Nitroaniline	mg/kg	NS	NS	NS		0.23	U
	3-Nitroaniline	mg/kg	NS	NS	NS		0.23	U
	4-Nitroaniline	mg/kg	350	1,600	2,500		0.23	U
	Dibenzofuran	mg/kg	110	1,600	1,400		0.23	U
	n-Nitrosodimethylamine	mg/kg	NS	NS	NS		0.46	U
	2,4,6-Trichlorophenol	mg/kg	86	1,100	1,300		0.14	U
	P-Chloro-M-Cresol	mg/kg	8,600	100,000	26,000		0.23	U
	2-Chlorophenol	mg/kg	540	8,000	2,700		0.23	U
	2,4-Dichlorophenol	mg/kg	260	3,400	5,100		0.21	U
	2,4-Dimethylphenol	mg/kg	1,700	22,000	13,000		0.23	U
	2-Nitrophenol	mg/kg	NS	NS	NS		0.5	U
	4-Nitrophenol	mg/kg	NS	NS	NS		0.32	U
	2,4-Dinitrophenol	mg/kg	170	2,200	5,100		1.1	U
	4,6-Dinitro-o-cresol	mg/kg	NS	NS	NS		0.6	U
	Phenol	mg/kg	26,000	100,000	100,000		0.23	U
	2-Methylphenol	mg/kg	4,300	56,000	51,000		0.23	U
	3/4-Methylphenol	mg/kg	1,700(e)	22,000(e)	5,100(e)		0.33	U
	2,4,5-Trichlorophenol	mg/kg	8,600	100,000	77,000		0.23	U
	Benzoic Acid	mg/kg	100,000	100,000	11,000		0.75	U
	Benzyl Alcohol	mg/kg	8,600	100,000	77,000		0.23	U
	Carbazole	mg/kg	270	110	6,700		0.23	U
	Pyridine	mg/kg	NS	NS	NS		0.25	U
	Acenaphthene	mg/kg	4,900	62,000	48,000		0.0092	U
	Hexachlorobenzene	mg/kg	1.1	14	3.4		0.0092	U
	2-Chloronaphthalene	mg/kg	6,500	82,000	48,000		0.0092	U
	Fluoranthene	mg/kg	3,300	41,000	24,000		**0.071**	
	Hexachlorobutadiene	mg/kg	15	16	17		0.0092	U
	Hexachloroethane	mg/kg	27	120	450		0.0092	U
	Naphthalene	mg/kg	29	120	130		0.0092	U
	Benzo(a)anthracene	mg/kg	16	280	1,700		**0.031**	
	Benzo(a)pyrene	mg/kg	1.6	29	9.9		**0.028**	
	Benzo(b)fluoranthene	mg/kg	16	290	1,700		**0.043**	
	Benzo(k)fluoranthene	mg/kg	160	2,900	17,000		**0.013**	
	Chrysene	mg/kg	1,600	29,000	100,000		**0.031**	
	Acenaphthylene	mg/kg	4,900	45,000	48,000		0.0092	U
	Anthracene	mg/kg	25,000	100,000	100,000		0.0092	U
	Benzo(ghi)perylene	mg/kg	2,500	23,000	72,000		**0.015**	
	Fluorene	mg/kg	3,300	41,000	96,000		0.0092	U
	Phenanthrene	mg/kg	2,500	23,000	72,000		**0.038**	
	Dibenzo(a,h)anthracene	mg/kg	1.6	29	170		0.0092	U
	Indeno(1,2,3-cd)Pyrene	mg/kg	16	290	1,700		**0.016**	
	Pyrene	mg/kg	2,500	31,000	72,000		**0.055**	
	1-Methylnaphthalene	mg/kg	240	990	6,000		0.0092	U
	2-Methylnaphthalene	mg/kg	330	4,100	960		0.0092	U
	Pentachlorophenol	mg/kg	14	54	340		0.037	U
PCBs								
	Aroclor-1016	mg/kg	5.6	70	16		0.0689	U
	Aroclor-1221	mg/kg	NS	NS	NS		0.0689	U
	Aroclor-1232	mg/kg	NS	NS	NS		0.0689	U
	Aroclor-1242	mg/kg	NS	NS	NS		0.0689	U
	Aroclor-1248	mg/kg	NS	NS	NS		0.0689	U
	Aroclor-1254	mg/kg	NS	NS	NS		0.0689	U
	Aroclor-1260	mg/kg	NS	NS	NS		0.0689	U
	Aroclor-1262	mg/kg	NS	NS	NS		0.0689	U
	Aroclor-1268	mg/kg	NS	NS	NS		0.0689	U
	Total PCBs	mg/kg	3.1	13	74		0.0689	U
Pesticides								
	Delta-BHC	mg/kg	NS	NS	NS		0.00213	U
	Lindane	mg/kg	7.8	35	200		0.000887	U
	Alpha-BHC	mg/kg	1.2	5	29		0.000887	U
	Beta-BHC	mg/kg	4.1	17	100		0.00213	U
	Heptachlor	mg/kg	1.9	8.7	34		0.00106	U
	Aldrin	mg/kg	0.54	2.5	14		0.00213	U
	Heptachlor epoxide	mg/kg	1	4.5	4.4		0.00399	U
	Endrin	mg/kg	26	340	150		0.000887	U
	Endrin aldehyde	mg/kg	NS	NS	NS		0.00266	U
	Endrin ketone	mg/kg	NS	NS	NS		0.00213	U
	Dieldrin	mg/kg	0.46	2	12		0.00133	U
	4,4'-DDE	mg/kg	27	130	100		0.00213	U
	4,4'-DDD	mg/kg	31	130	130		0.00213	U
	4,4'-DDT	mg/kg	26	120	160		0.00399	U
	Endosulfan I	mg/kg	640(f)	9,600(f)	1,700(f)		0.00213	U
	Endosulfan II	mg/kg	640(f)	9,600(f)	1,700(f)		0.00213	U
	Endosulfan sulfate	mg/kg	640(f)	9,600(f)	1,700(f)		0.000887	U
	Methoxychlor	mg/kg	430	5,600	1,300		0.00399	U
	Toxaphene	mg/kg	NS	NS	NS		0.0399	U
	Chlordane	mg/kg	24(g)	110(h)	100(g)		0.0177	U
	cis-Chlordane	mg/kg	NS	NS	NS		0.00266	U
	trans-Chlordane	mg/kg	NS	NS	NS		0.00266	U
Herbicides								
	MCPP	mg/kg	86	1,100	2,600		4.68	U
	MCPA	mg/kg	43	560	130		4.68	U
	Dalapon	mg/kg	2,600	34,000	7,700		0.0468	U
	Dicamba	mg/kg	NS	NS	NS		0.0468	U
	Dichloroprop	mg/kg	NS	NS	NS		0.0468	U
	2,4-D	mg/kg	NS	NS	NS		0.234	U
	2,4-DB	mg/kg	NS	NS	NS		0.234	U
	2,4,5-T	mg/kg	860	11,000	26,000		0.234	U

Table 2 - Summary of Analytical Results for Soil Sample -- July 2024
Bar Mills Dam
Buxton/Hollis, Maine

						Sample Location:	**SS-1**	
						Lab Sample ID~:	L2440510-05 / L2447107-02	
						Sample Depth:	0-0.5 ft	
						Sample Date:	07/18/2024	
Analysis	Analyte	Unit	Residential*	Commercial Worker*	Construction Worker*			
	2,4,5-TP (Silvex)	mg/kg	690	9,000	2,100	0.234	U
TPH							
	Diesel Range Organics (C10-C28)	mg/kg	2,500(h)	14,000(h)	4,800(h)	46	U
Metals, total							
	Antimony	mg/kg	43	640	130	2.2	U
	Arsenic	mg/kg	9.3	41	54	**2.3**	
	Beryllium	mg/kg	210	3,200	110	**0.55**	
	Cadmium	mg/kg	9.8	140	42	0.27	U
	Chromium	mg/kg	100,000(i)	100,000(i)	27,000(i)	**8.0**	
	Copper	mg/kg	4,300	64,000	14,000	**32**	
	Lead	mg/kg	200	440	460	**22**	
	Mercury	mg/kg	3.1	3.1	3.1	0.090	U
	Nickel	mg/kg	2,100	32,000	990	**7.8**	
	Selenium	mg/kg	540	8,000	1,700	2.7	U
	Silver	mg/kg	540	8,000	1,700	0.68	U
	Thallium	mg/kg	1.1	16	14	0.55	U
	Zinc	mg/kg	32,000	100,000	100,000	**51**	
General Chemistry							
	Ignitability		NS	NS	NS	NI	
	Specific Conductance	umhos/cm	NS	NS	NS	10	U
	Cyanide	mg/kg	33	220	38	1.4	U
	pH	su	NS	NS	NS	**6.02**	
	Sulfate	mg/kg	NS	NS	NS	130	U
	Reactive Cyanide	mg/kg	NS	NS	NS	10	U
	Reactive Sulfide	mg/kg	NS	NS	NS	10	U
	Chromium (VI)	mg/kg	4.2	89	46	1.13	U
Asbestos							
	Asbestos	%	NS	NS	NS	ND	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

ND - Not detected.

NI - Not ignitable.

NS - No ME RAG standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed RAGs

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

* - Maine DEP Remedial Action Guidelines (RAGs) for Contaminated Sites
Effective November 15, 2023; Table 4: Maine RAGs for the Soil Exposure Pathway.

~ - Lab Sample ID for other/hexavalent chromium analyses.

(a) - RAG for xylene (total) used.

(b) - The cis and trans isomers should be summed and compared to the RAG of 1,3-Dichloropropene.

(c) - RAG for C9-C10 Aromatics used.

(d) - RAG for C5-C8 Aliphatics used.

(e) - RAG for 4-Methylphenol (Cresol, p-) used.

(f) - RAG for Endosulfan used.

(g) -RAG for Chlordane (technical) used.

(h) - RAG for C9-C18 Aliphatics used.

(I) - RAG for chromium(III) used.

Attachment A
Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L2440510
Client:	TRC Environmental Corp 63 Marginal Way, 4th Floor Portland, ME 04101
ATTN:	Zachary Bonin
Phone:	(207) 205-2830
Project Name:	BAR MILLS DAM
Project Number:	510195, PH 5, TASK 2
Report Date:	08/09/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2440510-01	SED-1 (0-1')	SEDIMENT	BUXTON/ HOLLIS, ME	07/18/24 08:30	07/18/24
L2440510-02	SED-2 (0-2')	SEDIMENT	BUXTON/ HOLLIS, ME	07/18/24 09:00	07/18/24
L2440510-03	SED-3 (0-2')	SEDIMENT	BUXTON/ HOLLIS, ME	07/18/24 10:00	07/18/24
L2440510-04	SED-4 (0-1.5')	SEDIMENT	BUXTON/ HOLLIS, ME	07/18/24 10:20	07/18/24
L2440510-05	SS-1	SOIL	BUXTON/ HOLLIS, ME	07/18/24 09:25	07/18/24
L2440510-06	DUP	SEDIMENT	BUXTON/ HOLLIS, ME	07/18/24 00:00	07/18/24
L2440510-07	TRIP BLANK		BUXTON/ HOLLIS, ME	07/18/24 09:25	07/18/24

Project Name:	BAR MILLS DAM	**Lab Number:**	L2440510
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/09/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BAR MILLS DAM **Lab Number:** L2440510
Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

Case Narrative (continued)

Report Submission

August 09, 2024: This final report includes the results of all requested analyses.

July 25, 2024: This is a preliminary report.

Sample Receipt

L2440510-06: The collection date was obtained from the container labels.

L2440510-07: A sample identified as "TRIP BLANK" was listed on the Chain of Custody, but not received. This was verified by the client.

Volatile Organics

The WG1950273-3/-4 LCS/LCSD recoveries, associated with L2440510-01 through -06, are below the individual acceptance criteria for methylene chloride (LCS 56%), trans-1,2-dichloroethene (LCS 58%), acetone (LCS 51%), vinyl acetate (62%/66%), and methyl acetate (LCS 58%), but within the overall method allowances. The results of the associated samples are reported.

The WG1950273-3/-4 LCS/LCSD RPD, associated with L2440510-01 through -06, is above the acceptance criteria for 1,1,2-trichloro-1,2,2-trifluoroethane (31%).

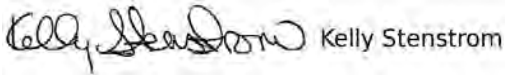
Semivolatile Organics

The WG1949582-2/-3 LCS/LCSD recoveries, associated with L2440510-01 through -06, are below the individual acceptance criteria for bis(2-chloroisopropyl)ether (39%/38%) and aniline (LCSD 38%), but within the overall method allowances. The results of the associated samples are reported.

Total Organic Carbon

L2440510-02 and -03: The sample was frozen upon receipt in order to arrest the holding time.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 08/09/24

ORGANICS

VOLATILES

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 07/22/24 10:58
Analyst: AJK
Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.7	--	1
1,1-Dichloroethane	ND		ug/kg	1.1	--	1
Chloroform	ND		ug/kg	1.7	--	1
Carbon tetrachloride	ND		ug/kg	1.1	--	1
1,2-Dichloropropane	ND		ug/kg	1.1	--	1
Dibromochloromethane	ND		ug/kg	1.1	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	--	1
Tetrachloroethene	ND		ug/kg	0.57	--	1
Chlorobenzene	ND		ug/kg	0.57	--	1
Trichlorofluoromethane	ND		ug/kg	4.6	--	1
1,2-Dichloroethane	ND		ug/kg	1.1	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.57	--	1
Bromodichloromethane	ND		ug/kg	0.57	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.57	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.57	--	1
1,1-Dichloropropene	ND		ug/kg	0.57	--	1
Bromoform	ND		ug/kg	4.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.57	--	1
Benzene	ND		ug/kg	0.57	--	1
Toluene	ND		ug/kg	1.1	--	1
Ethylbenzene	ND		ug/kg	1.1	--	1
Chloromethane	ND		ug/kg	4.6	--	1
Bromomethane	ND		ug/kg	2.3	--	1
Vinyl chloride	ND		ug/kg	1.1	--	1
Chloroethane	ND		ug/kg	2.3	--	1
1,1-Dichloroethene	ND		ug/kg	1.1	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01 Date Collected: 07/18/24 08:30

Client ID: SED-1 (0-1') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.57	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.3	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	--	1
Methyl tert butyl ether	ND		ug/kg	2.3	--	1
p/m-Xylene	ND		ug/kg	2.3	--	1
o-Xylene	ND		ug/kg	1.1	--	1
Xylenes, Total	ND		ug/kg	1.1	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	--	1
Dibromomethane	ND		ug/kg	2.3	--	1
1,4-Dichlorobutane	ND		ug/kg	11	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.3	--	1
Styrene	ND		ug/kg	1.1	--	1
Dichlorodifluoromethane	ND		ug/kg	11	--	1
Acetone	28		ug/kg	28	--	1
Carbon disulfide	ND		ug/kg	11	--	1
2-Butanone	11		ug/kg	11	--	1
Vinyl acetate	ND		ug/kg	11	--	1
4-Methyl-2-pentanone	ND		ug/kg	11	--	1
2-Hexanone	ND		ug/kg	11	--	1
Ethyl methacrylate	ND		ug/kg	11	--	1
Acrylonitrile	ND		ug/kg	4.6	--	1
Bromochloromethane	ND		ug/kg	2.3	--	1
Tetrahydrofuran	ND		ug/kg	4.6	--	1
2,2-Dichloropropane	ND		ug/kg	2.3	--	1
1,2-Dibromoethane	ND		ug/kg	1.1	--	1
1,3-Dichloropropane	ND		ug/kg	2.3	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.57	--	1
Bromobenzene	ND		ug/kg	2.3	--	1
n-Butylbenzene	ND		ug/kg	1.1	--	1
sec-Butylbenzene	ND		ug/kg	1.1	--	1
tert-Butylbenzene	ND		ug/kg	2.3	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	2.3	--	1
o-Chlorotoluene	ND		ug/kg	2.3	--	1
p-Chlorotoluene	ND		ug/kg	2.3	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.4	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01 Date Collected: 07/18/24 08:30

Client ID: SED-1 (0-1') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	4.6	--	1
Isopropylbenzene	ND		ug/kg	1.1	--	1
p-Isopropyltoluene	ND		ug/kg	1.1	--	1
Naphthalene	ND		ug/kg	4.6	--	1
n-Propylbenzene	ND		ug/kg	1.1	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.3	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.3	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.7	--	1
Ethyl ether	ND		ug/kg	2.3	--	1
Methyl Acetate	ND		ug/kg	4.6	--	1
Ethyl Acetate	ND		ug/kg	11	--	1
Diisopropyl Ether	ND		ug/kg	2.3	--	1
Cyclohexane	ND		ug/kg	11	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.3	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.3	--	1
1,4-Dioxane	ND		ug/kg	91	--	1
Methyl cyclohexane	ND		ug/kg	4.6	--	1
Freon-113	ND		ug/kg	4.6	--	1
p-Diethylbenzene	ND		ug/kg	2.3	--	1
p-Ethyltoluene	ND		ug/kg	2.3	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	105		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 07/22/24 11:19
Analyst: AJK
Percent Solids: 64%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	11	--	1
1,1-Dichloroethane	ND		ug/kg	2.3	--	1
Chloroform	ND		ug/kg	3.4	--	1
Carbon tetrachloride	ND		ug/kg	2.3	--	1
1,2-Dichloropropane	ND		ug/kg	2.3	--	1
Dibromochloromethane	ND		ug/kg	2.3	--	1
1,1,2-Trichloroethane	ND		ug/kg	2.3	--	1
Tetrachloroethene	ND		ug/kg	1.1	--	1
Chlorobenzene	ND		ug/kg	1.1	--	1
Trichlorofluoromethane	ND		ug/kg	9.2	--	1
1,2-Dichloroethane	ND		ug/kg	2.3	--	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	--	1
Bromodichloromethane	ND		ug/kg	1.1	--	1
trans-1,3-Dichloropropene	ND		ug/kg	2.3	--	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	--	1
1,3-Dichloropropene, Total	ND		ug/kg	1.1	--	1
1,1-Dichloropropene	ND		ug/kg	1.1	--	1
Bromoform	ND		ug/kg	9.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	--	1
Benzene	ND		ug/kg	1.1	--	1
Toluene	ND		ug/kg	2.3	--	1
Ethylbenzene	ND		ug/kg	2.3	--	1
Chloromethane	ND		ug/kg	9.2	--	1
Bromomethane	ND		ug/kg	4.6	--	1
Vinyl chloride	ND		ug/kg	2.3	--	1
Chloroethane	ND		ug/kg	4.6	--	1
1,1-Dichloroethene	ND		ug/kg	2.3	--	1
trans-1,2-Dichloroethene	ND		ug/kg	3.4	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02 Date Collected: 07/18/24 09:00

Client ID: SED-2 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	1.1	--	1
1,2-Dichlorobenzene	ND		ug/kg	4.6	--	1
1,3-Dichlorobenzene	ND		ug/kg	4.6	--	1
1,4-Dichlorobenzene	ND		ug/kg	4.6	--	1
Methyl tert butyl ether	ND		ug/kg	4.6	--	1
p/m-Xylene	ND		ug/kg	4.6	--	1
o-Xylene	ND		ug/kg	2.3	--	1
Xylenes, Total	ND		ug/kg	2.3	--	1
cis-1,2-Dichloroethene	ND		ug/kg	2.3	--	1
1,2-Dichloroethene, Total	ND		ug/kg	2.3	--	1
Dibromomethane	ND		ug/kg	4.6	--	1
1,4-Dichlorobutane	ND		ug/kg	23	--	1
1,2,3-Trichloropropane	ND		ug/kg	4.6	--	1
Styrene	ND		ug/kg	2.3	--	1
Dichlorodifluoromethane	ND		ug/kg	23	--	1
Acetone	58		ug/kg	57	--	1
Carbon disulfide	ND		ug/kg	23	--	1
2-Butanone	28		ug/kg	23	--	1
Vinyl acetate	ND		ug/kg	23	--	1
4-Methyl-2-pentanone	ND		ug/kg	23	--	1
2-Hexanone	ND		ug/kg	23	--	1
Ethyl methacrylate	ND		ug/kg	23	--	1
Acrylonitrile	ND		ug/kg	9.2	--	1
Bromochloromethane	ND		ug/kg	4.6	--	1
Tetrahydrofuran	ND		ug/kg	9.2	--	1
2,2-Dichloropropane	ND		ug/kg	4.6	--	1
1,2-Dibromoethane	ND		ug/kg	2.3	--	1
1,3-Dichloropropane	ND		ug/kg	4.6	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	--	1
Bromobenzene	ND		ug/kg	4.6	--	1
n-Butylbenzene	ND		ug/kg	2.3	--	1
sec-Butylbenzene	ND		ug/kg	2.3	--	1
tert-Butylbenzene	ND		ug/kg	4.6	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	4.6	--	1
o-Chlorotoluene	ND		ug/kg	4.6	--	1
p-Chlorotoluene	ND		ug/kg	4.6	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.9	--	1

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	9.2	--	1
Isopropylbenzene	ND		ug/kg	2.3	--	1
p-Isopropyltoluene	ND		ug/kg	2.3	--	1
Naphthalene	ND		ug/kg	9.2	--	1
n-Propylbenzene	ND		ug/kg	2.3	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.6	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.6	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.6	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	4.6	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	11	--	1
Ethyl ether	ND		ug/kg	4.6	--	1
Methyl Acetate	ND		ug/kg	9.2	--	1
Ethyl Acetate	ND		ug/kg	23	--	1
Diisopropyl Ether	ND		ug/kg	4.6	--	1
Cyclohexane	ND		ug/kg	23	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.6	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.6	--	1
1,4-Dioxane	ND		ug/kg	180	--	1
Methyl cyclohexane	ND		ug/kg	9.2	--	1
Freon-113	ND		ug/kg	9.2	--	1
p-Diethylbenzene	ND		ug/kg	4.6	--	1
p-Ethyltoluene	ND		ug/kg	4.6	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.6	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	104		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 07/22/24 11:41
Analyst: AJK
Percent Solids: 61%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	9.6	--	1
1,1-Dichloroethane	ND		ug/kg	1.9	--	1
Chloroform	ND		ug/kg	2.9	--	1
Carbon tetrachloride	ND		ug/kg	1.9	--	1
1,2-Dichloropropane	ND		ug/kg	1.9	--	1
Dibromochloromethane	ND		ug/kg	1.9	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.9	--	1
Tetrachloroethene	ND		ug/kg	0.96	--	1
Chlorobenzene	ND		ug/kg	0.96	--	1
Trichlorofluoromethane	ND		ug/kg	7.6	--	1
1,2-Dichloroethane	ND		ug/kg	1.9	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.96	--	1
Bromodichloromethane	ND		ug/kg	0.96	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.9	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.96	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.96	--	1
1,1-Dichloropropene	ND		ug/kg	0.96	--	1
Bromoform	ND		ug/kg	7.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.96	--	1
Benzene	ND		ug/kg	0.96	--	1
Toluene	ND		ug/kg	1.9	--	1
Ethylbenzene	ND		ug/kg	1.9	--	1
Chloromethane	ND		ug/kg	7.6	--	1
Bromomethane	ND		ug/kg	3.8	--	1
Vinyl chloride	ND		ug/kg	1.9	--	1
Chloroethane	ND		ug/kg	3.8	--	1
1,1-Dichloroethene	ND		ug/kg	1.9	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.9	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03 Date Collected: 07/18/24 10:00

Client ID: SED-3 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.96	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.8	--	1
1,3-Dichlorobenzene	ND		ug/kg	3.8	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.8	--	1
Methyl tert butyl ether	ND		ug/kg	3.8	--	1
p/m-Xylene	ND		ug/kg	3.8	--	1
o-Xylene	ND		ug/kg	1.9	--	1
Xylenes, Total	ND		ug/kg	1.9	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.9	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.9	--	1
Dibromomethane	ND		ug/kg	3.8	--	1
1,4-Dichlorobutane	ND		ug/kg	19	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.8	--	1
Styrene	ND		ug/kg	1.9	--	1
Dichlorodifluoromethane	ND		ug/kg	19	--	1
Acetone	48		ug/kg	48	--	1
Carbon disulfide	ND		ug/kg	19	--	1
2-Butanone	19		ug/kg	19	--	1
Vinyl acetate	ND		ug/kg	19	--	1
4-Methyl-2-pentanone	ND		ug/kg	19	--	1
2-Hexanone	ND		ug/kg	19	--	1
Ethyl methacrylate	ND		ug/kg	19	--	1
Acrylonitrile	ND		ug/kg	7.6	--	1
Bromochloromethane	ND		ug/kg	3.8	--	1
Tetrahydrofuran	ND		ug/kg	7.6	--	1
2,2-Dichloropropane	ND		ug/kg	3.8	--	1
1,2-Dibromoethane	ND		ug/kg	1.9	--	1
1,3-Dichloropropane	ND		ug/kg	3.8	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.96	--	1
Bromobenzene	ND		ug/kg	3.8	--	1
n-Butylbenzene	ND		ug/kg	1.9	--	1
sec-Butylbenzene	ND		ug/kg	1.9	--	1
tert-Butylbenzene	ND		ug/kg	3.8	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	3.8	--	1
o-Chlorotoluene	ND		ug/kg	3.8	--	1
p-Chlorotoluene	ND		ug/kg	3.8	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.7	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03 Date Collected: 07/18/24 10:00

Client ID: SED-3 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	7.6	--	1
Isopropylbenzene	ND		ug/kg	1.9	--	1
p-Isopropyltoluene	ND		ug/kg	1.9	--	1
Naphthalene	ND		ug/kg	7.6	--	1
n-Propylbenzene	ND		ug/kg	1.9	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.8	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.8	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.8	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.8	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	9.6	--	1
Ethyl ether	ND		ug/kg	3.8	--	1
Methyl Acetate	ND		ug/kg	7.6	--	1
Ethyl Acetate	ND		ug/kg	19	--	1
Diisopropyl Ether	ND		ug/kg	3.8	--	1
Cyclohexane	ND		ug/kg	19	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.8	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.8	--	1
1,4-Dioxane	ND		ug/kg	150	--	1
Methyl cyclohexane	ND		ug/kg	7.6	--	1
Freon-113	ND		ug/kg	7.6	--	1
p-Diethylbenzene	ND		ug/kg	3.8	--	1
p-Ethyltoluene	ND		ug/kg	3.8	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.8	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	107		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 07/22/24 12:02
Analyst: AJK
Percent Solids: 62%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	8.0	--	1
1,1-Dichloroethane	ND		ug/kg	1.6	--	1
Chloroform	ND		ug/kg	2.4	--	1
Carbon tetrachloride	ND		ug/kg	1.6	--	1
1,2-Dichloropropane	ND		ug/kg	1.6	--	1
Dibromochloromethane	ND		ug/kg	1.6	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	--	1
Tetrachloroethene	ND		ug/kg	0.80	--	1
Chlorobenzene	ND		ug/kg	0.80	--	1
Trichlorofluoromethane	ND		ug/kg	6.4	--	1
1,2-Dichloroethane	ND		ug/kg	1.6	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.80	--	1
Bromodichloromethane	ND		ug/kg	0.80	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.6	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.80	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.80	--	1
1,1-Dichloropropene	ND		ug/kg	0.80	--	1
Bromoform	ND		ug/kg	6.4	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.80	--	1
Benzene	ND		ug/kg	0.80	--	1
Toluene	ND		ug/kg	1.6	--	1
Ethylbenzene	ND		ug/kg	1.6	--	1
Chloromethane	ND		ug/kg	6.4	--	1
Bromomethane	ND		ug/kg	3.2	--	1
Vinyl chloride	ND		ug/kg	1.6	--	1
Chloroethane	ND		ug/kg	3.2	--	1
1,1-Dichloroethene	ND		ug/kg	1.6	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.4	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04 Date Collected: 07/18/24 10:20

Client ID: SED-4 (0-1.5') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.80	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.2	--	1
1,3-Dichlorobenzene	ND		ug/kg	3.2	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.2	--	1
Methyl tert butyl ether	ND		ug/kg	3.2	--	1
p/m-Xylene	3.8		ug/kg	3.2	--	1
o-Xylene	1.6		ug/kg	1.6	--	1
Xylenes, Total	5.4		ug/kg	1.6	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.6	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.6	--	1
Dibromomethane	ND		ug/kg	3.2	--	1
1,4-Dichlorobutane	ND		ug/kg	16	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.2	--	1
Styrene	ND		ug/kg	1.6	--	1
Dichlorodifluoromethane	ND		ug/kg	16	--	1
Acetone	58		ug/kg	40	--	1
Carbon disulfide	ND		ug/kg	16	--	1
2-Butanone	17		ug/kg	16	--	1
Vinyl acetate	ND		ug/kg	16	--	1
4-Methyl-2-pentanone	ND		ug/kg	16	--	1
2-Hexanone	ND		ug/kg	16	--	1
Ethyl methacrylate	ND		ug/kg	16	--	1
Acrylonitrile	ND		ug/kg	6.4	--	1
Bromochloromethane	ND		ug/kg	3.2	--	1
Tetrahydrofuran	ND		ug/kg	6.4	--	1
2,2-Dichloropropane	ND		ug/kg	3.2	--	1
1,2-Dibromoethane	ND		ug/kg	1.6	--	1
1,3-Dichloropropane	ND		ug/kg	3.2	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.80	--	1
Bromobenzene	ND		ug/kg	3.2	--	1
n-Butylbenzene	ND		ug/kg	1.6	--	1
sec-Butylbenzene	ND		ug/kg	1.6	--	1
tert-Butylbenzene	ND		ug/kg	3.2	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	3.2	--	1
o-Chlorotoluene	ND		ug/kg	3.2	--	1
p-Chlorotoluene	ND		ug/kg	3.2	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.8	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04 Date Collected: 07/18/24 10:20

Client ID: SED-4 (0-1.5') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	6.4	--	1
Isopropylbenzene	ND		ug/kg	1.6	--	1
p-Isopropyltoluene	ND		ug/kg	1.6	--	1
Naphthalene	ND		ug/kg	6.4	--	1
n-Propylbenzene	ND		ug/kg	1.6	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.2	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.2	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.2	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.2	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	8.0	--	1
Ethyl ether	ND		ug/kg	3.2	--	1
Methyl Acetate	ND		ug/kg	6.4	--	1
Ethyl Acetate	ND		ug/kg	16	--	1
Diisopropyl Ether	ND		ug/kg	3.2	--	1
Cyclohexane	ND		ug/kg	16	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.2	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.2	--	1
1,4-Dioxane	ND		ug/kg	130	--	1
Methyl cyclohexane	ND		ug/kg	6.4	--	1
Freon-113	ND		ug/kg	6.4	--	1
p-Diethylbenzene	ND		ug/kg	3.2	--	1
p-Ethyltoluene	ND		ug/kg	3.2	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.2	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	88		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 07/22/24 12:23
Analyst: JIC
Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	8.5	--	1
1,1-Dichloroethane	ND		ug/kg	1.7	--	1
Chloroform	ND		ug/kg	2.6	--	1
Carbon tetrachloride	ND		ug/kg	1.7	--	1
1,2-Dichloropropane	ND		ug/kg	1.7	--	1
Dibromochloromethane	ND		ug/kg	1.7	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	--	1
Tetrachloroethene	ND		ug/kg	0.85	--	1
Chlorobenzene	ND		ug/kg	0.85	--	1
Trichlorofluoromethane	ND		ug/kg	6.8	--	1
1,2-Dichloroethane	ND		ug/kg	1.7	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.85	--	1
Bromodichloromethane	ND		ug/kg	0.85	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.7	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.85	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.85	--	1
1,1-Dichloropropene	ND		ug/kg	0.85	--	1
Bromoform	ND		ug/kg	6.8	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.85	--	1
Benzene	ND		ug/kg	0.85	--	1
Toluene	ND		ug/kg	1.7	--	1
Ethylbenzene	ND		ug/kg	1.7	--	1
Chloromethane	ND		ug/kg	6.8	--	1
Bromomethane	ND		ug/kg	3.4	--	1
Vinyl chloride	ND		ug/kg	1.7	--	1
Chloroethane	ND		ug/kg	3.4	--	1
1,1-Dichloroethene	ND		ug/kg	1.7	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.6	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05 Date Collected: 07/18/24 09:25

Client ID: SS-1 Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.85	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.4	--	1
1,3-Dichlorobenzene	ND		ug/kg	3.4	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.4	--	1
Methyl tert butyl ether	ND		ug/kg	3.4	--	1
p/m-Xylene	3.9		ug/kg	3.4	--	1
o-Xylene	ND		ug/kg	1.7	--	1
Xylenes, Total	3.9		ug/kg	1.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.7	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.7	--	1
Dibromomethane	ND		ug/kg	3.4	--	1
1,4-Dichlorobutane	ND		ug/kg	17	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.4	--	1
Styrene	ND		ug/kg	1.7	--	1
Dichlorodifluoromethane	ND		ug/kg	17	--	1
Acetone	ND		ug/kg	43	--	1
Carbon disulfide	ND		ug/kg	17	--	1
2-Butanone	ND		ug/kg	17	--	1
Vinyl acetate	ND		ug/kg	17	--	1
4-Methyl-2-pentanone	ND		ug/kg	17	--	1
2-Hexanone	ND		ug/kg	17	--	1
Ethyl methacrylate	ND		ug/kg	17	--	1
Acrylonitrile	ND		ug/kg	6.8	--	1
Bromochloromethane	ND		ug/kg	3.4	--	1
Tetrahydrofuran	ND		ug/kg	6.8	--	1
2,2-Dichloropropane	ND		ug/kg	3.4	--	1
1,2-Dibromoethane	ND		ug/kg	1.7	--	1
1,3-Dichloropropane	ND		ug/kg	3.4	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.85	--	1
Bromobenzene	ND		ug/kg	3.4	--	1
n-Butylbenzene	ND		ug/kg	1.7	--	1
sec-Butylbenzene	ND		ug/kg	1.7	--	1
tert-Butylbenzene	ND		ug/kg	3.4	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	3.4	--	1
o-Chlorotoluene	ND		ug/kg	3.4	--	1
p-Chlorotoluene	ND		ug/kg	3.4	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.1	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05 Date Collected: 07/18/24 09:25

Client ID: SS-1 Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	6.8	--	1
Isopropylbenzene	ND		ug/kg	1.7	--	1
p-Isopropyltoluene	ND		ug/kg	1.7	--	1
Naphthalene	ND		ug/kg	6.8	--	1
n-Propylbenzene	ND		ug/kg	1.7	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.4	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.4	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	8.5	--	1
Ethyl ether	ND		ug/kg	3.4	--	1
Methyl Acetate	ND		ug/kg	6.8	--	1
Ethyl Acetate	ND		ug/kg	17	--	1
Diisopropyl Ether	ND		ug/kg	3.4	--	1
Cyclohexane	ND		ug/kg	17	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.4	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.4	--	1
1,4-Dioxane	ND		ug/kg	140	--	1
Methyl cyclohexane	ND		ug/kg	6.8	--	1
Freon-113	ND		ug/kg	6.8	--	1
p-Diethylbenzene	ND		ug/kg	3.4	--	1
p-Ethyltoluene	ND		ug/kg	3.4	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.4	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	110		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 07/22/24 12:45
Analyst: JIC
Percent Solids: 65%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	10	--	1
1,1-Dichloroethane	ND		ug/kg	2.0	--	1
Chloroform	ND		ug/kg	3.1	--	1
Carbon tetrachloride	ND		ug/kg	2.0	--	1
1,2-Dichloropropane	ND		ug/kg	2.0	--	1
Dibromochloromethane	ND		ug/kg	2.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	2.0	--	1
Tetrachloroethene	ND		ug/kg	1.0	--	1
Chlorobenzene	ND		ug/kg	1.0	--	1
Trichlorofluoromethane	ND		ug/kg	8.2	--	1
1,2-Dichloroethane	ND		ug/kg	2.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	--	1
Bromodichloromethane	ND		ug/kg	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/kg	2.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--	1
1,1-Dichloropropene	ND		ug/kg	1.0	--	1
Bromoform	ND		ug/kg	8.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--	1
Benzene	ND		ug/kg	1.0	--	1
Toluene	ND		ug/kg	2.0	--	1
Ethylbenzene	ND		ug/kg	2.0	--	1
Chloromethane	ND		ug/kg	8.2	--	1
Bromomethane	ND		ug/kg	4.1	--	1
Vinyl chloride	ND		ug/kg	2.0	--	1
Chloroethane	ND		ug/kg	4.1	--	1
1,1-Dichloroethene	ND		ug/kg	2.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	3.1	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06 Date Collected: 07/18/24 00:00

Client ID: DUP Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichlorobenzene	ND		ug/kg	4.1	--	1
1,3-Dichlorobenzene	ND		ug/kg	4.1	--	1
1,4-Dichlorobenzene	ND		ug/kg	4.1	--	1
Methyl tert butyl ether	ND		ug/kg	4.1	--	1
p/m-Xylene	4.5		ug/kg	4.1	--	1
o-Xylene	2.0		ug/kg	2.0	--	1
Xylenes, Total	6.5		ug/kg	2.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	2.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	2.0	--	1
Dibromomethane	ND		ug/kg	4.1	--	1
1,4-Dichlorobutane	ND		ug/kg	20	--	1
1,2,3-Trichloropropane	ND		ug/kg	4.1	--	1
Styrene	ND		ug/kg	2.0	--	1
Dichlorodifluoromethane	ND		ug/kg	20	--	1
Acetone	57		ug/kg	51	--	1
Carbon disulfide	ND		ug/kg	20	--	1
2-Butanone	ND		ug/kg	20	--	1
Vinyl acetate	ND		ug/kg	20	--	1
4-Methyl-2-pentanone	ND		ug/kg	20	--	1
2-Hexanone	ND		ug/kg	20	--	1
Ethyl methacrylate	ND		ug/kg	20	--	1
Acrylonitrile	ND		ug/kg	8.2	--	1
Bromochloromethane	ND		ug/kg	4.1	--	1
Tetrahydrofuran	ND		ug/kg	8.2	--	1
2,2-Dichloropropane	ND		ug/kg	4.1	--	1
1,2-Dibromoethane	ND		ug/kg	2.0	--	1
1,3-Dichloropropane	ND		ug/kg	4.1	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--	1
Bromobenzene	ND		ug/kg	4.1	--	1
n-Butylbenzene	ND		ug/kg	2.0	--	1
sec-Butylbenzene	ND		ug/kg	2.0	--	1
tert-Butylbenzene	ND		ug/kg	4.1	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	4.1	--	1
o-Chlorotoluene	ND		ug/kg	4.1	--	1
p-Chlorotoluene	ND		ug/kg	4.1	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.2	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06 Date Collected: 07/18/24 00:00

Client ID: DUP Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	8.2	--	1
Isopropylbenzene	ND		ug/kg	2.0	--	1
p-Isopropyltoluene	ND		ug/kg	2.0	--	1
Naphthalene	ND		ug/kg	8.2	--	1
n-Propylbenzene	ND		ug/kg	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.1	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.1	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.1	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	4.1	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	10	--	1
Ethyl ether	ND		ug/kg	4.1	--	1
Methyl Acetate	ND		ug/kg	8.2	--	1
Ethyl Acetate	ND		ug/kg	20	--	1
Diisopropyl Ether	ND		ug/kg	4.1	--	1
Cyclohexane	ND		ug/kg	20	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.1	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.1	--	1
1,4-Dioxane	ND		ug/kg	160	--	1
Methyl cyclohexane	ND		ug/kg	8.2	--	1
Freon-113	ND		ug/kg	8.2	--	1
p-Diethylbenzene	ND		ug/kg	4.1	--	1
p-Ethyltoluene	ND		ug/kg	4.1	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.1	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	108		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/22/24 10:35
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-06 Batch: WG1950273-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	0.50	--

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/22/24 10:35
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-06 Batch: WG1950273-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,4-Dichlorobutane	ND		ug/kg	10	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	25	--
Carbon disulfide	ND		ug/kg	10	--
2-Butanone	ND		ug/kg	10	--
Vinyl acetate	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Ethyl methacrylate	ND		ug/kg	10	--
Acrylonitrile	ND		ug/kg	4.0	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/22/24 10:35
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-06 Batch: WG1950273-5					
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--
Ethyl ether	ND		ug/kg	2.0	--
Methyl Acetate	ND		ug/kg	4.0	--
Ethyl Acetate	ND		ug/kg	10	--
Diisopropyl Ether	ND		ug/kg	2.0	--
Cyclohexane	ND		ug/kg	10	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--
Methyl cyclohexane	ND		ug/kg	4.0	--
Freon-113	ND		ug/kg	4.0	--
p-Diethylbenzene	ND		ug/kg	2.0	--
p-Ethyltoluene	ND		ug/kg	2.0	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/22/24 10:35
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-06 Batch: WG1950273-5					
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	104		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-06 Batch: WG1950273-3 WG1950273-4								
Methylene chloride	**56**	Q	73		70-130	26		30
1,1-Dichloroethane	76		90		70-130	17		30
Chloroform	89		88		70-130	1		30
Carbon tetrachloride	82		84		70-130	2		30
1,2-Dichloropropane	95		94		70-130	1		30
Dibromochloromethane	89		88		70-130	1		30
1,1,2-Trichloroethane	95		92		70-130	3		30
Tetrachloroethene	87		88		70-130	1		30
Chlorobenzene	89		88		70-130	1		30
Trichlorofluoromethane	78		91		70-139	15		30
1,2-Dichloroethane	88		87		70-130	1		30
1,1,1-Trichloroethane	82		83		70-130	1		30
Bromodichloromethane	87		88		70-130	1		30
trans-1,3-Dichloropropene	93		90		70-130	3		30
cis-1,3-Dichloropropene	92		92		70-130	0		30
1,1-Dichloropropene	87		84		70-130	4		30
Bromoform	90		86		70-130	5		30
1,1,2,2-Tetrachloroethane	86		82		70-130	5		30
Benzene	89		87		70-130	2		30
Toluene	85		82		70-130	4		30
Ethylbenzene	89		85		70-130	5		30
Chloromethane	94		116		52-130	21		30
Bromomethane	96		120		57-147	22		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-06 Batch: WG1950273-3 WG1950273-4								
Vinyl chloride	87		106		67-130	20		30
Chloroethane	91		110		50-151	19		30
1,1-Dichloroethene	80		100		65-135	22		30
trans-1,2-Dichloroethene	**58**	Q	70		70-130	19		30
Trichloroethene	95		95		70-130	0		30
1,2-Dichlorobenzene	93		89		70-130	4		30
1,3-Dichlorobenzene	93		89		70-130	4		30
1,4-Dichlorobenzene	94		90		70-130	4		30
Methyl tert butyl ether	69		83		66-130	18		30
p/m-Xylene	89		88		70-130	1		30
o-Xylene	90		102		70-130	13		30
cis-1,2-Dichloroethene	79		89		70-130	12		30
Dibromomethane	87		89		70-130	2		30
1,4-Dichlorobutane	110		105		70-130	5		30
1,2,3-Trichloropropane	95		91		68-130	4		30
Styrene	90		104		70-130	14		30
Dichlorodifluoromethane	64		78		30-146	20		30
Acetone	**51**	Q	66		54-140	26		30
Carbon disulfide	84		104		59-130	21		30
2-Butanone	88		82		70-130	7		30
Vinyl acetate	**62**	Q	**66**	Q	70-130	6		30
4-Methyl-2-pentanone	90		83		70-130	8		30
2-Hexanone	81		75		70-130	8		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-06 Batch: WG1950273-3 WG1950273-4								
Ethyl methacrylate	99		94		70-130	5		30
Acrylonitrile	90		108		70-130	18		30
Bromochloromethane	90		94		70-130	4		30
Tetrahydrofuran	92		83		66-130	10		30
2,2-Dichloropropane	77		80		70-130	4		30
1,2-Dibromoethane	90		88		70-130	2		30
1,3-Dichloropropane	95		91		69-130	4		30
1,1,1,2-Tetrachloroethane	89		90		70-130	1		30
Bromobenzene	91		88		70-130	3		30
n-Butylbenzene	97		92		70-130	5		30
sec-Butylbenzene	92		88		70-130	4		30
tert-Butylbenzene	89		86		70-130	3		30
1,3,5-Trichlorobenzene	98		94		70-139	4		30
o-Chlorotoluene	111		106		70-130	5		30
p-Chlorotoluene	94		90		70-130	4		30
1,2-Dibromo-3-chloropropane	84		83		68-130	1		30
Hexachlorobutadiene	93		88		67-130	6		30
Isopropylbenzene	91		86		70-130	6		30
p-Isopropyltoluene	92		87		70-130	6		30
Naphthalene	90		87		70-130	3		30
n-Propylbenzene	94		89		70-130	5		30
1,2,3-Trichlorobenzene	98		95		70-130	3		30
1,2,4-Trichlorobenzene	97		92		70-130	5		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-06 Batch: WG1950273-3 WG1950273-4								
1,3,5-Trimethylbenzene	92		89		70-130	3		30
1,2,4-Trimethylbenzene	94		89		70-130	5		30
trans-1,4-Dichloro-2-butene	101		98		70-130	3		30
Ethyl ether	104		130		67-130	22		30
Methyl Acetate	**58**	Q	71		65-130	20		30
Ethyl Acetate	92		86		70-130	7		30
Diisopropyl Ether	73		88		66-130	19		30
Cyclohexane	87		81		70-130	7		30
Ethyl-Tert-Butyl-Ether	76		89		70-130	16		30
Tertiary-Amyl Methyl Ether	86		86		70-130	0		30
1,4-Dioxane	89		96		65-136	8		30
Methyl cyclohexane	84		81		70-130	4		30
Freon-113	70		96		70-130	**31**	Q	30
p-Diethylbenzene	92		88		70-130	4		30
p-Ethyltoluene	94		89		70-130	5		30
1,2,4,5-Tetramethylbenzene	89		84		70-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		98		70-130
Toluene-d8	102		99		70-130
4-Bromofluorobenzene	99		98		70-130
Dibromofluoromethane	100		101		70-130

