Pickpocket Dam Removal

River Advisory Committee Project Update #3

May 21, 2026

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Exeter - Project Manager
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VHB – Environmental Service Leader
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VHB – Project Manager

Project Funding

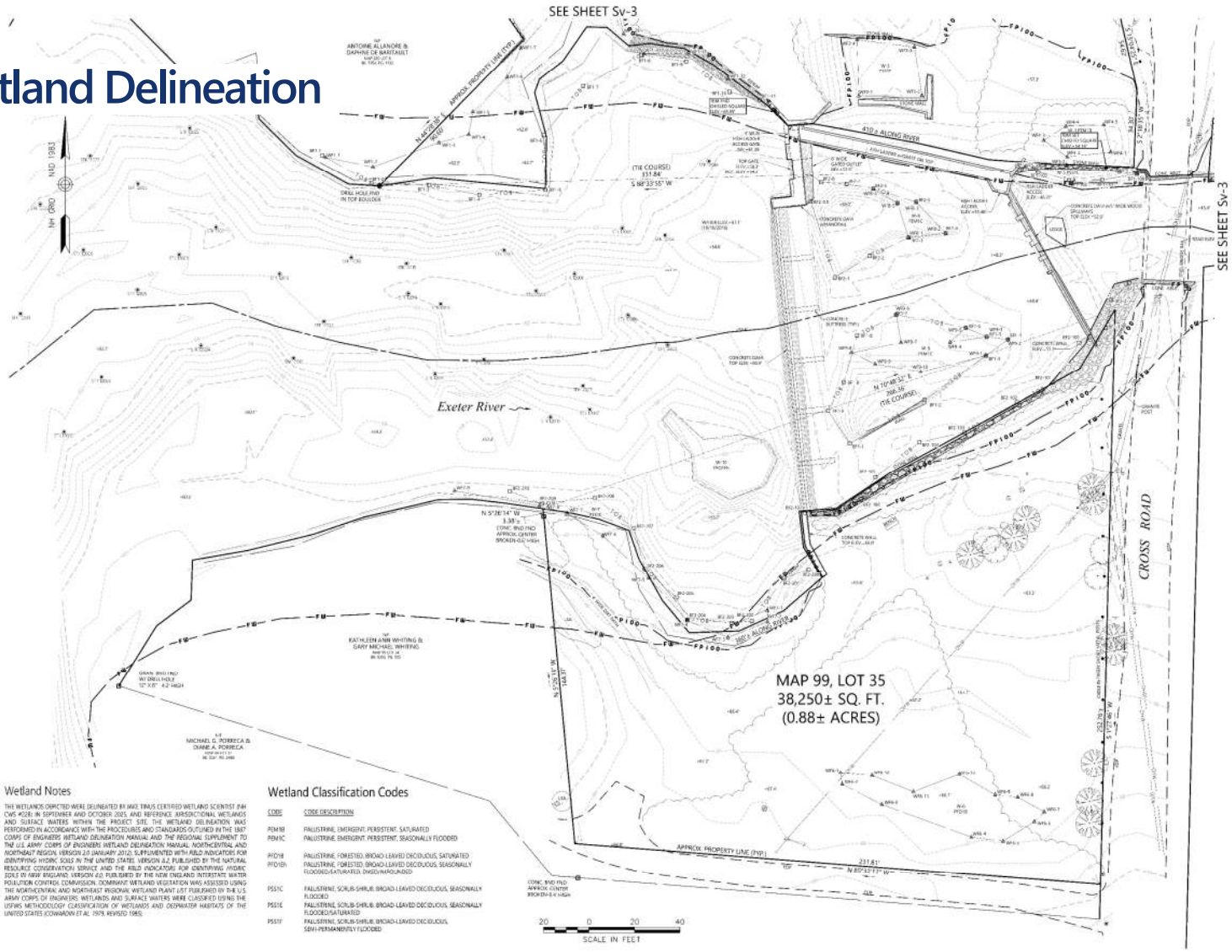
This project is supported by the Great Bay 2030 partnership, which is funded by the New Hampshire Charitable Foundation.

NEW HAMPSHIRE
CHARITABLE FOUNDATION

Agenda

- Completed Tasks
- Ongoing Work
- Schedule & Next Steps
- Questions

Survey & Wetland Delineation



Wetland Notes

1) THE WETLANDS DEPICTED WERE DELINEATED BY JAKE TITUS CERTIFIED WETLAND SCIENTIST (NH CWS #228) IN SEPTEMBER AND OCTOBER 2025, AND REFERENCE JURISDICTIONAL WETLANDS AND SURFACE WATERS WITHIN THE PROJECT SITE. THE WETLAND DELINEATION WAS PERFORMED IN ACCORDANCE WITH THE PROCEDURES AND STANDARDS OUTLINED IN THE 1987 *CORPS OF ENGINEERS WETLAND DELINEATION MANUAL* AND THE *REGIONAL SUPPLEMENT TO THE U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0* (JANUARY 2012), SUPPLEMENTED WITH *FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2*, PUBLISHED BY THE NATURAL RESOURCE CONSERVATION SERVICE AND THE *FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4.0*, PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION. DOMINANT WETLAND VEGETATION WAS ASSESSED USING THE NORTHCENTRAL AND NORTHEAST REGIONAL WETLAND PLANT LIST PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS. WETLANDS AND SURFACE WATERS WERE CLASSIFIED USING THE USFWS METHODOLOGY *CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES* (COWARDIN ET AL. 1979, REVISED 1985).

Wetland Classification Codes

CODE	CODE DESCRIPTION
PEMB	PALUSTRINE, EMERGENT, PERSISTENT, SATURATED
PEMC	PALUSTRINE, EMERGENT, PERSISTENT, SEASONALLY FLOODED
PFOB	PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SATURATED
PFOB	PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED/SATURATED, DIKED/IMPOUNDED
PSSC	PALUSTRINE, SCRUB-SHRUB, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED
PSSE	PALUSTRINE, SCRUB-SHRUB, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED/SATURATED
PSSF	PALUSTRINE, SCRUB-SHRUB, BROAD-LEAVED DECIDUOUS, SEMI-PERMANENTLY FLOODED

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Legend

SBF FND ■ STONE BOUND FOUND
DH FND ● DRILL HOLE FOUND
IR FND ○ IRON ROD FOUND
WATER GATE
STREET SIGN
LIGHT POLE
UTILITY POLE
GUY POLE
GUY WIRE
MAILBOX
WELL
TEST PROBE
8"TREE DECIDUOUS TREE WITH SIZE
6"TREE CONIFEROUS TREE WITH SIZE
EDGE OF PAVEMENT
GUARDRAIL
CHAIN LINK FENCE
OVERHEAD WIRE
STONE WALL
TREE LINE
TOP OF BANK

Pickpocket Dam Removal and Exeter River Restoration

Cross Road & Pickpocket Road
Exeter and Brentwood, New Hampshire

No.	Revision	Date	Approved

Designed by | Checked by

Date
April 15, 2026

Not Approved for Construction

Drawing Title
Existing Dam Survey
Pickpocket Dam

Drawing Number
Sv-2

Sheet 2 of 3