SEMIVOLATILES

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 07/22/24 18:17
Analyst: IM
Percent Solids: 78%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	690	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	210	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	190	--	1
1,2-Dichlorobenzene	ND		ug/kg	210	--	1
1,3-Dichlorobenzene	ND		ug/kg	210	--	1
1,4-Dichlorobenzene	ND		ug/kg	210	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	210	--	1
2,4-Dinitrotoluene	ND		ug/kg	210	--	1
2,6-Dinitrotoluene	ND		ug/kg	210	--	1
Azobenzene	ND		ug/kg	210	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	210	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	210	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	250	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	230	--	1
Hexachlorocyclopentadiene	ND		ug/kg	600	--	1
Isophorone	ND		ug/kg	190	--	1
Nitrobenzene	ND		ug/kg	190	--	1
NDPA/DPA	ND		ug/kg	170	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	210	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	210	--	1
Butyl benzyl phthalate	ND		ug/kg	210	--	1
Di-n-butylphthalate	ND		ug/kg	210	--	1
Di-n-octylphthalate	ND		ug/kg	210	--	1
Diethyl phthalate	ND		ug/kg	210	--	1
Dimethyl phthalate	ND		ug/kg	210	--	1
Biphenyl	ND		ug/kg	480	--	1
Aniline	ND		ug/kg	250	--	1
4-Chloroaniline	ND		ug/kg	210	--	1

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	210	--	1
3-Nitroaniline	ND		ug/kg	210	--	1
4-Nitroaniline	ND		ug/kg	210	--	1
Dibenzofuran	ND		ug/kg	210	--	1
n-Nitrosodimethylamine	ND		ug/kg	420	--	1
2,4,6-Trichlorophenol	ND		ug/kg	120	--	1
p-Chloro-m-cresol	ND		ug/kg	210	--	1
2-Chlorophenol	ND		ug/kg	210	--	1
2,4-Dichlorophenol	ND		ug/kg	190	--	1
2,4-Dimethylphenol	ND		ug/kg	210	--	1
2-Nitrophenol	ND		ug/kg	450	--	1
4-Nitrophenol	ND		ug/kg	290	--	1
2,4-Dinitrophenol	ND		ug/kg	1000	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	540	--	1
Phenol	ND		ug/kg	210	--	1
2-Methylphenol	ND		ug/kg	210	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	300	--	1
2,4,5-Trichlorophenol	ND		ug/kg	210	--	1
Benzoic Acid	ND		ug/kg	680	--	1
Benzyl Alcohol	ND		ug/kg	210	--	1
Carbazole	ND		ug/kg	210	--	1
Pyridine	ND		ug/kg	230	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		25-120
Phenol-d6	57		10-120
Nitrobenzene-d5	55		23-120
2-Fluorobiphenyl	52		30-120
2,4,6-Tribromophenol	60		10-136
4-Terphenyl-d14	60		18-120

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 20:30
Analyst: MRG
Percent Solids: 78%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	8.8		ug/kg	8.4	--	1
2-Chloronaphthalene	ND		ug/kg	8.4	--	1
Fluoranthene	300		ug/kg	8.4	--	1
Hexachlorobutadiene	ND		ug/kg	8.4	--	1
Naphthalene	ND		ug/kg	8.4	--	1
Benzo(a)anthracene	110		ug/kg	8.4	--	1
Benzo(a)pyrene	120		ug/kg	8.4	--	1
Benzo(b)fluoranthene	160		ug/kg	8.4	--	1
Benzo(k)fluoranthene	51		ug/kg	8.4	--	1
Chrysene	120		ug/kg	8.4	--	1
Acenaphthylene	22		ug/kg	8.4	--	1
Anthracene	36		ug/kg	8.4	--	1
Benzo(ghi)perylene	64		ug/kg	8.4	--	1
Fluorene	18		ug/kg	8.4	--	1
Phenanthrene	160		ug/kg	8.4	--	1
Dibenzo(a,h)anthracene	15		ug/kg	8.4	--	1
Indeno(1,2,3-cd)Pyrene	64		ug/kg	8.4	--	1
Pyrene	240		ug/kg	8.4	--	1
1-Methylnaphthalene	ND		ug/kg	8.4	--	1
2-Methylnaphthalene	ND		ug/kg	8.4	--	1
Pentachlorophenol	ND		ug/kg	34	--	1
Hexachlorobenzene	ND		ug/kg	8.4	--	1
Hexachloroethane	ND		ug/kg	8.4	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01 Date Collected: 07/18/24 08:30

Client ID: SED-1 (0-1') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		25-120
Phenol-d6	63		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	60		30-120
2,4,6-Tribromophenol	75		10-136
4-Terphenyl-d14	61		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 07/22/24 18:42
Analyst: IM
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	860	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	260	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	230	--	1
1,2-Dichlorobenzene	ND		ug/kg	260	--	1
1,3-Dichlorobenzene	ND		ug/kg	260	--	1
1,4-Dichlorobenzene	ND		ug/kg	260	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	260	--	1
2,4-Dinitrotoluene	ND		ug/kg	260	--	1
2,6-Dinitrotoluene	ND		ug/kg	260	--	1
Azobenzene	ND		ug/kg	260	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	260	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	260	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	310	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	280	--	1
Hexachlorocyclopentadiene	ND		ug/kg	740	--	1
Isophorone	ND		ug/kg	230	--	1
Nitrobenzene	ND		ug/kg	230	--	1
NDPA/DPA	ND		ug/kg	210	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	260	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	260	--	1
Butyl benzyl phthalate	ND		ug/kg	260	--	1
Di-n-butylphthalate	ND		ug/kg	260	--	1
Di-n-octylphthalate	ND		ug/kg	260	--	1
Diethyl phthalate	ND		ug/kg	260	--	1
Dimethyl phthalate	ND		ug/kg	260	--	1
Biphenyl	ND		ug/kg	590	--	1
Aniline	ND		ug/kg	310	--	1
4-Chloroaniline	ND		ug/kg	260	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02 Date Collected: 07/18/24 09:00

Client ID: SED-2 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	260	--	1
3-Nitroaniline	ND		ug/kg	260	--	1
4-Nitroaniline	ND		ug/kg	260	--	1
Dibenzofuran	ND		ug/kg	260	--	1
n-Nitrosodimethylamine	ND		ug/kg	520	--	1
2,4,6-Trichlorophenol	ND		ug/kg	160	--	1
p-Chloro-m-cresol	ND		ug/kg	260	--	1
2-Chlorophenol	ND		ug/kg	260	--	1
2,4-Dichlorophenol	ND		ug/kg	230	--	1
2,4-Dimethylphenol	ND		ug/kg	260	--	1
2-Nitrophenol	ND		ug/kg	560	--	1
4-Nitrophenol	ND		ug/kg	360	--	1
2,4-Dinitrophenol	ND		ug/kg	1200	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	680	--	1
Phenol	ND		ug/kg	260	--	1
2-Methylphenol	ND		ug/kg	260	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	370	--	1
2,4,5-Trichlorophenol	ND		ug/kg	260	--	1
Benzoic Acid	ND		ug/kg	840	--	1
Benzyl Alcohol	ND		ug/kg	260	--	1
Carbazole	ND		ug/kg	260	--	1
Pyridine	ND		ug/kg	280	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		25-120
Phenol-d6	54		10-120
Nitrobenzene-d5	53		23-120
2-Fluorobiphenyl	46		30-120
2,4,6-Tribromophenol	57		10-136
4-Terphenyl-d14	53		18-120

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 20:46
Analyst: MRG
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	10	--	1
2-Chloronaphthalene	ND		ug/kg	10	--	1
Fluoranthene	ND		ug/kg	10	--	1
Hexachlorobutadiene	ND		ug/kg	10	--	1
Naphthalene	ND		ug/kg	10	--	1
Benzo(a)anthracene	ND		ug/kg	10	--	1
Benzo(a)pyrene	ND		ug/kg	10	--	1
Benzo(b)fluoranthene	ND		ug/kg	10	--	1
Benzo(k)fluoranthene	ND		ug/kg	10	--	1
Chrysene	ND		ug/kg	10	--	1
Acenaphthylene	ND		ug/kg	10	--	1
Anthracene	ND		ug/kg	10	--	1
Benzo(ghi)perylene	ND		ug/kg	10	--	1
Fluorene	ND		ug/kg	10	--	1
Phenanthrene	ND		ug/kg	10	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	10	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10	--	1
Pyrene	ND		ug/kg	10	--	1
1-Methylnaphthalene	ND		ug/kg	10	--	1
2-Methylnaphthalene	ND		ug/kg	10	--	1
Pentachlorophenol	ND		ug/kg	42	--	1
Hexachlorobenzene	ND		ug/kg	10	--	1
Hexachloroethane	ND		ug/kg	10	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02 Date Collected: 07/18/24 09:00

Client ID: SED-2 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		25-120
Phenol-d6	59		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	53		30-120
2,4,6-Tribromophenol	72		10-136
4-Terphenyl-d14	56		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 07/22/24 19:07
Analyst: IM
Percent Solids: 61%

Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	900	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	270	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	240	--	1
1,2-Dichlorobenzene	ND		ug/kg	270	--	1
1,3-Dichlorobenzene	ND		ug/kg	270	--	1
1,4-Dichlorobenzene	ND		ug/kg	270	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	270	--	1
2,4-Dinitrotoluene	ND		ug/kg	270	--	1
2,6-Dinitrotoluene	ND		ug/kg	270	--	1
Azobenzene	ND		ug/kg	270	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	270	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	270	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	330	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	290	--	1
Hexachlorocyclopentadiene	ND		ug/kg	780	--	1
Isophorone	ND		ug/kg	240	--	1
Nitrobenzene	ND		ug/kg	240	--	1
NDPA/DPA	ND		ug/kg	220	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	270	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	270	--	1
Butyl benzyl phthalate	ND		ug/kg	270	--	1
Di-n-butylphthalate	ND		ug/kg	270	--	1
Di-n-octylphthalate	ND		ug/kg	270	--	1
Diethyl phthalate	ND		ug/kg	270	--	1
Dimethyl phthalate	ND		ug/kg	270	--	1
Biphenyl	ND		ug/kg	620	--	1
Aniline	ND		ug/kg	330	--	1
4-Chloroaniline	ND		ug/kg	270	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03 Date Collected: 07/18/24 10:00

Client ID: SED-3 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	270	--	1
3-Nitroaniline	ND		ug/kg	270	--	1
4-Nitroaniline	ND		ug/kg	270	--	1
Dibenzofuran	ND		ug/kg	270	--	1
n-Nitrosodimethylamine	ND		ug/kg	540	--	1
2,4,6-Trichlorophenol	ND		ug/kg	160	--	1
p-Chloro-m-cresol	ND		ug/kg	270	--	1
2-Chlorophenol	ND		ug/kg	270	--	1
2,4-Dichlorophenol	ND		ug/kg	240	--	1
2,4-Dimethylphenol	ND		ug/kg	270	--	1
2-Nitrophenol	ND		ug/kg	590	--	1
4-Nitrophenol	ND		ug/kg	380	--	1
2,4-Dinitrophenol	ND		ug/kg	1300	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	710	--	1
Phenol	ND		ug/kg	270	--	1
2-Methylphenol	ND		ug/kg	270	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	390	--	1
2,4,5-Trichlorophenol	ND		ug/kg	270	--	1
Benzoic Acid	ND		ug/kg	880	--	1
Benzyl Alcohol	ND		ug/kg	270	--	1
Carbazole	ND		ug/kg	270	--	1
Pyridine	ND		ug/kg	290	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		25-120
Phenol-d6	56		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	50		30-120
2,4,6-Tribromophenol	57		10-136
4-Terphenyl-d14	54		18-120

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 21:02
Analyst: MRG
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	11	--	1
2-Chloronaphthalene	ND		ug/kg	11	--	1
Fluoranthene	34		ug/kg	11	--	1
Hexachlorobutadiene	ND		ug/kg	11	--	1
Naphthalene	ND		ug/kg	11	--	1
Benzo(a)anthracene	15		ug/kg	11	--	1
Benzo(a)pyrene	20		ug/kg	11	--	1
Benzo(b)fluoranthene	28		ug/kg	11	--	1
Benzo(k)fluoranthene	ND		ug/kg	11	--	1
Chrysene	19		ug/kg	11	--	1
Acenaphthylene	ND		ug/kg	11	--	1
Anthracene	ND		ug/kg	11	--	1
Benzo(ghi)perylene	12		ug/kg	11	--	1
Fluorene	ND		ug/kg	11	--	1
Phenanthrene	11		ug/kg	11	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	11	--	1
Indeno(1,2,3-cd)Pyrene	12		ug/kg	11	--	1
Pyrene	28		ug/kg	11	--	1
1-Methylnaphthalene	ND		ug/kg	11	--	1
2-Methylnaphthalene	ND		ug/kg	11	--	1
Pentachlorophenol	ND		ug/kg	44	--	1
Hexachlorobenzene	ND		ug/kg	11	--	1
Hexachloroethane	ND		ug/kg	11	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03 Date Collected: 07/18/24 10:00

Client ID: SED-3 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		25-120
Phenol-d6	62		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	73		10-136
4-Terphenyl-d14	56		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 07/22/24 19:32
Analyst: IM
Percent Solids: 62%

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	870	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	260	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	240	--	1
1,2-Dichlorobenzene	ND		ug/kg	260	--	1
1,3-Dichlorobenzene	ND		ug/kg	260	--	1
1,4-Dichlorobenzene	ND		ug/kg	260	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	260	--	1
2,4-Dinitrotoluene	ND		ug/kg	260	--	1
2,6-Dinitrotoluene	ND		ug/kg	260	--	1
Azobenzene	ND		ug/kg	260	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	260	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	260	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	320	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	290	--	1
Hexachlorocyclopentadiene	ND		ug/kg	760	--	1
Isophorone	ND		ug/kg	240	--	1
Nitrobenzene	ND		ug/kg	240	--	1
NDPA/DPA	ND		ug/kg	210	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	260	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	260	--	1
Butyl benzyl phthalate	ND		ug/kg	260	--	1
Di-n-butylphthalate	ND		ug/kg	260	--	1
Di-n-octylphthalate	ND		ug/kg	260	--	1
Diethyl phthalate	ND		ug/kg	260	--	1
Dimethyl phthalate	ND		ug/kg	260	--	1
Biphenyl	ND		ug/kg	600	--	1
Aniline	ND		ug/kg	320	--	1
4-Chloroaniline	ND		ug/kg	260	--	1

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	260	--	1
3-Nitroaniline	ND		ug/kg	260	--	1
4-Nitroaniline	ND		ug/kg	260	--	1
Dibenzofuran	ND		ug/kg	260	--	1
n-Nitrosodimethylamine	ND		ug/kg	530	--	1
2,4,6-Trichlorophenol	ND		ug/kg	160	--	1
p-Chloro-m-cresol	ND		ug/kg	260	--	1
2-Chlorophenol	ND		ug/kg	260	--	1
2,4-Dichlorophenol	ND		ug/kg	240	--	1
2,4-Dimethylphenol	ND		ug/kg	260	--	1
2-Nitrophenol	ND		ug/kg	570	--	1
4-Nitrophenol	ND		ug/kg	370	--	1
2,4-Dinitrophenol	ND		ug/kg	1300	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	690	--	1
Phenol	ND		ug/kg	260	--	1
2-Methylphenol	ND		ug/kg	260	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	380	--	1
2,4,5-Trichlorophenol	ND		ug/kg	260	--	1
Benzoic Acid	ND		ug/kg	860	--	1
Benzyl Alcohol	ND		ug/kg	260	--	1
Carbazole	ND		ug/kg	260	--	1
Pyridine	ND		ug/kg	290	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		25-120
Phenol-d6	52		10-120
Nitrobenzene-d5	49		23-120
2-Fluorobiphenyl	44		30-120
2,4,6-Tribromophenol	60		10-136
4-Terphenyl-d14	51		18-120

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 21:19
Analyst: MRG
Percent Solids: 62%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	10	--	1
2-Chloronaphthalene	ND		ug/kg	10	--	1
Fluoranthene	ND		ug/kg	10	--	1
Hexachlorobutadiene	ND		ug/kg	10	--	1
Naphthalene	ND		ug/kg	10	--	1
Benzo(a)anthracene	ND		ug/kg	10	--	1
Benzo(a)pyrene	ND		ug/kg	10	--	1
Benzo(b)fluoranthene	ND		ug/kg	10	--	1
Benzo(k)fluoranthene	ND		ug/kg	10	--	1
Chrysene	ND		ug/kg	10	--	1
Acenaphthylene	ND		ug/kg	10	--	1
Anthracene	ND		ug/kg	10	--	1
Benzo(ghi)perylene	ND		ug/kg	10	--	1
Fluorene	ND		ug/kg	10	--	1
Phenanthrene	ND		ug/kg	10	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	10	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10	--	1
Pyrene	ND		ug/kg	10	--	1
1-Methylnaphthalene	ND		ug/kg	10	--	1
2-Methylnaphthalene	ND		ug/kg	10	--	1
Pentachlorophenol	ND		ug/kg	42	--	1
Hexachlorobenzene	ND		ug/kg	10	--	1
Hexachloroethane	ND		ug/kg	10	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04 Date Collected: 07/18/24 10:20

Client ID: SED-4 (0-1.5') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		25-120
Phenol-d6	55		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	49		30-120
2,4,6-Tribromophenol	70		10-136
4-Terphenyl-d14	50		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/22/24 19:57
Analyst: IM
Percent Solids: 71%
Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	760	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	230	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	210	--	1
1,2-Dichlorobenzene	ND		ug/kg	230	--	1
1,3-Dichlorobenzene	ND		ug/kg	230	--	1
1,4-Dichlorobenzene	ND		ug/kg	230	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	230	--	1
2,4-Dinitrotoluene	ND		ug/kg	230	--	1
2,6-Dinitrotoluene	ND		ug/kg	230	--	1
Azobenzene	ND		ug/kg	230	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	230	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	230	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	280	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	250	--	1
Hexachlorocyclopentadiene	ND		ug/kg	660	--	1
Isophorone	ND		ug/kg	210	--	1
Nitrobenzene	ND		ug/kg	210	--	1
NDPA/DPA	ND		ug/kg	180	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	230	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	230	--	1
Butyl benzyl phthalate	ND		ug/kg	230	--	1
Di-n-butylphthalate	ND		ug/kg	230	--	1
Di-n-octylphthalate	ND		ug/kg	230	--	1
Diethyl phthalate	ND		ug/kg	230	--	1
Dimethyl phthalate	ND		ug/kg	230	--	1
Biphenyl	ND		ug/kg	520	--	1
Aniline	ND		ug/kg	280	--	1
4-Chloroaniline	ND		ug/kg	230	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05 Date Collected: 07/18/24 09:25

Client ID: SS-1 Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	230	--	1
3-Nitroaniline	ND		ug/kg	230	--	1
4-Nitroaniline	ND		ug/kg	230	--	1
Dibenzofuran	ND		ug/kg	230	--	1
n-Nitrosodimethylamine	ND		ug/kg	460	--	1
2,4,6-Trichlorophenol	ND		ug/kg	140	--	1
p-Chloro-m-cresol	ND		ug/kg	230	--	1
2-Chlorophenol	ND		ug/kg	230	--	1
2,4-Dichlorophenol	ND		ug/kg	210	--	1
2,4-Dimethylphenol	ND		ug/kg	230	--	1
2-Nitrophenol	ND		ug/kg	500	--	1
4-Nitrophenol	ND		ug/kg	320	--	1
2,4-Dinitrophenol	ND		ug/kg	1100	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	600	--	1
Phenol	ND		ug/kg	230	--	1
2-Methylphenol	ND		ug/kg	230	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	330	--	1
2,4,5-Trichlorophenol	ND		ug/kg	230	--	1
Benzoic Acid	ND		ug/kg	750	--	1
Benzyl Alcohol	ND		ug/kg	230	--	1
Carbazole	ND		ug/kg	230	--	1
Pyridine	ND		ug/kg	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		25-120
Phenol-d6	53		10-120
Nitrobenzene-d5	52		23-120
2-Fluorobiphenyl	46		30-120
2,4,6-Tribromophenol	54		10-136
4-Terphenyl-d14	50		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 21:35
Analyst: MRG
Percent Solids: 71%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	9.2	--	1
2-Chloronaphthalene	ND		ug/kg	9.2	--	1
Fluoranthene	71		ug/kg	9.2	--	1
Hexachlorobutadiene	ND		ug/kg	9.2	--	1
Naphthalene	ND		ug/kg	9.2	--	1
Benzo(a)anthracene	31		ug/kg	9.2	--	1
Benzo(a)pyrene	28		ug/kg	9.2	--	1
Benzo(b)fluoranthene	43		ug/kg	9.2	--	1
Benzo(k)fluoranthene	13		ug/kg	9.2	--	1
Chrysene	31		ug/kg	9.2	--	1
Acenaphthylene	ND		ug/kg	9.2	--	1
Anthracene	ND		ug/kg	9.2	--	1
Benzo(ghi)perylene	15		ug/kg	9.2	--	1
Fluorene	ND		ug/kg	9.2	--	1
Phenanthrene	38		ug/kg	9.2	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	9.2	--	1
Indeno(1,2,3-cd)Pyrene	16		ug/kg	9.2	--	1
Pyrene	55		ug/kg	9.2	--	1
1-Methylnaphthalene	ND		ug/kg	9.2	--	1
2-Methylnaphthalene	ND		ug/kg	9.2	--	1
Pentachlorophenol	ND		ug/kg	37	--	1
Hexachlorobenzene	ND		ug/kg	9.2	--	1
Hexachloroethane	ND		ug/kg	9.2	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05 Date Collected: 07/18/24 09:25

Client ID: SS-1 Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		25-120
Phenol-d6	58		10-120
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	55		30-120
2,4,6-Tribromophenol	67		10-136
4-Terphenyl-d14	51		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 07/22/24 20:22
Analyst: IM
Percent Solids: 65%
Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	830	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	250	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	230	--	1
1,2-Dichlorobenzene	ND		ug/kg	250	--	1
1,3-Dichlorobenzene	ND		ug/kg	250	--	1
1,4-Dichlorobenzene	ND		ug/kg	250	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	250	--	1
2,4-Dinitrotoluene	ND		ug/kg	250	--	1
2,6-Dinitrotoluene	ND		ug/kg	250	--	1
Azobenzene	ND		ug/kg	250	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	250	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	250	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	300	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	270	--	1
Hexachlorocyclopentadiene	ND		ug/kg	720	--	1
Isophorone	ND		ug/kg	230	--	1
Nitrobenzene	ND		ug/kg	230	--	1
NDPA/DPA	ND		ug/kg	200	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	250	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	250	--	1
Butyl benzyl phthalate	ND		ug/kg	250	--	1
Di-n-butylphthalate	ND		ug/kg	250	--	1
Di-n-octylphthalate	ND		ug/kg	250	--	1
Diethyl phthalate	ND		ug/kg	250	--	1
Dimethyl phthalate	ND		ug/kg	250	--	1
Biphenyl	ND		ug/kg	570	--	1
Aniline	ND		ug/kg	300	--	1
4-Chloroaniline	ND		ug/kg	250	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06 Date Collected: 07/18/24 00:00

Client ID: DUP Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	250	--	1
3-Nitroaniline	ND		ug/kg	250	--	1
4-Nitroaniline	ND		ug/kg	250	--	1
Dibenzofuran	ND		ug/kg	250	--	1
n-Nitrosodimethylamine	ND		ug/kg	500	--	1
2,4,6-Trichlorophenol	ND		ug/kg	150	--	1
p-Chloro-m-cresol	ND		ug/kg	250	--	1
2-Chlorophenol	ND		ug/kg	250	--	1
2,4-Dichlorophenol	ND		ug/kg	230	--	1
2,4-Dimethylphenol	ND		ug/kg	250	--	1
2-Nitrophenol	ND		ug/kg	540	--	1
4-Nitrophenol	ND		ug/kg	350	--	1
2,4-Dinitrophenol	ND		ug/kg	1200	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	660	--	1
Phenol	ND		ug/kg	250	--	1
2-Methylphenol	ND		ug/kg	250	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	360	--	1
2,4,5-Trichlorophenol	ND		ug/kg	250	--	1
Benzoic Acid	ND		ug/kg	820	--	1
Benzyl Alcohol	ND		ug/kg	250	--	1
Carbazole	ND		ug/kg	250	--	1
Pyridine	ND		ug/kg	270	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		25-120
Phenol-d6	56		10-120
Nitrobenzene-d5	53		23-120
2-Fluorobiphenyl	46		30-120
2,4,6-Tribromophenol	60		10-136
4-Terphenyl-d14	51		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 21:52
Analyst: MRG
Percent Solids: 65%

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	10	--	1
2-Chloronaphthalene	ND		ug/kg	10	--	1
Fluoranthene	24		ug/kg	10	--	1
Hexachlorobutadiene	ND		ug/kg	10	--	1
Naphthalene	ND		ug/kg	10	--	1
Benzo(a)anthracene	11		ug/kg	10	--	1
Benzo(a)pyrene	13		ug/kg	10	--	1
Benzo(b)fluoranthene	18		ug/kg	10	--	1
Benzo(k)fluoranthene	ND		ug/kg	10	--	1
Chrysene	11		ug/kg	10	--	1
Acenaphthylene	ND		ug/kg	10	--	1
Anthracene	ND		ug/kg	10	--	1
Benzo(ghi)perylene	ND		ug/kg	10	--	1
Fluorene	ND		ug/kg	10	--	1
Phenanthrene	12		ug/kg	10	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	10	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10	--	1
Pyrene	19		ug/kg	10	--	1
1-Methylnaphthalene	ND		ug/kg	10	--	1
2-Methylnaphthalene	ND		ug/kg	10	--	1
Pentachlorophenol	ND		ug/kg	40	--	1
Hexachlorobenzene	ND		ug/kg	10	--	1
Hexachloroethane	ND		ug/kg	10	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06 Date Collected: 07/18/24 00:00

Client ID: DUP Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		25-120
Phenol-d6	60		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	53		30-120
2,4,6-Tribromophenol	73		10-136
4-Terphenyl-d14	50		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/22/24 15:21
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG1949582-1					
Acenaphthene	ND		ug/kg	130	--
Benzidine	ND		ug/kg	540	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	98	--
Bis(2-chloroethyl)ether	ND		ug/kg	150	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	160	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	160	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	98	--
4-Chlorophenyl phenyl ether	ND		ug/kg	160	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachlorocyclopentadiene	ND		ug/kg	460	--
Hexachloroethane	ND		ug/kg	130	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
NDPA/DPA	ND		ug/kg	130	--
n-Nitrosodi-n-propylamine	ND		ug/kg	160	--
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/22/24 15:21
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG1949582-1					
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	98	--
Benzo(a)pyrene	ND		ug/kg	130	--
Benzo(b)fluoranthene	ND		ug/kg	98	--
Benzo(k)fluoranthene	ND		ug/kg	98	--
Chrysene	ND		ug/kg	98	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	98	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	98	--
Dibenzo(a,h)anthracene	ND		ug/kg	98	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	98	--
Biphenyl	ND		ug/kg	370	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
1-Methylnaphthalene	ND		ug/kg	160	--
2-Nitroaniline	ND		ug/kg	160	--
3-Nitroaniline	ND		ug/kg	160	--
4-Nitroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	200	--
n-Nitrosodimethylamine	ND		ug/kg	320	--
2,4,6-Trichlorophenol	ND		ug/kg	98	--
p-Chloro-m-cresol	ND		ug/kg	160	--
2-Chlorophenol	ND		ug/kg	160	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/22/24 15:21
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG1949582-1					
2,4-Dichlorophenol	ND		ug/kg	150	--
2,4-Dimethylphenol	ND		ug/kg	160	--
2-Nitrophenol	ND		ug/kg	350	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	780	--
4,6-Dinitro-o-cresol	ND		ug/kg	420	--
Pentachlorophenol	ND		ug/kg	130	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--
Benzoic Acid	ND		ug/kg	530	--
Benzyl Alcohol	ND		ug/kg	160	--
Carbazole	ND		ug/kg	160	--
Pyridine	ND		ug/kg	180	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		25-120
Phenol-d6	54		10-120
Nitrobenzene-d5	48		23-120
2-Fluorobiphenyl	50		30-120
2,4,6-Tribromophenol	59		10-136
4-Terphenyl-d14	65		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 20:13
Analyst: MRG

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-06 Batch: WG1949583-1					
Acenaphthene	ND		ug/kg	6.5	--
2-Chloronaphthalene	ND		ug/kg	6.5	--
Fluoranthene	ND		ug/kg	6.5	--
Hexachlorobutadiene	ND		ug/kg	6.5	--
Naphthalene	ND		ug/kg	6.5	--
Benzo(a)anthracene	ND		ug/kg	6.5	--
Benzo(a)pyrene	ND		ug/kg	6.5	--
Benzo(b)fluoranthene	ND		ug/kg	6.5	--
Benzo(k)fluoranthene	ND		ug/kg	6.5	--
Chrysene	ND		ug/kg	6.5	--
Acenaphthylene	ND		ug/kg	6.5	--
Anthracene	ND		ug/kg	6.5	--
Benzo(ghi)perylene	ND		ug/kg	6.5	--
Fluorene	ND		ug/kg	6.5	--
Phenanthrene	ND		ug/kg	6.5	--
Dibenzo(a,h)anthracene	ND		ug/kg	6.5	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	6.5	--
Pyrene	ND		ug/kg	6.5	--
1-Methylnaphthalene	ND		ug/kg	6.5	--
2-Methylnaphthalene	ND		ug/kg	6.5	--
Pentachlorophenol	ND		ug/kg	26	--
Hexachlorobenzene	ND		ug/kg	6.5	--
Hexachloroethane	ND		ug/kg	6.5	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 07/22/24 20:13
Analyst: MRG

Extraction Method: EPA 3546
Extraction Date: 07/21/24 21:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-06 Batch: WG1949583-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		25-120
Phenol-d6	58		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	52		30-120
2,4,6-Tribromophenol	64		10-136
4-Terphenyl-d14	64		18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1949582-2 WG1949582-3								
Acenaphthene	51		51		31-137	0		50
Benzidine	34		30		10-66	13		50
1,2,4-Trichlorobenzene	50		49		38-107	2		50
Hexachlorobenzene	52		52		40-140	0		50
Bis(2-chloroethyl)ether	51		50		40-140	2		50
2-Chloronaphthalene	52		51		40-140	2		50
1,2-Dichlorobenzene	50		47		40-140	6		50
1,3-Dichlorobenzene	48		45		40-140	6		50
1,4-Dichlorobenzene	48		45		28-104	6		50
3,3'-Dichlorobenzidine	50		49		40-140	2		50
2,4-Dinitrotoluene	58		59		40-132	2		50
2,6-Dinitrotoluene	59		60		40-140	2		50
Azobenzene	57		57		40-140	0		50
Fluoranthene	57		58		40-140	2		50
4-Chlorophenyl phenyl ether	50		50		40-140	0		50
4-Bromophenyl phenyl ether	50		51		40-140	2		50
Bis(2-chloroisopropyl)ether	**39**	Q	**38**	Q	40-140	3		50
Bis(2-chloroethoxy)methane	54		55		40-117	2		50
Hexachlorobutadiene	50		48		40-140	4		50
Hexachlorocyclopentadiene	44		41		40-140	7		50
Hexachloroethane	52		49		40-140	6		50
Isophorone	54		55		40-140	2		50
Naphthalene	50		48		40-140	4		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1949582-2 WG1949582-3								
Nitrobenzene	55		54		40-140	2		50
NDPA/DPA	52		53		36-157	2		50
n-Nitrosodi-n-propylamine	55		55		32-121	0		50
Bis(2-ethylhexyl)phthalate	58		60		40-140	3		50
Butyl benzyl phthalate	67		69		40-140	3		50
Di-n-butylphthalate	60		62		40-140	3		50
Di-n-octylphthalate	63		65		40-140	3		50
Diethyl phthalate	52		54		40-140	4		50
Dimethyl phthalate	53		54		40-140	2		50
Benzo(a)anthracene	51		52		40-140	2		50
Benzo(a)pyrene	50		52		40-140	4		50
Benzo(b)fluoranthene	52		53		40-140	2		50
Benzo(k)fluoranthene	51		51		40-140	0		50
Chrysene	50		53		40-140	6		50
Acenaphthylene	52		52		40-140	0		50
Anthracene	56		58		40-140	4		50
Benzo(ghi)perylene	51		52		40-140	2		50
Fluorene	52		52		40-140	0		50
Phenanthrene	54		55		40-140	2		50
Dibenzo(a,h)anthracene	52		54		40-140	4		50
Indeno(1,2,3-cd)pyrene	50		52		40-140	4		50
Pyrene	57		59		35-142	3		50
Biphenyl	52		52		37-127	0		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1949582-2 WG1949582-3								
Aniline	40		**38**	Q	40-140	5		50
4-Chloroaniline	42		48		40-140	13		50
1-Methylnaphthalene	51		52		26-130	2		50
2-Nitroaniline	61		61		47-134	0		50
3-Nitroaniline	48		46		26-129	4		50
4-Nitroaniline	49		50		41-125	2		50
Dibenzofuran	52		52		40-140	0		50
2-Methylnaphthalene	50		50		40-140	0		50
n-Nitrosodimethylamine	49		48		22-100	2		50
2,4,6-Trichlorophenol	52		52		30-130	0		50
p-Chloro-m-cresol	56		58		26-103	4		50
2-Chlorophenol	53		52		25-102	2		50
2,4-Dichlorophenol	54		56		30-130	4		50
2,4-Dimethylphenol	46		46		30-130	0		50
2-Nitrophenol	62		61		30-130	2		50
4-Nitrophenol	64		66		11-114	3		50
2,4-Dinitrophenol	47		52		4-130	10		50
4,6-Dinitro-o-cresol	60		63		10-130	5		50
Pentachlorophenol	51		52		17-109	2		50
Phenol	54		54		26-90	0		50
2-Methylphenol	55		55		30-130.	0		50
3-Methylphenol/4-Methylphenol	51		52		30-130	2		50
2,4,5-Trichlorophenol	56		57		30-130	2		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1949582-2 WG1949582-3								
Benzoic Acid	19		21		10-110	10		50
Benzyl Alcohol	56		56		40-140	0		50
Carbazole	55		56		54-128	2		50
Pyridine	29		26		10-93	11		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	56		55		25-120
Phenol-d6	59		58		10-120
Nitrobenzene-d5	59		58		23-120
2-Fluorobiphenyl	53		52		30-120
2,4,6-Tribromophenol	61		62		10-136
4-Terphenyl-d14	59		60		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-06 Batch: WG1949583-2 WG1949583-3								
Acenaphthene	54		56		40-140	4		50
2-Chloronaphthalene	57		57		40-140	0		50
Fluoranthene	58		60		40-140	3		50
Hexachlorobutadiene	54		52		34-107	4		50
Naphthalene	55		54		40-140	2		50
Benzo(a)anthracene	54		56		40-140	4		50
Benzo(a)pyrene	59		60		40-140	2		50
Benzo(b)fluoranthene	59		60		40-140	2		50
Benzo(k)fluoranthene	59		60		40-140	2		50
Chrysene	54		56		40-140	4		50
Acenaphthylene	61		62		40-140	2		50
Anthracene	55		56		40-140	2		50
Benzo(ghi)perylene	52		54		40-140	4		50
Fluorene	58		59		40-140	2		50
Phenanthrene	53		55		40-140	4		50
Dibenzo(a,h)anthracene	56		58		40-140	4		50
Indeno(1,2,3-cd)Pyrene	57		59		40-140	3		50
Pyrene	57		59		35-142	3		50
1-Methylnaphthalene	58		58		40-140	0		50
2-Methylnaphthalene	59		58		40-140	2		50
Pentachlorophenol	36		41		17-109	13		50
Hexachlorobenzene	49		50		40-140	2		50
Hexachloroethane	59		58		29-106	2		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-06 Batch: WG1949583-2 WG1949583-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	63		63		25-120
Phenol-d6	65		66		10-120
Nitrobenzene-d5	98		98		23-120
2-Fluorobiphenyl	59		60		30-120
2,4,6-Tribromophenol	75		78		10-136
4-Terphenyl-d14	66		66		18-120

PETROLEUM HYDROCARBONS

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 07/22/24 23:36
Analyst: MTC
Percent Solids: 78%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 05:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	42000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	70		40-140

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 07/22/24 21:51
Analyst: MTC
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 05:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	52000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	63		40-140

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 07/22/24 20:41
Analyst: MTC
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 05:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	54000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	63		40-140

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 07/22/24 23:01
Analyst: MTC
Percent Solids: 62%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 05:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	53000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	63		40-140

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8015D(M)
Analytical Date: 07/23/24 00:11
Analyst: MTC
Percent Solids: 71%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 05:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	46000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	73		40-140

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 07/22/24 21:16
Analyst: MTC
Percent Solids: 65%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 05:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	50000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	71		40-140

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 07/22/24 20:06
Analyst: MTC

Extraction Method: EPA 3546
Extraction Date: 07/22/24 05:15

Parameter	Result	Qualifier	Units	RL	MDL
Diesel Range Organics - Westborough Lab for sample(s): 01-06 Batch: WG1949616-1					
DRO (C10-C28)	ND		ug/kg	32000	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	71		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Diesel Range Organics - Westborough Lab	Associated sample(s): 01-06		Batch: WG1949616-2					
DRO (C10-C28)	84		-		60-140	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	62				40-140

Lab Duplicate Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Diesel Range Organics - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1949616-3 QC Sample: L2440510-02 Client ID: SED-2 (0-2')						
DRO (C10-C28)	ND	ND	ug/kg	NC		20

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	63		65		40-140

PCBS

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 07/22/24 16:18
Analyst: AD
Percent Solids: 78%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 04:34
Cleanup Method: EPA 3665A
Cleanup Date: 07/22/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/22/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	60.2	--	1	A
Aroclor 1221	ND		ug/kg	60.2	--	1	A
Aroclor 1232	ND		ug/kg	60.2	--	1	A
Aroclor 1242	ND		ug/kg	60.2	--	1	A
Aroclor 1248	ND		ug/kg	60.2	--	1	A
Aroclor 1254	ND		ug/kg	60.2	--	1	A
Aroclor 1260	ND		ug/kg	60.2	--	1	A
Aroclor 1262	ND		ug/kg	60.2	--	1	A
Aroclor 1268	ND		ug/kg	60.2	--	1	A
PCBs, Total	ND		ug/kg	60.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	100		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	114		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 07/22/24 16:30
Analyst: AD
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 04:34
Cleanup Method: EPA 3665A
Cleanup Date: 07/22/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/22/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	76.7	--	1	A
Aroclor 1221	ND		ug/kg	76.7	--	1	A
Aroclor 1232	ND		ug/kg	76.7	--	1	A
Aroclor 1242	ND		ug/kg	76.7	--	1	A
Aroclor 1248	ND		ug/kg	76.7	--	1	A
Aroclor 1254	ND		ug/kg	76.7	--	1	A
Aroclor 1260	ND		ug/kg	76.7	--	1	A
Aroclor 1262	ND		ug/kg	76.7	--	1	A
Aroclor 1268	ND		ug/kg	76.7	--	1	A
PCBs, Total	ND		ug/kg	76.7	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	88		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 07/22/24 16:41
Analyst: AD
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 04:34
Cleanup Method: EPA 3665A
Cleanup Date: 07/22/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/22/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	76.9	--	1	A
Aroclor 1221	ND		ug/kg	76.9	--	1	A
Aroclor 1232	ND		ug/kg	76.9	--	1	A
Aroclor 1242	ND		ug/kg	76.9	--	1	A
Aroclor 1248	ND		ug/kg	76.9	--	1	A
Aroclor 1254	ND		ug/kg	76.9	--	1	A
Aroclor 1260	ND		ug/kg	76.9	--	1	A
Aroclor 1262	ND		ug/kg	76.9	--	1	A
Aroclor 1268	ND		ug/kg	76.9	--	1	A
PCBs, Total	ND		ug/kg	76.9	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 07/22/24 16:53
Analyst: AD
Percent Solids: 62%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 04:34
Cleanup Method: EPA 3665A
Cleanup Date: 07/22/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/22/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	78.2	--	1	A
Aroclor 1221	ND		ug/kg	78.2	--	1	A
Aroclor 1232	ND		ug/kg	78.2	--	1	A
Aroclor 1242	ND		ug/kg	78.2	--	1	A
Aroclor 1248	ND		ug/kg	78.2	--	1	A
Aroclor 1254	ND		ug/kg	78.2	--	1	A
Aroclor 1260	ND		ug/kg	78.2	--	1	A
Aroclor 1262	ND		ug/kg	78.2	--	1	A
Aroclor 1268	ND		ug/kg	78.2	--	1	A
PCBs, Total	ND		ug/kg	78.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	94		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/22/24 17:04
Analyst: AD
Percent Solids: 71%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 04:34
Cleanup Method: EPA 3665A
Cleanup Date: 07/22/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/22/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	68.9	--	1	A
Aroclor 1221	ND		ug/kg	68.9	--	1	A
Aroclor 1232	ND		ug/kg	68.9	--	1	A
Aroclor 1242	ND		ug/kg	68.9	--	1	A
Aroclor 1248	ND		ug/kg	68.9	--	1	A
Aroclor 1254	ND		ug/kg	68.9	--	1	A
Aroclor 1260	ND		ug/kg	68.9	--	1	A
Aroclor 1262	ND		ug/kg	68.9	--	1	A
Aroclor 1268	ND		ug/kg	68.9	--	1	A
PCBs, Total	ND		ug/kg	68.9	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	78		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	84		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 07/22/24 17:16
Analyst: AD
Percent Solids: 65%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 04:34
Cleanup Method: EPA 3665A
Cleanup Date: 07/22/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/22/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	71.6	--	1	A
Aroclor 1221	ND		ug/kg	71.6	--	1	A
Aroclor 1232	ND		ug/kg	71.6	--	1	A
Aroclor 1242	ND		ug/kg	71.6	--	1	A
Aroclor 1248	ND		ug/kg	71.6	--	1	A
Aroclor 1254	ND		ug/kg	71.6	--	1	A
Aroclor 1260	ND		ug/kg	71.6	--	1	A
Aroclor 1262	ND		ug/kg	71.6	--	1	A
Aroclor 1268	ND		ug/kg	71.6	--	1	A
PCBs, Total	ND		ug/kg	71.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	92		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/22/24 15:44
Analyst: AD

Extraction Method: EPA 3546
Extraction Date: 07/22/24 04:34
Cleanup Method: EPA 3665A
Cleanup Date: 07/22/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/22/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-06 Batch: WG1949611-1						
Aroclor 1016	ND		ug/kg	47.9	--	A
Aroclor 1221	ND		ug/kg	47.9	--	A
Aroclor 1232	ND		ug/kg	47.9	--	A
Aroclor 1242	ND		ug/kg	47.9	--	A
Aroclor 1248	ND		ug/kg	47.9	--	A
Aroclor 1254	ND		ug/kg	47.9	--	A
Aroclor 1260	ND		ug/kg	47.9	--	A
Aroclor 1262	ND		ug/kg	47.9	--	A
Aroclor 1268	ND		ug/kg	47.9	--	A
PCBs, Total	ND		ug/kg	47.9	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91		30-150	A
Decachlorobiphenyl	107		30-150	A
2,4,5,6-Tetrachloro-m-xylene	98		30-150	B
Decachlorobiphenyl	117		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-06 Batch: WG1949611-2 WG1949611-3									
Aroclor 1016	87		69		40-140	23		50	A
Aroclor 1260	80		64		40-140	22		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	99		78		30-150	A
Decachlorobiphenyl	115		92		30-150	A
2,4,5,6-Tetrachloro-m-xylene	104		81		30-150	B
Decachlorobiphenyl	123		98		30-150	B

PESTICIDES

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 07/23/24 11:10
Analyst: JAG
Percent Solids: 78%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.95	--	1	A
Lindane	ND		ug/kg	0.813	--	1	A
Alpha-BHC	ND		ug/kg	0.813	--	1	A
Beta-BHC	ND		ug/kg	1.95	--	1	A
Heptachlor	ND		ug/kg	0.976	--	1	A
Aldrin	ND		ug/kg	1.95	--	1	A
Heptachlor epoxide	ND		ug/kg	3.66	--	1	A
Endrin	ND		ug/kg	0.813	--	1	A
Endrin aldehyde	ND		ug/kg	2.44	--	1	A
Endrin ketone	ND		ug/kg	1.95	--	1	A
Dieldrin	ND		ug/kg	1.22	--	1	A
4,4'-DDE	ND		ug/kg	1.95	--	1	B
4,4'-DDD	ND		ug/kg	1.95	--	1	A
4,4'-DDT	ND		ug/kg	3.66	--	1	B
Endosulfan I	ND		ug/kg	1.95	--	1	A
Endosulfan II	ND		ug/kg	1.95	--	1	A
Endosulfan sulfate	ND		ug/kg	0.813	--	1	A
Methoxychlor	ND		ug/kg	3.66	--	1	A
Toxaphene	ND		ug/kg	36.6	--	1	A
Chlordane	ND		ug/kg	16.2	--	1	A
cis-Chlordane	ND		ug/kg	2.44	--	1	A
trans-Chlordane	ND	IP	ug/kg	2.44	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01 Date Collected: 07/18/24 08:30

Client ID: SED-1 (0-1') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	101		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 07/24/24 17:36
Analyst: JAG
Percent Solids: 78%
Methylation Date: 07/24/24 12:05

Extraction Method: EPA 8151A
Extraction Date: 07/23/24 07:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	4280	--	1	A
MCPA	ND		ug/kg	4280	--	1	A
Dalapon	ND		ug/kg	42.8	--	1	A
Dicamba	ND		ug/kg	42.8	--	1	A
Dichloroprop	ND		ug/kg	42.8	--	1	A
2,4-D	ND		ug/kg	214	--	1	A
2,4-DB	ND		ug/kg	214	--	1	A
2,4,5-T	ND		ug/kg	214	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	214	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	66		30-150	A
DCAA	69		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 07/23/24 11:21
Analyst: JAG
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	2.45	--	1	A
Lindane	ND		ug/kg	1.02	--	1	A
Alpha-BHC	ND		ug/kg	1.02	--	1	A
Beta-BHC	ND		ug/kg	2.45	--	1	A
Heptachlor	ND		ug/kg	1.22	--	1	A
Aldrin	ND		ug/kg	2.45	--	1	A
Heptachlor epoxide	ND		ug/kg	4.60	--	1	A
Endrin	ND		ug/kg	1.02	--	1	A
Endrin aldehyde	ND		ug/kg	3.06	--	1	A
Endrin ketone	ND		ug/kg	2.45	--	1	A
Dieldrin	ND		ug/kg	1.53	--	1	A
4,4'-DDE	ND		ug/kg	2.45	--	1	A
4,4'-DDD	ND		ug/kg	2.45	--	1	A
4,4'-DDT	ND		ug/kg	4.60	--	1	A
Endosulfan I	ND		ug/kg	2.45	--	1	A
Endosulfan II	ND		ug/kg	2.45	--	1	A
Endosulfan sulfate	ND		ug/kg	1.02	--	1	A
Methoxychlor	ND		ug/kg	4.60	--	1	A
Toxaphene	ND		ug/kg	46.0	--	1	A
Chlordane	ND		ug/kg	20.4	--	1	A
cis-Chlordane	ND		ug/kg	3.06	--	1	A
trans-Chlordane	ND		ug/kg	3.06	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02 Date Collected: 07/18/24 09:00

Client ID: SED-2 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	107		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 07/24/24 18:14
Analyst: JAG
Percent Solids: 64%
Methylation Date: 07/24/24 12:05

Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified
Extraction Method: EPA 8151A
Extraction Date: 07/23/24 07:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	5160	--	1	A
MCPA	ND		ug/kg	5160	--	1	A
Dalapon	ND		ug/kg	51.6	--	1	A
Dicamba	ND		ug/kg	51.6	--	1	A
Dichloroprop	ND		ug/kg	51.6	--	1	A
2,4-D	ND		ug/kg	258	--	1	A
2,4-DB	ND		ug/kg	258	--	1	A
2,4,5-T	ND		ug/kg	258	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	258	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	44		30-150	A
DCAA	48		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 07/23/24 11:32
Analyst: JAG
Percent Solids: 61%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	2.57	--	1	A
Lindane	ND		ug/kg	1.07	--	1	A
Alpha-BHC	ND		ug/kg	1.07	--	1	A
Beta-BHC	ND		ug/kg	2.57	--	1	A
Heptachlor	ND		ug/kg	1.28	--	1	A
Aldrin	ND		ug/kg	2.57	--	1	A
Heptachlor epoxide	ND		ug/kg	4.82	--	1	A
Endrin	ND		ug/kg	1.07	--	1	A
Endrin aldehyde	ND		ug/kg	3.21	--	1	A
Endrin ketone	ND		ug/kg	2.57	--	1	A
Dieldrin	ND		ug/kg	1.61	--	1	A
4,4'-DDE	ND		ug/kg	2.57	--	1	A
4,4'-DDD	ND		ug/kg	2.57	--	1	A
4,4'-DDT	ND		ug/kg	4.82	--	1	A
Endosulfan I	ND		ug/kg	2.57	--	1	A
Endosulfan II	ND		ug/kg	2.57	--	1	A
Endosulfan sulfate	ND		ug/kg	1.07	--	1	A
Methoxychlor	ND		ug/kg	4.82	--	1	A
Toxaphene	ND		ug/kg	48.2	--	1	A
Chlordane	ND		ug/kg	21.4	--	1	A
cis-Chlordane	ND		ug/kg	3.21	--	1	A
trans-Chlordane	ND		ug/kg	3.21	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03 Date Collected: 07/18/24 10:00

Client ID: SED-3 (0-2') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	99		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 07/25/24 10:24
Analyst: MMG
Percent Solids: 61%
Methylation Date: 07/25/24 08:09
Extraction Method: EPA 8151A
Extraction Date: 07/24/24 23:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	5460	--	1	A
MCPA	ND		ug/kg	5460	--	1	A
Dalapon	ND		ug/kg	54.6	--	1	A
Dicamba	ND		ug/kg	54.6	--	1	A
Dichloroprop	ND		ug/kg	54.6	--	1	A
2,4-D	ND		ug/kg	273	--	1	A
2,4-DB	ND		ug/kg	273	--	1	A
2,4,5-T	ND		ug/kg	273	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	273	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	94		30-150	A
DCAA	93		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 07/23/24 11:44
Analyst: JAG
Percent Solids: 62%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	2.45	--	1	A
Lindane	ND		ug/kg	1.02	--	1	A
Alpha-BHC	ND		ug/kg	1.02	--	1	A
Beta-BHC	ND		ug/kg	2.45	--	1	A
Heptachlor	ND		ug/kg	1.22	--	1	A
Aldrin	ND		ug/kg	2.45	--	1	A
Heptachlor epoxide	ND		ug/kg	4.59	--	1	A
Endrin	ND		ug/kg	1.02	--	1	A
Endrin aldehyde	ND		ug/kg	3.06	--	1	A
Endrin ketone	ND		ug/kg	2.45	--	1	A
Dieldrin	ND		ug/kg	1.53	--	1	A
4,4'-DDE	ND		ug/kg	2.45	--	1	A
4,4'-DDD	ND		ug/kg	2.45	--	1	A
4,4'-DDT	ND		ug/kg	4.59	--	1	A
Endosulfan I	ND		ug/kg	2.45	--	1	A
Endosulfan II	ND		ug/kg	2.45	--	1	A
Endosulfan sulfate	ND		ug/kg	1.02	--	1	A
Methoxychlor	ND		ug/kg	4.59	--	1	A
Toxaphene	ND		ug/kg	45.9	--	1	A
Chlordane	ND		ug/kg	20.4	--	1	A
cis-Chlordane	ND		ug/kg	3.06	--	1	A
trans-Chlordane	ND		ug/kg	3.06	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04 Date Collected: 07/18/24 10:20

Client ID: SED-4 (0-1.5') Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	96		30-150	B
Decachlorobiphenyl	101		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 07/24/24 18:51
Analyst: JAG
Percent Solids: 62%
Methylation Date: 07/24/24 12:05

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified
Extraction Method: EPA 8151A
Extraction Date: 07/23/24 07:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	5350	--	1	A
MCPA	ND		ug/kg	5350	--	1	A
Dalapon	ND		ug/kg	53.5	--	1	A
Dicamba	ND		ug/kg	53.5	--	1	A
Dichloroprop	ND		ug/kg	53.5	--	1	A
2,4-D	ND		ug/kg	268	--	1	A
2,4-DB	ND		ug/kg	268	--	1	A
2,4,5-T	ND		ug/kg	268	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	268	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	46		30-150	A
DCAA	50		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/23/24 11:55
Analyst: JAG
Percent Solids: 71%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	2.13	--	1	A
Lindane	ND		ug/kg	0.887	--	1	A
Alpha-BHC	ND		ug/kg	0.887	--	1	A
Beta-BHC	ND		ug/kg	2.13	--	1	A
Heptachlor	ND		ug/kg	1.06	--	1	A
Aldrin	ND		ug/kg	2.13	--	1	A
Heptachlor epoxide	ND		ug/kg	3.99	--	1	A
Endrin	ND		ug/kg	0.887	--	1	A
Endrin aldehyde	ND		ug/kg	2.66	--	1	A
Endrin ketone	ND		ug/kg	2.13	--	1	A
Dieldrin	ND		ug/kg	1.33	--	1	A
4,4'-DDE	ND		ug/kg	2.13	--	1	A
4,4'-DDD	ND		ug/kg	2.13	--	1	A
4,4'-DDT	ND		ug/kg	3.99	--	1	A
Endosulfan I	ND		ug/kg	2.13	--	1	A
Endosulfan II	ND		ug/kg	2.13	--	1	A
Endosulfan sulfate	ND		ug/kg	0.887	--	1	A
Methoxychlor	ND		ug/kg	3.99	--	1	A
Toxaphene	ND		ug/kg	39.9	--	1	A
Chlordane	ND		ug/kg	17.7	--	1	A
cis-Chlordane	ND		ug/kg	2.66	--	1	A
trans-Chlordane	ND		ug/kg	2.66	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05 Date Collected: 07/18/24 09:25

Client ID: SS-1 Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	100		30-150	B
Decachlorobiphenyl	101		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 07/24/24 19:09
Analyst: JAG
Percent Solids: 71%
Methylation Date: 07/24/24 12:05
Extraction Method: EPA 8151A
Extraction Date: 07/23/24 07:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	4680	--	1	A
MCPA	ND		ug/kg	4680	--	1	A
Dalapon	ND		ug/kg	46.8	--	1	A
Dicamba	ND		ug/kg	46.8	--	1	A
Dichloroprop	ND		ug/kg	46.8	--	1	A
2,4-D	ND		ug/kg	234	--	1	A
2,4-DB	ND		ug/kg	234	--	1	A
2,4,5-T	ND		ug/kg	234	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	234	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	79		30-150	A
DCAA	79		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 07/23/24 12:06
Analyst: JAG
Percent Solids: 65%

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	2.44	--	1	A
Lindane	ND		ug/kg	1.02	--	1	A
Alpha-BHC	ND		ug/kg	1.02	--	1	A
Beta-BHC	ND		ug/kg	2.44	--	1	A
Heptachlor	ND		ug/kg	1.22	--	1	A
Aldrin	ND		ug/kg	2.44	--	1	A
Heptachlor epoxide	ND		ug/kg	4.57	--	1	A
Endrin	ND		ug/kg	1.02	--	1	A
Endrin aldehyde	ND		ug/kg	3.05	--	1	A
Endrin ketone	ND		ug/kg	2.44	--	1	A
Dieldrin	ND		ug/kg	1.52	--	1	A
4,4'-DDE	ND		ug/kg	2.44	--	1	A
4,4'-DDD	ND		ug/kg	2.44	--	1	A
4,4'-DDT	ND		ug/kg	4.57	--	1	A
Endosulfan I	ND		ug/kg	2.44	--	1	A
Endosulfan II	ND		ug/kg	2.44	--	1	A
Endosulfan sulfate	ND		ug/kg	1.02	--	1	A
Methoxychlor	ND		ug/kg	4.57	--	1	A
Toxaphene	ND		ug/kg	45.7	--	1	A
Chlordane	ND		ug/kg	20.3	--	1	A
cis-Chlordane	ND		ug/kg	3.05	--	1	A
trans-Chlordane	ND		ug/kg	3.05	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06 Date Collected: 07/18/24 00:00

Client ID: DUP Date Received: 07/18/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	80		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 07/24/24 19:28
Analyst: JAG
Percent Solids: 65%
Methylation Date: 07/24/24 12:05
Extraction Method: EPA 8151A
Extraction Date: 07/23/24 07:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	5060	--	1	A
MCPA	ND		ug/kg	5060	--	1	A
Dalapon	ND		ug/kg	50.6	--	1	A
Dicamba	ND		ug/kg	50.6	--	1	A
Dichloroprop	ND		ug/kg	50.6	--	1	A
2,4-D	ND		ug/kg	253	--	1	A
2,4-DB	ND		ug/kg	253	--	1	A
2,4,5-T	ND		ug/kg	253	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	253	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	76		30-150	A
DCAA	80		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/23/24 10:37
Analyst: JAG

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-06 Batch: WG1949604-1						
Delta-BHC	ND		ug/kg	1.56	--	A
Lindane	ND		ug/kg	0.651	--	A
Alpha-BHC	ND		ug/kg	0.651	--	A
Beta-BHC	ND		ug/kg	1.56	--	A
Heptachlor	ND		ug/kg	0.782	--	A
Aldrin	ND		ug/kg	1.56	--	A
Heptachlor epoxide	ND		ug/kg	2.93	--	A
Endrin	ND		ug/kg	0.651	--	A
Endrin aldehyde	ND		ug/kg	1.95	--	A
Endrin ketone	ND		ug/kg	1.56	--	A
Dieldrin	ND		ug/kg	0.977	--	A
4,4'-DDE	ND		ug/kg	1.56	--	A
4,4'-DDD	ND		ug/kg	1.56	--	A
4,4'-DDT	ND		ug/kg	2.93	--	A
Endosulfan I	ND		ug/kg	1.56	--	A
Endosulfan II	ND		ug/kg	1.56	--	A
Endosulfan sulfate	ND		ug/kg	0.651	--	A
Methoxychlor	ND		ug/kg	2.93	--	A
Toxaphene	ND		ug/kg	29.3	--	A
Chlordane	ND		ug/kg	13.0	--	A
cis-Chlordane	ND		ug/kg	1.95	--	A
trans-Chlordane	ND		ug/kg	1.95	--	A

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/23/24 10:37
Analyst: JAG

Extraction Method: EPA 3546
Extraction Date: 07/22/24 03:06
Cleanup Method: EPA 3620B
Cleanup Date: 07/23/24
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-06 Batch: WG1949604-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	48		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 07/24/24 14:12
Analyst: MMG

Extraction Method: EPA 8151A
Extraction Date: 07/23/24 07:45

Methylation Date: 07/24/24 12:05

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-02,04-06 Batch: WG1950144-1						
MCPP	ND		ug/kg	3270	--	A
MCPA	ND		ug/kg	3270	--	A
Dalapon	ND		ug/kg	32.7	--	A
Dicamba	ND		ug/kg	32.7	--	A
Dichloroprop	ND		ug/kg	32.7	--	A
2,4-D	ND		ug/kg	163	--	A
2,4-DB	ND		ug/kg	163	--	A
2,4,5-T	ND		ug/kg	163	--	A
2,4,5-TP (Silvex)	ND		ug/kg	163	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	77		30-150	A
DCAA	82		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 07/25/24 09:28
Analyst: MMG

Extraction Method: EPA 8151A
Extraction Date: 07/24/24 12:00

Methylation Date: 07/25/24 08:09

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 03 Batch: WG1950775-1						
MCPP	ND		ug/kg	3230	--	A
MCPA	ND		ug/kg	3230	--	A
Dalapon	ND		ug/kg	32.3	--	A
Dicamba	ND		ug/kg	32.3	--	A
Dichloroprop	ND		ug/kg	32.3	--	A
2,4-D	ND		ug/kg	161	--	A
2,4-DB	ND		ug/kg	161	--	A
2,4,5-T	ND		ug/kg	161	--	A
2,4,5-TP (Silvex)	ND		ug/kg	161	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	82		30-150	A
DCAA	87		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-06 Batch: WG1949604-2 WG1949604-3									
Delta-BHC	68		75		30-150	10		30	A
Lindane	66		73		30-150	10		30	A
Alpha-BHC	66		74		30-150	11		30	A
Beta-BHC	66		73		30-150	10		30	A
Heptachlor	70		78		30-150	11		30	A
Aldrin	66		74		30-150	11		30	A
Heptachlor epoxide	50		57		30-150	13		30	A
Endrin	70		78		30-150	11		30	A
Endrin aldehyde	59		65		30-150	10		30	A
Endrin ketone	71		81		30-150	13		30	A
Dieldrin	75		84		30-150	11		30	A
4,4'-DDE	67		75		30-150	11		30	A
4,4'-DDD	74		82		30-150	10		30	A
4,4'-DDT	72		81		30-150	12		30	A
Endosulfan I	67		76		30-150	13		30	A
Endosulfan II	72		80		30-150	11		30	A
Endosulfan sulfate	63		70		30-150	11		30	A
Methoxychlor	71		79		30-150	11		30	A
cis-Chlordane	61		69		30-150	12		30	A
trans-Chlordane	65		71		30-150	9		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-06 Batch: WG1949604-2 WG1949604-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		59		30-150	A
Decachlorobiphenyl	51		58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		74		30-150	B
Decachlorobiphenyl	70		78		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-02,04-06 Batch: WG1950144-2 WG1950144-3									
MCPP	118		110		30-150	7		30	A
MCPA	97		91		30-150	6		30	A
Dalapon	88		79		30-150	11		30	A
Dicamba	96		91		30-150	5		30	A
Dichloroprop	93		88		30-150	6		30	A
2,4-D	93		87		30-150	7		30	A
2,4-DB	90		93		30-150	3		30	A
2,4,5-T	94		90		30-150	4		30	A
2,4,5-TP (Silvex)	91		86		30-150	6		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	83		80		30-150	A
DCAA	98		98		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 03 Batch: WG1950775-2 WG1950775-3									
MCPP	107		104		30-150	3		30	A
MCPA	87		86		30-150	1		30	A
Dalapon	59		60		30-150	2		30	A
Dicamba	85		84		30-150	1		30	A
Dichloroprop	83		81		30-150	2		30	A
2,4-D	86		82		30-150	5		30	A
2,4-DB	97		99		30-150	2		30	A
2,4,5-T	88		87		30-150	1		30	A
2,4,5-TP (Silvex)	83		81		30-150	2		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	74		74		30-150	A
DCAA	89		87		30-150	B

METALS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	1.9	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Arsenic, Total	4.4		mg/kg	0.61	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Beryllium, Total	0.66		mg/kg	0.36	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Cadmium, Total	ND		mg/kg	0.24	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Chromium, Total	14		mg/kg	2.4	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Copper, Total	7.2		mg/kg	2.4	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Lead, Total	12		mg/kg	0.73	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Mercury, Total	ND		mg/kg	0.081	--	1	07/19/24 10:40	07/24/24 12:20	EPA 7471B	1,7471B	MJR
Nickel, Total	11		mg/kg	1.2	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Selenium, Total	3.2		mg/kg	2.4	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Silver, Total	ND		mg/kg	0.61	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Thallium, Total	ND		mg/kg	0.48	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF
Zinc, Total	51		mg/kg	12	--	10	07/19/24 08:25	07/24/24 14:40	EPA 3050B	1,6020B	EJF

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 64%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	2.4	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Arsenic, Total	2.4		mg/kg	0.76	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Beryllium, Total	1.3		mg/kg	0.46	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Cadmium, Total	0.33		mg/kg	0.31	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Chromium, Total	11		mg/kg	3.1	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Copper, Total	6.6		mg/kg	3.1	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Lead, Total	14		mg/kg	0.92	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Mercury, Total	ND		mg/kg	0.099	--	1	07/19/24 10:40	07/24/24 12:23	EPA 7471B	1,7471B	MJR
Nickel, Total	8.2		mg/kg	1.5	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Selenium, Total	5.6		mg/kg	3.1	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Silver, Total	ND		mg/kg	0.76	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Thallium, Total	ND		mg/kg	0.61	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF
Zinc, Total	68		mg/kg	15	--	10	07/19/24 08:25	07/24/24 14:44	EPA 3050B	1,6020B	EJF

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 61%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	2.6	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Arsenic, Total	3.0		mg/kg	0.81	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Beryllium, Total	1.1		mg/kg	0.49	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Cadmium, Total	ND		mg/kg	0.32	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Chromium, Total	14		mg/kg	3.2	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Copper, Total	5.6		mg/kg	3.2	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Lead, Total	10		mg/kg	0.97	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Mercury, Total	ND		mg/kg	0.105	--	1	07/19/24 10:40	07/24/24 12:27	EPA 7471B	1,7471B	MJR
Nickel, Total	9.7		mg/kg	1.6	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Selenium, Total	5.0		mg/kg	3.2	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Silver, Total	ND		mg/kg	0.81	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Thallium, Total	ND		mg/kg	0.65	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF
Zinc, Total	61		mg/kg	16	--	10	07/19/24 08:25	07/24/24 14:49	EPA 3050B	1,6020B	EJF

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 62%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	2.5	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Arsenic, Total	2.5		mg/kg	0.78	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Beryllium, Total	1.3		mg/kg	0.47	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Cadmium, Total	0.32		mg/kg	0.31	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Chromium, Total	11		mg/kg	3.1	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Copper, Total	6.0		mg/kg	3.1	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Lead, Total	9.1		mg/kg	0.94	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Mercury, Total	ND		mg/kg	0.102	--	1	07/19/24 10:40	07/24/24 12:30	EPA 7471B	1,7471B	MJR
Nickel, Total	8.1		mg/kg	1.6	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Selenium, Total	5.8		mg/kg	3.1	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Silver, Total	ND		mg/kg	0.78	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Thallium, Total	ND		mg/kg	0.63	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF
Zinc, Total	67		mg/kg	16	--	10	07/19/24 08:25	07/24/24 14:54	EPA 3050B	1,6020B	EJF

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	2.2	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Arsenic, Total	2.3		mg/kg	0.68	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Beryllium, Total	0.55		mg/kg	0.41	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Cadmium, Total	ND		mg/kg	0.27	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Chromium, Total	8.0		mg/kg	2.7	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Copper, Total	32		mg/kg	2.7	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Lead, Total	22		mg/kg	0.82	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Mercury, Total	ND		mg/kg	0.090	--	1	07/19/24 10:40	07/24/24 12:33	EPA 7471B	1,7471B	MJR
Nickel, Total	7.8		mg/kg	1.4	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Selenium, Total	ND		mg/kg	2.7	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Silver, Total	ND		mg/kg	0.68	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Thallium, Total	ND		mg/kg	0.55	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF
Zinc, Total	51		mg/kg	14	--	10	07/19/24 08:25	07/24/24 15:59	EPA 3050B	1,6020B	EJF

Project Name: BAR MILLS DAM
Lab Number: L2440510
Project Number: 510195, PH 5, TASK 2
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 65%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	2.4	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Arsenic, Total	2.6		mg/kg	0.74	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Beryllium, Total	1.1		mg/kg	0.44	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Cadmium, Total	ND		mg/kg	0.29	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Chromium, Total	13		mg/kg	2.9	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Copper, Total	6.0		mg/kg	2.9	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Lead, Total	9.8		mg/kg	0.88	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Mercury, Total	ND		mg/kg	0.099	--	1	07/19/24 10:40	07/24/24 12:36	EPA 7471B	1,7471B	MJR
Nickel, Total	8.8		mg/kg	1.5	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Selenium, Total	4.8		mg/kg	2.9	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Silver, Total	ND		mg/kg	0.74	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Thallium, Total	ND		mg/kg	0.59	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF
Zinc, Total	59		mg/kg	15	--	10	07/19/24 08:25	07/24/24 16:04	EPA 3050B	1,6020B	EJF

Project Name: BAR MILLS DAM **Lab Number:** L2440510

Project Number: 510195, PH 5, TASK 2 **Report Date:** 08/09/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-06 Batch: WG1948816-1										
Antimony, Total	ND		mg/kg	1.6	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Arsenic, Total	ND		mg/kg	0.50	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Beryllium, Total	ND		mg/kg	0.30	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Cadmium, Total	ND		mg/kg	0.20	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Chromium, Total	ND		mg/kg	2.0	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Copper, Total	ND		mg/kg	2.0	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Lead, Total	ND		mg/kg	0.60	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Nickel, Total	ND		mg/kg	1.0	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Selenium, Total	ND		mg/kg	2.0	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Silver, Total	ND		mg/kg	0.50	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Thallium, Total	ND		mg/kg	0.40	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF
Zinc, Total	ND		mg/kg	10	--	10	07/19/24 08:25	07/19/24 10:43	1,6020B	EJF

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-06 Batch: WG1948823-1										
Mercury, Total	ND		mg/kg	0.083	--	1	07/19/24 10:40	07/23/24 17:27	1,7471B	JWN

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG1948816-2								
Antimony, Total	105		-		80-120	-		20
Arsenic, Total	100		-		80-120	-		20
Beryllium, Total	102		-		80-120	-		20
Cadmium, Total	104		-		80-120	-		20
Chromium, Total	94		-		80-120	-		20
Copper, Total	95		-		80-120	-		20
Lead, Total	104		-		80-120	-		20
Nickel, Total	100		-		80-120	-		20
Selenium, Total	93		-		80-120	-		20
Silver, Total	92		-		80-120	-		20
Thallium, Total	93		-		80-120	-		20
Zinc, Total	98		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG1948823-2								
Mercury, Total	100		-		80-120	-		

INORGANICS
&
MISCELLANEOUS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/24/24 16:27	1,1030	REM

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment

Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/24/24 16:27	1,1030	REM

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/24/24 16:27	1,1030	REM

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/24/24 16:27	1,1030	REM

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/24/24 16:27	1,1030	REM

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/24/24 16:27	1,1030	REM

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	07/23/24 02:17	1,9050A	CAR
Solids, Total	77.9		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.2	--	1	07/23/24 22:30	07/24/24 13:06	1,9010C/9012B	JER
pH (H)	7.72		SU	-	NA	1	-	07/23/24 00:51	1,9045D	CAR
Sulfate	ND		mg/kg	130	--	1	-	07/24/24 14:30	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:15	125,7.3	TLH
Sulfide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:07	125,7.3	TLH

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-02
Client ID: SED-2 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.839		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Total Organic Carbon (Rep2)	1.10		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Total Organic Carbon (Average)	0.967		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Coarse Gravel	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Fine Gravel	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Total Gravel	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Coarse Sand	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Medium Sand	1.00		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Fine Sand	48.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Total Sand	49.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Silt Fine	46.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Clay Fine	5.00		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Total Fines	51.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	07/23/24 02:17	1,9050A	CAR
Solids, Total	63.7		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.5	--	1	07/23/24 22:30	07/24/24 13:07	1,9010C/9012B	JER
pH (H)	6.25		SU	-	NA	1	-	07/23/24 00:51	1,9045D	CAR
Sulfate	ND		mg/kg	140	--	.9	-	07/24/24 14:30	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:15	125,7.3	TLH
Sulfide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:07	125,7.3	TLH

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-03
Client ID: SED-3 (0-2')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.20		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Total Organic Carbon (Rep2)	1.24		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Total Organic Carbon (Average)	1.22		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Coarse Gravel	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Fine Gravel	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Total Gravel	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Coarse Sand	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Medium Sand	ND		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Fine Sand	41.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Total Sand	41.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Silt Fine	54.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Clay Fine	5.00		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
% Total Fines	59.0		%	0.100	NA	1	-	07/20/24 15:59	12,D6913/D7928	SJK
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	07/23/24 02:17	1,9050A	CAR
Solids, Total	60.5		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.6	--	1	07/23/24 22:30	07/24/24 13:09	1,9010C/9012B	JER
pH (H)	6.34		SU	-	NA	1	-	07/23/24 00:51	1,9045D	CAR
Sulfate	ND		mg/kg	160	--	1	-	07/24/24 14:30	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:15	125,7.3	TLH
Sulfide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:07	125,7.3	TLH

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-04
Client ID: SED-4 (0-1.5')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 10:20
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	07/23/24 02:17	1,9050A	CAR
Solids, Total	62.2		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.5	--	1	07/23/24 22:30	07/24/24 13:10	1,9010C/9012B	JER
pH (H)	6.39		SU	-	NA	1	-	07/23/24 00:51	1,9045D	CAR
Sulfate	ND		mg/kg	140	--	.9	-	07/24/24 14:30	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:16	125,7.3	TLH
Sulfide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:08	125,7.3	TLH

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-05
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	07/23/24 02:17	1,9050A	CAR
Solids, Total	70.6		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.4	--	1	07/23/24 22:30	07/24/24 13:11	1,9010C/9012B	JER
pH (H)	6.02		SU	-	NA	1	-	07/23/24 00:51	1,9045D	CAR
Sulfate	ND		mg/kg	130	--	.9	-	07/24/24 14:30	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:16	125,7.3	TLH
Sulfide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:08	125,7.3	TLH

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

SAMPLE RESULTS

Lab ID: L2440510-06
Client ID: DUP
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 00:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	07/23/24 02:17	1,9050A	CAR
Solids, Total	64.5		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.5	--	1	07/23/24 22:30	07/24/24 13:12	1,9010C/9012B	JER
pH (H)	6.76		SU	-	NA	1	-	07/23/24 00:51	1,9045D	CAR
Sulfate	ND		mg/kg	160	--	1	-	07/24/24 14:30	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:16	125,7.3	TLH
Sulfide, Reactive	17		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:08	125,7.3	TLH

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2440510
Report Date: 08/09/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1948854-2										
Solids, Total	99.8		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1950413-1										
Sulfate	ND		mg/kg	100	--	1	-	07/24/24 14:30	1,9038	MRW
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1950492-1										
Cyanide, Total	ND		mg/kg	0.88	--	1	07/23/24 22:30	07/24/24 12:35	1,9010C/9012B	JER
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1951011-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:14	125,7.3	TLH
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1951012-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	07/24/24 21:10	07/24/24 22:06	125,7.3	TLH
Total Organic Carbon - Mansfield Lab for sample(s): 02-03 Batch: WG1954733-1										
Total Organic Carbon (Rep1)	ND		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Total Organic Carbon (Rep2)	ND		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP
Total Organic Carbon (Average)	ND		%	0.050	--	1	-	08/02/24 10:33	13,-	SPP

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1950002-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1950004-1								
Specific Conductance	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1950413-2								
Sulfate	82		-		80-121	-		12
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1950492-2 WG1950492-3								
Cyanide, Total	101		101		80-120	0		35
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1951011-2								
Cyanide, Reactive	117		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1951012-2								
Sulfide, Reactive	86		-		60-125	-		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510

Report Date: 08/09/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 02-03 Batch: WG1954733-2					
Total Organic Carbon (Rep1)	91	-	75-125	-	25
Total Organic Carbon (Rep2)	92	-	75-125	-	25
Total Organic Carbon (Average)	91	-	75-125	-	25

Matrix Spike Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1950413-4 QC Sample: L2440510-01 Client ID: SED-1 (0-1')												
Sulfate	ND	257	280	110		-	-		22-183	-		12
Total Organic Carbon - Mansfield Lab Associated sample(s): 02-03 QC Batch ID: WG1954733-4 QC Sample: L2440510-02 Client ID: SED-2 (0-2')												
Total Organic Carbon (Rep1)	0.839	1.53	2.67	119		-	-		75-125	-		25
Total Organic Carbon (Rep2)	1.10	1.16	2.09	85		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1948854-1 QC Sample: L2440510-01 Client ID: SED-1 (0-1')						
Solids, Total	77.9	73.1	%	6		20
Grain Size Analysis - Mansfield Lab Associated sample(s): 02-03 QC Batch ID: WG1949402-1 QC Sample: L2440510-02 Client ID: SED-2 (0-2')						
Cobbles	ND	ND	%	NC		20
% Coarse Gravel	ND	ND	%	NC		20
% Fine Gravel	ND	ND	%	NC		20
% Total Gravel	ND	ND	%	NC		20
% Coarse Sand	ND	ND	%	NC		20
% Medium Sand	1.00	1.00	%	0		20
% Fine Sand	48.0	48.0	%	0		20
% Total Sand	49.0	49.0	%	0		20
% Silt Fine	46.0	46.0	%	0		20
% Clay Fine	5.00	5.00	%	0		20
% Total Fines	51.0	51.0	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1950002-2 QC Sample: L2440510-02 Client ID: SED-2 (0-2')						
pH (H)	6.25	6.22	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1950004-2 QC Sample: L2440510-02 Client ID: SED-2 (0-2')						
Specific Conductance @ 25 C	ND	ND	umhos/cm	NC		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1950413-3 QC Sample: L2440510-01 Client ID: SED-1 (0-1')					
Sulfate	ND	ND	mg/kg	NC	12
Total Organic Carbon - Mansfield Lab Associated sample(s): 02-03 QC Batch ID: WG1954733-3 QC Sample: L2440510-02 Client ID: SED-2 (0-2')					
Total Organic Carbon (Rep1)	0.839	0.914	%	9	25
Total Organic Carbon (Rep2)	1.10	1.12	%	2	25
Total Organic Carbon (Average)	0.967	1.02	%	5	25

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2440510-01A	Vial MeOH preserved	B	NA		4.8	Y	Absent		8260HLW(14)
L2440510-01B	Vial water preserved	B	NA		4.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-01C	Vial water preserved	B	NA		4.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-01D	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		ME-TS-2540(7)
L2440510-01E	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		ME-TS-2540(7)
L2440510-01F	Metals Only-Glass 60mL/2oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),8270TCL(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),HERB-8151(14),REACTCN(14),COND-9050(28)
L2440510-01G	Metals Only-Glass 60mL/2oz unpreserved	B	NA		4.8	Y	Absent		TL-6020T(180),SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),SB-6020T(180),AS-6020T(180),HG-T(28),CD-6020T(180),AG-6020T(180)
L2440510-01H	Glass 120ml/4oz unpreserved/No Headspace	B	NA		4.8	Y	Absent		HOLD-WETCHEM()
L2440510-01J	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),8270TCL(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),HERB-8151(14),REACTCN(14),COND-9050(28)
L2440510-01K	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),8270TCL(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),HERB-8151(14),REACTCN(14),COND-9050(28)
L2440510-01L	Glass 500ml/16oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),TCN-9010(14),REACTS(14),8270TCL(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),HERB-8151(14),REACTCN(14),COND-9050(28)
L2440510-02A	Vial MeOH preserved	B	NA		4.8	Y	Absent		8260HLW(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2440510-02B	Vial water preserved	B	NA		4.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-02C	Vial water preserved	B	NA		4.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-02D	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		ME-TS-2540(7)
L2440510-02E	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		ME-TS-2540(7)
L2440510-02F	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		ME-TS-2540(7)
L2440510-02G	Metals Only-Glass 60mL/2oz unpreserved	B	NA		4.8	Y	Absent		A2-TOC-LK-2REPS(14)
L2440510-02H	Metals Only-Glass 60mL/2oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),IGNIT-1030(14),8270TCL(14),TCN-9010(14),TPH-DRO(14),SO4-9038(28),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)
L2440510-02J	Metals Only-Glass 60mL/2oz unpreserved	B	NA		4.8	Y	Absent		TL-6020T(180),SE-6020T(180),CR-6020T(180),NI-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),SB-6020T(180),AS-6020T(180),AG-6020T(180),HG-T(28),CD-6020T(180)
L2440510-02K	Glass 120ml/4oz unpreserved/No Headspace	B	NA		4.8	Y	Absent		HOLD-WETCHEM()
L2440510-02L	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),IGNIT-1030(14),8270TCL(14),TCN-9010(14),TPH-DRO(14),SO4-9038(28),8270TCL-SIM(14),PEST-8081(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)
L2440510-02M	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),IGNIT-1030(14),8270TCL(14),TCN-9010(14),TPH-DRO(14),SO4-9038(28),8270TCL-SIM(14),PEST-8081(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)
L2440510-02N	Glass 500ml/16oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),IGNIT-1030(14),8270TCL(14),TCN-9010(14),TPH-DRO(14),SO4-9038(28),8270TCL-SIM(14),PEST-8081(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)
L2440510-02P	Plastic 8oz unpreserved for Grain Size	B	NA		4.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL()
L2440510-03A	Vial MeOH preserved	A	NA		2.8	Y	Absent		8260HLW(14)
L2440510-03B	Vial water preserved	A	NA		2.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-03C	Vial water preserved	A	NA		2.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2440510-03D	Plastic 2oz unpreserved for TS	A	NA		2.8	Y	Absent		ME-TS-2540(7)
L2440510-03E	Plastic 2oz unpreserved for TS	A	NA		2.8	Y	Absent		ME-TS-2540(7)
L2440510-03F	Plastic 2oz unpreserved for TS	A	NA		2.8	Y	Absent		ME-TS-2540(7)
L2440510-03G	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		A2-TOC-LK-2REPS(14)
L2440510-03H	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		TCN-9010(14),REACTS(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-03J	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		SE-6020T(180),TL-6020T(180),NI-6020T(180),CR-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),SB-6020T(180),AS-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L2440510-03K	Glass 120ml/4oz unpreserved/No Headspace	A	NA		2.8	Y	Absent		HOLD-WETCHEM()
L2440510-03L	Glass 250ml/8oz unpreserved	A	NA		2.8	Y	Absent		TCN-9010(14),REACTS(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-03M	Glass 250ml/8oz unpreserved	A	NA		2.8	Y	Absent		TCN-9010(14),REACTS(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-03N	Glass 500ml/16oz unpreserved	A	NA		2.8	Y	Absent		TCN-9010(14),REACTS(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-03P	Plastic 8oz unpreserved for Grain Size	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-FGRAVEL(),A2-HYDRO-COBBLES()
L2440510-04A	Vial MeOH preserved	A	NA		2.8	Y	Absent		8260HLW(14)
L2440510-04B	Vial water preserved	A	NA		2.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-04C	Vial water preserved	A	NA		2.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2440510-04D	Plastic 2oz unpreserved for TS	A	NA		2.8	Y	Absent		ME-TS-2540(7)
L2440510-04E	Plastic 2oz unpreserved for TS	A	NA		2.8	Y	Absent		ME-TS-2540(7)
L2440510-04F	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		IGNIT-1030(14),REACTS(14),8270TCL(14),TCN-9010(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-04G	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L2440510-04H	Glass 120ml/4oz unpreserved/No Headspace	A	NA		2.8	Y	Absent		HOLD-WETCHEM()
L2440510-04J	Glass 250ml/8oz unpreserved	A	NA		2.8	Y	Absent		IGNIT-1030(14),REACTS(14),8270TCL(14),TCN-9010(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-04K	Glass 250ml/8oz unpreserved	A	NA		2.8	Y	Absent		IGNIT-1030(14),REACTS(14),8270TCL(14),TCN-9010(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-04L	Glass 500ml/16oz unpreserved	A	NA		2.8	Y	Absent		IGNIT-1030(14),REACTS(14),8270TCL(14),TCN-9010(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),REACTCN(14),HERB-8151(14),PCB-8082(365),COND-9050(28)
L2440510-05A	Vial MeOH preserved	B	NA		4.8	Y	Absent		8260HLW(14)
L2440510-05B	Vial water preserved	B	NA		4.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-05C	Vial water preserved	B	NA		4.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-05D	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		ME-TS-2540(7)
L2440510-05E	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		ME-TS-2540(7)
L2440510-05F	Metals Only-Glass 60mL/2oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),TCN-9010(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)

*Values in parentheses indicate holding time in days

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2440510-05G	Metals Only-Glass 60mL/2oz unpreserved	B	NA		4.8	Y	Absent		SE-6020T(180),TL-6020T(180),NI-6020T(180),CR-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L2440510-05H	Glass 120ml/4oz unpreserved/No Headspace	B	NA		4.8	Y	Absent		HOLD-WETCHEM()
L2440510-05J	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),TCN-9010(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)
L2440510-05K	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),TCN-9010(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)
L2440510-05L	Glass 500ml/16oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),TCN-9010(14),8270TCL(14),IGNIT-1030(14),TPH-DRO(14),SO4-9038(28),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),HERB-8151(14),PCB-8082(365),REACTCN(14),COND-9050(28)
L2440510-06A	Vial MeOH preserved	A	NA		2.8	Y	Absent		8260HLW(14)
L2440510-06B	Vial water preserved	A	NA		2.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-06C	Vial water preserved	A	NA		2.8	Y	Absent	18-JUL-24 22:07	8260HLW(14)
L2440510-06D	Plastic 2oz unpreserved for TS	A	NA		2.8	Y	Absent		ME-TS-2540(7)
L2440510-06E	Plastic 2oz unpreserved for TS	A	NA		2.8	Y	Absent		ME-TS-2540(7)
L2440510-06F	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		8270TCL(14),TCN-9010(14),IGNIT-1030(14),REACTS(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),PCB-8082(365),REACTCN(14),HERB-8151(14),COND-9050(28)
L2440510-06G	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),CD-6020T(180),AG-6020T(180),HG-T(28)
L2440510-06H	Glass 120ml/4oz unpreserved/No Headspace	A	NA		2.8	Y	Absent		HOLD-WETCHEM()

*Values in parentheses indicate holding time in days

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2440510
Report Date: 08/09/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2440510-06J	Glass 250ml/8oz unpreserved	A	NA		2.8	Y	Absent		8270TCL(14),TCN-9010(14),IGNIT-1030(14),REACTS(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),PCB-8082(365),REACTCN(14),HERB-8151(14),COND-9050(28)
L2440510-06K	Glass 250ml/8oz unpreserved	A	NA		2.8	Y	Absent		8270TCL(14),TCN-9010(14),IGNIT-1030(14),REACTS(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),PCB-8082(365),REACTCN(14),HERB-8151(14),COND-9050(28)
L2440510-06L	Glass 500ml/16oz unpreserved	A	NA		2.8	Y	Absent		8270TCL(14),TCN-9010(14),IGNIT-1030(14),REACTS(14),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),PCB-8082(365),REACTCN(14),HERB-8151(14),COND-9050(28)

*Values in parentheses indicate holding time in days

Project Name:	BAR MILLS DAM	**Lab Number:**	L2440510
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/09/24

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2440510
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/09/24

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2440510
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/09/24

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2440510
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/09/24

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

LIMITATION OF LIABILITIES

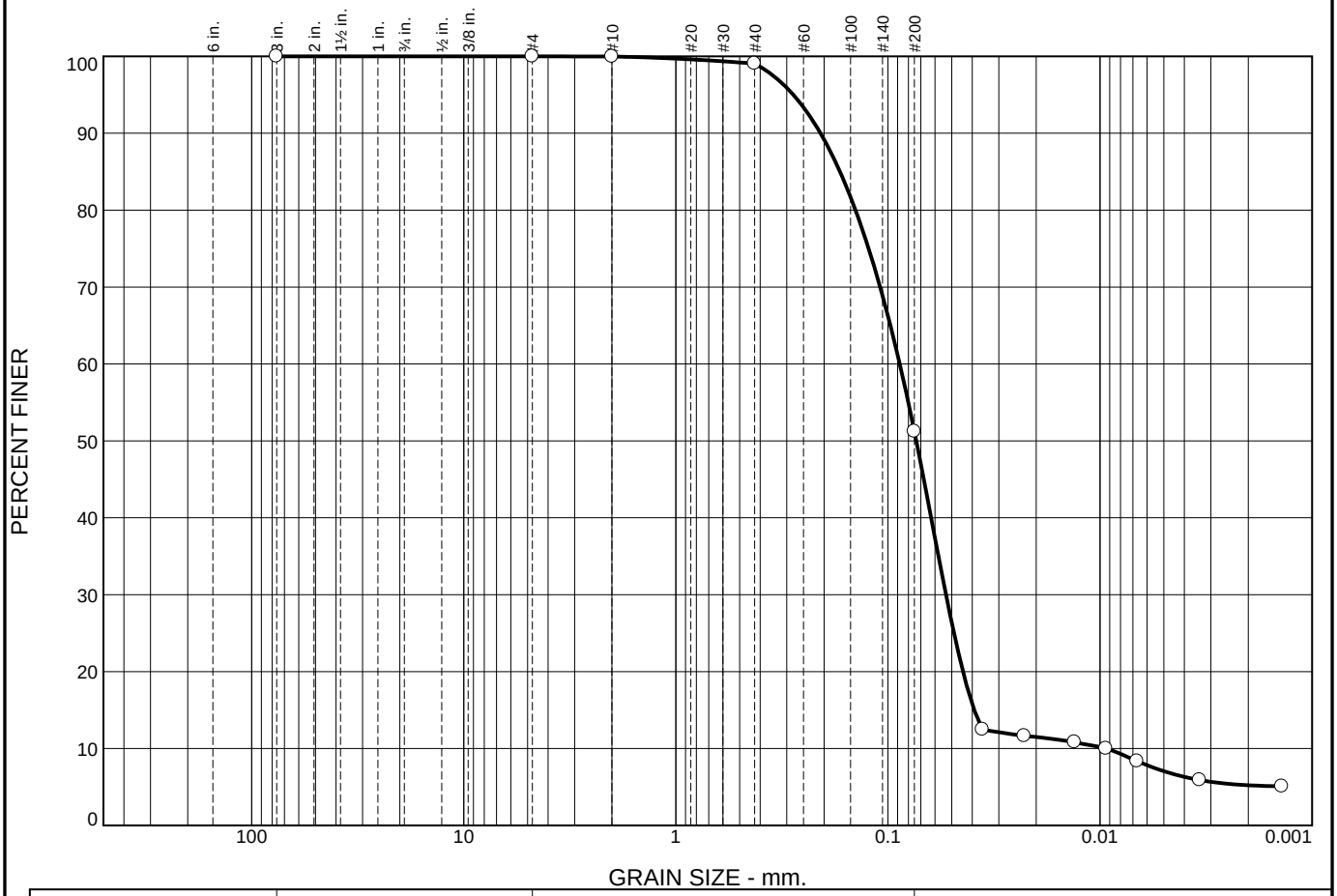
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	0	1	48	46	5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1683	0.0879	0.0735	0.0532	0.0392	0.0094	3.44	9.38

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SED-2 (0-2') **Sample Number:** L2440510-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

8/7/2024

Location: SED-2 (0-2')
Sample Number: L2440510-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 79.42
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
79.42	0.00	3"	0.00	0.00	100
		#4	0.00	0.00	100
		#10	0.02	0.00	100
		#40	0.73	0.00	99
		#200	37.99	0.00	51

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 51
Weight of hydrometer sample =50.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -1
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 **-** 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	1.0085	1.0076	0.0135	8.5	14.0	0.0358	12.5
5.00	20.9	1.0080	1.0071	0.0135	8.0	14.2	0.0227	11.6
15.00	20.9	1.0075	1.0066	0.0135	7.5	14.3	0.0132	10.8
30.00	20.9	1.0070	1.0061	0.0135	7.0	14.4	0.0094	10.0
60.00	20.9	1.0060	1.0051	0.0135	6.0	14.7	0.0067	8.4
240.00	20.9	1.0045	1.0036	0.0135	4.5	15.1	0.0034	5.9
1440.00	20.9	1.0040	1.0031	0.0135	4.0	15.2	0.0014	5.1

Fractional Components

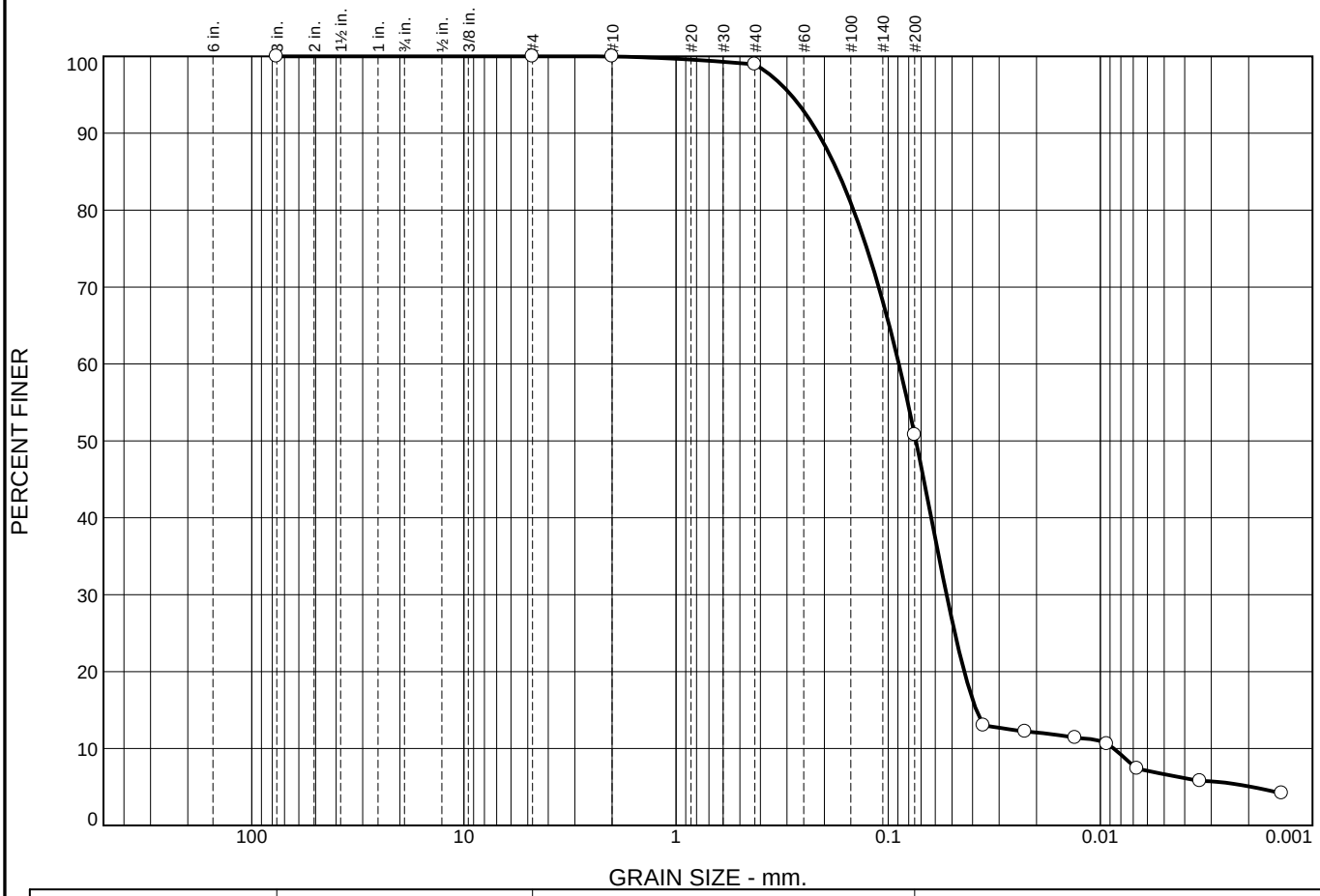
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	1	48	49	46	5	51

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0094	0.0392	0.0443	0.0532	0.0625	0.0735	0.0879	0.1422	0.1683	0.2078	0.2790

Fineness Modulus	C_u	C_c
0.23	9.38	3.44

Alpha Analytical

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	0	1	48	46	5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1729	0.0890	0.0740	0.0531	0.0384	0.0086	3.66	10.30

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SED-2 (0-2') **Sample Number:** WG1949402-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

8/7/2024

Location: SED-2 (0-2')
Sample Number: WG1949402-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 79.07
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
79.07	0.00	3"	0.00	0.00	100
		#4	0.00	0.00	100
		#10	0.01	0.00	100
		#40	0.82	0.00	99
		#200	38.08	0.00	51

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 51
Weight of hydrometer sample =50.73
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -1
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 **-** 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	1.0090	1.0081	0.0135	9.0	13.9	0.0356	13.0
5.00	20.9	1.0085	1.0076	0.0135	8.5	14.0	0.0226	12.2
15.00	20.9	1.0080	1.0071	0.0135	8.0	14.2	0.0131	11.4
30.00	20.9	1.0075	1.0066	0.0135	7.5	14.3	0.0093	10.6
60.00	20.9	1.0055	1.0046	0.0135	5.5	14.8	0.0067	7.4
240.00	20.9	1.0045	1.0036	0.0135	4.5	15.1	0.0034	5.8
1440.00	20.9	1.0035	1.0026	0.0135	3.5	15.4	0.0014	4.2

Fractional Components

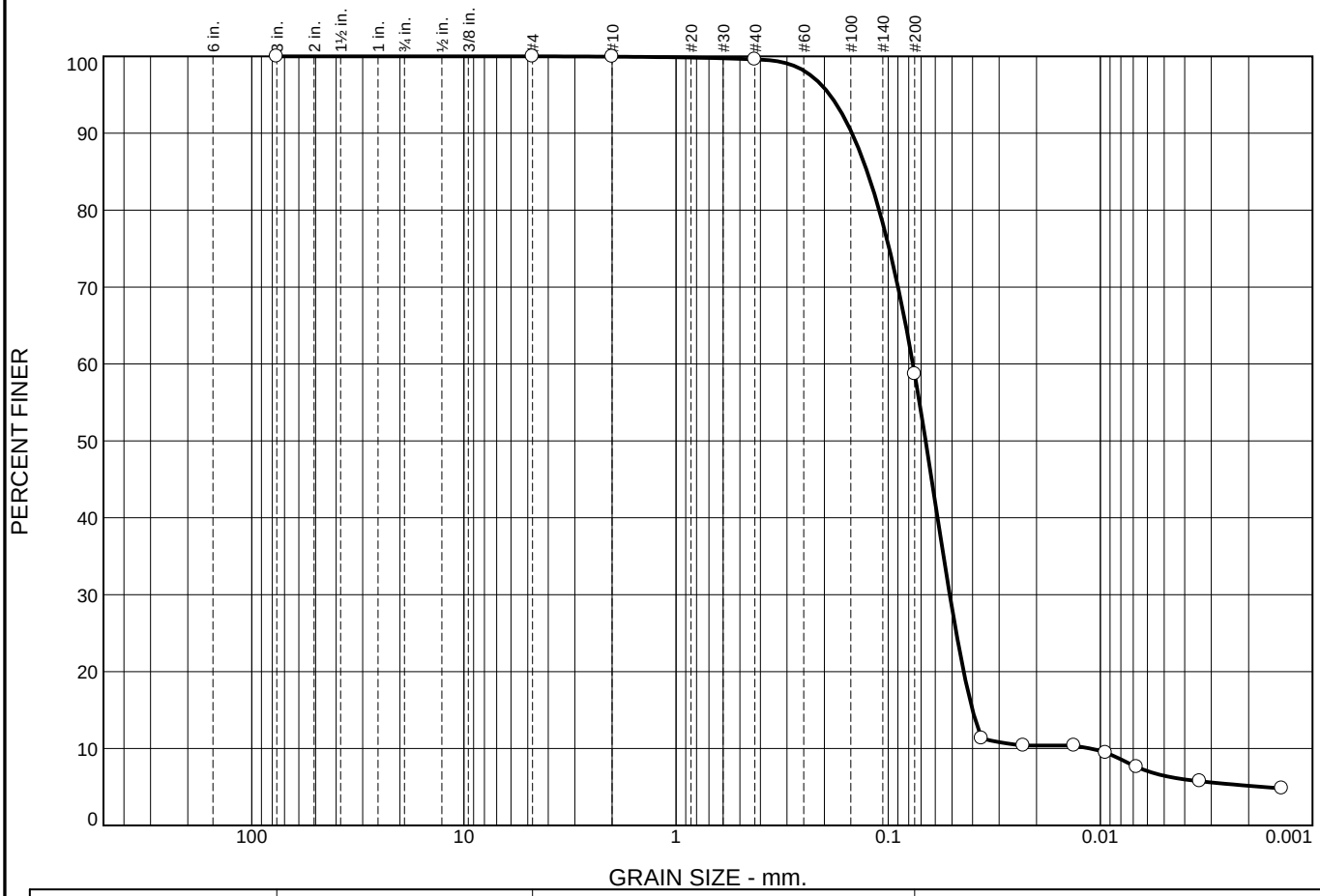
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	1	48	49	46	5	51

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0019	0.0086	0.0384	0.0438	0.0531	0.0627	0.0740	0.0890	0.1457	0.1729	0.2140	0.2871

Fineness Modulus	C_u	C_c
0.24	10.30	3.66

Alpha Analytical

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	0	0	41	54	5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1256	0.0764	0.0666	0.0513	0.0400	0.0112	3.07	6.82

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SED-3 (0-2') **Sample Number:** L2440510-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

8/7/2024

Location: SED-3 (0-2')
Sample Number: L2440510-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 115.40
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.40	0.00	3"	0.00	0.00	100
		#4	0.00	0.00	100
		#10	0.05	0.00	100
		#40	0.41	0.00	100
		#200	47.20	0.00	59

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 59
Weight of hydrometer sample =50.76
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -1
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 **-** 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	1.0070	1.0061	0.0135	7.0	14.4	0.0363	11.3
5.00	20.9	1.0065	1.0056	0.0135	6.5	14.6	0.0230	10.4
15.00	20.9	1.0065	1.0056	0.0135	6.5	14.6	0.0133	10.4
30.00	20.9	1.0060	1.0051	0.0135	6.0	14.7	0.0094	9.5
60.00	20.9	1.0050	1.0041	0.0135	5.0	15.0	0.0067	7.6
240.00	20.9	1.0040	1.0031	0.0135	4.0	15.2	0.0034	5.7
1440.00	20.9	1.0035	1.0026	0.0135	3.5	15.4	0.0014	4.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	0	41	41	54	5	59

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0017	0.0112	0.0400	0.0441	0.0513	0.0585	0.0666	0.0764	0.1103	0.1256	0.1481	0.1885

Fineness Modulus	C_u	C_c
0.11	6.82	3.07

Alpha Analytical

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2440510 25JUL24
TRC – ME

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 7/18/24

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: TRC Environmental Corp
Address: 63 Marginal Way, 4th Floor
Portland, ME 04101
Phone: 207-205-2830
Fax:
Email: See comments

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Bar Mills Dam
Project Location: Buxton/Hollis, ME
Project #: 510195, Phase 5, Task 2
Project Manager: Zachary Bonin
ALPHA Quote #: Q28026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
Maine Department of Environmental Protection	Remedial Action Guidelines (All scenarios)

Other Project Specific Requirements/Comments/Detection Limits:

Email results to: zbonin@trccompanies.com; teschner@trccompanies.com; alaughlin@trccompanies.com; aburns@trccompanies.com
Hold samples for Chromium Speciation pending PPM13 Total Metals results.
Detection Limits must meet all Maine Department of Environmental Protection RAGs

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs EPA 8260C	SVOCs 8270C-SIM	PCB Aroclors 8082A	TPH 8015D(M)	PPM13 Metals 6010B †	Pesticides 8081B / Herbicides 8151A	Reactive cyanide / sulfur method 7.3	Conductivity / Corrosivity / pH / Ignitab	Total Cyanide 9010 / Sulfate 9038	TOC via Lloyd Kahn (2 reps)	Grain Size ASTM D422 w/ hydrometer	Chromium Speciation (See comment)	Sample Specific Comments	TOTAL # BOTTLES
40510 -01	SED-1 (0-1')	7/18/24	08:30 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		11
02	SED-2 (0-2')	7/18/24	09:00 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐		14
03	SED-3 (0-2')	7/18/24	10:00 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐		14
04	SED-4 (0-1.5')	7/18/24	10:20 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		11
05	SS-1	7/18/24	09:25 AM	Soil	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		11
06	DUP	–	–	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		11
07	Trip Blank					☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
Container Type						✓	A	A	A	A	A	A	A	A	A	A			
Preservative						F	A	A	A	A	A	A	A	A	A	A			

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Relinquished By:	Date/Time	Received By:	Date/Time
A. Burns	7/18/24 15:00	Pace	7/18/24 1500
Pace	7/18/24 1705		7/18/24 1701
	7/18/24 1915		7/18 1915

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ANALYTICAL REPORT

Lab Number:	L2447107
Client:	TRC Environmental Corp 63 Marginal Way, 4th Floor Portland, ME 04101
ATTN:	Zachary Bonin
Phone:	(207) 205-2830
Project Name:	BAR MILLS DAM
Project Number:	510195, PH 5, TASK 2
Report Date:	08/26/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2447107
Report Date: 08/26/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2447107-01	SED-1 (0-1')	SEDIMENT	BUXTON/ HOLLIS, ME	07/18/24 08:30	07/18/24
L2447107-02	SS-1	SOIL	BUXTON/ HOLLIS, ME	07/18/24 09:25	07/18/24

Project Name:	BAR MILLS DAM	**Lab Number:**	L2447107
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/26/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BAR MILLS DAM	**Lab Number:**	L2447107
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/26/24

Case Narrative (continued)

Chromium, Hexavalent

L2447107-01 and -02: The sample was analyzed with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 08/26/24

INORGANICS
&
MISCELLANEOUS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2447107
Report Date: 08/26/24

SAMPLE RESULTS

Lab ID: L2447107-01
Client ID: SED-1 (0-1')
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 08:30
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.9		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.03	--	1	08/22/24 13:36	08/23/24 15:16	1,7196A	RDS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2447107
Report Date: 08/26/24

SAMPLE RESULTS

Lab ID: L2447107-02
Client ID: SS-1
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 07/18/24 09:25
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.6		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.13	--	1	08/22/24 13:36	08/23/24 15:16	1,7196A	RDS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2447107
Report Date: 08/26/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1948854-2										
Solids, Total	99.8		%	0.100	NA	1	-	07/19/24 08:15	121,2540G	ROI
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1962497-1										
Chromium, Hexavalent	ND		mg/kg	0.800	--	1	08/22/24 13:36	08/23/24 15:16	1,7196A	RDS

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2447107

Report Date: 08/26/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1962497-2								
Chromium, Hexavalent	90		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2447107
Report Date: 08/26/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1962497-4 QC Sample: L2447107-02 Client ID: SS-1												
Chromium, Hexavalent	ND	1640	1440	88		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2447107

Report Date: 08/26/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1962497-6 QC Sample: L2447107-02 Client ID: SS-1						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2447107
Report Date: 08/26/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2447107-01K	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		HEXCR-7196(30)
L2447107-02J	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		HEXCR-7196(30)

*Values in parentheses indicate holding time in days

Project Name:	BAR MILLS DAM	**Lab Number:**	L2447107
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/26/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2447107
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/26/24

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2447107
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/26/24

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2447107
Project Number:	510195, PH 5, TASK 2	**Report Date:**	08/26/24

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:08262411:39
Serial_No:08092414:31

~~L2440510~~ 25JUL24
TRC – ME
L2447107

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 7/18/24

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Report Information Data Deliverable
- ☐ FAX
- ☒ EMAIL
- ☒ ADEx
- ☐ Add'l Deliverables

Project Information
Project Name: Bar Mills Dam
Project Location: Buxton/Hollis, ME
Project #: 510195, Phase 5, Task 2
Project Manager: Zachary Bonin
ALPHA Quote #: Q28026

Regulatory Requirements/Report Limits
State/Fed Program: Maine Department of Environmental Protection
Criteria: Remedial Action Guidelines (All scenarios)

Client Information
Client: TRC Environmental Corp
Address: 63 Marginal Way, 4th Floor
Portland, ME 04101
Phone: 207-205-2830
Fax:
Email: See comments
☐ These samples have been Previously analyzed by Alpha

Turn-Around Time
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:
Email results to: zbonin@trccompanies.com; teschner@trcccompanies.com; alaughlin@trccompanies.com; aburns@trccompanies.com
~~Hold samples for Chromium Speciation pending PPM13 Total Metals results~~
Detection Limits must meet all Maine Department of Environmental Protection RAGs

Please analyze requested samples for Hexavalent Chormium (ZEB, 8/19/24)

Hexavalent Chromium

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs EPA 8260C	SVOCs 8270C-SIM	PCB Aroclors 8082A	TPH 8015D(M)	PPM13 Metals 6010B +	Pesticides 8081B / Herbicides 8151A	Reactive cyanide / sulfur method 7.3	Conductivity / Corrosivity / pH / Ignitab	Total Cyanide 9010 / Sulfate 9038	TOC via Lloyd Kahn (2 reps)	Grain Size ASTM D422 w/ hydrometer	Chromium Speciation (See comment)	SAMPLE HANDLING Filtration ☐ Done ☐ Not Needed ☐ Lab to do Preservation ☐ Lab to do (Please specify below)	Sample Specific Comments	TOTAL # BOTTLES
~~70510~~ -01	SED-1 (0-1')	7/18/24	08:30 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	X			11
02	SED-2 (0-2')	7/18/24	09:00 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐			14
03	SED-3 (0-2')	7/18/24	10:00 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐			14
04	SED-4 (0-1.5')	7/18/24	10:20 AM	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐			11
05	SS-1	7/18/24	09:25 AM	Soil	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	X			11
47107-02 06	DUP	-	-	Sediment	AL/AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐			11
07	Trip Blank					☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			1
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
Container Type						✓	A	A	A	A	A	A	A	A	A	A	-			
Preservative						F	A	A	A	A	A	A	A	A	A	A	-			

Relinquished By:	Date/Time	Received By:	Date/Time
A. Burns	7/19/24 8:00	Pace	7/18/24 1503
Pace	7/18/24 1705		7/18/24 1701
	7/18/24 1915		7/18 1915

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ANALYTICAL REPORT

Lab Number:	L2454546
Client:	TRC Environmental Corp 63 Marginal Way, 4th Floor Portland, ME 04101
ATTN:	Zachary Bonin
Phone:	(207) 205-2830
Project Name:	BAR MILLS DAM
Project Number:	510195, PH 5, TASK 2
Report Date:	10/17/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2454546-01	SED-5	SEDIMENT	BUXTON/ HOLLIS, ME	09/23/24 08:30	09/23/24
L2454546-02	SED-6	SEDIMENT	BUXTON/ HOLLIS, ME	09/23/24 08:45	09/23/24
L2454546-03	SED-7	SEDIMENT	BUXTON/ HOLLIS, ME	09/23/24 09:05	09/23/24
L2454546-04	TRIP BLANKS	SOIL	BUXTON/ HOLLIS, ME	09/23/24 00:00	09/23/24

Project Name:	BAR MILLS DAM	**Lab Number:**	L2454546
Project Number:	510195, PH 5, TASK 2	**Report Date:**	10/17/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BAR MILLS DAM **Lab Number:** L2454546
Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

Case Narrative (continued)

Report Submission

October 17, 2024: This final report includes the results of all requested analyses.

October 07, 2024: This is a preliminary report.

Sample Receipt

L2454546-02: At the client's request, the Hexavalent Chromium analysis was performed.

Semivolatile Organics

The WG1977684-2/-3 LCS/LCSD recoveries, associated with L2454546-01, -02, and -03, are below the acceptance criteria for benzoic acid (1%/4%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

The WG1977684-2/-3 LCS/LCSD RPD, associated with L2454546-01, -02, and -03, is above the acceptance criteria for benzoic acid (94%).

PCBs

L2454546-01, -02, and -03: The sample has elevated detection limits due to limited sample volume available for analysis.

Cyanide, Total

The WG1976340-2 LCS recovery for cyanide, total (61%), associated with L2454546-01 through -03, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.

pH

The WG1977417-2 Laboratory Duplicate RPD for pH (8%), performed on L2454546-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Project Name:	BAR MILLS DAM	**Lab Number:**	L2454546
Project Number:	510195, PH 5, TASK 2	**Report Date:**	10/17/24

Case Narrative (continued)

Total Organic Carbon

WG1981162: The required batch QC was prepared; however, the native sample required a different reporting method; therefore, the associated QC results could not be reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 10/17/24

ORGANICS

VOLATILES

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 10/02/24 14:45
Analyst: TMH
Percent Solids: 50%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	10	--	1
1,1-Dichloroethane	ND		ug/kg	2.0	--	1
Chloroform	ND		ug/kg	3.0	--	1
Carbon tetrachloride	ND		ug/kg	2.0	--	1
1,2-Dichloropropane	ND		ug/kg	2.0	--	1
Dibromochloromethane	ND		ug/kg	2.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	2.0	--	1
Tetrachloroethene	ND		ug/kg	1.0	--	1
Chlorobenzene	ND		ug/kg	1.0	--	1
Trichlorofluoromethane	ND		ug/kg	8.1	--	1
1,2-Dichloroethane	ND		ug/kg	2.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	--	1
Bromodichloromethane	ND		ug/kg	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/kg	2.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--	1
1,1-Dichloropropene	ND		ug/kg	1.0	--	1
Bromoform	ND		ug/kg	8.1	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--	1
Benzene	ND		ug/kg	1.0	--	1
Toluene	ND		ug/kg	2.0	--	1
Ethylbenzene	ND		ug/kg	2.0	--	1
Chloromethane	ND		ug/kg	8.1	--	1
Bromomethane	ND		ug/kg	4.1	--	1
Vinyl chloride	ND		ug/kg	2.0	--	1
Chloroethane	ND		ug/kg	4.1	--	1
1,1-Dichloroethene	ND		ug/kg	2.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	3.0	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01 Date Collected: 09/23/24 08:30

Client ID: SED-5 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichlorobenzene	ND		ug/kg	4.1	--	1
1,3-Dichlorobenzene	ND		ug/kg	4.1	--	1
1,4-Dichlorobenzene	ND		ug/kg	4.1	--	1
Methyl tert butyl ether	ND		ug/kg	4.1	--	1
p/m-Xylene	ND		ug/kg	4.1	--	1
o-Xylene	ND		ug/kg	2.0	--	1
Xylenes, Total	ND		ug/kg	2.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	2.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	2.0	--	1
Dibromomethane	ND		ug/kg	4.1	--	1
1,4-Dichlorobutane	ND		ug/kg	20	--	1
1,2,3-Trichloropropane	ND		ug/kg	4.1	--	1
Styrene	ND		ug/kg	2.0	--	1
Dichlorodifluoromethane	ND		ug/kg	20	--	1
Acetone	82		ug/kg	51	--	1
Carbon disulfide	ND		ug/kg	20	--	1
2-Butanone	ND		ug/kg	20	--	1
Vinyl acetate	ND		ug/kg	20	--	1
4-Methyl-2-pentanone	ND		ug/kg	20	--	1
2-Hexanone	ND		ug/kg	20	--	1
Ethyl methacrylate	ND		ug/kg	20	--	1
Acrylonitrile	ND		ug/kg	8.1	--	1
Bromochloromethane	ND		ug/kg	4.1	--	1
Tetrahydrofuran	ND		ug/kg	8.1	--	1
2,2-Dichloropropane	ND		ug/kg	4.1	--	1
1,2-Dibromoethane	ND		ug/kg	2.0	--	1
1,3-Dichloropropane	ND		ug/kg	4.1	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--	1
Bromobenzene	ND		ug/kg	4.1	--	1
n-Butylbenzene	ND		ug/kg	2.0	--	1
sec-Butylbenzene	ND		ug/kg	2.0	--	1
tert-Butylbenzene	ND		ug/kg	4.1	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	4.1	--	1
o-Chlorotoluene	ND		ug/kg	4.1	--	1
p-Chlorotoluene	ND		ug/kg	4.1	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.1	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01 Date Collected: 09/23/24 08:30

Client ID: SED-5 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	8.1	--	1
Isopropylbenzene	ND		ug/kg	2.0	--	1
p-Isopropyltoluene	ND		ug/kg	2.0	--	1
Naphthalene	ND		ug/kg	8.1	--	1
n-Propylbenzene	ND		ug/kg	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.1	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.1	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.1	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	4.1	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	10	--	1
Ethyl ether	ND		ug/kg	4.1	--	1
Methyl Acetate	ND		ug/kg	8.1	--	1
Ethyl Acetate	ND		ug/kg	20	--	1
Diisopropyl Ether	ND		ug/kg	4.1	--	1
Cyclohexane	ND		ug/kg	20	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.1	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.1	--	1
1,4-Dioxane	ND		ug/kg	160	--	1
Methyl cyclohexane	ND		ug/kg	8.1	--	1
Freon-113	ND		ug/kg	8.1	--	1
p-Diethylbenzene	ND		ug/kg	4.1	--	1
p-Ethyltoluene	ND		ug/kg	4.1	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.1	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	102		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 10/02/24 15:06
Analyst: TMH
Percent Solids: 47%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	14	--	1
1,1-Dichloroethane	ND		ug/kg	2.7	--	1
Chloroform	ND		ug/kg	4.1	--	1
Carbon tetrachloride	ND		ug/kg	2.7	--	1
1,2-Dichloropropane	ND		ug/kg	2.7	--	1
Dibromochloromethane	ND		ug/kg	2.7	--	1
1,1,2-Trichloroethane	ND		ug/kg	2.7	--	1
Tetrachloroethene	ND		ug/kg	1.4	--	1
Chlorobenzene	ND		ug/kg	1.4	--	1
Trichlorofluoromethane	ND		ug/kg	11	--	1
1,2-Dichloroethane	ND		ug/kg	2.7	--	1
1,1,1-Trichloroethane	ND		ug/kg	1.4	--	1
Bromodichloromethane	ND		ug/kg	1.4	--	1
trans-1,3-Dichloropropene	ND		ug/kg	2.7	--	1
cis-1,3-Dichloropropene	ND		ug/kg	1.4	--	1
1,3-Dichloropropene, Total	ND		ug/kg	1.4	--	1
1,1-Dichloropropene	ND		ug/kg	1.4	--	1
Bromoform	ND		ug/kg	11	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.4	--	1
Benzene	ND		ug/kg	1.4	--	1
Toluene	ND		ug/kg	2.7	--	1
Ethylbenzene	ND		ug/kg	2.7	--	1
Chloromethane	ND		ug/kg	11	--	1
Bromomethane	ND		ug/kg	5.5	--	1
Vinyl chloride	ND		ug/kg	2.7	--	1
Chloroethane	ND		ug/kg	5.5	--	1
1,1-Dichloroethene	ND		ug/kg	2.7	--	1
trans-1,2-Dichloroethene	ND		ug/kg	4.1	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02 Date Collected: 09/23/24 08:45

Client ID: SED-6 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	1.4	--	1
1,2-Dichlorobenzene	ND		ug/kg	5.5	--	1
1,3-Dichlorobenzene	ND		ug/kg	5.5	--	1
1,4-Dichlorobenzene	ND		ug/kg	5.5	--	1
Methyl tert butyl ether	ND		ug/kg	5.5	--	1
p/m-Xylene	ND		ug/kg	5.5	--	1
o-Xylene	ND		ug/kg	2.7	--	1
Xylenes, Total	ND		ug/kg	2.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	2.7	--	1
1,2-Dichloroethene, Total	ND		ug/kg	2.7	--	1
Dibromomethane	ND		ug/kg	5.5	--	1
1,4-Dichlorobutane	ND		ug/kg	27	--	1
1,2,3-Trichloropropane	ND		ug/kg	5.5	--	1
Styrene	ND		ug/kg	2.7	--	1
Dichlorodifluoromethane	ND		ug/kg	27	--	1
Acetone	100		ug/kg	68	--	1
Carbon disulfide	ND		ug/kg	27	--	1
2-Butanone	27		ug/kg	27	--	1
Vinyl acetate	ND		ug/kg	27	--	1
4-Methyl-2-pentanone	ND		ug/kg	27	--	1
2-Hexanone	ND		ug/kg	27	--	1
Ethyl methacrylate	ND		ug/kg	27	--	1
Acrylonitrile	ND		ug/kg	11	--	1
Bromochloromethane	ND		ug/kg	5.5	--	1
Tetrahydrofuran	ND		ug/kg	11	--	1
2,2-Dichloropropane	ND		ug/kg	5.5	--	1
1,2-Dibromoethane	ND		ug/kg	2.7	--	1
1,3-Dichloropropane	ND		ug/kg	5.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.4	--	1
Bromobenzene	ND		ug/kg	5.5	--	1
n-Butylbenzene	ND		ug/kg	2.7	--	1
sec-Butylbenzene	ND		ug/kg	2.7	--	1
tert-Butylbenzene	ND		ug/kg	5.5	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	5.5	--	1
o-Chlorotoluene	ND		ug/kg	5.5	--	1
p-Chlorotoluene	ND		ug/kg	5.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	8.2	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02 Date Collected: 09/23/24 08:45

Client ID: SED-6 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	11	--	1
Isopropylbenzene	ND		ug/kg	2.7	--	1
p-Isopropyltoluene	ND		ug/kg	2.7	--	1
Naphthalene	ND		ug/kg	11	--	1
n-Propylbenzene	ND		ug/kg	2.7	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.5	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.5	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.5	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	14	--	1
Ethyl ether	ND		ug/kg	5.5	--	1
Methyl Acetate	ND		ug/kg	11	--	1
Ethyl Acetate	ND		ug/kg	27	--	1
Diisopropyl Ether	ND		ug/kg	5.5	--	1
Cyclohexane	ND		ug/kg	27	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	5.5	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	5.5	--	1
1,4-Dioxane	ND		ug/kg	220	--	1
Methyl cyclohexane	ND		ug/kg	11	--	1
Freon-113	ND		ug/kg	11	--	1
p-Diethylbenzene	ND		ug/kg	5.5	--	1
p-Ethyltoluene	ND		ug/kg	5.5	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	105		70-130

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 10/02/24 15:27
Analyst: TMH
Percent Solids: 46%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	13	--	1
1,1-Dichloroethane	ND		ug/kg	2.6	--	1
Chloroform	ND		ug/kg	3.9	--	1
Carbon tetrachloride	ND		ug/kg	2.6	--	1
1,2-Dichloropropane	ND		ug/kg	2.6	--	1
Dibromochloromethane	ND		ug/kg	2.6	--	1
1,1,2-Trichloroethane	ND		ug/kg	2.6	--	1
Tetrachloroethene	ND		ug/kg	1.3	--	1
Chlorobenzene	ND		ug/kg	1.3	--	1
Trichlorofluoromethane	ND		ug/kg	10	--	1
1,2-Dichloroethane	ND		ug/kg	2.6	--	1
1,1,1-Trichloroethane	ND		ug/kg	1.3	--	1
Bromodichloromethane	ND		ug/kg	1.3	--	1
trans-1,3-Dichloropropene	ND		ug/kg	2.6	--	1
cis-1,3-Dichloropropene	ND		ug/kg	1.3	--	1
1,3-Dichloropropene, Total	ND		ug/kg	1.3	--	1
1,1-Dichloropropene	ND		ug/kg	1.3	--	1
Bromoform	ND		ug/kg	10	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.3	--	1
Benzene	ND		ug/kg	1.3	--	1
Toluene	ND		ug/kg	2.6	--	1
Ethylbenzene	ND		ug/kg	2.6	--	1
Chloromethane	ND		ug/kg	10	--	1
Bromomethane	ND		ug/kg	5.2	--	1
Vinyl chloride	ND		ug/kg	2.6	--	1
Chloroethane	ND		ug/kg	5.2	--	1
1,1-Dichloroethene	ND		ug/kg	2.6	--	1
trans-1,2-Dichloroethene	ND		ug/kg	3.9	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03 Date Collected: 09/23/24 09:05

Client ID: SED-7 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	1.3	--	1
1,2-Dichlorobenzene	ND		ug/kg	5.2	--	1
1,3-Dichlorobenzene	ND		ug/kg	5.2	--	1
1,4-Dichlorobenzene	ND		ug/kg	5.2	--	1
Methyl tert butyl ether	ND		ug/kg	5.2	--	1
p/m-Xylene	ND		ug/kg	5.2	--	1
o-Xylene	ND		ug/kg	2.6	--	1
Xylenes, Total	ND		ug/kg	2.6	--	1
cis-1,2-Dichloroethene	ND		ug/kg	2.6	--	1
1,2-Dichloroethene, Total	ND		ug/kg	2.6	--	1
Dibromomethane	ND		ug/kg	5.2	--	1
1,4-Dichlorobutane	ND		ug/kg	26	--	1
1,2,3-Trichloropropane	ND		ug/kg	5.2	--	1
Styrene	ND		ug/kg	2.6	--	1
Dichlorodifluoromethane	ND		ug/kg	26	--	1
Acetone	160		ug/kg	65	--	1
Carbon disulfide	ND		ug/kg	26	--	1
2-Butanone	37		ug/kg	26	--	1
Vinyl acetate	ND		ug/kg	26	--	1
4-Methyl-2-pentanone	ND		ug/kg	26	--	1
2-Hexanone	ND		ug/kg	26	--	1
Ethyl methacrylate	ND		ug/kg	26	--	1
Acrylonitrile	ND		ug/kg	10	--	1
Bromochloromethane	ND		ug/kg	5.2	--	1
Tetrahydrofuran	ND		ug/kg	10	--	1
2,2-Dichloropropane	ND		ug/kg	5.2	--	1
1,2-Dibromoethane	ND		ug/kg	2.6	--	1
1,3-Dichloropropane	ND		ug/kg	5.2	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.3	--	1
Bromobenzene	ND		ug/kg	5.2	--	1
n-Butylbenzene	ND		ug/kg	2.6	--	1
sec-Butylbenzene	ND		ug/kg	2.6	--	1
tert-Butylbenzene	ND		ug/kg	5.2	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	5.2	--	1
o-Chlorotoluene	ND		ug/kg	5.2	--	1
p-Chlorotoluene	ND		ug/kg	5.2	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	7.8	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03 Date Collected: 09/23/24 09:05

Client ID: SED-7 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	10	--	1
Isopropylbenzene	ND		ug/kg	2.6	--	1
p-Isopropyltoluene	ND		ug/kg	2.6	--	1
Naphthalene	ND		ug/kg	10	--	1
n-Propylbenzene	ND		ug/kg	2.6	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.2	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.2	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.2	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.2	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	13	--	1
Ethyl ether	ND		ug/kg	5.2	--	1
Methyl Acetate	ND		ug/kg	10	--	1
Ethyl Acetate	ND		ug/kg	26	--	1
Diisopropyl Ether	ND		ug/kg	5.2	--	1
Cyclohexane	ND		ug/kg	26	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	5.2	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	5.2	--	1
1,4-Dioxane	ND		ug/kg	210	--	1
Methyl cyclohexane	ND		ug/kg	10	--	1
Freon-113	ND		ug/kg	10	--	1
p-Diethylbenzene	ND		ug/kg	5.2	--	1
p-Ethyltoluene	ND		ug/kg	5.2	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.2	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	102		70-130

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-04 Date Collected: 09/23/24 00:00
Client ID: TRIP BLANKS Date Received: 09/23/24
Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 10/02/24 15:47
Analyst: TMH
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.0	--	1
1,1-Dichloroethane	ND		ug/kg	1.0	--	1
Chloroform	ND		ug/kg	1.5	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	1.0	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	--	1
Tetrachloroethene	ND		ug/kg	0.50	--	1
Chlorobenzene	ND		ug/kg	0.50	--	1
Trichlorofluoromethane	ND		ug/kg	4.0	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	--	1
Bromodichloromethane	ND		ug/kg	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--	1
1,1-Dichloropropene	ND		ug/kg	0.50	--	1
Bromoform	ND		ug/kg	4.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Benzene	ND		ug/kg	0.50	--	1
Toluene	ND		ug/kg	1.0	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.0	--	1
Bromomethane	ND		ug/kg	2.0	--	1
Vinyl chloride	ND		ug/kg	1.0	--	1
Chloroethane	ND		ug/kg	2.0	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-04 Date Collected: 09/23/24 00:00

Client ID: TRIP BLANKS Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.50	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	--	1
Methyl tert butyl ether	ND		ug/kg	2.0	--	1
p/m-Xylene	ND		ug/kg	2.0	--	1
o-Xylene	ND		ug/kg	1.0	--	1
Xylenes, Total	ND		ug/kg	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	2.0	--	1
1,4-Dichlorobutane	ND		ug/kg	10	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	--	1
Styrene	ND		ug/kg	1.0	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	ND		ug/kg	25	--	1
Carbon disulfide	ND		ug/kg	10	--	1
2-Butanone	ND		ug/kg	10	--	1
Vinyl acetate	ND		ug/kg	10	--	1
4-Methyl-2-pentanone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Ethyl methacrylate	ND		ug/kg	10	--	1
Acrylonitrile	ND		ug/kg	4.0	--	1
Bromochloromethane	ND		ug/kg	2.0	--	1
Tetrahydrofuran	ND		ug/kg	4.0	--	1
2,2-Dichloropropane	ND		ug/kg	2.0	--	1
1,2-Dibromoethane	ND		ug/kg	1.0	--	1
1,3-Dichloropropane	ND		ug/kg	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Bromobenzene	ND		ug/kg	2.0	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	2.0	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--	1
o-Chlorotoluene	ND		ug/kg	2.0	--	1
p-Chlorotoluene	ND		ug/kg	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-04 Date Collected: 09/23/24 00:00

Client ID: TRIP BLANKS Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Hexachlorobutadiene	ND		ug/kg	4.0	--	1
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	ND		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.0	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--	1
Ethyl ether	ND		ug/kg	2.0	--	1
Methyl Acetate	ND		ug/kg	4.0	--	1
Ethyl Acetate	ND		ug/kg	10	--	1
Diisopropyl Ether	ND		ug/kg	2.0	--	1
Cyclohexane	ND		ug/kg	10	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--	1
1,4-Dioxane	ND		ug/kg	80	--	1
Methyl cyclohexane	ND		ug/kg	4.0	--	1
Freon-113	ND		ug/kg	4.0	--	1
p-Diethylbenzene	ND		ug/kg	2.0	--	1
p-Ethyltoluene	ND		ug/kg	2.0	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	105		70-130

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/02/24 11:16
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1979285-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	0.50	--

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/02/24 11:16
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1979285-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,4-Dichlorobutane	ND		ug/kg	10	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	25	--
Carbon disulfide	ND		ug/kg	10	--
2-Butanone	ND		ug/kg	10	--
Vinyl acetate	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Ethyl methacrylate	ND		ug/kg	10	--
Acrylonitrile	ND		ug/kg	4.0	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/02/24 11:16
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1979285-5					
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--
Ethyl ether	ND		ug/kg	2.0	--
Methyl Acetate	ND		ug/kg	4.0	--
Ethyl Acetate	ND		ug/kg	10	--
Diisopropyl Ether	ND		ug/kg	2.0	--
Cyclohexane	ND		ug/kg	10	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--
Methyl cyclohexane	ND		ug/kg	4.0	--
Freon-113	ND		ug/kg	4.0	--
p-Diethylbenzene	ND		ug/kg	2.0	--
p-Ethyltoluene	ND		ug/kg	2.0	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/02/24 11:16
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1979285-5					
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1979285-3 WG1979285-4								
Methylene chloride	95		97		70-130	2		30
1,1-Dichloroethane	98		96		70-130	2		30
Chloroform	101		99		70-130	2		30
Carbon tetrachloride	99		97		70-130	2		30
1,2-Dichloropropane	97		100		70-130	3		30
Dibromochloromethane	95		100		70-130	5		30
1,1,2-Trichloroethane	94		99		70-130	5		30
Tetrachloroethene	103		100		70-130	3		30
Chlorobenzene	99		98		70-130	1		30
Trichlorofluoromethane	97		94		70-139	3		30
1,2-Dichloroethane	95		98		70-130	3		30
1,1,1-Trichloroethane	99		96		70-130	3		30
Bromodichloromethane	92		95		70-130	3		30
trans-1,3-Dichloropropene	96		99		70-130	3		30
cis-1,3-Dichloropropene	98		100		70-130	2		30
1,1-Dichloropropene	98		97		70-130	1		30
Bromoform	96		102		70-130	6		30
1,1,2,2-Tetrachloroethane	87		99		70-130	13		30
Benzene	99		97		70-130	2		30
Toluene	99		97		70-130	2		30
Ethylbenzene	102		99		70-130	3		30
Chloromethane	87		81		52-130	7		30
Bromomethane	117		110		57-147	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1979285-3 WG1979285-4								
Vinyl chloride	98		93		67-130	5		30
Chloroethane	96		94		50-151	2		30
1,1-Dichloroethene	97		96		65-135	1		30
trans-1,2-Dichloroethene	101		99		70-130	2		30
Trichloroethene	99		97		70-130	2		30
1,2-Dichlorobenzene	99		101		70-130	2		30
1,3-Dichlorobenzene	101		102		70-130	1		30
1,4-Dichlorobenzene	99		99		70-130	0		30
Methyl tert butyl ether	93		103		66-130	10		30
p/m-Xylene	102		99		70-130	3		30
o-Xylene	100		98		70-130	2		30
cis-1,2-Dichloroethene	96		97		70-130	1		30
Dibromomethane	90		97		70-130	7		30
1,4-Dichlorobutane	93		101		70-130	8		30
1,2,3-Trichloropropane	92		104		68-130	12		30
Styrene	100		99		70-130	1		30
Dichlorodifluoromethane	94		88		30-146	7		30
Acetone	79		98		54-140	21		30
Carbon disulfide	98		96		59-130	2		30
2-Butanone	83		99		70-130	18		30
Vinyl acetate	89		99		70-130	11		30
4-Methyl-2-pentanone	82		96		70-130	16		30
2-Hexanone	76		93		70-130	20		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1979285-3 WG1979285-4								
Ethyl methacrylate	89		100		70-130	12		30
Acrylonitrile	82		101		70-130	21		30
Bromochloromethane	95		96		70-130	1		30
Tetrahydrofuran	80		97		66-130	19		30
2,2-Dichloropropane	102		93		70-130	9		30
1,2-Dibromoethane	93		99		70-130	6		30
1,3-Dichloropropane	96		101		69-130	5		30
1,1,1,2-Tetrachloroethane	103		102		70-130	1		30
Bromobenzene	98		100		70-130	2		30
n-Butylbenzene	104		102		70-130	2		30
sec-Butylbenzene	102		99		70-130	3		30
tert-Butylbenzene	102		100		70-130	2		30
1,3,5-Trichlorobenzene	101		102		70-139	1		30
o-Chlorotoluene	120		117		70-130	3		30
p-Chlorotoluene	100		100		70-130	0		30
1,2-Dibromo-3-chloropropane	83		100		68-130	19		30
Hexachlorobutadiene	101		98		67-130	3		30
Isopropylbenzene	102		100		70-130	2		30
p-Isopropyltoluene	103		101		70-130	2		30
Naphthalene	89		101		70-130	13		30
n-Propylbenzene	103		102		70-130	1		30
1,2,3-Trichlorobenzene	99		104		70-130	5		30
1,2,4-Trichlorobenzene	100		104		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1979285-3 WG1979285-4								
1,3,5-Trimethylbenzene	102		101		70-130	1		30
1,2,4-Trimethylbenzene	103		102		70-130	1		30
trans-1,4-Dichloro-2-butene	82		95		70-130	15		30
Ethyl ether	83		93		67-130	11		30
Methyl Acetate	77		91		65-130	17		30
Ethyl Acetate	84		99		70-130	16		30
Diisopropyl Ether	100		101		66-130	1		30
Cyclohexane	100		97		70-130	3		30
Ethyl-Tert-Butyl-Ether	99		104		70-130	5		30
Tertiary-Amyl Methyl Ether	98		104		70-130	6		30
1,4-Dioxane	74		100		65-136	30		30
Methyl cyclohexane	99		96		70-130	3		30
Freon-113	98		92		70-130	6		30
p-Diethylbenzene	103		102		70-130	1		30
p-Ethyltoluene	102		100		70-130	2		30
1,2,4,5-Tetramethylbenzene	102		103		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		97		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	100		100		70-130

SEMIVOLATILES

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 09/29/24 19:38
Analyst: SLR
Percent Solids: 50%

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	1100	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	330	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	300	--	1
1,2-Dichlorobenzene	ND		ug/kg	330	--	1
1,3-Dichlorobenzene	ND		ug/kg	330	--	1
1,4-Dichlorobenzene	ND		ug/kg	330	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	330	--	1
2,4-Dinitrotoluene	ND		ug/kg	330	--	1
2,6-Dinitrotoluene	ND		ug/kg	330	--	1
Azobenzene	ND		ug/kg	330	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	330	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	330	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	400	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	360	--	1
Hexachlorocyclopentadiene	ND		ug/kg	940	--	1
Isophorone	ND		ug/kg	300	--	1
Nitrobenzene	ND		ug/kg	300	--	1
NDPA/DPA	ND		ug/kg	260	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	330	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	330	--	1
Butyl benzyl phthalate	ND		ug/kg	330	--	1
Di-n-butylphthalate	ND		ug/kg	330	--	1
Di-n-octylphthalate	ND		ug/kg	330	--	1
Diethyl phthalate	ND		ug/kg	330	--	1
Dimethyl phthalate	ND		ug/kg	330	--	1
Biphenyl	ND		ug/kg	750	--	1
Aniline	ND		ug/kg	400	--	1
4-Chloroaniline	ND		ug/kg	330	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01 Date Collected: 09/23/24 08:30

Client ID: SED-5 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	330	--	1
3-Nitroaniline	ND		ug/kg	330	--	1
4-Nitroaniline	ND		ug/kg	330	--	1
Dibenzofuran	ND		ug/kg	330	--	1
n-Nitrosodimethylamine	ND		ug/kg	660	--	1
2,4,6-Trichlorophenol	ND		ug/kg	200	--	1
p-Chloro-m-cresol	ND		ug/kg	330	--	1
2-Chlorophenol	ND		ug/kg	330	--	1
2,4-Dichlorophenol	ND		ug/kg	300	--	1
2,4-Dimethylphenol	ND		ug/kg	330	--	1
2-Nitrophenol	ND		ug/kg	710	--	1
4-Nitrophenol	ND		ug/kg	460	--	1
2,4-Dinitrophenol	ND		ug/kg	1600	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	860	--	1
Phenol	ND		ug/kg	330	--	1
2-Methylphenol	ND		ug/kg	330	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	480	--	1
2,4,5-Trichlorophenol	ND		ug/kg	330	--	1
Benzoic Acid	ND		ug/kg	1100	--	1
Benzyl Alcohol	ND		ug/kg	330	--	1
Carbazole	ND		ug/kg	330	--	1
Pyridine	ND		ug/kg	360	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	74		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	67		30-120
2,4,6-Tribromophenol	68		10-136
4-Terphenyl-d14	58		18-120

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 09/29/24 16:13
Analyst: DV
Percent Solids: 50%

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	13	--	1
2-Chloronaphthalene	ND		ug/kg	13	--	1
Fluoranthene	54		ug/kg	13	--	1
Hexachlorobutadiene	ND		ug/kg	13	--	1
Naphthalene	ND		ug/kg	13	--	1
Benzo(a)anthracene	24		ug/kg	13	--	1
Benzo(a)pyrene	23		ug/kg	13	--	1
Benzo(b)fluoranthene	28		ug/kg	13	--	1
Benzo(k)fluoranthene	ND		ug/kg	13	--	1
Chrysene	20		ug/kg	13	--	1
Acenaphthylene	ND		ug/kg	13	--	1
Anthracene	ND		ug/kg	13	--	1
Benzo(ghi)perylene	13		ug/kg	13	--	1
Fluorene	ND		ug/kg	13	--	1
Phenanthrene	23		ug/kg	13	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	13	--	1
Indeno(1,2,3-cd)Pyrene	14		ug/kg	13	--	1
Pyrene	47		ug/kg	13	--	1
1-Methylnaphthalene	ND		ug/kg	13	--	1
2-Methylnaphthalene	ND		ug/kg	13	--	1
Pentachlorophenol	ND		ug/kg	53	--	1
Hexachlorobenzene	ND		ug/kg	13	--	1
Hexachloroethane	ND		ug/kg	13	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01 Date Collected: 09/23/24 08:30

Client ID: SED-5 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	57		30-120
2,4,6-Tribromophenol	79		10-136
4-Terphenyl-d14	57		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 09/29/24 20:01
Analyst: SLR
Percent Solids: 47%
Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	1100	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	310	--	1
1,2-Dichlorobenzene	ND		ug/kg	350	--	1
1,3-Dichlorobenzene	ND		ug/kg	350	--	1
1,4-Dichlorobenzene	ND		ug/kg	350	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	350	--	1
2,4-Dinitrotoluene	ND		ug/kg	350	--	1
2,6-Dinitrotoluene	ND		ug/kg	350	--	1
Azobenzene	ND		ug/kg	350	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	350	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	350	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	420	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	380	--	1
Hexachlorocyclopentadiene	ND		ug/kg	1000	--	1
Isophorone	ND		ug/kg	310	--	1
Nitrobenzene	ND		ug/kg	310	--	1
NDPA/DPA	ND		ug/kg	280	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	350	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	350	--	1
Butyl benzyl phthalate	ND		ug/kg	350	--	1
Di-n-butylphthalate	ND		ug/kg	350	--	1
Di-n-octylphthalate	ND		ug/kg	350	--	1
Diethyl phthalate	ND		ug/kg	350	--	1
Dimethyl phthalate	ND		ug/kg	350	--	1
Biphenyl	ND		ug/kg	790	--	1
Aniline	ND		ug/kg	420	--	1
4-Chloroaniline	ND		ug/kg	350	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02 Date Collected: 09/23/24 08:45

Client ID: SED-6 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	350	--	1
3-Nitroaniline	ND		ug/kg	350	--	1
4-Nitroaniline	ND		ug/kg	350	--	1
Dibenzofuran	ND		ug/kg	350	--	1
n-Nitrosodimethylamine	ND		ug/kg	700	--	1
2,4,6-Trichlorophenol	ND		ug/kg	210	--	1
p-Chloro-m-cresol	ND		ug/kg	350	--	1
2-Chlorophenol	ND		ug/kg	350	--	1
2,4-Dichlorophenol	ND		ug/kg	310	--	1
2,4-Dimethylphenol	ND		ug/kg	350	--	1
2-Nitrophenol	ND		ug/kg	750	--	1
4-Nitrophenol	ND		ug/kg	490	--	1
2,4-Dinitrophenol	ND		ug/kg	1700	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	900	--	1
Phenol	ND		ug/kg	350	--	1
2-Methylphenol	ND		ug/kg	350	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	500	--	1
2,4,5-Trichlorophenol	ND		ug/kg	350	--	1
Benzoic Acid	ND		ug/kg	1100	--	1
Benzyl Alcohol	ND		ug/kg	350	--	1
Carbazole	ND		ug/kg	350	--	1
Pyridine	ND		ug/kg	380	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		25-120
Phenol-d6	72		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	73		30-120
2,4,6-Tribromophenol	68		10-136
4-Terphenyl-d14	70		18-120

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 09/29/24 16:30
Analyst: DV
Percent Solids: 47%

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	14	--	1
2-Chloronaphthalene	ND		ug/kg	14	--	1
Fluoranthene	29		ug/kg	14	--	1
Hexachlorobutadiene	ND		ug/kg	14	--	1
Naphthalene	ND		ug/kg	14	--	1
Benzo(a)anthracene	ND		ug/kg	14	--	1
Benzo(a)pyrene	ND		ug/kg	14	--	1
Benzo(b)fluoranthene	14		ug/kg	14	--	1
Benzo(k)fluoranthene	ND		ug/kg	14	--	1
Chrysene	ND		ug/kg	14	--	1
Acenaphthylene	ND		ug/kg	14	--	1
Anthracene	ND		ug/kg	14	--	1
Benzo(ghi)perylene	ND		ug/kg	14	--	1
Fluorene	ND		ug/kg	14	--	1
Phenanthrene	19		ug/kg	14	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	14	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	14	--	1
Pyrene	25		ug/kg	14	--	1
1-Methylnaphthalene	ND		ug/kg	14	--	1
2-Methylnaphthalene	ND		ug/kg	14	--	1
Pentachlorophenol	ND		ug/kg	56	--	1
Hexachlorobenzene	ND		ug/kg	14	--	1
Hexachloroethane	ND		ug/kg	14	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02 Date Collected: 09/23/24 08:45

Client ID: SED-6 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		25-120
Phenol-d6	68		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	79		10-136
4-Terphenyl-d14	66		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 09/29/24 20:25
Analyst: SLR
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/kg	1200	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	320	--	1
1,2-Dichlorobenzene	ND		ug/kg	350	--	1
1,3-Dichlorobenzene	ND		ug/kg	350	--	1
1,4-Dichlorobenzene	ND		ug/kg	350	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	350	--	1
2,4-Dinitrotoluene	ND		ug/kg	350	--	1
2,6-Dinitrotoluene	ND		ug/kg	350	--	1
Azobenzene	ND		ug/kg	350	--	1
4-Chlorophenyl phenyl ether	ND		ug/kg	350	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	350	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	420	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	380	--	1
Hexachlorocyclopentadiene	ND		ug/kg	1000	--	1
Isophorone	ND		ug/kg	320	--	1
Nitrobenzene	ND		ug/kg	320	--	1
NDPA/DPA	ND		ug/kg	280	--	1
n-Nitrosodi-n-propylamine	ND		ug/kg	350	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	350	--	1
Butyl benzyl phthalate	ND		ug/kg	350	--	1
Di-n-butylphthalate	ND		ug/kg	350	--	1
Di-n-octylphthalate	ND		ug/kg	350	--	1
Diethyl phthalate	ND		ug/kg	350	--	1
Dimethyl phthalate	ND		ug/kg	350	--	1
Biphenyl	ND		ug/kg	810	--	1
Aniline	ND		ug/kg	420	--	1
4-Chloroaniline	ND		ug/kg	350	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03 Date Collected: 09/23/24 09:05

Client ID: SED-7 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2-Nitroaniline	ND		ug/kg	350	--	1
3-Nitroaniline	ND		ug/kg	350	--	1
4-Nitroaniline	ND		ug/kg	350	--	1
Dibenzofuran	ND		ug/kg	350	--	1
n-Nitrosodimethylamine	ND		ug/kg	710	--	1
2,4,6-Trichlorophenol	ND		ug/kg	210	--	1
p-Chloro-m-cresol	ND		ug/kg	350	--	1
2-Chlorophenol	ND		ug/kg	350	--	1
2,4-Dichlorophenol	ND		ug/kg	320	--	1
2,4-Dimethylphenol	ND		ug/kg	350	--	1
2-Nitrophenol	ND		ug/kg	760	--	1
4-Nitrophenol	ND		ug/kg	500	--	1
2,4-Dinitrophenol	ND		ug/kg	1700	--	1
4,6-Dinitro-o-cresol	ND		ug/kg	920	--	1
Phenol	ND		ug/kg	350	--	1
2-Methylphenol	ND		ug/kg	350	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	510	--	1
2,4,5-Trichlorophenol	ND		ug/kg	350	--	1
Benzoic Acid	ND		ug/kg	1100	--	1
Benzyl Alcohol	ND		ug/kg	350	--	1
Carbazole	ND		ug/kg	350	--	1
Pyridine	ND		ug/kg	380	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		25-120
Phenol-d6	78		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	74		30-120
2,4,6-Tribromophenol	69		10-136
4-Terphenyl-d14	72		18-120

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E-SIM
Analytical Date: 09/29/24 16:47
Analyst: DV
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	14	--	1
2-Chloronaphthalene	ND		ug/kg	14	--	1
Fluoranthene	ND		ug/kg	14	--	1
Hexachlorobutadiene	ND		ug/kg	14	--	1
Naphthalene	ND		ug/kg	14	--	1
Benzo(a)anthracene	ND		ug/kg	14	--	1
Benzo(a)pyrene	ND		ug/kg	14	--	1
Benzo(b)fluoranthene	ND		ug/kg	14	--	1
Benzo(k)fluoranthene	ND		ug/kg	14	--	1
Chrysene	ND		ug/kg	14	--	1
Acenaphthylene	ND		ug/kg	14	--	1
Anthracene	ND		ug/kg	14	--	1
Benzo(ghi)perylene	ND		ug/kg	14	--	1
Fluorene	ND		ug/kg	14	--	1
Phenanthrene	ND		ug/kg	14	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	14	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	14	--	1
Pyrene	ND		ug/kg	14	--	1
1-Methylnaphthalene	ND		ug/kg	14	--	1
2-Methylnaphthalene	ND		ug/kg	14	--	1
Pentachlorophenol	ND		ug/kg	57	--	1
Hexachlorobenzene	ND		ug/kg	14	--	1
Hexachloroethane	ND		ug/kg	14	--	1

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03 Date Collected: 09/23/24 09:05

Client ID: SED-7 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	78		10-136
4-Terphenyl-d14	61		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 09/29/24 18:28
Analyst: SLR

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1977684-1					
Acenaphthene	ND		ug/kg	130	--
Benzidine	ND		ug/kg	530	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	97	--
Bis(2-chloroethyl)ether	ND		ug/kg	140	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	160	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	160	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	97	--
4-Chlorophenyl phenyl ether	ND		ug/kg	160	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	190	--
Bis(2-chloroethoxy)methane	ND		ug/kg	170	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachlorocyclopentadiene	ND		ug/kg	460	--
Hexachloroethane	ND		ug/kg	130	--
Isophorone	ND		ug/kg	140	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	140	--
NDPA/DPA	ND		ug/kg	130	--
n-Nitrosodi-n-propylamine	ND		ug/kg	160	--
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 09/29/24 18:28
Analyst: SLR

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1977684-1					
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	97	--
Benzo(a)pyrene	ND		ug/kg	130	--
Benzo(b)fluoranthene	ND		ug/kg	97	--
Benzo(k)fluoranthene	ND		ug/kg	97	--
Chrysene	ND		ug/kg	97	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	97	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	97	--
Dibenzo(a,h)anthracene	ND		ug/kg	97	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	97	--
Biphenyl	ND		ug/kg	370	--
Aniline	ND		ug/kg	190	--
4-Chloroaniline	ND		ug/kg	160	--
1-Methylnaphthalene	ND		ug/kg	160	--
2-Nitroaniline	ND		ug/kg	160	--
3-Nitroaniline	ND		ug/kg	160	--
4-Nitroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	190	--
n-Nitrosodimethylamine	ND		ug/kg	320	--
2,4,6-Trichlorophenol	ND		ug/kg	97	--
p-Chloro-m-cresol	ND		ug/kg	160	--
2-Chlorophenol	ND		ug/kg	160	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 09/29/24 18:28
Analyst: SLR

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1977684-1					
2,4-Dichlorophenol	ND		ug/kg	140	--
2,4-Dimethylphenol	ND		ug/kg	160	--
2-Nitrophenol	ND		ug/kg	350	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	780	--
4,6-Dinitro-o-cresol	ND		ug/kg	420	--
Pentachlorophenol	ND		ug/kg	130	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--
Benzoic Acid	ND		ug/kg	520	--
Benzyl Alcohol	ND		ug/kg	160	--
Carbazole	ND		ug/kg	160	--
Pyridine	ND		ug/kg	170	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	67		30-120
2,4,6-Tribromophenol	59		10-136
4-Terphenyl-d14	66		18-120

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 09/29/24 15:57
Analyst: DV

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1977685-1					
Acenaphthene	ND		ug/kg	6.5	--
2-Chloronaphthalene	ND		ug/kg	6.5	--
Fluoranthene	ND		ug/kg	6.5	--
Hexachlorobutadiene	ND		ug/kg	6.5	--
Naphthalene	ND		ug/kg	6.5	--
Benzo(a)anthracene	ND		ug/kg	6.5	--
Benzo(a)pyrene	ND		ug/kg	6.5	--
Benzo(b)fluoranthene	ND		ug/kg	6.5	--
Benzo(k)fluoranthene	ND		ug/kg	6.5	--
Chrysene	ND		ug/kg	6.5	--
Acenaphthylene	ND		ug/kg	6.5	--
Anthracene	ND		ug/kg	6.5	--
Benzo(ghi)perylene	ND		ug/kg	6.5	--
Fluorene	ND		ug/kg	6.5	--
Phenanthrene	ND		ug/kg	6.5	--
Dibenzo(a,h)anthracene	ND		ug/kg	6.5	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	6.5	--
Pyrene	ND		ug/kg	6.5	--
1-Methylnaphthalene	ND		ug/kg	6.5	--
2-Methylnaphthalene	ND		ug/kg	6.5	--
Pentachlorophenol	ND		ug/kg	26	--
Hexachlorobenzene	ND		ug/kg	6.5	--
Hexachloroethane	ND		ug/kg	6.5	--

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 09/29/24 15:57
Analyst: DV

Extraction Method: EPA 3546
Extraction Date: 09/29/24 00:37

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1977685-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	85		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	64		10-136
4-Terphenyl-d14	63		18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1977684-2 WG1977684-3								
Acenaphthene	78		69		31-137	12		50
Benzidine	54		45		10-66	18		50
1,2,4-Trichlorobenzene	78		72		38-107	8		50
Hexachlorobenzene	76		66		40-140	14		50
Bis(2-chloroethyl)ether	74		68		40-140	8		50
2-Chloronaphthalene	83		73		40-140	13		50
1,2-Dichlorobenzene	74		67		40-140	10		50
1,3-Dichlorobenzene	72		67		40-140	7		50
1,4-Dichlorobenzene	74		68		28-104	8		50
3,3'-Dichlorobenzidine	74		59		40-140	23		50
2,4-Dinitrotoluene	98		84		40-132	15		50
2,6-Dinitrotoluene	96		83		40-140	15		50
Azobenzene	85		74		40-140	14		50
Fluoranthene	81		72		40-140	12		50
4-Chlorophenyl phenyl ether	81		70		40-140	15		50
4-Bromophenyl phenyl ether	78		67		40-140	15		50
Bis(2-chloroisopropyl)ether	73		66		40-140	10		50
Bis(2-chloroethoxy)methane	83		72		40-117	14		50
Hexachlorobutadiene	74		68		40-140	8		50
Hexachlorocyclopentadiene	64		58		40-140	10		50
Hexachloroethane	76		71		40-140	7		50
Isophorone	81		71		40-140	13		50
Naphthalene	76		68		40-140	11		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1977684-2 WG1977684-3								
Nitrobenzene	83		76		40-140	9		50
NDPA/DPA	81		70		36-157	15		50
n-Nitrosodi-n-propylamine	79		71		32-121	11		50
Bis(2-ethylhexyl)phthalate	96		84		40-140	13		50
Butyl benzyl phthalate	95		84		40-140	12		50
Di-n-butylphthalate	90		79		40-140	13		50
Di-n-octylphthalate	96		85		40-140	12		50
Diethyl phthalate	87		76		40-140	13		50
Dimethyl phthalate	88		76		40-140	15		50
Benzo(a)anthracene	79		70		40-140	12		50
Benzo(a)pyrene	81		71		40-140	13		50
Benzo(b)fluoranthene	78		70		40-140	11		50
Benzo(k)fluoranthene	80		68		40-140	16		50
Chrysene	81		70		40-140	15		50
Acenaphthylene	84		74		40-140	13		50
Anthracene	85		74		40-140	14		50
Benzo(ghi)perylene	75		67		40-140	11		50
Fluorene	79		70		40-140	12		50
Phenanthrene	83		72		40-140	14		50
Dibenzo(a,h)anthracene	76		67		40-140	13		50
Indeno(1,2,3-cd)pyrene	75		67		40-140	11		50
Pyrene	82		72		35-142	13		50
Biphenyl	85		74		37-127	14		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1977684-2 WG1977684-3								
Aniline	60		50		40-140	18		50
4-Chloroaniline	75		71		40-140	5		50
1-Methylnaphthalene	85		75		26-130	13		50
2-Nitroaniline	101		85		47-134	17		50
3-Nitroaniline	87		72		26-129	19		50
4-Nitroaniline	91		78		41-125	15		50
Dibenzofuran	79		70		40-140	12		50
2-Methylnaphthalene	79		70		40-140	12		50
n-Nitrosodimethylamine	71		64		22-100	10		50
2,4,6-Trichlorophenol	90		76		30-130	17		50
p-Chloro-m-cresol	89		75		26-103	17		50
2-Chlorophenol	80		71		25-102	12		50
2,4-Dichlorophenol	88		76		30-130	15		50
2,4-Dimethylphenol	80		68		30-130	16		50
2-Nitrophenol	91		80		30-130	13		50
4-Nitrophenol	98		85		11-114	14		50
2,4-Dinitrophenol	46		46		4-130	0		50
4,6-Dinitro-o-cresol	94		80		10-130	16		50
Pentachlorophenol	75		65		17-109	14		50
Phenol	75		66		26-90	13		50
2-Methylphenol	84		74		30-130.	13		50
3-Methylphenol/4-Methylphenol	84		73		30-130	14		50
2,4,5-Trichlorophenol	92		79		30-130	15		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1977684-2 WG1977684-3								
Benzoic Acid	**1**	Q	**4**	Q	10-110	**94**	Q	50
Benzyl Alcohol	88		78		40-140	12		50
Carbazole	84		73		54-128	14		50
Pyridine	40		36		10-93	11		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	77		70		25-120
Phenol-d6	80		70		10-120
Nitrobenzene-d5	83		73		23-120
2-Fluorobiphenyl	79		68		30-120
2,4,6-Tribromophenol	75		64		10-136
4-Terphenyl-d14	76		66		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1977685-2 WG1977685-3								
Acenaphthene	69		78		40-140	12		50
2-Chloronaphthalene	66		74		40-140	11		50
Fluoranthene	73		82		40-140	12		50
Hexachlorobutadiene	80		89		34-107	11		50
Naphthalene	70		78		40-140	11		50
Benzo(a)anthracene	70		80		40-140	13		50
Benzo(a)pyrene	70		80		40-140	13		50
Benzo(b)fluoranthene	66		77		40-140	15		50
Benzo(k)fluoranthene	61		70		40-140	14		50
Chrysene	65		76		40-140	16		50
Acenaphthylene	70		78		40-140	11		50
Anthracene	69		78		40-140	12		50
Benzo(ghi)perylene	65		75		40-140	14		50
Fluorene	68		77		40-140	12		50
Phenanthrene	67		76		40-140	13		50
Dibenzo(a,h)anthracene	66		77		40-140	15		50
Indeno(1,2,3-cd)Pyrene	72		85		40-140	17		50
Pyrene	72		80		35-142	11		50
1-Methylnaphthalene	68		76		40-140	11		50
2-Methylnaphthalene	70		78		40-140	11		50
Pentachlorophenol	50		61		17-109	20		50
Hexachlorobenzene	75		84		40-140	11		50
Hexachloroethane	74		83		29-106	11		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1977685-2 WG1977685-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	57		65		25-120
Phenol-d6	65		73		10-120
Nitrobenzene-d5	73		83		23-120
2-Fluorobiphenyl	53		59		30-120
2,4,6-Tribromophenol	69		79		10-136
4-Terphenyl-d14	60		67		18-120

PETROLEUM HYDROCARBONS

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 09/29/24 15:15
Analyst: SBC
Percent Solids: 50%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 13:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	64000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	75		40-140

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 09/29/24 16:30
Analyst: SBC
Percent Solids: 47%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 13:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	69000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	67		40-140

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8015D(M)
Analytical Date: 09/29/24 15:53
Analyst: SBC
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 13:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Diesel Range Organics - Westborough Lab						
DRO (C10-C28)	ND		ug/kg	72000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	60		40-140

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 09/29/24 14:01
Analyst: SBC

Extraction Method: EPA 3546
Extraction Date: 09/28/24 13:51

Parameter	Result	Qualifier	Units	RL	MDL
Diesel Range Organics - Westborough Lab for sample(s): 01-03 Batch: WG1977604-1					
DRO (C10-C28)	ND		ug/kg	33000	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	75		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Diesel Range Organics - Westborough Lab	Associated sample(s): 01-03		Batch: WG1977604-2					
DRO (C10-C28)	74		-		60-140	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	71				40-140

PCBS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 09/30/24 10:54
Analyst: RMP
Percent Solids: 50%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 10:12
Cleanup Method: EPA 3665A
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	185	--	1	A
Aroclor 1221	ND		ug/kg	185	--	1	A
Aroclor 1232	ND		ug/kg	185	--	1	A
Aroclor 1242	ND		ug/kg	185	--	1	A
Aroclor 1248	ND		ug/kg	185	--	1	A
Aroclor 1254	ND		ug/kg	185	--	1	A
Aroclor 1260	ND		ug/kg	185	--	1	A
Aroclor 1262	ND		ug/kg	185	--	1	A
Aroclor 1268	ND		ug/kg	185	--	1	A
PCBs, Total	ND		ug/kg	185	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 09/30/24 11:02
Analyst: RMP
Percent Solids: 47%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 10:12
Cleanup Method: EPA 3665A
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	183	--	1	A
Aroclor 1221	ND		ug/kg	183	--	1	A
Aroclor 1232	ND		ug/kg	183	--	1	A
Aroclor 1242	ND		ug/kg	183	--	1	A
Aroclor 1248	ND		ug/kg	183	--	1	A
Aroclor 1254	ND		ug/kg	183	--	1	A
Aroclor 1260	ND		ug/kg	183	--	1	A
Aroclor 1262	ND		ug/kg	183	--	1	A
Aroclor 1268	ND		ug/kg	183	--	1	A
PCBs, Total	ND		ug/kg	183	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	81		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8082A
Analytical Date: 09/30/24 11:10
Analyst: RMP
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 10:12
Cleanup Method: EPA 3665A
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	193	--	1	A
Aroclor 1221	ND		ug/kg	193	--	1	A
Aroclor 1232	ND		ug/kg	193	--	1	A
Aroclor 1242	ND		ug/kg	193	--	1	A
Aroclor 1248	ND		ug/kg	193	--	1	A
Aroclor 1254	ND		ug/kg	193	--	1	A
Aroclor 1260	ND		ug/kg	193	--	1	A
Aroclor 1262	ND		ug/kg	193	--	1	A
Aroclor 1268	ND		ug/kg	193	--	1	A
PCBs, Total	ND		ug/kg	193	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	78		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	89		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 09/29/24 12:29
Analyst: RMP

Extraction Method: EPA 3546
Extraction Date: 09/27/24 16:24
Cleanup Method: EPA 3665A
Cleanup Date: 09/28/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-03 Batch: WG1977344-1						
Aroclor 1016	ND		ug/kg	47.1	--	A
Aroclor 1221	ND		ug/kg	47.1	--	A
Aroclor 1232	ND		ug/kg	47.1	--	A
Aroclor 1242	ND		ug/kg	47.1	--	A
Aroclor 1248	ND		ug/kg	47.1	--	A
Aroclor 1254	ND		ug/kg	47.1	--	A
Aroclor 1260	ND		ug/kg	47.1	--	A
Aroclor 1262	ND		ug/kg	47.1	--	A
Aroclor 1268	ND		ug/kg	47.1	--	A
PCBs, Total	ND		ug/kg	47.1	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	69		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	71		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG1977344-2 WG1977344-3									
Aroclor 1016	97		103		40-140	6		50	A
Aroclor 1260	91		99		40-140	8		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		79		30-150	A
Decachlorobiphenyl	77		82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		88		30-150	B
Decachlorobiphenyl	79		79		30-150	B

PESTICIDES

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 09/30/24 11:08
Analyst: JAG
Percent Solids: 50%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 11:50
Cleanup Method: EPA 3620B
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	3.14	--	1	A
Lindane	ND		ug/kg	1.31	--	1	A
Alpha-BHC	ND		ug/kg	1.31	--	1	A
Beta-BHC	ND		ug/kg	3.14	--	1	A
Heptachlor	ND		ug/kg	1.57	--	1	A
Aldrin	ND		ug/kg	3.14	--	1	A
Heptachlor epoxide	ND		ug/kg	5.89	--	1	A
Endrin	ND		ug/kg	1.31	--	1	A
Endrin aldehyde	ND		ug/kg	3.93	--	1	A
Endrin ketone	ND		ug/kg	3.14	--	1	A
Dieldrin	ND		ug/kg	1.96	--	1	A
4,4'-DDE	ND		ug/kg	3.14	--	1	A
4,4'-DDD	ND		ug/kg	3.14	--	1	A
4,4'-DDT	ND		ug/kg	5.89	--	1	A
Endosulfan I	ND		ug/kg	3.14	--	1	A
Endosulfan II	ND		ug/kg	3.14	--	1	A
Endosulfan sulfate	ND		ug/kg	1.31	--	1	A
Methoxychlor	ND		ug/kg	5.89	--	1	A
Toxaphene	ND		ug/kg	58.9	--	1	A
Chlordane	ND		ug/kg	26.2	--	1	A
cis-Chlordane	ND		ug/kg	3.93	--	1	A
trans-Chlordane	ND		ug/kg	3.93	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01 Date Collected: 09/23/24 08:30

Client ID: SED-5 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	79		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 09/28/24 12:48
Analyst: MMG
Percent Solids: 50%
Methylation Date: 09/28/24 07:05

Extraction Method: EPA 8151A
Extraction Date: 09/26/24 13:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	6520	--	1	A
MCPA	ND		ug/kg	6520	--	1	A
Dalapon	ND		ug/kg	65.2	--	1	A
Dicamba	ND		ug/kg	65.2	--	1	A
Dichloroprop	ND		ug/kg	65.2	--	1	A
2,4-D	ND		ug/kg	326	--	1	A
2,4-DB	ND		ug/kg	326	--	1	A
2,4,5-T	ND		ug/kg	326	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	326	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	88		30-150	A
DCAA	86		30-150	B

Project Name: BAR MILLS DAM
Lab Number: L2454546
Project Number: 510195, PH 5, TASK 2
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 09/30/24 11:20
Analyst: JAG
Percent Solids: 47%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 11:50
Cleanup Method: EPA 3620B
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	3.24	--	1	A
Lindane	ND		ug/kg	1.35	--	1	A
Alpha-BHC	ND		ug/kg	1.35	--	1	A
Beta-BHC	ND		ug/kg	3.24	--	1	A
Heptachlor	ND		ug/kg	1.62	--	1	A
Aldrin	ND		ug/kg	3.24	--	1	A
Heptachlor epoxide	ND		ug/kg	6.07	--	1	A
Endrin	ND		ug/kg	1.35	--	1	A
Endrin aldehyde	ND		ug/kg	4.04	--	1	A
Endrin ketone	ND		ug/kg	3.24	--	1	A
Dieldrin	ND		ug/kg	2.02	--	1	A
4,4'-DDE	ND		ug/kg	3.24	--	1	A
4,4'-DDD	ND		ug/kg	3.24	--	1	A
4,4'-DDT	ND		ug/kg	6.07	--	1	A
Endosulfan I	ND		ug/kg	3.24	--	1	A
Endosulfan II	ND		ug/kg	3.24	--	1	A
Endosulfan sulfate	ND		ug/kg	1.35	--	1	A
Methoxychlor	ND		ug/kg	6.07	--	1	A
Toxaphene	ND		ug/kg	60.7	--	1	A
Chlordane	ND		ug/kg	27.0	--	1	A
cis-Chlordane	ND		ug/kg	4.04	--	1	A
trans-Chlordane	ND		ug/kg	4.04	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02 Date Collected: 09/23/24 08:45

Client ID: SED-6 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	79		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 09/28/24 13:07
Analyst: MMG
Percent Solids: 47%
Methylation Date: 09/28/24 07:05

Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified
Extraction Method: EPA 8151A
Extraction Date: 09/26/24 13:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	6980	--	1	A
MCPA	ND		ug/kg	6980	--	1	A
Dalapon	ND		ug/kg	69.8	--	1	A
Dicamba	ND		ug/kg	69.8	--	1	A
Dichloroprop	ND		ug/kg	69.8	--	1	A
2,4-D	ND		ug/kg	349	--	1	A
2,4-DB	ND		ug/kg	349	--	1	A
2,4,5-T	ND		ug/kg	349	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	349	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	80		30-150	A
DCAA	78		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8081B
Analytical Date: 09/30/24 11:32
Analyst: JAG
Percent Solids: 46%

Extraction Method: EPA 3546
Extraction Date: 09/28/24 11:50
Cleanup Method: EPA 3620B
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	3.45	--	1	A
Lindane	ND		ug/kg	1.44	--	1	A
Alpha-BHC	ND		ug/kg	1.44	--	1	A
Beta-BHC	ND		ug/kg	3.45	--	1	A
Heptachlor	ND		ug/kg	1.72	--	1	A
Aldrin	ND		ug/kg	3.45	--	1	A
Heptachlor epoxide	ND		ug/kg	6.47	--	1	A
Endrin	ND		ug/kg	1.44	--	1	A
Endrin aldehyde	ND		ug/kg	4.31	--	1	A
Endrin ketone	ND		ug/kg	3.45	--	1	A
Dieldrin	ND		ug/kg	2.16	--	1	A
4,4'-DDE	ND		ug/kg	3.45	--	1	A
4,4'-DDD	ND		ug/kg	3.45	--	1	A
4,4'-DDT	ND		ug/kg	6.47	--	1	A
Endosulfan I	ND		ug/kg	3.45	--	1	A
Endosulfan II	ND		ug/kg	3.45	--	1	A
Endosulfan sulfate	ND		ug/kg	1.44	--	1	A
Methoxychlor	ND		ug/kg	6.47	--	1	A
Toxaphene	ND		ug/kg	64.7	--	1	A
Chlordane	ND		ug/kg	28.8	--	1	A
cis-Chlordane	ND		ug/kg	4.31	--	1	A
trans-Chlordane	ND		ug/kg	4.31	--	1	A

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03 Date Collected: 09/23/24 09:05

Client ID: SED-7 Date Received: 09/23/24

Sample Location: BUXTON/ HOLLIS, ME Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	74		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment
Analytical Method: 1,8151A
Analytical Date: 09/28/24 13:25
Analyst: MMG
Percent Solids: 46%
Methylation Date: 09/28/24 07:05

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified
Extraction Method: EPA 8151A
Extraction Date: 09/26/24 13:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/kg	7060	--	1	A
MCPA	ND		ug/kg	7060	--	1	A
Dalapon	ND		ug/kg	70.6	--	1	A
Dicamba	ND		ug/kg	70.6	--	1	A
Dichloroprop	ND		ug/kg	70.6	--	1	A
2,4-D	ND		ug/kg	353	--	1	A
2,4-DB	ND		ug/kg	353	--	1	A
2,4,5-T	ND		ug/kg	353	--	1	A
2,4,5-TP (Silvex)	ND		ug/kg	353	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	80		30-150	A
DCAA	79		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 09/27/24 08:06
Analyst: AKM

Extraction Method: EPA 8151A
Extraction Date: 09/26/24 13:47

Methylation Date: 09/27/24 05:29

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-03 Batch: WG1976711-1						
MCPP	ND		ug/kg	3300	--	A
MCPA	ND		ug/kg	3300	--	A
Dalapon	ND		ug/kg	33.0	--	A
Dicamba	ND		ug/kg	33.0	--	A
Dichloroprop	ND		ug/kg	33.0	--	A
2,4-D	ND		ug/kg	165	--	A
2,4-DB	ND		ug/kg	165	--	A
2,4,5-T	ND		ug/kg	165	--	A
2,4,5-TP (Silvex)	ND		ug/kg	165	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	90		30-150	A
DCAA	90		30-150	B

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 09/30/24 10:30
Analyst: JAG

Extraction Method: EPA 3546
Extraction Date: 09/28/24 11:50
Cleanup Method: EPA 3620B
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-03 Batch: WG1977581-1						
Delta-BHC	ND		ug/kg	1.52	--	A
Lindane	ND		ug/kg	0.632	--	A
Alpha-BHC	ND		ug/kg	0.632	--	A
Beta-BHC	ND		ug/kg	1.52	--	A
Heptachlor	ND		ug/kg	0.759	--	A
Aldrin	ND		ug/kg	1.52	--	A
Heptachlor epoxide	ND		ug/kg	2.85	--	A
Endrin	ND		ug/kg	0.632	--	A
Endrin aldehyde	ND		ug/kg	1.90	--	A
Endrin ketone	ND		ug/kg	1.52	--	A
Dieldrin	ND		ug/kg	0.949	--	A
4,4'-DDE	ND		ug/kg	1.52	--	A
4,4'-DDD	ND		ug/kg	1.52	--	A
4,4'-DDT	ND		ug/kg	2.85	--	A
Endosulfan I	ND		ug/kg	1.52	--	A
Endosulfan II	ND		ug/kg	1.52	--	A
Endosulfan sulfate	ND		ug/kg	0.632	--	A
Methoxychlor	ND		ug/kg	2.85	--	A
Toxaphene	ND		ug/kg	28.5	--	A
Chlordane	ND		ug/kg	12.6	--	A
cis-Chlordane	ND		ug/kg	1.90	--	A
trans-Chlordane	ND		ug/kg	1.90	--	A

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 09/30/24 10:30
Analyst: JAG

Extraction Method: EPA 3546
Extraction Date: 09/28/24 11:50
Cleanup Method: EPA 3620B
Cleanup Date: 09/29/24
Cleanup Method: EPA 3660B
Cleanup Date: 09/29/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-03 Batch: WG1977581-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	64		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG1976711-2 WG1976711-3									
MCPP	89		94		30-150	5		30	A
MCPA	94		98		30-150	4		30	A
Dalapon	81		81		30-150	0		30	A
Dicamba	91		96		30-150	5		30	A
Dichloroprop	93		99		30-150	6		30	A
2,4-D	88		93		30-150	6		30	A
2,4-DB	91		93		30-150	2		30	A
2,4,5-T	91		97		30-150	6		30	A
2,4,5-TP (Silvex)	85		93		30-150	9		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	86		87		30-150	A
DCAA	91		101		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG1977581-2 WG1977581-3									
Delta-BHC	55		59		30-150	7		30	A
Lindane	55		56		30-150	2		30	A
Alpha-BHC	58		59		30-150	2		30	A
Beta-BHC	67		69		30-150	3		30	A
Heptachlor	62		63		30-150	2		30	A
Aldrin	60		62		30-150	3		30	A
Heptachlor epoxide	48		49		30-150	2		30	A
Endrin	63		66		30-150	5		30	A
Endrin aldehyde	58		64		30-150	10		30	A
Endrin ketone	66		70		30-150	6		30	A
Dieldrin	67		70		30-150	4		30	A
4,4'-DDE	62		64		30-150	3		30	A
4,4'-DDD	66		68		30-150	3		30	A
4,4'-DDT	71		76		30-150	7		30	A
Endosulfan I	61		63		30-150	3		30	A
Endosulfan II	64		67		30-150	5		30	A
Endosulfan sulfate	71		76		30-150	7		30	A
Methoxychlor	78		83		30-150	6		30	A
cis-Chlordane	67		69		30-150	3		30	A
trans-Chlordane	73		74		30-150	1		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG1977581-2 WG1977581-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		66		30-150	A
Decachlorobiphenyl	53		62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		57		30-150	B
Decachlorobiphenyl	63		69		30-150	B

METALS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 50%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	3.0	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Arsenic, Total	6.3		mg/kg	0.96	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Beryllium, Total	1.3		mg/kg	0.57	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Cadmium, Total	0.47		mg/kg	0.38	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Chromium, Total	14		mg/kg	3.8	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Copper, Total	12		mg/kg	3.8	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Lead, Total	12		mg/kg	1.1	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Mercury, Total	ND		mg/kg	0.126	--	1	09/30/24 08:25	09/30/24 11:52	EPA 7471B	1,7471B	MJR
Nickel, Total	11		mg/kg	1.9	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Selenium, Total	4.0		mg/kg	3.8	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Silver, Total	ND		mg/kg	0.96	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Thallium, Total	ND		mg/kg	0.76	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC
Zinc, Total	77		mg/kg	19	--	10	09/29/24 09:35	10/05/24 17:00	EPA 3050B	1,6020B	MRC

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 47%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	3.3	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Arsenic, Total	3.8		mg/kg	1.0	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Beryllium, Total	2.2		mg/kg	0.62	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Cadmium, Total	0.64		mg/kg	0.41	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Chromium, Total	15		mg/kg	4.1	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Copper, Total	9.3		mg/kg	4.1	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Lead, Total	15		mg/kg	1.2	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Mercury, Total	ND		mg/kg	0.136	--	1	09/30/24 08:25	09/30/24 12:33	EPA 7471B	1,7471B	MJR
Nickel, Total	10		mg/kg	2.1	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Selenium, Total	5.3		mg/kg	4.1	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Silver, Total	ND		mg/kg	1.0	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Thallium, Total	ND		mg/kg	0.82	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC
Zinc, Total	110		mg/kg	21	--	10	09/29/24 09:35	10/05/24 17:04	EPA 3050B	1,6020B	MRC

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME
Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 46%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	3.4	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Arsenic, Total	3.8		mg/kg	1.1	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Beryllium, Total	1.5		mg/kg	0.64	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Cadmium, Total	ND		mg/kg	0.42	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Chromium, Total	13		mg/kg	4.2	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Copper, Total	7.4		mg/kg	4.2	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Lead, Total	11		mg/kg	1.3	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Mercury, Total	ND		mg/kg	0.136	--	1	09/30/24 08:25	09/30/24 12:37	EPA 7471B	1,7471B	MJR
Nickel, Total	9.4		mg/kg	2.1	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Selenium, Total	4.6		mg/kg	4.2	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Silver, Total	ND		mg/kg	1.1	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Thallium, Total	ND		mg/kg	0.85	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC
Zinc, Total	78		mg/kg	21	--	10	09/29/24 09:35	10/05/24 17:09	EPA 3050B	1,6020B	MRC

Project Name: BAR MILLS DAM **Lab Number:** L2454546

Project Number: 510195, PH 5, TASK 2 **Report Date:** 10/17/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1977222-1										
Antimony, Total	ND		mg/kg	1.6	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Arsenic, Total	ND		mg/kg	0.50	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Beryllium, Total	ND		mg/kg	0.30	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Cadmium, Total	ND		mg/kg	0.20	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Chromium, Total	ND		mg/kg	2.0	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Copper, Total	ND		mg/kg	2.0	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Lead, Total	ND		mg/kg	0.60	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Nickel, Total	ND		mg/kg	1.0	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Selenium, Total	ND		mg/kg	2.0	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Silver, Total	ND		mg/kg	0.50	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Thallium, Total	ND		mg/kg	0.40	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC
Zinc, Total	ND		mg/kg	10	--	10	09/29/24 09:35	10/05/24 15:54	1,6020B	MRC

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1977285-1										
Mercury, Total	ND		mg/kg	0.083	--	1	09/30/24 08:25	09/30/24 11:45	1,7471B	MJR

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1977222-2								
Antimony, Total	100		-		80-120	-		20
Arsenic, Total	100		-		80-120	-		20
Beryllium, Total	102		-		80-120	-		20
Cadmium, Total	99		-		80-120	-		20
Chromium, Total	106		-		80-120	-		20
Copper, Total	110		-		80-120	-		20
Lead, Total	106		-		80-120	-		20
Nickel, Total	108		-		80-120	-		20
Selenium, Total	96		-		80-120	-		20
Silver, Total	100		-		80-120	-		20
Thallium, Total	99		-		80-120	-		20
Zinc, Total	108		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1977285-2								
Mercury, Total	100		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1977285-3 QC Sample: L2454546-01 Client ID: SED-5												
Mercury, Total	ND	2.51	2.38	95		-	-		80-120	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1977285-4 QC Sample: L2454546-01 Client ID: SED-5						
Mercury, Total	ND	ND	mg/kg	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	09/27/24 17:24	1,1030	GEF

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	09/27/24 17:24	1,1030	GEF

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME
Sample Depth:
Matrix: Sediment

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Wet Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	09/27/24 17:24	1,1030	GEF

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-01
Client ID: SED-5
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:30
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	24		umhos/cm	10	--	1	-	09/27/24 23:34	1,9050A	AAS
Solids, Total	50.3		%	0.100	NA	1	-	09/24/24 10:48	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.9	--	1	09/25/24 19:50	09/26/24 13:44	1,9010C/9012B	JER
pH (H)	7.90		SU	-	NA	1	-	09/27/24 23:34	1,9045D	AAS
Sulfate	ND		mg/kg	180	--	.9	-	09/29/24 15:20	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 15:01	125,7.3	BAY
Sulfide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 14:36	125,7.3	BAY

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-02
Client ID: SED-6
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 08:45
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.24		%	0.050	--	1	-	10/07/24 10:12	13,-	SPP
Total Organic Carbon (Rep2)	2.41		%	0.050	--	1	-	10/07/24 10:12	13,-	SPP
Total Organic Carbon (Average)	2.32		%	0.050	--	1	-	10/07/24 10:12	13,-	SPP
Grain Size Analysis - Mansfield Lab										
Cobbles	ND		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Coarse Gravel	ND		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Fine Gravel	ND		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Total Gravel	ND		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Coarse Sand	ND		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Medium Sand	3.00		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Fine Sand	34.0		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Total Sand	37.0		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Silt Fine	51.0		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Clay Fine	12.0		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
% Total Fines	63.0		%	0.100	NA	1	-	10/09/24 10:40	12,D6913/D7928	SJK
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	29		umhos/cm	10	--	1	-	09/27/24 23:34	1,9050A	AAS
Solids, Total	47.0		%	0.100	NA	1	-	09/24/24 10:48	121,2540G	ROI
Cyanide, Total	ND		mg/kg	2.0	--	1	09/25/24 19:50	09/26/24 13:49	1,9010C/9012B	JER
pH (H)	6.85		SU	-	NA	1	-	09/27/24 23:34	1,9045D	AAS
Sulfate	ND		mg/kg	190	--	.9	-	09/29/24 15:20	1,9038	MRW
Chromium, Hexavalent	ND		mg/kg	1.70	--	1	10/16/24 12:43	10/17/24 04:08	1,7196A	DTH
Cyanide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 15:01	125,7.3	BAY
Sulfide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 14:36	125,7.3	BAY

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

SAMPLE RESULTS

Lab ID: L2454546-03
Client ID: SED-7
Sample Location: BUXTON/ HOLLIS, ME

Date Collected: 09/23/24 09:05
Date Received: 09/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	09/27/24 23:34	1,9050A	AAS
Solids, Total	46.0		%	0.100	NA	1	-	09/24/24 10:48	121,2540G	ROI
Cyanide, Total	ND		mg/kg	2.0	--	1	09/25/24 19:50	09/26/24 13:50	1,9010C/9012B	JER
pH (H)	7.13		SU	-	NA	1	-	09/27/24 23:34	1,9045D	AAS
Sulfate	ND		mg/kg	200	--	.9	-	09/29/24 15:20	1,9038	MRW
Cyanide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 15:02	125,7.3	BAY
Sulfide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 14:36	125,7.3	BAY

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1975426-2										
Solids, Total	99.9		%	0.100	NA	1	-	09/24/24 10:48	121,2540G	ROI
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1976340-1										
Cyanide, Total	ND		mg/kg	0.91	--	1	09/25/24 19:50	09/26/24 13:28	1,9010C/9012B	JER
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1977762-1										
Sulfate	ND		mg/kg	100	--	1	-	09/29/24 15:20	1,9038	MRW
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1977791-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 14:58	125,7.3	BAY
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1977792-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	09/29/24 13:10	09/29/24 14:33	125,7.3	BAY
Total Organic Carbon - Mansfield Lab for sample(s): 02 Batch: WG1981162-1										
Total Organic Carbon (Rep1)	ND		%	0.050	--	1	-	10/07/24 10:12	13,-	SPP
Total Organic Carbon (Rep2)	ND		%	0.050	--	1	-	10/07/24 10:12	13,-	SPP
Total Organic Carbon (Average)	ND		%	0.050	--	1	-	10/07/24 10:12	13,-	SPP
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1984923-1										
Chromium, Hexavalent	ND		mg/kg	0.800	--	1	10/16/24 12:43	10/17/24 04:08	1,7196A	DTH

Lab Control Sample Analysis

Batch Quality Control

Project Name: BAR MILLS DAM

Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1976340-2 WG1976340-3								
Cyanide, Total	**61**	Q	81		80-120	31		35
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1977417-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1977418-1								
Specific Conductance	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1977762-2								
Sulfate	92		-		80-121	-		12
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1977791-2								
Cyanide, Reactive	102		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1977792-2								
Sulfide, Reactive	118		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1984923-2								
Chromium, Hexavalent	80		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1976340-6 WG1976340-7 QC Sample: L2454546-01 Client ID: SED-5												
Cyanide, Total	ND	18	18	98		20	100		75-125	11		35
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1977762-4 QC Sample: L2454546-01 Client ID: SED-5												
Sulfate	ND	351	440	130		-	-		22-183	-		12
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1984923-4 QC Sample: L2454546-02 Client ID: SED-6												
Chromium, Hexavalent	ND	2530	2070	82		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1977417-2 QC Sample: L2454546-01 Client ID: SED-5						
pH (H)	7.90	7.29	SU	**8**	Q	5
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1977418-2 QC Sample: L2454546-01 Client ID: SED-5						
Specific Conductance @ 25 C	24	22	umhos/cm	9		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1977762-3 QC Sample: L2454546-01 Client ID: SED-5						
Sulfate	ND	ND	mg/kg	NC		12
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1984923-6 QC Sample: L2454546-02 Client ID: SED-6						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2
Lab Number: L2454546
Report Date: 10/17/24

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG1981162-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	105		75-125
Total Organic Carbon (Rep2)	103		75-125
Total Organic Carbon (Average)	104		75-125

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2454546-01A	Vial MeOH preserved	A	NA		3.4	Y	Absent		8260HLW(14)
L2454546-01B	Vial water preserved	A	NA		3.4	Y	Absent	24-SEP-24 08:18	8260HLW(14)
L2454546-01C	Vial water preserved	A	NA		3.4	Y	Absent	24-SEP-24 08:18	8260HLW(14)
L2454546-01D	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		ME-TS-2540(7)
L2454546-01E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		TL-6020T(180),SE-6020T(180),CR-6020T(180),NI-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),SB-6020T(180),AS-6020T(180),CD-6020T(180),HG-T(28),AG-6020T(180)
L2454546-01F	Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),8270TCL(14),REACTS(14),TCN-9010(14),HOLD-WETCHEM(),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),HERB-8151(14),REACTCN(14),PCB-8082(365),COND-9050(28)
L2454546-01G	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),8270TCL(14),REACTS(14),TCN-9010(14),HOLD-WETCHEM(),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),HERB-8151(14),REACTCN(14),PCB-8082(365),COND-9050(28)
L2454546-01H	Glass 500ml/16oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),8270TCL(14),REACTS(14),TCN-9010(14),HOLD-WETCHEM(),SO4-9038(28),TPH-DRO(14),PH-9045(1),PEST-8081(14),8270TCL-SIM(14),HERB-8151(14),REACTCN(14),PCB-8082(365),COND-9050(28)
L2454546-02A	Vial MeOH preserved	A	NA		3.4	Y	Absent		8260HLW(14)
L2454546-02B	Vial water preserved	A	NA		3.4	Y	Absent	24-SEP-24 08:18	8260HLW(14)
L2454546-02C	Vial water preserved	A	NA		3.4	Y	Absent	24-SEP-24 08:18	8260HLW(14)
L2454546-02D	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		ME-TS-2540(7)

*Values in parentheses indicate holding time in days

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2454546-02E	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		ME-TS-2540(7)
L2454546-02F	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		SE-6020T(180),TL-6020T(180),NI-6020T(180),CR-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L2454546-02G	Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		A2-TOC-LK-2REPS(14)
L2454546-02H	Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),8270TCL(14),TCN-9010(14),REACTS(14),HOLD-WETCHEM(),TPH-DRO(14),SO4-9038(28),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),REACTCN(14),HERB-8151(14),HEXCR-7196(30),COND-9050(28)
L2454546-02I	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),8270TCL(14),TCN-9010(14),REACTS(14),HOLD-WETCHEM(),TPH-DRO(14),SO4-9038(28),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),REACTCN(14),HERB-8151(14),COND-9050(28)
L2454546-02J	Glass 500ml/16oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),8270TCL(14),TCN-9010(14),REACTS(14),HOLD-WETCHEM(),TPH-DRO(14),SO4-9038(28),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),REACTCN(14),HERB-8151(14),COND-9050(28)
L2454546-02K	Plastic 8oz unpreserved for Grain Size	A	NA		3.4	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-CFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-SFINE(),A2-HYDRO-CSAND(),A2-HYDRO-TSAND(),A2-HYDRO-FGRAVEL(),A2-HYDRO-COBBLES()
L2454546-03A	Vial MeOH preserved	A	NA		3.4	Y	Absent		8260HLW(14)
L2454546-03B	Vial water preserved	A	NA		3.4	Y	Absent	24-SEP-24 08:18	8260HLW(14)
L2454546-03C	Vial water preserved	A	NA		3.4	Y	Absent	24-SEP-24 08:18	8260HLW(14)
L2454546-03D	Plastic 2oz unpreserved for TS	A	NA		3.4	Y	Absent		ME-TS-2540(7)
L2454546-03E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		SE-6020T(180),TL-6020T(180),NI-6020T(180),CR-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),SB-6020T(180),AS-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)

*Values in parentheses indicate holding time in days

Project Name: BAR MILLS DAM
Project Number: 510195, PH 5, TASK 2

Lab Number: L2454546
Report Date: 10/17/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2454546-03F	Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),TCN-9010(14),8270TCL(14),REACTS(14),HOLD-WETCHEM(),SO4-9038(28),TPH-DRO(14),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),HERB-8151(14),REACTCN(14),COND-9050(28)
L2454546-03G	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),TCN-9010(14),8270TCL(14),REACTS(14),HOLD-WETCHEM(),SO4-9038(28),TPH-DRO(14),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),HERB-8151(14),REACTCN(14),COND-9050(28)
L2454546-03H	Glass 500ml/16oz unpreserved	A	NA		3.4	Y	Absent		IGNIT-1030(14),TCN-9010(14),8270TCL(14),REACTS(14),HOLD-WETCHEM(),SO4-9038(28),TPH-DRO(14),PH-9045(1),8270TCL-SIM(14),PEST-8081(14),PCB-8082(365),HERB-8151(14),REACTCN(14),COND-9050(28)
L2454546-04A	Vial MeOH preserved	A	NA		3.4	Y	Absent		8260HLW(14)
L2454546-04B	Vial water preserved	A	NA		3.4	Y	Absent	24-SEP-24 08:18	8260HLW(14)

*Values in parentheses indicate holding time in days

Project Name:	BAR MILLS DAM	**Lab Number:**	L2454546
Project Number:	510195, PH 5, TASK 2	**Report Date:**	10/17/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2454546
Project Number:	510195, PH 5, TASK 2	**Report Date:**	10/17/24

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2454546
Project Number:	510195, PH 5, TASK 2	**Report Date:**	10/17/24

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	BAR MILLS DAM	**Lab Number:**	L2454546
Project Number:	510195, PH 5, TASK 2	**Report Date:**	10/17/24

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

LIMITATION OF LIABILITIES

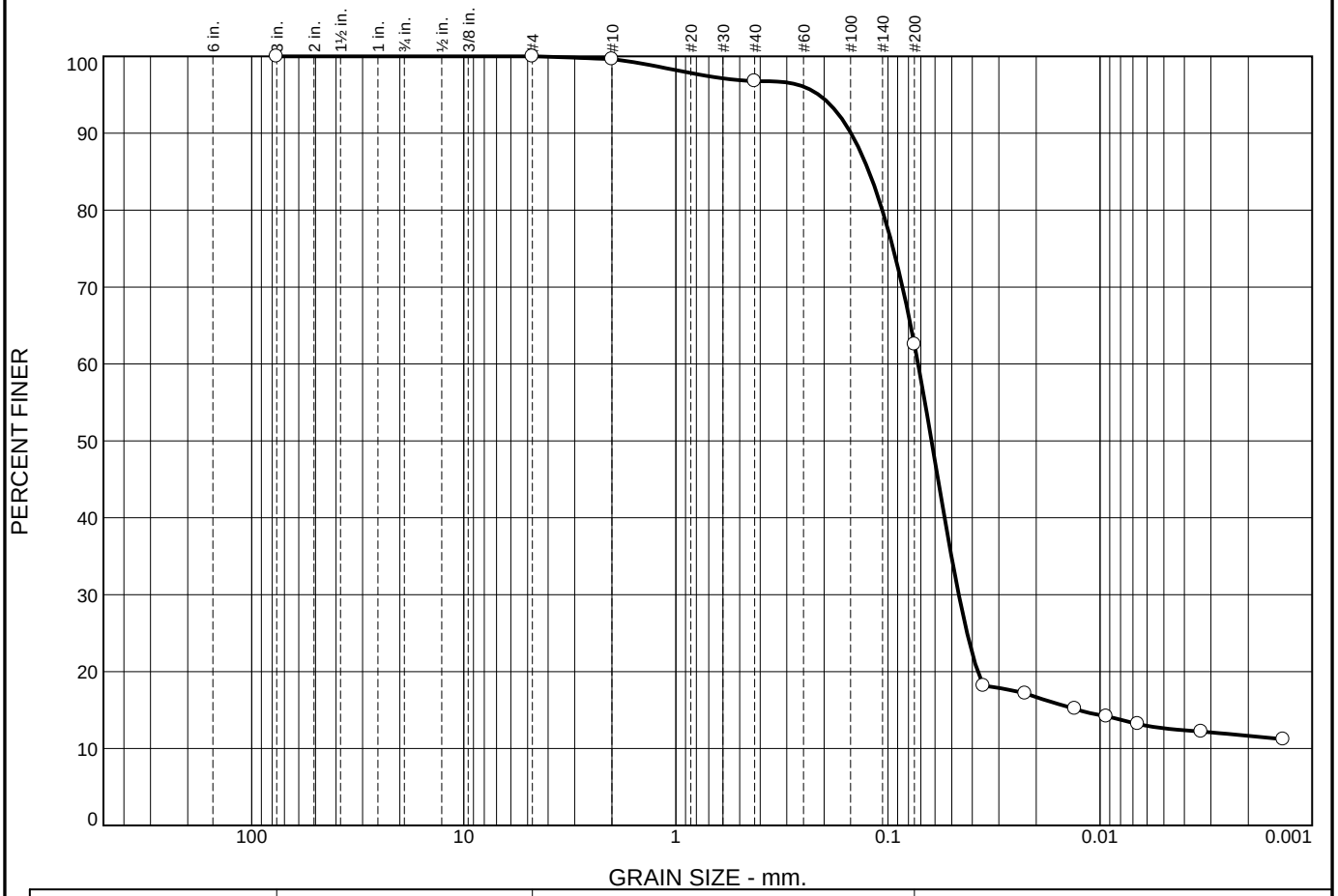
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We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	0	3	34	51	12

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1228	0.0721	0.0623	0.0463	0.0126			

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SED-6 **Sample Number:** L2454546-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/16/2024

Location: SED-6
Sample Number: L2454546-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 116.43
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
116.43	0.00	3"	0.00	0.00	100
		#4	0.00	0.00	100
		#10	0.43	0.00	100
		#40	3.31	0.00	97
		#200	39.86	0.00	63

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 63
Weight of hydrometer sample =50.44
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 **-** 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.1	1.0090	1.0091	0.0135	9.0	13.9	0.0355	18.2
5.00	21.1	1.0085	1.0086	0.0135	8.5	14.0	0.0226	17.2
15.00	21.1	1.0075	1.0076	0.0135	7.5	14.3	0.0131	15.2
30.00	21.1	1.0070	1.0071	0.0135	7.0	14.4	0.0093	14.2
60.00	21.1	1.0065	1.0066	0.0135	6.5	14.6	0.0066	13.2
240.00	21.1	1.0060	1.0061	0.0135	6.0	14.7	0.0033	12.2
1440.00	21.1	1.0055	1.0056	0.0135	5.5	14.8	0.0014	11.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	3	34	37	51	12	63

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0126	0.0377	0.0463	0.0540	0.0623	0.0721	0.1063	0.1228	0.1493	0.2117

Fineness Modulus
0.18

Alpha Analytical

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2454546 30SEP24
TRC – ME

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 9/23/24

ALPH

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: Bar Mills Dam
Project Location: Buxton/Hollis, ME
Project #: 510195, Phase 5, Task 2
Project Manager: Zachary Bonin
ALPHA Quote #: Q28698

Client Information

Client: TRC Environmental Corp
Address: 63 Marginal Way, 4th Floor
Portland, ME 04101
Phone: 207-205-2830
Fax:
Email: See comments

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Data Deliverables

Billing Information

☐ Same as Client info PO #: 221850

Regulatory Requirements/Report Limits

State/Fed Program: MEDEP & USACE
Criteria: All MEDEP RAGS and USACE RIM RLs

Other Project Specific Requirements/Comments/Detection Limits:

Email results to: zbonin@trccompanies.com; teschner@trccompanies.com; alaughlin@trccompanies.com; aburns@trccompanies.com
Hold samples for Chromium Speciation pending PPM13 Total Metals results.
Detection Limits must meet all MEDEP RAGs and USACE RIM RLs (if feasible)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs EPA 8260C	SVOCs 8270C-SIM	PCB Aroclors 8082A	TPH 8015D(M)	PPM13 Metals 6010B	Pesticides 8081B / Herbicides 8151A	Reactive cyanide / sulfur method 7.3	Conductivity / Corrosivity / pH / Ignitab	Total Cyanide 9010 / Sulfate 9038	TOC via Lloyd Kahn (2 reps)	Grain Size ASTM D422 w/ hydrometer	Chromium Speciation (See comment)	Sample Specific Comments	TOTAL # BOTTLES
01	SED-5	9/25/24	8:30	SED	AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		
02	SED-6	9/25/24	8:45	SED	AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒		
03	SED-7	9/23/24	9:06	SED	AB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		
04	Trip Blanks	9/25/24				☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
Container Type						V	V	A	A	A	A	A	A	A	A	A	A		
Preservative						B/O	B/O	A	A	A	A	A	A	A	A	A	A		

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Relinquished By:	Date/Time	Received By:	Date/Time
A. Burns	9/23/24 12:10	Pace	9/23/24
Pace	9/23/24		9-23-24 1710
	9-23-24 1850		9/23/24 1850

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Kleinschmidt Associates

Lab Log #: 0064879
Project #: 510195.0005.0002
Date Received: 07/19/2024
Date Analyzed: 07/23/2024

Site: Bar Mills Dam, Buxton, ME

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
SED-3 (0-2)	SED-3/Bar Mills Dam	Brown sediment	20%	cellulose	ND	None
SED-4 (0-1.5)	SED-4/Bar Mills Dam	Brown sediment	20%	cellulose	ND	None
SS-1	SS-1/Bar Mills Dam	Brown soil		- - -	ND	None
SED-2 (0-2)	SED-2/Bar Mills Dam	Brown sediment	20%	cellulose	ND	None
SED-1 (0-1)	SED-1/Bar Mills Dam	Brown sediment	20%	cellulose	ND	None
DUP	DUP/Bar Mills Dam	Brown sediment	20%	cellulose	ND	None

ND - asbestos was not detected
Trace - asbestos was observed at level of 1% or less - This is the reporting limit
NA/PS - Not Analyzed / Positive Stop
SNA - Sample Not Analyzed- See Chain of Custody for details
Notes: Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows 18/01A EPA -- 40 CFR Appendix E to subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples and 18/A03 EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 101424-01, effective through June 30, 2025. TRC is accredited by the AIHA Laboratory Accreditation Programs AIHA LAP (ID: LAP-100122) in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2024. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested, as received by the laboratory.

Analyzed by: Kathleen Williamson, Laboratory Manager

Reviewed by Joel Corso, Approved Signatory

Date Issued 07/24/2024

TRC

21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009
Supersede Previous Edition

LAB ID #. 64879

PROJECT NUMBER	PROJECT NAME
510195 Phase 5 Task 2	Bar Mills Dam
SIGNATURE	~~INSPECTOR~~ Sampler
	AB

PARAMETERS

TURNAROUND TIME

PLM:		8hr		24hr		48hr	✓	3day
TEM:		24hr		48hr		3day		5day

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
SED-3(0-2)	7/18/24	10:00		✓	SED 3/Bar Mills Dam	✓					Sediment
SED-4(0-15)	7/18/24	16:20		✓	SED-4/Bar Mills Dam	✓					Sediment
SS-1	7/18/24	9:25		✓	SS-1/Bar Mills Dam	✓					Soil
SED-2(0-2)	7/18/24	9:00		✓	SED-2/Bar Mills Dam	✓					Sediment
SED-1(6-1")	7/18/24	8:30		✓	SED-1/Bar Mills Dam	✓					Sediment
DUP	7/18/24	—		✓	—	✓					Sediment

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	7/18/24	7/19/24			
(Printed) Aubrey Burns	Time: 12:30	(Printed) Joel Cossa 1030	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples: _____
Acceptable: Yes ✓ No _____
Comments:

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Kleinschmidt Associates

Lab Log #: 0065369
Project #: 510195.0005.0002
Date Received: 09/24/2024
Date Analyzed: 09/24/2024

Site: Bar Mills Dam, West Buxton, ME

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
SED-5	Power Canal	Brown Sediment	20%	cellulose	ND	None
SED-6	Power Canal	Brown Sediment	20%	cellulose	ND	None
SED-7	Power Canal	Brown Sediment	20%	cellulose	ND	None

ND - asbestos was not detected
Trace - asbestos was observed at level of 1% or less - This is the reporting limit
NA/PS - Not Analyzed / Positive Stop
SNA - Sample Not Analyzed- See Chain of Custody for details
Notes: Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows 18/01A EPA -- 40 CFR Appendix E to subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples and 18/A03 EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 101424-01. TRC is accredited by the AIHA Laboratory Accreditation Programs AIHA LAP (ID: LAP-100122) in the Industrial Hygiene Program (IHLAP) for PLM. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

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Analyzed by: Aaliyah Walker, Laboratory Analyst

Reviewed by Kathleen Williamson, Laboratory Manager

Date Issued 09/24/2024

TRC

Edition: October 2009
Supersede Previous Edition

21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Kleinschmidt Associates

LAB ID #. 65369

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
510195, Phase 5, Task 2	Bar Mills Dam, West Buxton, ME		PLM: [ ] 8hr [ ] 24hr [ ] 48hr [X] 3day TEM: [ ] 24hr [ ] 48hr [ ] 3day [ ] 5day

SIGNATURE	~~INSPECTOR~~ Sampler
	Aubrey Burns

FIELD SAMPLE NUMBER	DATE	TIME	TYPE: COMP	TYPE: GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
SED-5	9/23/24	8:30		X	Power Canal	X					Sediment
SED-6	9/23/24	8:45		X	Power Canal	X					Sediment
SED-7	9/23/24	9:00		X	Power Canal	X					Sediment

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
A. Burns	9/23/24	9/24/24			
(Printed) Aubrey Burns	Time: 10:10	(Printed) 1030 Williamson	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples:
Acceptable: Yes ✓ No
Comments:

Attachment B
Data Usability Assessment

Soil and Sediment Sampling
Bar Mills Dam
Buxton/Hollis, Maine
Data Usability Assessment
Prepared: October 24, 2024; Updated: October 30, 2024

A. Overall Summary

The data associated with soil and sediment samples collected on July 18, 2024 and September 23, 2024 were reviewed. In general, data are usable for project decisions based on a review of accuracy, precision, and sensitivity of the data. The data are valid as reported and may be used for decision-making purposes with the following limitation.

- The nondetect results for benzoic acid in sediment samples SED-5 (0-1), SED-6 (0-1), and SED-7 (0-0.5) cannot be used for project objectives due to significantly low (<10%) laboratory control sample (LCS) and LCS duplicate (LCSD) recoveries; these results were rejected.

Samples Included in the Data Usability Assessment

Soil: SS-1 (0-0.5)

Sediment: SED-1 (0-1), SED-2 (0-2), SED-3 (0-2), SED-4 (0-1.5), SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5), DUP[1]

Field Duplicates: [1]Field duplicate of SED-3

Trip Blank: TRIP BLANKS (9/23/24)

Matrix Spikes (MSs), MS Duplicates (MSDs), and/or Laboratory Duplicates:
Soil: SS-1 (0-0.5) (MS/Laboratory duplicate: hexavalent chromium)
Sediment: SED-1 (0-1) (MS/Laboratory duplicate: sulfate), SED-2 (0-2) (Laboratory duplicate: TPH-DRO, grain size, pH, specific conductance; MS/Laboratory duplicate: TOC), SED-5 (0-1) (MS/Laboratory duplicate: mercury, sulfate; MS/MSD: total cyanide; Laboratory duplicate: specific conductance, pH), SED-6 (0-1) (MS/Laboratory duplicate: hexavalent chromium)

Analyses Performed:
Soil: VOCs, SVOCs, PCBs, pesticides, herbicides, TPH-DRO, total metals, ignitability, specific conductance, total cyanide, pH, sulfate, reactive cyanide, reactive sulfide, asbestos, hexavalent chromium
Sediment: VOCs, SVOCs, PCBs, pesticides, herbicides, TPH-DRO, total metals, grain size, ignitability, specific conductance, total cyanide, pH, sulfate, reactive cyanide, reactive sulfide, TOC, asbestos, hexavalent chromium

Laboratory Data Packages: L2440510, L2454546, L2447107* (Alpha Analytical, Mansfield and/or Westborough, MA)

*The laboratory listed one of the laboratory sample IDs next to the wrong sample on the revised chain-of-custody included in this report (DUP instead of SS-1). The laboratory properly analyzed the correct samples, SED-1 (0-1) and SS-1 (0-0.5), for hexavalent chromium.

Criteria Reviewed: Holding times/sample preparation, blanks, surrogates, LCS, LCSDs, laboratory duplicates, MS, MSDs, field duplicates, reporting limits (RLs)

B. Sensitivity Evaluation

Sensitivity was acceptable for all analyses of soil samples (i.e., the RLs for nondetect results were below the Maine Department of Environmental Protection Remedial Action Guidelines [MEDEP RAGs] for the Soil Exposure Pathway, November 15, 2023, for Residential, Commercial Worker, and Construction Worker scenarios).

Sensitivity was acceptable for the herbicide, total cyanide, and TOC analyses of sediment samples (i.e., the RLs for nondetect results were below the EPA Region 3 Biological Technical Assistance Group (BTAG) Freshwater Sediment Screening Benchmarks, August 2006 and/or the US Army Corps of Engineers [ACE] Regional Implementation Manual [RIM] RLs, 2004, as applicable). The nondetect RLs for several VOCs, SVOCs, pesticides, total PCBs, and total metals in sediment samples were above the EPA Region 3 BTAG Freshwater Sediment Screening Benchmarks and/or USACE RIM RLs as summarized in the table below.

Analyte Affected	Affected Samples	Criteria Exceeded (mg/Kg)	RL(s) (mg/Kg)
trans-1,3-Dichloropropene, cis-1,3-Dichloropropene, 1,3-Dichloropropene, Total	All sediment samples	0.0000509[2]	0.00057-0.0027
Carbon disulfide		0.000851[2]	0.011-0.027
1,2-Dichlorobenzene		0.0165[2]	0.21-0.35
3,3'-Dichlorobenzidine		0.127[2]	
2,4-Dinitrotoluene		0.0416[2]	
Bis(2-Ethylhexyl)phthalate		0.05[1] 0.18[2]	
Butyl benzyl phthalate, Di-n-butylphthalate, Di-n-octylphthalate, Diethyl phthalate, Dimethyl phthalate		0.05[1]	
Biphenyl		0.02[1]	0.48-0.81
2-Chlorophenol		0.0312[2]	0.21-0.35
2,4-Dichlorophenol		0.117[2]	0.19-0.32
2,4-Dimethylphenol		0.029[2]	0.21-0.35
Hexachlorobenzene		0.001[1]	0.0084-0.014
Total PCBs		0.0598[2]	0.0602-0.193
Heptachlor epoxide		0.001[1] 0.00247[2]	0.00366-0.00647
4,4'-DDD, Endosulfan II		0.001[1]	0.00195-0.00647
Methoxychlor		0.001[1]	0.00366-0.00647
Toxaphene		0.025[1] 0.0001[2]	0.0366-0.0647
Chlordane		0.00324[2]	0.0162-0.0288
Mercury		0.02[1]	0.081-0.136
Thallium		0.2[1]	0.48-0.85
Aldrin	All sediment samples	0.001[1]	0.00195-0.00345
	All sediment samples except SED-1 (0-1)	0.002[2]	0.00244-0.00345

Analyte Affected	Affected Samples	Criteria Exceeded (mg/Kg)	RL(s) (mg/Kg)
Acenaphthene	SED-3 (0-2), SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	0.01[1]	0.011-0.014
	All sediment samples except SED-1 (0-1)	0.0067[2]	0.01-0.014
Dieldrin	All sediment samples	0.001[1]	0.00122-0.00216
	SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	0.0019[2]	0.00196-0.00216
4,4'-DDE	All sediment samples	0.001[1]	0.00195-0.00345
	SED-6 (0-1), SED-7 (0-0.5)	0.00316[2]	0.00324-0.00345
4,4'-DDT	All sediment samples	0.001[1]	0.00366-0.00647
	All sediment samples except SED-1 (0-1)	0.00416[2]	0.00457-0.00647
Endosulfan I	All sediment samples	0.001[1]	0.00195-0.00345
	SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	0.0029[2]	0.00314-0.00345
cis-Chlordane, trans-Chlordane	All sediment samples	0.001[1]	0.00244-0.00431
	SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	0.00324[2]	0.00393-0.00431
Fluoranthene, Benzo(b)fluoranthene, Phenanthrene, Pyrene	SED-7 (0-0.5)	0.01[1]	0.014
Naphthalene (SVOC), Benzo(k)fluoranthene, Anthracene, Fluorene, Dibenzo(a,h)anthracene	SED-3 (0-2), SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	0.01[1]	0.011-0.014
Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Benzo(ghi)perylene, Indeno(1,2,3-cd)Pyrene	SED-6 (0-1), SED-7 (0-0.5)	0.01[1]	0.014
Acenaphthylene	SED-3 (0-2), SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	0.01[1]	0.011-0.014
	All sediment samples except SED-1 (0-1)	0.0059[2]	0.01-0.014
Lindane, Endrin	All sediment samples except SED-1 (0-1)	0.001[1]	0.00102-0.00144
Heptachlor	All sediment samples except SED-1 (0-1)	0.001[1]	0.00122-0.00172
Antimony	SED-3 (0-2), SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	2.5[1]	2.6-3.4
	All sediment samples except SED-1 (0-1)	2[2]	2.4-3.4
Cadmium	SED-1 (0-1), SED-3 (0-2), DUP, SED-7 (0-0.5)	0.07[1]	0.24-0.42
Silver	All sediment samples	0.2[1]	0.61-1.1
	SED-7 (0-0.5)	1[2]	1.1

[1] USACE RIM RL
[2] EPA Region 3 BTAG Freshwater Sediment Screening Benchmark

In general, these sensitivity issues were due to limitations of the analytical methods and/or adjustment of the sample RLs for sample-specific preparation factors. Since the sediment data are only being used for project planning purposes and baseline monitoring, these RL issues do not affect the overall achievement of project objectives.

No project action limits exist for the remaining sediment analyses.

C. Evaluation of Accuracy and Precision

Biases and uncertainties associated with the VOC, SVOC, hexavalent chromium, and pH analyses of the soil samples, and VOC, SVOC, total cyanide, hexavalent chromium, and pH analyses of the sediment samples are discussed below. There were no biases or uncertainty associated with the remaining analyses of samples in this data set.

C-1. Low-Biased Results

The nondetect results for benzoic acid in sediment samples SED-5 (0-1), SED-6 (0-1), and SED-7 (0-0.5) cannot be used for project objectives due to significantly low (<10%) LCS and LCSD recoveries; these results were rejected.

In general, the overall data usability and decision-making process were not affected by the remaining QC nonconformances, as shown in the table below.

Matrix	Associated Samples	Analytes Affected	Reason for Low Bias	Reason Data Usability or Decision-making Process Not Affected
Soil	SS-1 (0-0.5)	Hexavalent chromium	Holding time exceedance	Result for affected analyte significantly below the project action levels in the associated sample.
Sediment	SED-1 (0-1), SED-2 (0-2), SED-3 (0-2), SED-4 (0-1.5), DUP	Methylene chloride, trans-1,2-dichloroethene, acetone, vinyl acetate, methyl acetate, bis(2-chloroisopropyl)ether, aniline	Low LCS and/or LCSD recovery	Either no project actions levels exist or results for affected analytes significantly below the project action levels in the associated samples.
	SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	Total cyanide	Low LCS recovery	Recovery for total cyanide within vendor-certified acceptance limits.
	SED-1 (0-1)	Hexavalent chromium	Holding time exceedance	No project action levels exist for hexavalent chromium.

C-2. Potential Uncertainty

Potential uncertainty exists for select results due to various QC nonconformances. In general, the overall data usability and decision-making process were not affected by the QC nonconformances, as shown in the table below.

Matrix	Associated Samples	Analytes Affected	Reason for Uncertainty	Reason Data Usability or Decision-making Process Not Affected
Soil	SS-1 (0-0.5)	1,1,2-Trichloro-1,2,2-trifluoroethane	LCS/LCSD variability	Result for affected analyte significantly below the project action levels in the associated sample.
		pH	Holding time exceedance	No project action levels exist for pH.
Sediment	All sediment samples	pH	Holding time exceedance	No project action levels exist for pH.

Matrix	Associated Samples	Analytes Affected	Reason for Uncertainty	Reason Data Usability or Decision-making Process Not Affected
Sediment	SED-1 (0-1), SED-2 (0-2), SED-3 (0-2), SED-4 (0-1.5), DUP	1,1,2-Trichloro-1,2,2-trifluoroethane	LCS/LCSD variability	No project action levels exist for 1,1,2-trichloro-1,2,2-trifluoroethane.
	SED-3 (0-2), DUP	Total xylenes	Field duplicate variability	No project action levels exist for total xylenes.
	SED-5 (0-1), SED-6 (0-1), SED-7 (0-0.5)	pH	Laboratory duplicate variability	No project action levels exist for pH.

Attachment C
Town of Buxton Letter dated July 11, 2024

Sent via email July 11, 2024

Mr. David Heidrich
Brookfield Renewable U.S.
150 Main Street
Lewiston, Maine 04240

Re: Town of Buxton Request to Revise Final Study Plan for the Bar Mills Project (FERC Project No. P-2194)

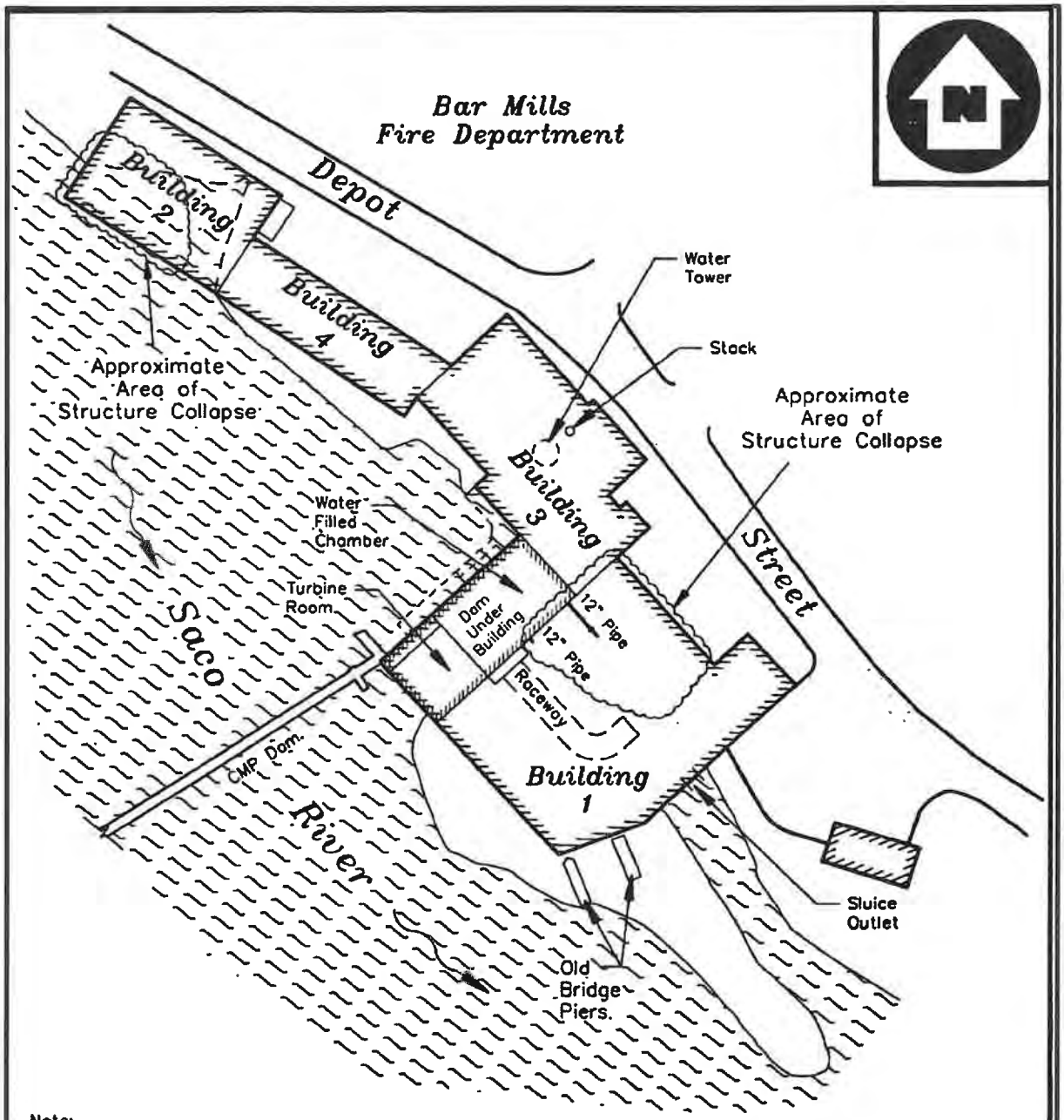
Dear David:

The U.S. Environmental Protection Agency's (EPA) Removal Action Administrative File for the Rogers Fibre Mill Superfund Site is a record of the environmental risks and physical hazards mitigated 25 years ago. It contains information highly pertinent to Brookfield White Pine Hydro's (BWPH) field studies scheduled to begin July 15, 2024. In particular, the Board of Selectmen request BWPH evaluate the effect of the projected lower river level on the measures the EPA implemented to improve water quality and secure the remains of the mill dam/foundation; and review the engineered solutions used to stabilize remaining sediment contamination with the objective of fully removing the spillway dam.

EPA modified one of the 12-inch diameter pipes (Figure 1) to pass water through the remaining dam/foundation of the Rogers Fibre Mill. Water flowing from the pipe was intended to improve the dissolved oxygen content in the narrower stream channel (Figure 2) minimizing the migration of contamination from the tailrace (Tsang, 1999). The rendering on page 50 of the Final Study Plan suggests the post-removal river level will leave the influent area for the pipe disconnected from the river. This likelihood became evident during the winter drop in head pond elevation which exposed the penstocks and river sediments (Figure 3). BWPH needs to assess the consequences of the lower river level on the pipe and ask the EPA and the Maine Department of Environmental Protection whether flow through the narrower stream channel is still necessary.

It is unclear from the EPA's Response Activities whether the sediments at the entrance to the penstocks were sampled. It is in the public's interest that BWPH test sediment in this area to determine whether there will be a direct contact health risk once the river level is lowered. If contamination does not exist or necessitates excavation, the location offers access for equipment to remove the east side of the spillway dam.

Figure 1



Note:
Drawing based on "Rogers Plant Colonial Fiber Company", by H.I. & E.C. Jordan, dated April 30, 1970.

SITE DIAGRAM

ROGERS FIBRE MILL
DEPOT STREET
BAR MILLS, MAINE

WESTON® MANAGERS DESIGNERS/CONSULTANTS
REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD #	DRAWN BY:	DATE
98-05-0259	K.J.C./P.P.	SEP 98

FILE NAME: R:\98050259\DWG\ROGERS.DWG

FIGURE 2

Figure 2

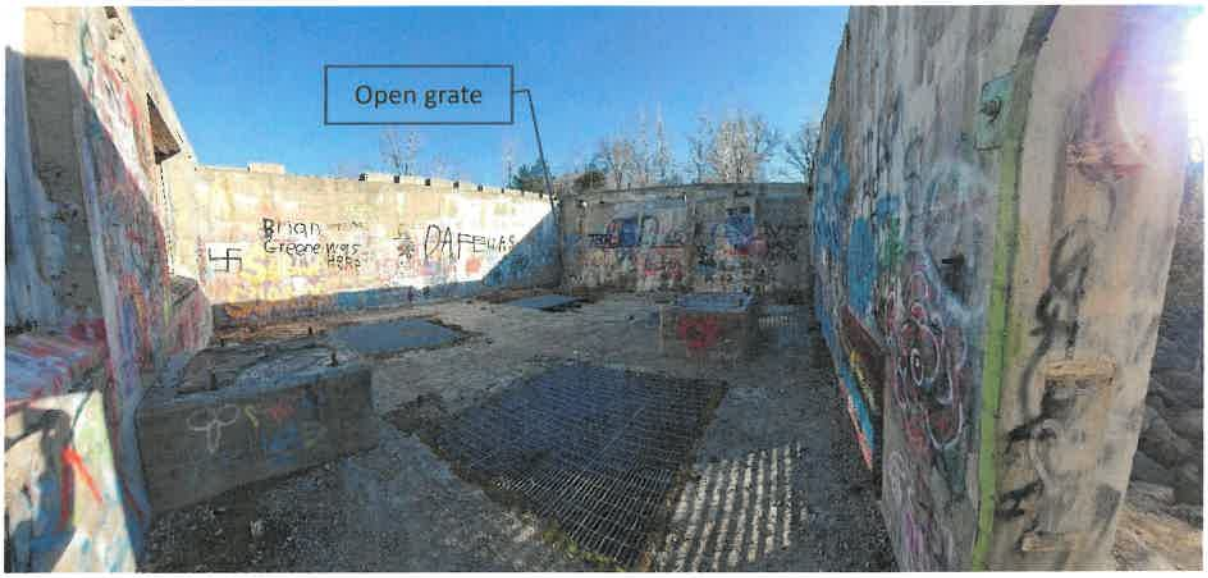

BAR MILLS DAM
Remains of Rogers Fibre Mill and wet road used for bridge replacement (Google Earth May 19, 2016)
Sediment area and wet road access option
Water filled chamber
Turbine room
Wet road access option
12 inch pipe and stream channel
EPA excavation in former tailrace area covered by riprap fill
300 ft
Google Earth

Figure 3



During the late stages of the Removal Action, the EPA installed grates to prevent entry to the turbine room and water filled chamber within the foundation of the mill (Weston, 2000). The grates have since been vandalized making the confined space beneath the turbine room accessible (Figure 4). Once the river level is lowered, the exposed penstocks will also allow access to the inside of the deteriorating dam/foundation (Figure 3). The 2008 FERC Order

Figure 4



Issuing New License established that the project works included "the concrete foundation of the demolished Roger Fiber Mill Building" and required revised drawings showing the foundation within the project boundary. BWPH must evaluate this public safety hazard.

More than six thousand tons of sediment and sludge were removed from the former mill site. The Addendum to the Administrative File states that the cleanup action "eliminated the threat of direct public contact with contaminated soil/sediment and also reduced the ecological and environmental risks." The remaining contaminated sediment was made inaccessible by covering the tailrace (labeled "Raceway" in Figure 1) with riprap (Weston, 2000). Fifteen years later, the remediation enabled the Maine Department of Transportation to construct a temporary wet road south of the tailrace for construction equipment to build the new Bar Mills Bridge (Figure 2). Using a similar technique, BWPH can avoid disturbing the remaining contaminated sediments in the tailrace to access and remove the east side of the spillway dam.

Full removal is necessary to conform with Article 11.13.D of the Town of Buxton's Zoning Ordinance that a structure in a water body:

> *shall be no larger in dimension than necessary to carry on the activity and be consistent with existing conditions, use, and character of the area.*

If half of the spillway dam remained, it would no longer fulfill its intended activity nor be consistent with the new conditions, use, and character of the river.

Unrelated to the Administrative File, BWPH's Final Study Plan omitted aesthetic vantage points that reveal the advanced deterioration of the powerhouse (Figure 5) and the dam/foundation of the Rogers Fibre Mill (Figures 3 and 6). Both structures have heavy staining, leaking joints, and broken concrete that diminish the scenic character of the Saco River and will present a liability for decades. BWPH needs to include these vantage points for the aesthetics study and plan to address the deteriorating conditions as part of the license surrender application.

Figure 5

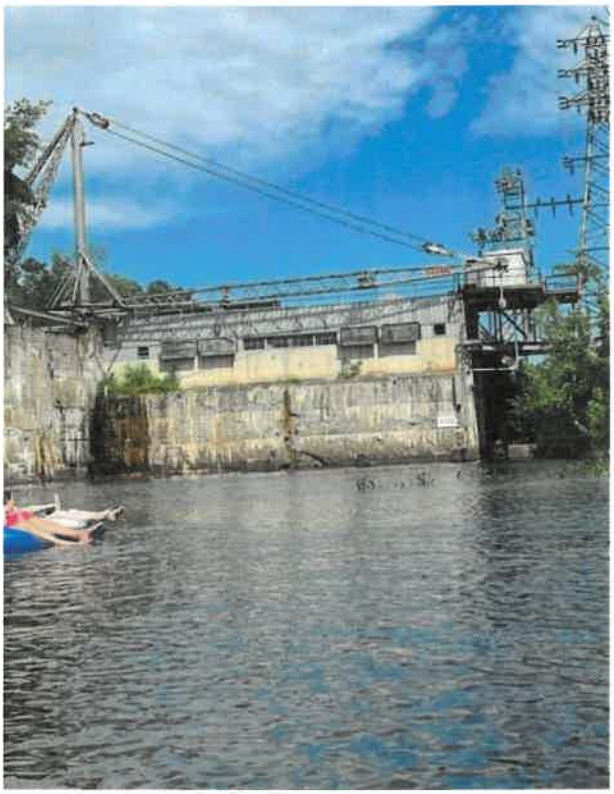


Figure 2



The Board of Selectmen looks forward to renewed progress on the Study Plan that incorporates the EPA's Removal Action, protects public health and safety, complies with the Town Ordinance, and fully evaluates aesthetics. Please confirm these concerns will be addressed during the July 2024 field season.

Sincerely,

David A. Field David A Field
Chair, Buxton Selectboard

cc: Diana Shannon – FERC
Laura Paye – MDEP
Tony Fletcher – MEMA
Andy Qua – Kleinschmidt
John Perry – MDIFW
Casey Clark – MDMR
Mary Hoffman – Town of Hollis
FERC On-line

References

Google Earth Pro. May 2016. 43°36'46.45" N, 70°33'05.86" W. Accessed November 22, 2023.

Tsang, Janis K. to Patricia L. Meaney. 1999. *Request of a Ceiling Increase for a continued Removal Action at the Rogers Fibre Mill Site, Bar Mills, ME – ACTION MEMORANDUM ADDENDUM.* Boston, MA: U.S. Environmental Protection Agency Region 1.

Weston, Roy F., Inc. 2000. *After Action Report for the Rogers Fibre Mill Removal Site Bar Mills, Maine June 1998 through October 1999*. Prepared for the U.S. Environmental Protection Agency Region 1, Emergency Planning and Response Branch.

Attachment D
EPA/USACE Correspondence

From: Janis Tsang
To: Rosiu-Cornell, Tyler-Patti, Charter-Dave
Date: 6/1/99 11:51pm
Subject: Rogers Fibre Mill Site Sediment data

Hi Folks,

Back in late March, 1999, after excavating a foot or two in water, the removal program finally finished the sediment excavation at the tailrace at the Rogers Fibre Mill Site. In April, we took a total of six post excavation samples to EPA New England Regional Lab for BNA and metal analyses. The results showed the following concentrations in ppm:

- Cu (84, 72, 441, 325, 298,216) vs 34 ppm for cleanup level
- Cr (376, 136, 355, 665, 148, 71) vs 81 ppm for cleanup level
- Pb (184, 142, 577, 432, 328, 202) vs 47 ppm for cleanup level
- Zn (302, 435, 517, 392, 252, 228) vs 150 ppm for cleanup level
- total PAHs (36.76,29.84, 42.2, 32, 30.23, 7.53) vs 4 ppm for cleanup level
- butylbenzylphthalate (9.6, 7.6, 28, 20, 7.7, 1.9) vs 100 ppb for cleanup level

Two weeks ago, ERT Alan Humphrey and Weston REAC took a total of 33 samples for metal analyses. The 30 sampling results I got back are summarized as follows:

Cr: < 50 ppm - 4 samples
50 - 100 ppm - 2 samples
100 - 200 ppm - 15 samples
200 - 500 ppm - 6 samples
> 500 ppm - 3 samples (1400 ppm highest)

Cu: < 50 ppm - 1 sample
50 -100 - 4 samples
100 -200 - 11 samples
200 - 500 - 12 samples
>500 - 2 samples (2000 ppm highest)

Pb: < 50 ppm - none
50 - 100 - 4 samples
100 - 200 - 4 samples
200 - 500 - 21 samples
> 500 - 1 sample (1500 ppm)

Zn: < 50 ppm - 1 sample
50 -100 ppm - 3 samples
100 - 200 ppm - 8 samples
200 - 500 - 18 samples
> 500 ppm - none

The above sampling results were not the typical results we have seen in the previous stockpiles (usually we excavated and stockpiled the sediment and then took a sample.). Most results for all metals are around 200 ppm. The above results were not anticipated. The area where we sampled is 80 feet by 110 feet. The depth of sediments varies from 1 to 3 feet.

Currently, the water treatment equipment and excavation equipment are demobilized. The set up for excavation, i.e., access road, staging area for stockpiles are gone. To remove the remaining 500 to 1000 yds of sediments are not going to be cheap. Moreover, there is no guarantee to be able to take all of sediment out (Excavation in water and sediment mixed with miscellaneous stone).

Gordon Russell of US Fish and Wildlife Services and I met last Thursday and discussed the above. He and I agreed that it makes sense to take a look of the best way to spend the remaining limited project money. He recognized that by next spring, the remaining sediment is going to be washed away though he does not suggest to leave the sediment there as is. He said that the DO content at the tailrace is low. At the time we were there, there was some algae and de-gasing going on. He thinks that there is some failing septic system discharging septage

into the river and with the low flow, migratory fish may die as a result of low DO. (And general public may think the site contamination kill the fish instead.) His suggestion was since the project money is very low ($ 125,000), it may be better off to spend the money to re-contour the channel in order to have a narrow stream of water to flow and improve the DO content. I told Gordon that I will take a look to see whether narrowing the channel is feasible.

Since the cleanup levels are background levels and we know at this point they are impossible to achieve, with the limited money I have, I am hoping to meet with all of you at the site to see if we can reevaluate the cleanup levels and work some common ground out. I attached the latest polrep for your information. Please let me know when it is convenient for us to meet on site. Thanks.

Janis

CC: Humphrey-Alan, McIntyre-Dave

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 1 - NEW ENGLAND

OFFICE OF SITE REMEDIATION AND RESTORATION

TO: **Janis Tsang, OSC**

FROM: **Cornell Rosiu, OSRR/TSSA Ecological Risk Assessment** CR

DATE: **June 18, 1999**

SUBJECT: **Contaminated Sediments that Remain in the Tailrace at Rogers Fibre Mill Site, Bar Mills, Maine**

The following recommendation concerning contaminated sediments that remain in the tailrace at the Rogers Fibre Mill Site, Bar Mills, Maine was made following : (1) review of the Pollution Report No. 4 dated May 20, 1999, (2) review of your June 1, 1999 memo to me, and (3) a visit to the site on June 4, 1999.

A comparison of the sediment chemical data from March and May 1999 to benthic effects data (Long et al., 1995), indicated risks to benthic organisms were possible but not significant. Because environmental risks appeared now to be insignificant following the initial removal, completion of the overall project (site stabilization, final restoration, etc.) should be considered a priority, not further removal of contaminated sediment. Additional consideration may include:

1. The volume of contaminated sediment remaining in the tailrace, cost of further removal, and cost and location of potential disposal.

2. Evaluate the potential impacts of any further removal, including associated disposal, and consider alternatives to removal.

3. In selecting a final design for stabilization/restoration, consider flood flow elevations in the tailrace, and potential to erode stabilization/restoration materials in the future.

4. In completing the project, remove as much of the sediment remaining as possible only if there are sufficient funds to stabilize and restore the site.

Therefore, it is recommended that as much of the remaining contamination as is practical be removed, but consider the items listed above and importance of completing the project overall.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

August 3, 1999

Engineering/Planning Division
Evaluation Branch

Ms. Janis Tsang
U.S. EPA, Region 1
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Dear Ms. Tsang:

Enclosed is the June 18, 1999, site visit report to the Roger's Fibre Mill Site in Bar Mills, Maine. The area of concern during this visit was that which was previously covered by Building 1. The sediment in this area is contaminated with metals, namely chromium, lead, copper, and zinc. These contaminated sediments need to be excavated or stabilized to prevent contaminant migration into the Saco River. The Environmental Protection Agency (EPA) had requested technical assistance from the US Army Corps of Engineers (USACE) to evaluate this area and recommend an alternative to sediment excavation.

Mr. Ken Levitt and Ms. Diane Curry from USACE attended the site visit. Based on their observations and information provided by you and your team, it is our recommendation that the area should not be revegetated. The freshwater wetland alternative was not recommended because the hydrology of the area is unknown. Based on observations, flows vary significantly. It would be difficult to select vegetation which would be able to establish itself. A wetland environment may also attract children, as the Roger's Fibre Mill site is located in close proximity to a residential neighborhood.

If you have any questions, please contact Mr. Ken Levitt of my staff at (978) 318-8114.

Sincerely,

Kenneth E. Hitch, P.E.
Chief, Engineering/Planning Division

Enclosure

Roger's Fibre Mill Site, Bar Mills, Maine

USACE Site Visit Report 18 June 1999

Mandy Butterworth, R.F. Weston/Start Program
Diane Curry, USACE
Rich Henry, REAC
Alan Humphrey, USEPA
Ken Levitt, USACE
Janis Tsang, USEPA
Peter Welch, R.F. Weston

The Roger's Fibre Mill Site is located on Depot Street, a residential neighborhood in Bar Mills, Maine (Figure 1). The USEPA recently demolished and removed the four dilapidated buildings of the old mill complex. Contaminated sediments lie in the area previously covered by Building 1. This area can be seen in Photo 1, which was taken in the upstream direction while standing at the area's outflow. The structure in the background is the dam which was previously located under Building 1. The riprapped area on the right borders Depot Street. The riprapped area on the left lines the embankment which separates the area from the main channel of the Saco River. The sediment in this area is contaminated with metals, namely chromium (Cr), lead (Pb), copper (Cu) and zinc (Zn). The sediments lying to the left of the penstock have an obvious rust color (Photo 2). The USEPA anticipates that due to the sediment consistency (having a high water content and mixed with miscellaneous stone), excavation of the entire area will be too costly for the current budget (Photo 3). The agency is proposing to remove some of the sediments that are most accessible, and then find an appropriate method, such as establishing a freshwater wetland, to stabilize the remaining area. The area must be stabilized to reduce contaminant migration into the Saco River. Currently, the agency is seeking alternatives to sediment excavation. The purpose of the 18-June-99 visit was to evaluate the site and provide recommendations for alternatives.

The site dimensions are 80 feet x 110 feet (8,800 square feet). Bedrock lies close to the surface, with a sediment layer of only 6 inches to 3 feet. In a few areas, the bedrock is actually exposed. A channel will be excavated through the area and it will likely follow the existing natural channel. This channel can be seen in Photo 4, which was taken in the downstream direction while standing above the penstock. The proposed channel dimensions are 2' deep and 4' - 5' wide. The banks of the new channel will need to be stabilized to accommodate a fairly wide range of flows. Riprap is a likely method to be used. The anticipated base flow after channel construction is 1000 gallons per minute (gpm). The main inflow to the area will be from an existing 12" pipe (Photo 5). The maximum allowable release from this pipe is 2.16 million gallons per day (mgd). Groundwater seepage, dam seepage and septic tank leachate contribute a negligible inflow of 50 gpm. Currently, the pipe is closed and only the negligible flows are entering

the area. The actual hydrology of the area (*i.e.,* seasonal variations in flow volumes and velocities) is unknown. The area experiences seasonal flooding and is periodically inundated. During certain times of the year, water will also overtop the embankment which separates the site from the river. For the past month, most of the area has been dry. As can be seen in Photos 4 and 6, there is some pooling just downstream of the 12" pipe where the natural channel begins, but the remaining area is dry.

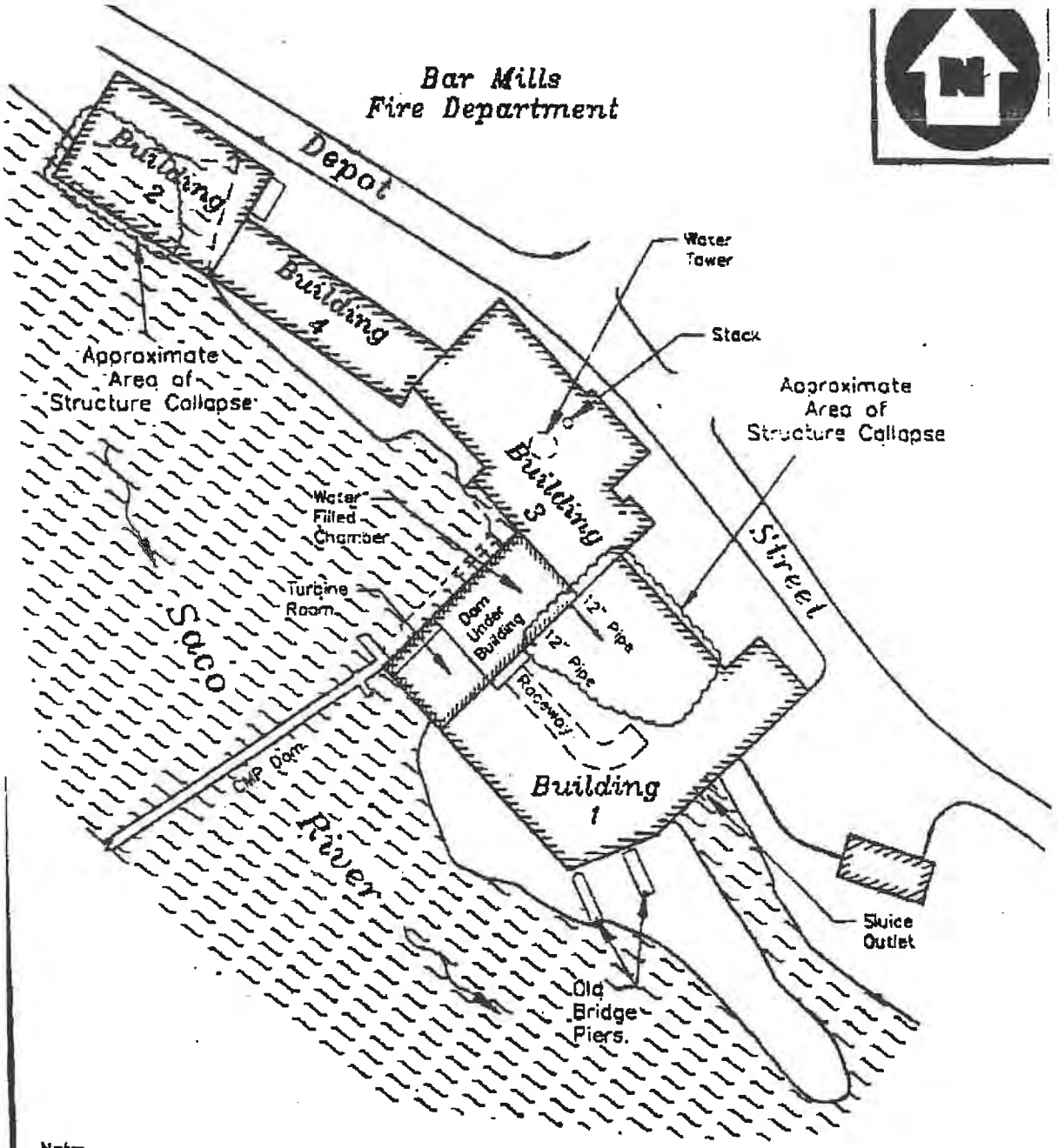
The area to be stabilized is located adjacent to the riprapped area which borders the river (left side of Photo 1). As stated previously, water will occasionally overtop the embankment and flow into the area to be stabilized. When this project is completed, the area should be unattractive as possible so as to deter people from using the area for recreational purposes. The mill site is located near a residential neighborhood. There are concerns that if a wetland environment is constructed, children may be attracted to the area. This situation is undesirable because only the most accessible sediments are being removed. The remaining sediments will have some metals contamination.

Rich Henry (REAC), who is experienced in wetlands, recommended that after sediment excavation, the area be stabilized by backfilling with rock. He stated that the existing environment is rocky, and placing rock in this area would conform to the existing substrate. Over time natural vegetation will grow, further stabilizing the sediments. As can be seen in Photo 7, the area is already beginning to revegetate with some small seedlings (possibly red maple). Backfilling with rock has several advantages. The area needs to be stabilized quickly, making rock a good alternative. The actual hydrology through the area is unknown. Based on observations, flows through the area vary significantly. It may be difficult to identify vegetation which will flourish in this environment, whereas rock will be able to withstand the periodic overflow from the river. Also, children will be less likely to play in a rocky environment as opposed to a wetland environment.

Mike Penko (USACE) agreed that rock would probably be the best way to stabilize the remaining sediments, primarily because the velocity of the river overflow is unknown. Rock would be better able than vegetation to withstand a high flow. Once in place, the voids between the individual rocks could be filled in with soil (not covered) and initially seeded with either winter rye, millet or annual rye, depending upon the time of year (*i.e.,* near September it would be winter rye; earlier it would be millet or annual rye). This initial seeding would jumpstart the re-vegetation, which should occur naturally once the rock and soil is in place. This re-vegetation will further aid in stabilizing the sediments. Revegetation is an option but is not is not necessary as this process will occur naturally over time.

Additional project photographs are available for review. They may be obtained by contacting Ken Levitt at Ext. 78114 or Diane Curry (E-mail).

Figure 1



Note:
Drawing based on "Rogers Plant Colonial Fiber Company", by H.I. & E.C. Jordan, dated April 30, 1970.

SITE SKETCH

ROGERS FIBER MILL
DEPOT STREET
BAR MILLS, MAINE

WESTON®
MANAGERS DESIGNERS/CONSULTANTS
REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD #	DRAWN BY:	DATE
98-05-0259	K.J.C./P.P.	SEP 98

FILE NAME:

FIGURE 2

Rogers Mills Project Photographs

Photo 1



Photo 2



Photo 3



Photo 4

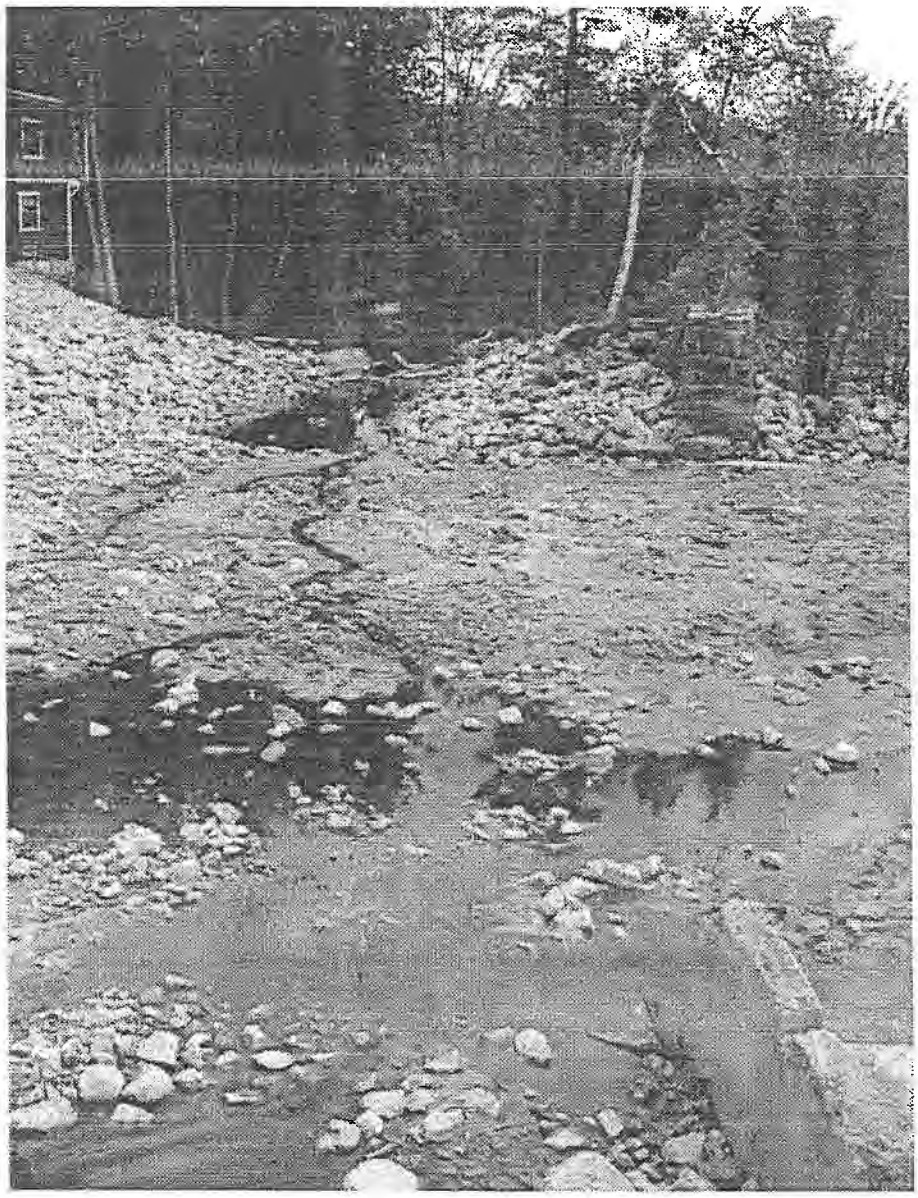


Photo 5

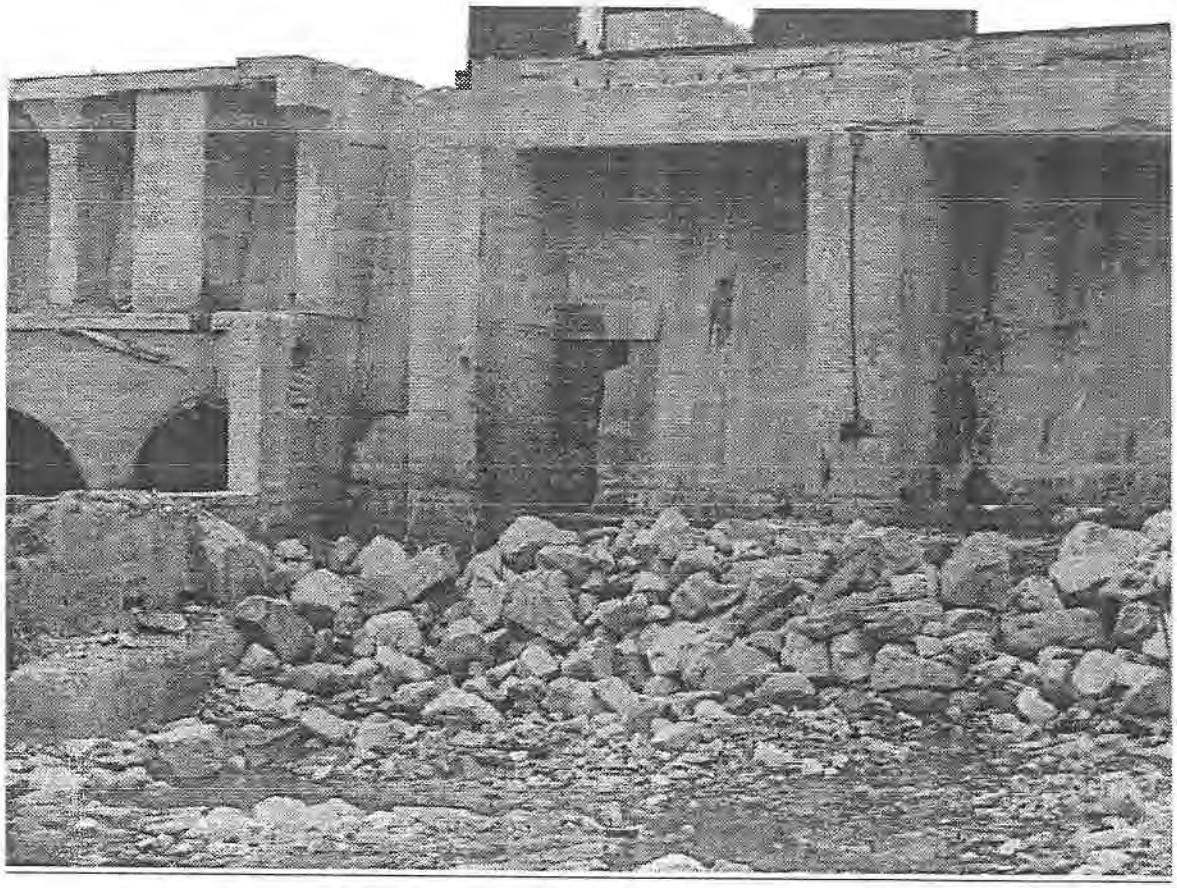


Photo 6



Photo 7



APPENDIX G

TRC LETTER, EFFECTS OF PARTIAL DAM REMOVAL ON GROUNDWATER LEVELS

249 Western Ave.
Augusta, ME 04330

T 207.621.7000
TRCcompanies.com

January 15, 2025

Mr. Kevin Cooley
Kleinschmidt
141 Main Street
P.O. Box 650
Pittsfield, ME 04967
Sent via Email: Kevin.Cooley@KleinschmidtGroup.com

Effect of Partial Dam Removal on Groundwater Levels
Brookfield Bar Mills Dam - Saco River
Bar Mills Road, Buxton, Maine

Kevin,

TRC Environmental Corporation (TRC) is pleased to provide this evaluation of potential impacts to the reduction in impoundment water levels associated with Brookfield White Pine Hydro LLC's, (Brookfield) proposed decommissioning of its Bar Mills Project located in Buxton, ME. This letter report summarizes TRC's evaluation of wells in the vicinity of the Bar Mills Dam that may be affected by the dam's removal. The evaluation is based on information obtained from the Maine Geological Survey's water well database (Maine Geological Survey: Water Well Database - Digital Data); the EDR Radius Map Report purchased from EDR; the Maine Geological Survey's Significant Sand and Gravel Aquifers map, Bar Mills Quadrangle, Maine; and Kleinschmidt's 60% Design Review binder for the Bar Mills Hydroelectric Project Decommissioning, dated February 15, 2023.

1.0 Evaluation

When the Bar Mills dam is decommissioned and partially removed, water levels in the impounded mill pond will drop and the former pond will be returned to a free-flowing channel, as shown in the 60% design drawings for the dam decommissioning. Because the surface water of the mill pond and Saco River is hydraulically connected to the adjacent and underlying groundwater flow system, lower water levels in the mill pond and river will result in lower groundwater elevations near the former mill pond and return them to natural, pre-dam levels. The greatest change in surface water elevation will be just upstream from the dam, where the water elevation of the surface water will drop approximately 18 feet, from a normal pool elevation of 748.5 feet above National Geodetic Vertical Datum (NGVD) to a few feet above the proposed new elevation of the stream channel, approximately 727.5 feet NGVD (assume a river surface elevation of 130.5 feet NGVD at the dam). The change in surface water elevation will be progressively less, moving upstream from the dam. Surface water levels in the Saco River downstream from the dam should not be significantly affected by the decommissioning of the dam, therefore will have little to no effect on groundwater elevations downstream.

As described above, partial remove of the dam will result in an approximate drop in surface water elevation of 18 feet. This could result in a corresponding drop in groundwater elevations in wells adjacent to the mill pond, near the dam could drop by a maximum of 18 feet. However, the impact of dam decommissioning (i.e., lowering the mill pond water elevation) on groundwater elevations will be

DRAFT

attenuated with distance from the mill pond laterally and with distance upstream from the dam. Figure 1 shows the locations of water supply wells within one half mile of the dam. The table below identifies six water supply wells within 650 feet of the mill pond that have the greatest potential for impacts due to the decommissioning of the dam. The wells that are closest to the mill pond and have the greatest potential to be affected by the dam being partially removed are listed in the following table.

Wells Potentially Affected by Lowering of Water Levels at the Bar Mills Dam
Data from Maine Geological Survey Well Database)

Key Well	Well Number	Drill Date	Well Depth (ft)	Well Yield (gpm)	Depth to Bedrock (ft)	Casing Length (ft)	Well Use	Distance to Site (miles)
1	67687	4/1/2000	315	18	29	90	Domestic	0.08
2	63443	3/23/1999	280	20	44	49	Municipal	0.06
3	39734	1/9/1992	300	20	25	30	Other	0.008
4	29755	1/1/1996	95	20	16	23	Industrial	0.03
5	30546	8/14/1987	160	5	29	33	Domestic	0.08
6	52265	9/29/1995	364	20	21	37	Domestic	0.1

Lowering the groundwater elevation could affect adjacent water supply wells in three ways.

- First, a drop in groundwater elevation would dewater a portion of the upper saturated thickness of the bedrock connected to the well. Assuming that the reduction in well capacity is proportional to the saturated thickness of the well's open borehole, the potential capacity of well #29755 could be reduced by approximately 20%, while other nearby water supply wells' capacity could be reduced by 10% or less. The actual reduction in potential capacity will depend on the elevation of water-bearing fractures within the bedrock.
- Second, lowered groundwater elevations could require pumps to be set at deeper elevations within the well. This could be required because lowering the groundwater elevation will lower the static water elevation in the water supply wells and the pumps are typically not placed at the bottom of the well. So even if the well continues to have sufficient capacity, it may be necessary to lower the pumps of some of the water supply wells.
- Third, lowering of the static head in the water supply wells would require that the pumps lift water a higher elevation (i.e., by as much as 18 feet). Depending on the age and type of pump that is installed in the well, this could lead to a reduced flow rate from the pump due to increased lift required.

The well database and available topographic information allow the potential decrease in capacity from water level reduction to be estimated. However, the database does not provide information about the pump elevation within each well, so the elevation of the static water level relative to the elevation of the pump is unknown. Consequently, without additional information, it cannot be determined whether an individual pump needs to be lowered. Similarly, the nature, age, and condition of the pump cannot be determined from the database.

2.0 Potential Additional Tasks and Next Steps

TRC recommends that Brookfield attempt to obtain information about the wells from the drillers who installed the wells, or from the property owners. The initial step to contact owners would be to identify the properties on which the potentially affected wells are located. With the properties identified, the property owners could be contacted by phone, by mail, or in person to discuss the particulars of well construction and pump placement. It is possible that neither the drillers nor the owners will not have information about a given well. In the event the owners cannot provide the necessary information, with the owner's permission, the well could be opened, and the pump pulled to determine the type, age, and condition of the pump, and the depth at which it is set. That information would be used to determine whether the existing pump likely would be detrimentally affected by the change in impoundment level.

TRC appreciates the opportunity to provide this letter report and looks forward to continuing to support Brookfield and their facilities. Please contact me at 207-274-2674 if you would like to discuss any aspect of our evaluation or recommendations.

Sincerely,

Thomas R. Eschner, P.G.
Senior Project Manager

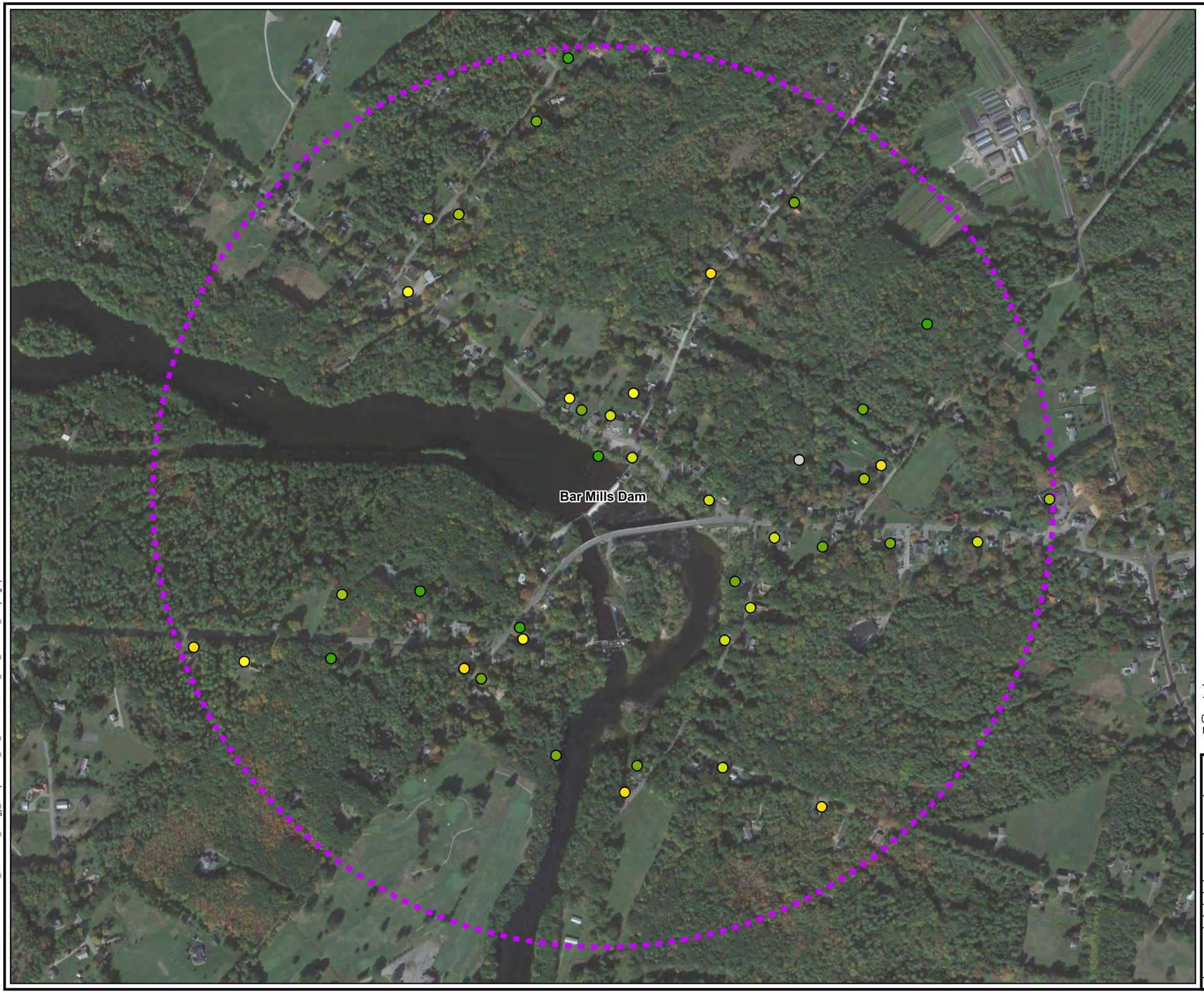
John M. Rice, P.E
Senior Engineer

cc M. Bergeron, TRC

Figure 1. Drinking Water Wells Within One-Half Mile of Bar Mills Dam, Buxton, Maine

Figure 2. Wells Potentially Affected by Lowering of Water Level at the Bar Mills Dam

TRC - GIS

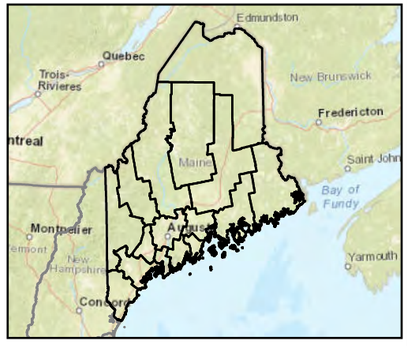


LEGEND

WATER WELL LOCATION

WELL DEPTH (FT)

- 0 - 50
- 50.1 - 100
- 100.1 - 150
- 150.1 - 200
- 200.1 - 250
- 250.1 - 300
- 300.1 - 400
- 400.1 - 500
- 500.1 - 600
- 600.1 - 800
- 800.1 - 1000
- 1000+
- NO DEPTH PROVIDED
- HALF MILE RADIUS



1:6,600
1" =550'

0 550 1,100
Feet

BROOKFIELD RENEWABLE
LEWISTON, MAINE

PROJECT: BAR MILLS HYDROELECTRIC PROJECT DECOMMISSIONING

TITLE: **WATER WELLS WITHIN ONE-HALF MILE OF BAR MILLS DAM, BUXTON, MAINE**

DRAWN BY:	GILMAN CORYELL	PROJ NO.:	XXXXXX.XXXX.XXXX
CHECKED BY:	JEFF FREDENBURG		**FIGURE 1**
APPROVED BY:	TOM ESCHNER		
DATE:			

TRC COMPANIES
63 MARGINAL WAY
PORTLAND, MAINE
www.trccompanies.com

FILE NO.: Bar_Mills_Sediment_Sampling.mxd

Plot Date: 7/14/2023, 07:54:19 AM by GCORYELL - LAYOUT: ANSI B (11"x17") **Coordinate System:** (None Defined) **Map Rotation:**
Path: T:\1-PROJECTS\Brookfield_Renewable_Energy_Group\999999_Bar_Mills\2-APRX\Bar_Mills_Sediment_Sampling.aprx

TRC - GIS

Well: 52265
Installed: 9/29/1995
364 feet, Domestic
Bedrock, Drilled
0.1 mile NW

Well: 30546
Installed: 8/14/1987
160 feet, Domestic
Bedrock, Drilled
0.08 mile NW

Well: 67687
Installed: 4/1/2000
315 feet, Domestic
Bedrock, Drilled
0.08 mile N

Well: 63443
Installed: 3/23/1999
280 feet, Municipal
Bedrock, Drilled
0.06 mile N

Well: 29755
Installed: 1/1/1966
95 feet, Other
Bedrock, Drilled
0.03 mile NW

Well: 39734
Installed: 1/9/1992
300 feet, Other
Bedrock, Drilled
0.008 mile NE

180
170
150
160
170
140
150
140
150
170
160
180

Bar Mills Dam

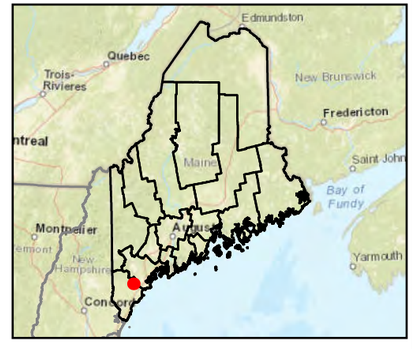
LEGEND

POTENTIALLY AFFECTED WATER WELLS

WELL DEPTH (FT)

- 50.1 - 100
- 150.1 - 200
- 250.1 - 300
- 300.1 - 400

TOPOGRAPHIC CONTOURS (10 FOOT)



N

1:1,200
1" =100'

0 100 200
Feet

BROOKFIELD RENEWABLE
LEWISTON, MAINE

PROJECT: BAR MILLS HYDROELECTRIC PROJECT DECOMMISSIONING

TITLE:
WELLS POTENTIALLY AFFECTED BY LOWERING OF WATER LEVEL AT THE BAR MILLS DAM

DRAWN BY:	GILMAN CORYELL	PROJ NO.:	XXXXXX.XXXX.XXXX
CHECKED BY:	JEFF FREDENBURG		**FIGURE 2**
APPROVED BY:	TOM ESCHNER		
DATE:			

TRC COMPANIES
63 MARGINAL WAY
PORTLAND, MAINE
www.trccompanies.com

FILE NO.: Bar_Mills_Sediment_Sampling.mxd

Plot Date: 7/14/2023 09:39:09 AM by GCORYELL -- LAYOUT: ANSI B (11"x17") **Coordinate System:** (None Defined) **Map Rotation:**
Path: T:\1-PROJECTS\Brookfield_Renewable_Energy_Group\999999_Bar_Mills\2-APRX\Bar_Mills_Sediment_Sampling.aprx

APPENDIX H

AQUATIC LIFE CLASSIFICATION ATTAINMENT REPORT

Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Classification Attainment Report

Station Information

Station Number: S-648
Waterbody: Saco River - Station 648
Town: Buxton
Directions: DIRECTLY DOWNSTREAM OF BAR MILLS DAM AND BAR MILL RD

River Basin: Saco
HUC8 Name: Saco
Latitude: 43° 36' 45.213" N
Longitude: 70° 33' 04.385" W
Stream Order: 5

Sample Information

Log Number: 3153 Type of Sample: ROCK BAG Date Deployed: 8/7/2024
Subsample Factor: X1 Replicates: 3 Date Retrieved: 9/3/2024

Classification Attainment

Statutory Class: A **Final Determination: A** Date: 9/19/2024
Model Result with P≥0.6: A **Reason for Determination: Model**
Date Last Calculated: 9/19/2024 Comments:

Model Probabilities

First Stage Model			
Class A	0.65	Class C	0.02
Class B	0.32	NA	0.00

C or Better Model	
Class A, B, or C	1.00
Non-Attainment	0.00

B or Better Model	
Class A or B	1.00
Class C or Non-Attainment	0.00

A Model	
Class A	0.82
Class B or C or Non-Attainment	0.18

Model Variables

01	Total Mean Abundance	97.67
02	Generic Richness	34.00
03	Plecoptera Mean Abundance	3.00
04	Ephemeroptera Mean Abundance	56.67
05	Shannon-Wiener Generic Diversity	3.63
06	Hilsenhoff Biotic Index	4.40
07	Relative Abundance - Chironomidae	0.14
08	Relative Generic Richness Diptera	0.38
09	*Hydropsyche* Abundance	1.67
11	*Cheumatopsyche* Abundance	0.33
12	EPT Generic Richness/ Diptera Generic Richness	1.31
13	Relative Abundance - Oligochaeta	0.00
15	Perlidae Mean Abundance (Family Functional Group)	3.00
16	Tanypodinae Mean Abundance (Family Functional Group)	0.67
17	Chironomini Abundance (Family Functional Group)	0.33
18	Relative Abundance Ephemeroptera	0.58
19	EPT Generic Richness	17.00
21	Sum of Abundances: *Dicrotendipes, Micropsectra, Parachironomus, Helobdella*	0.00
23	Relative Generic Richness- Plecoptera	0.03
25	Sum of Abundances: *Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia*	4.67
26	Sum of Abundances: *Acroneuria, Maccaffertium, Stenonema*	15.67
28	EP Generic Richness/14	0.64
30	Presence of Class A Indicator Taxa/7	0.14

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	*Baetis*	20.82
2	*Acerpenna*	19.80
3	*Simulium*	14.68
4	*Maccaffertium*	12.97
5	*Cricotopus*	3.75

Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Classification Attainment Report

Station Number: **S-648** Town: Buxton Date Deployed: 8/7/2024
Log Number: **3153** Waterbody: Saco River - Station 648 Date Retrieved: 9/3/2024

Sample Collection and Processing Information

Sampling Organization: HALEY WARD

Taxonomist: HALEY WARD - BANGOR, ME

Waterbody Information - Deployment			Waterbody Information - Retrieval		
Temperature:	19.8	deg C	Temperature:	21.2	deg C
Dissolved Oxygen:	9.42	mg/l	Dissolved Oxygen:	9.56	mg/l
Dissolved Oxygen Saturation:			Dissolved Oxygen Saturation:		
Specific Conductance:	66.8	uS/cm	Specific Conductance:	57.1	uS/cm
Velocity:			Velocity:		
pH:	8.72		pH:	7.81	
Wetted Width:	140	m	Wetted Width:	135	m
Bankfull Width:	150	m	Bankfull Width:	150	m
Depth:	35	cm	Depth:	20	cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name	Canopy Cover	Terrain
Rural Residential	Open	Rolling
Swamp Hardwood		
Upland Hardwood		

Potential Stressor	Location	Substrate	
	Below Dam	Bedrock	10 %
		Boulder	50 %
		Gravel	10 %
		Rubble/Cobble	20 %
		Sand	10 %

Landcover Summary - 2004 Data

Sample Comments

Aquatic Life Taxonomic Inventory Report

Station Number: S-648 Waterbody: Saco River - Station 648 Town: Buxton

Log Number: 3153 Subsample Factor: X1 Replicates: 3 Calculated: 9/19/2024

Taxon	Maine Taxonomic Code	Count (Mean of Samplers) Actual	Count (Mean of Samplers) Adjusted	Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance % Actual	Relative Abundance % Adjusted
Gammarus	09010201003	1.33	1.33	4	--	1.4	1.4
Acroneuria	09020209042		3.00	0	PR		3.1
Acroneuria abnormis	09020209042121	1.00		0	PR	1.0	
Acroneuria lycorias	09020209042125	2.00			--	2.0	
Calopteryx	09020307043		0.33	5	PR		0.3
Calopteryx aequabilis	09020307043085	0.33			--	0.3	
Coenagrionidae	09020309	0.33	0.33		--	0.3	0.3
Baetis	09020401001		20.33	4	CG		20.8
Baetis intercalaris	09020401001008	19.00			--	19.5	
Baetis tricaudatus	09020401001012	1.33			--	1.4	
Heterocloeon	09020401005	2.67	2.67	2	SC	2.7	2.7
Acerpenna	09020401007		19.33	5	CG		19.8
Acerpenna pygmaea	09020401007011	19.33			--	19.8	
Procloeon	09020401010	0.33	0.33		CG	0.3	0.3
Epeorus	09020402009	0.67	0.67	0	SC	0.7	0.7
Leucrocuta	09020402011	0.33	0.33	1	SC	0.3	0.3
Maccaffertium	09020402015	12.33	12.67	4	SC	12.6	13.0
Maccaffertium vicarium	09020402015055	0.33			--	0.3	
Ephemerella	09020410035	0.33	0.33	1	CG	0.3	0.3
Chimarra	09020601003		1.33	2	CF		1.4
Chimarra obscura	09020601003003	1.33			--	1.4	
Polycentropodidae	09020603	0.67	0.67		--	0.7	0.7
Neureclipsis	09020603008	2.00	2.00	7	CF	2.0	2.0
Cheumatopsyche	09020604015	0.33	0.33	5	CF	0.3	0.3
Hydropsyche	09020604016		1.67	4	CF		1.7
Hydropsyche morosa	09020604016030	1.67			--	1.7	
Hydroptila	09020607026	0.33	0.33	6	P	0.3	0.3
Lepidostoma	09020611064	0.33	0.33	1	SH	0.3	0.3
Oecetis	09020618078	1.00	1.00	8	PR	1.0	1.0
Chironomidae	09021011				--		
Ablabesmyia	09021011001		0.33	8	PR		0.3
Ablabesmyia mallochi	09021011001004	0.33			--	0.3	
Nilotanypus	09021011012	0.33	0.33	6	PR	0.3	0.3
Cricotopus	09021011037		3.67	7	SH		3.8
Cricotopus bicinctus	09021011037057	1.33			--	1.4	
Cricotopus sylvestris group	09021011037079	2.33			SH	2.4	
Eukiefferiella	09021011041	1.00	1.00	8	CG	1.0	1.0

Maine Department of Environmental Protection
Biological Monitoring Program

Aquatic Life Taxonomic Inventory Report

Station Number: S-648 Waterbody: Saco River - Station 648 Town: Buxton

Log Number: 3153 Subsample Factor: X1 Replicates: 3 Calculated: 9/19/2024

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Orthocladius	09021011050	0.33	0.33	6	CG	0.3	0.3
Parametriocnemus	09021011053	0.33	0.33	5	CG	0.3	0.3
Psectrocladius	09021011056	2.00	2.00	8	CG	2.0	2.0
Rheocricotopus	09021011057		0.33	6	CG		0.3
Rheocricotopus robacki	09021011057105	0.33			--	0.3	
Tvetenia	09021011065		3.33	5	CG		3.4
Tvetenia vitracies	09021011065113	3.33			--	3.4	
Rheotanytarsus	09021011072	1.33	1.33	6	CF	1.4	1.4
Tanytarsus	09021011076	0.33	0.33	6	CF	0.3	0.3
Polypedilum	09021011102		0.33	6	SH		0.3
Polypedilum illinoense group	09021011102185	0.33			--	0.3	
Simulium	09021012047	14.33	14.33	4	CF	14.7	14.7
Dineutus	09021104032	0.33	0.33	2	--	0.3	0.3

APPENDIX I

SHPO CONSULTATION

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

June 2, 2025

Ms. Sarah Bean Apmann
TRC
PO Box 1068
Bath, ME 04530

Project: MHPC #0793-23 FERC 2194; Bar Mills Project Decommissioning

Town: Hollis-Buxton, ME

Dear Ms. Apmann:

In response to your recent request, I have reviewed the information received May 12, 2025 to continue consultation on the above referenced projects in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

We concur that the Bar Mills Hydroelectric Project is eligible for listing in the National Register of Historic Places as a historic district.

The Commission concludes that the proposed partial demolition of the Bar Mills Dam will have adverse effect pursuant to 36 CFR Part 800.5(a)(2) due to the physical alteration of the property. This adverse effect applies to the entirety of the Hydroelectric Project Historic District.

Pursuant to the Section 106 regulations, an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association.

In accordance with 36 CFR Part 800.6(a), the responsible lead federal agency, US FERC, must seek ways to avoid, minimize or mitigate the adverse effects on this historic property. We recommend that the exterior architectural details be retained, scraped and painted.

If measures to avoid or minimize the adverse effect cannot be undertaken, we request that the lead federal agency enter into a Memorandum of Agreement (MOA) with our office for this undertaking which includes stipulations for mitigation for this project.

Per the Section 106 regulations, the lead federal agency must notify the Advisory Council on Historic Preservation (ACHP) of our adverse effect finding and invite them to participate in consultation pursuant to 36 CFR Part 800.6(a)(1). They must include with their notice to the ACHP all the documentation specified in 36 CFR Part 800.11(e). There is a 15-day period for their review from day of receipt.

We look forward to continuing consultation with you on this project. Please contact Megan Rideout of our staff if you have questions regarding this matter.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

Architectural Survey Report

Bar Mills Hydroelectric Project Decommissioning
Towns of Hollis and Buxton, York County
MHPC #0793-23; FERC #2194

Sarah Bean Apmann, Senior Architectural Historian
TRC Companies
P.O. Box 1068, Bath, ME 04530
SApmann@trccompanies.com
631.609.7138

Prepared for:
Sponsoring agency or entity
Brookfield White Pine Hydro LLC

Dates:
Provide the dates from when the project was started up through when the report was written and/or revised and submitted.
Survey: October, 23, 2024; Report: January, 2025; Survey Forms entered into CARMA: January, 2025

Level:
Reconnaissance or Intensive
Reconnaissance

Name of surveyors:
(If different from author, provide contact information for each surveyor.)
NA

Continuing project?
If so, please summarize previous efforts.
NA

I. EXECUTIVE SUMMARY

The Bar Mills Project, owned and operated by Brookfield White Pine Hydro LLC (applicant) is located on the Saco River between the West Buxton and Bar Mills. The applicant holds a license to operate the Bar Mills Projec issued by the Federal Energy Regulatory Commission (FERC), on August 26, 2008 and will expire on August 1, 2048. The FERC license requires run-of-river operations and seasonal minimum bypass and downstream flows from the Project consistent with the 1997 Flow Agreement, and the FERC Minimum Flow Monitoring Plan (2011). The Project is also subject to the 2007 Saco River Fisheries Assessment Agreement, amended in 2019, wich sets the operational date for completion of upstream fish passage facilities at the Project (or alternative developed in consultation with fisheries agencies to be May 1, 2025).

The Project Structures are located in Bar Mills and include a concrete dam that spans the river, a granite headwork structure located at the entrance to the intake canal, a canal that conveys flow to the powerhouse, a downstream fish passage facility, a powerhouse, and appurtant equipments (see Figure 1). Due to alkali-aggregate reation (AAR), conditions observed in the powerhouse caused by construction materials utilized in the 1950s, Units 1 and 2 are considered out-of-service indefinitely as of May and December 2017, respectively. Since this time, all flows at the Bar Mills Project have passed via the spillway and bypass reach. The applicant determined that surrendering the FERC Project license and decommissioning the Project

through a partial breach is the most viable solution in balancing operational, environmental, and future dam safetly needs.

Project consultation was initiated with the Maine Historic Preservation Commission (MHPC) in a letter received by the agency on June 5, 2023. MHPC responded on June 21, 2003 requesting an architectural survey of all resources within the area of potential effect (APE) that are at least 50 years old.

Through the architectural survey, nine historic resources were identified in the APE which is the Project area and was approved by MHPC on October 21, 2024. Eight of the resources were previously determined eligible for listing in the National Register of Historic Places (NRHP), and of those eight resources, two are NRHP-eligible historic districts. Each of the NRHP-eligible resources within the APE was assessed for effects by the Project according to the Criteria of Adverse Effect, 36 CFR 800.5 (a) (2). An adverse effect was determined by the Project to the Bar Mills Dam (Survey No. 4, CARMA No. 48691) and it was further determined that the Project may have an adverse effect on the Bar Mills Historic District (Survey No. 5).

II. RESEARCH DESIGN AND BACKGROUND RESEARCH

A. Basis:

Describe the purpose of this survey. Identify the Federal or State regulations mandating this survey, or any Programmatic Agreements associated with this project.

The purpose of this architectural survey is two-fold. First, it is to document and evaluate the NRHP eligibility of previously unassessed historic resources within the Projects' Areas which is the Projects' areas of potential effects (APE). Secondly, it is to assess the potential effects of the Project on any resources within the APE which are listed in the NRHP or eligible for listing in the NRHP. The survey and assesment were conducted for the applicant in accordance with Section 106 of the National Historic Preservation Act of 1966 (as amended). The survey followed all applicable federal and Maine guidelines, including MHPC's "Guidelines for Identification: Architecture and Landscapes." The survey data and mapping were entered into CARMA in accordance with the guidelines in the MHPC "Historic Property Workbench User Guide - Surveyor Role."

The applicant holds a license to operate the Project issued by the Federal Energy Regulatory Commission (FERC) (FERC #2194) on August 26, 2008 and set to expire on August 1, 2048. The FERC license requires run-of-river operations and seasonal minimum bypass and downstream flows from the Project consistent with the 1997 Flow agreement, and the FERC approved Minimum Flow Monitoring Plan (2011). The Project is also subject to the 2007 Saco River Fisheries Assessment Agreement, amended in 2019, which set the operational date for completion of upstream fish passage facilities at the Project to be May 1, 2025. Decommissioning of the Project will require the surrender of the Project FERC license and permitting through the US Army Corps of Engineers, the Maine Departmenr of Enviornmental Protection Maine Waterway Development and Construction Act, and the Saco River Corridor Commission.

B. Project Description / Scope of Work:

Describe the underlying project, specifically citing the type of project and duration of project. Summarize planned or anticipated alterations to landscapes, buildings, structures, districts, objects or sites.

The Project is located on the Saco River in the towns of Hollis and Buxton in York County. The entire Project extends approximately 5.3 miles along the Saco River from river mile 19, approximately 0.3 miles below Bar Mills Dam, to river mile 24.3, the lower extent of the West Buxton Project tailrace. The Project features and structures are located at the southern end of the Project in Bar Mills. They include a concrete dam that spans the river, a granite headwork structure located at the entrance to the intake canal, a canal that conveys flow to the powerhouse, a downstream fish passage facility, a powerhouse, and appurtenant equipment. Also extant is a former timber crib dam upstream of the concrete dam and submerged. The Project ceased hydroelectric generation in 2017 due to turbine cavitation associated with concrete issues which can only be remedied through full reconstruction. Since that time, all flows at the Bar Mills Project have passed via the spillway and bypass reach.

The applicant determined that surrendering the FERC Project license and decommissioning the Project through a partial breach is the most viable solution in balancing operational, environmental, and future dam safety needs. Without an economically viable solution to return the generating units to an operable condition, the Project is uniquely suited for the surrender of its license and a pathway to decommissioning. In order to address fish passage requirements as part of the decommissioning, the applicant has consulted with state and federal agencies to evaluate removal alternatives. The Project plan includes partial removal of the dam to an extent that addresses agency design criteria for upstream fish passage. Components of existing facilities that will be removed including the right (East) half portion of the submerged timber crib dam upstream of the Bar Mills dam, the right half of the main spillway, and the canal spillway and headworks. The plan also includes a new diversion weir (approximately two to three feet high) at the upstream end of the canal to direct flow and downstream migrating fish away from the canal, and a drain gate opening at the downstream end of the canal to allow the canal to drain after high flow conditions (see Figure 2).

C. Area of Potential Effect:

1. On a USGS topographic map draw the outermost boundary of the area of potential effect in red. Label this line "Project APE". If necessary, additional topographic maps or overlays may be submitted showing the limits of each specific APE if more than one potential effect is present within the project area.

2. List all the potential effects associated with the above cited scope of work. Distinguish between direct and indirect effects when applicable.

Direct effects occur in the area of physical impacts associated with construction and in the areas with views of the Facility. Indirect effects occur beyond the construction limits and vary depending on the nature of the undertaking. Additionally, 2019 historic preservation case law has determined that impacts formerly assumed to be indirect effects are technically direct effects. In NPCA v Semonite (USCA Case #18-5179 Document #1775491), federal courts clarified the meaning of the term "directly" in the National Historic Preservation Act as referring to causation, not physicality, of the type of effect on historic properties. Specifically, direct effects are not limited to physical impacts or intrusions on historic properties in the limits of disturbance (LOD). Rather, direct effects to historic properties also include visual, auditory, or atmospheric impacts that are

beyond the LOD. Indirect effects do not have a direct causal link and include cumulative effects and those effects which could occur in the foreseeable future or may be farther removed in distance. The APE, therefore, includes both direct and indirect effects.

3. Provide a narrative of how the geographical limit of each potential effect within the project area was established.

The APE for cultural resources is the “geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist” (36 CFR §800.16 [d]). Scale and nature of the undertaking influence the APE, resulting in delineated areas of effects that may be different depending on the kinds of effects caused by the undertaking.

On behalf of the Applicant, TRC recommended to MHPC an APE for the survey that conforms to the Project boundaries in a letter dated October 3, 2024. MHPC responded concurred with the proposed APE and scope of work in a letter dated October 21, 2024.

D. Survey Boundaries:

1. Draw the boundaries of the survey on the topographic map in blue or black and label this line “Survey Boundaries.” The boundaries of a survey map include portions of a property that lie outside the APE.

2. Describe the limits of the surveyed area. The survey boundary may be larger then the APE. Make reference to geographic landmarks, addresses or political boundaries. Utilize reasonable demarcations – tree lines, back lots.

The APE boundary conforms to the Project boundary.

E. Survey Methodology:

1. Describe background research method.

TRC conducted background research for previously surveyed resources including NRHP-listed and eligible resources, using the CARMA database and the National Park Service's website, the National Register Database and Research. TRC conducted a file review at MHPC on December 3, 2024. TRC also consulted with the Maine State Library and with the Special Collections Department at the Raymond H. Folge Library at the University of Maine at Orno. Finally, TRC reviewed the files of the Buxton Hollis Historical Society on October 23, 2024.

2. Describe field research method.

The field survey was conducted on October 23, 2024. TRC toured and photographed the Bar Mills Hydroelectric facility including the interior of the powerhouse. From the public right-of-way, TRC also surveyed all structures within the Project limits/APE. Photographs were taken of all buildings and structures within tho boundaries.

3. Did you undertake a file search at MHPC for NR or previously recorded properties?

A file search was conducted at MHPC for this survey on December 3, 2024.

III. SURVEY FINDINGS

A. Acres:

Provide the total number of acres within the survey boundaries.

The Project area is 265.34 acres as calculated in the projected coordinate system NAD 1983 State Plane Maine West FIPS 1802 (US Feet).

B. Setting:

Provide a general overview of the setting, including topography, development, and landscape.

The Project is located on the Saco River in the towns of Buxton and Hollis in York County. Maine. It consists of a dam structures, an impoundment, a powerhouse, and appurtenant features. The entire Project, including the

impoundment and upstream flowage easements, extends approximately 5.3 miles along the Saco River from river mile 19, approximately 0.3 mile below Bar Mills Dam to river mile 24.3, the loser extaent of the West Buxton Project tailrace. Surrounding the hydroelectric projects at both the northern end and southern end of the Project are residential areas with houses and other building types spanning from the early nineteenth century through to the mid-twentieth century. Either shore along the Saco River between the two town is wooded with residential development at the northern and southern ends.

C. Number of Resources Recorded:

Count each individually recorded building, structure, object, or site. Do not include continuation sheets in this count.

Nine resources were surveyed within the APE, two of which are NRHP-eligible historic districts.

D. Previously Inventoried Properties:

Address whether any of the resources had been previously surveyed. If so, how many, and how were these properties represented and evaluated within the current project?

Eight of the nine resources had been previously surveyed and assessed for NRHP eligibility. All were previously determined NRHP-eligible. All were re-evaulated for integrity and assessed for potential effect by the Project.

E. Types of Properties:

1. Summarize general trends within the project area: commercial, residential, urban, rural, etc.

The Project area is within the Saco River between West Buxton at the north and the village of Bar Mills to the south. Both ends feature separate hydroelctric facilities, the West Buxton Hydroelectric Facility and the Bar Mills Project. There are two bridges at those facilities; only the West Buxton Bridge is NRHP-eligible. West Buxton features former mill buildings, residences, and instituional buildings. Bar Mills also features such buildings and residences which line the eastern side of the APE on that southern end.

2. Summarize the age, style, and condition of the resources within the project area.

Survey No. 1: Bar Mills Hydroelectric Substation (Figure 3; Map 2a) - This small substation is located on the Saco River, south of the Bar Mill dam and northeast of the powerhouse. Its estimated date of construction is c. 1957, contemporary to the powerhouse (Survey No. 2). It is surrounded by a chainlink fence and there are associated transmission structures adjacent to the the substation.

Survey No. 2: Hydroelectric Plant and Dam (CARMA No. 48537; Figures 4-8, Table 1; Map 2a) - Built in 1956, the Project powerhouse substructure and a large part of the 40-feet wide by 80-feet long super-structure are constructed of reinforced concrete. A 25-ton outdoor derrick crane is located at the west end of the powerhouse to handle equipment (removal of the turbine generator units through the roof hatches during major maintenance efforts) and to lift and place the headgates.

The powerhouse substructure includes the two turbine water intakes and draft tubes, two headgates, and trashracks. The existing turbines are vertical-shaft, fixed-propeller Leffel units, each rated at 3,000 Hp (2.25 MW). Wicket gates control flow to each of the units. The combined maximum hydraulic capacity of the turbines is approximately 3,120 cfs. (Kleinschmidt Associates 2022).

The powerhouse is located at the southern end of the intake canal. The canal extends approimately 735 feet from the headworks structure at the powerhouse and ranges in width from approximately 75 feet to 180 feet (Kleinschmidt Associates 2022).

Survey No. 3: Former Bar Mills Bridge Abutments (CARMA No. 48568; Figure 9, Table 2; Map 2a) - Constructed in 1880, these bridge abutments are the remnants of the former iron Bar Mills Bridge. The bridge was washed out in the 1936 flood and they are located on the eastern riverbank of the Saco River north of the Bar Mills Bridge.

Survey No. 4: Bar Mills Dam (CARMA No. 48691; Figure 10, Table 3; Map 2a) - The Project dam extends from the east side of the Saco River adjacent to the site of the former Rogers Mill in Buxton to the Project canal headworks on the Hollis (west) shore of the river. It was built in 1956 replacing a timber crib dam at the same location from the nineteenth century. The main dam is founded on bedrock, with a maximum height of seven feet, topped with 6.75-foot-high hinged steel flashboard panels. The main dam includes a 50-foot long concrete wall on the east side and a 14-foot wide abutment connecting the wall to a 264-feet long spillway. There is a 14-foot wide sluice located in the center of the spillway. An approximately 14-foot wide concrete abutment is located on the western side of the spillway and joins the spillway to the canal headworks structure and canal wall/auxiliary spillway. An operating bridge spans the entire length of the spillway; an electric hoist located on the bridge is used for resetting the hinged flashboard panels. Beyond the canal headworks (discussed below), the dam includes an earthen embankment containing a buried 117.5-foot long concrete cut-off wall. The Project dam develops a head of 21 feet between the normal full headpond elevation (148.5') and normal tailwater elevation (127.5') (Kleinschmidt Associates 2022).

Survey No. 5: Bar Mills Historic District (Figure 11-14, Table 4; Map 2a) The Bar Mills Historic District is located on either side of the Saco River between Hollis and Buxton connected by Main Street (ME Route 4A) and the Bar Mills Bridge. It is composed of commercial, industrial, residential, and municipal buildings dating from the late eighteenth century to the mid-tewentieth century. The APE intersects the district's center on the Saco River (see Map 2a).

Survey No. 6: West Buxton Upper Powerhouse (Table 5; Map 2b) Built in 1907, this brick building is one-story at street level resting on a concrete base which adjoins the West Buxton dam on its southeastern side. The windows feature key-stoned segmental arches and there is a flat roof.

Survey No. 7: West Buxton Bridge (Bridge No. 3340) (CARMA No. 70100; Figure 15, Table 6; Map 2b) Built in 1937, this Warren through truss bridge replaced a lenticular bridge lost in a flood. This bridge is an early example of continuous bridge designs used by the MSCH bridge division.

Survey No. 8: West Buxton Lower Powerhouse (CARMA No. 70102; Figure 16, Table 7; Map 2b) Built in 1925, this brick and concrete structure is located at the southwest corner of the intersection of West Buxton Road and

River Road along the eastern bank of the Saco River.

Survey No. 9: West Buxton Historic District (Figure 17, Table 8; Map 2b) This NRHP-eligible historic district is located in West Buxton and is comprised of a collection of residential and industrial buildigs from the nineteenth and early twentieth centuries. Its period of significance is c. 1830-1925 and it includes buildings built in the Federal and Greek Revival styles as well as the nineteenth and twentieth century revival styles.

3. Describe in detail any eligible individual properties or historic districts.

As mentioned, only one of the resources surveyed was not previously identified by MHPC (Survey No. 1) and it is recommended not eligible for listing in the NRHP. Survey Nos. 2-9 were all previously surveyed and found eligible for listing in the NRHP. See Attached Survey Matrix for NRHP-eligibility.

There are two structures that were within the APE, as seen in CARMA, which are non-extant. They were NRHP eligible but have been demolished and replaced: Bar Mills Bridge #3333, CARMA No. 4855 and Canal Bridge #1525, CARMA No. 48541.

F. NR Eligibility:

1. Address resource integrity, NR criteria, area of significance and period of significance.

Survey No. 2: The Hydroelectric Plant and Dam is eligible for listing in the NRHP under Criteria A and C in the areas of Industry and Architecture. It maintains its integrity.

Survey No. 3: The Former Bar Mills Bridge abutments are eligible for listing in the NRHP under Criterion A in the area of Transportation. They maintain their integrity.

Survey No. 4: The Bar Mills Dam is elgible for listing in the NRHP under Criteria A and C in the areas of Industry and Architecnture. It maintains its integrity.

Survey No. 5: The Bar Mills Historic District is eligible for listing in the NRHP under Criteria A at the local level as a significant development as an industrial center along the Sace River during the eighteenth through the twentieth centuries. It is also eligible under Criterion C at the local level in the areas of Architecture, Community Planning/Development, and Industry. It is a collection of intact residential, municipal, and commercial buildings during those centuries and its period of significance is 1795 to 1961.

Survey No. 6: The West Buxton Upper Powerhouse is eligible for listing in the NRHP under Criteria A and C in the areas of Industry and Architecture. It retains aspects of its integrity.

Survey No. 7: The West Buxton Bridge is eligible for listing in the NRHP under Criteria A and C in the areas of Transportation and Engineering. It retains all aspects of its integrity.

Survey No. 8: The West Buxton Lower Powerhouse is eligible for listing in the NRHP under Criteria A and C in the areas of Industry and Architecture. It

retains aspects of its integrity.

Survey No. 9: The West Buxton Historic District is eligible for lisitng in the NRHP under Criteria A and C in the areas of Development, Inductry and Architecture. It maintains aspects of its integrity.

2. For a historic district provide a topographic map showing the limits of the proposed district illustrating street or landscape views and all non-historic or non-contributing resources.

IV. BIBLIOGRAPHY

Kleinschmidt Associates
2022 Decommissioing Scoping Document, Bar Mills Hydroelectric Project, FERC No. 2194.

2023 Draft Study Plan, Bar Mills Hydroelectric Project FERC No. 2194.

V. FINDING OF EFFECTS

Each NRHP-eligible resource within the APE was assessed for effects by the Project according to the Criteria of Adverse Effect, 36 CFR 800.5 (a) (2), see Tables 1-8. In consideration of those criteria, it is recommended that the Project will have no adverse effect on Survey Nos. 2, 3, 6, 7, 8, and 9. However, due to the partial demolition of the Bar Mills Dam (Survey No. 4), the Project will have an adverse effect on that resource. Further, due to the projected change in water level following the partial demolition of the dam, the Project may have an adverse effect on Survey No. 5, the Bar Mills Historic District. Specifically, the contributing resources within that district which present as the most vulnerable are 42 Depot Street (CARMA No. 48684), 72 Depot Street (CARMA Nos, 48689 and 48690), and 78 Depot Street (no CARMA number).

BAR MILLS HYDROELECTRIC PROJECT

FERC NO. 2194

APPLICATION FOR LICENSE SURRENDER

EXHIBIT G

PROJECT MAPS

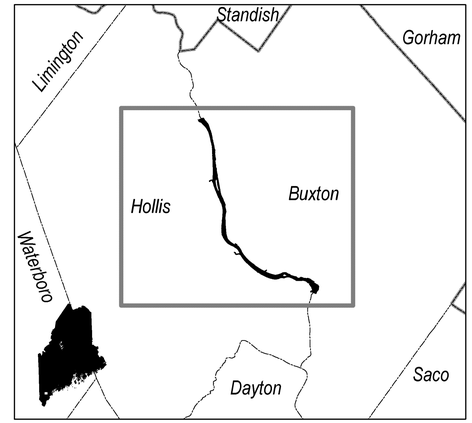
Reference Point #1
Northing: 303000
Easting: 2830000

Reference Point #2
Northing: 300000
Easting: 2852000

Reference Point #3
Northing: 283000
Easting: 2832000

Buxton

Hollis



Legend

- Reference Point (NAD83 Maine State Plane, West Zone, US Survey Feet)
- Project Boundary
- CMP Easement
- Road
- Public Access
- Hydrography
- Intermittent Stream
- Perennial Stream
- County Boundary
- Town Boundary

Reference Points Table

NAD Maine State Plane, West Zone U.S. Survey Feet

Sheet	Ref Point #	Northing	Easting
1	1	303000.0	2830000.0
1	2	300000.0	2852000.0
1	3	283000.0	2832000.0
2	4	283100.0	2849200.0
2	5	285200.0	2849400.0
2	6	284400.0	2851400.0

NOTES:

1. POLITICAL BOUNDARIES, AND HYDROGRAPHY DERIVED FROM 1:24,000 SCALE USGS TOPOGRAPHIC MAPS. ROAD NAMES AND FEATURES FROM E911 ROADS COURTESY OF MAINE OGIS.

STATE OF MAINE
STEPHEN M. EVERETT
2161
REGISTERED
LAND SURVEYOR

I HEREBY CERTIFY TO THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) THAT THIS PLAN MEETS THE CONDITIONS SET FOURTH BY FERC FOR ITS EXPRESSED PURPOSE. THE PURPOSE OF THIS MAP IS TO PROVIDE A GEOREFERENCED VISUAL DEPICTION OF THE LOCATION OF PROJECT FEATURES AND BOUNDARIES BASED ON THE BEST AVAILABLE HISTORICAL DRAWINGS INCORPORATED INTO THE GEOGRAPHIC INFORMATION SYSTEM (GIS). SOME LOCATIONS HAVE NOT BEEN VERIFIED BY PHYSICAL SURVEYS AND THIS DRAWING SHOULD NOT BE USED FOR PURPOSES OF DEVELOPING PROPERTY BOUNDARY DESCRIPTIONS.

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Feet
1 inch = 1,000 feet

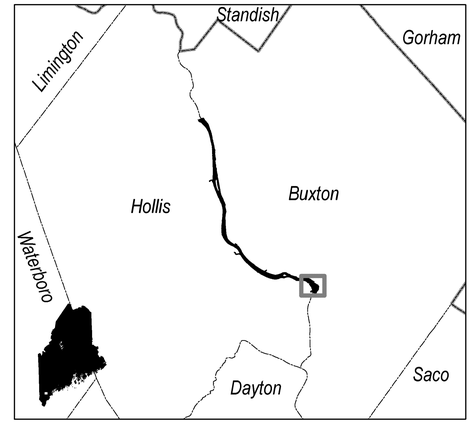
Exhibit G Project Detail Map

BAR MILLS PROJECT FERC NO. 2194

Date: 03-10-2009	Sheet 1 of 2	Prepared by: TRC

FERC Drawing # 2194-1009





Legend

- Reference Point (NAD83 Maine State Plane, West Zone, US Survey Feet)
- Project Boundary
- CMP Easement
- Road
- Public Access
- Hydrography
- Intermittent Stream
- Perennial Stream
- County Boundary
- Town Boundary

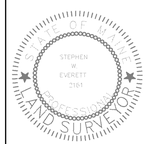
Reference Points Table

NAD Maine State Plane, West Zone U.S. Survey Feet

Sheet	Ref Point #	Northing	Easting
1	1	303000.0	2830000.0
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Feet

1 inch = 100 feet

Exhibit G Project Detail Map

BAR MILLS PROJECT FERC NO. 2194

Date: 03-10-2009	Sheet 2 of 2	Prepared by: TRC

FERC Drawing # 2194-1009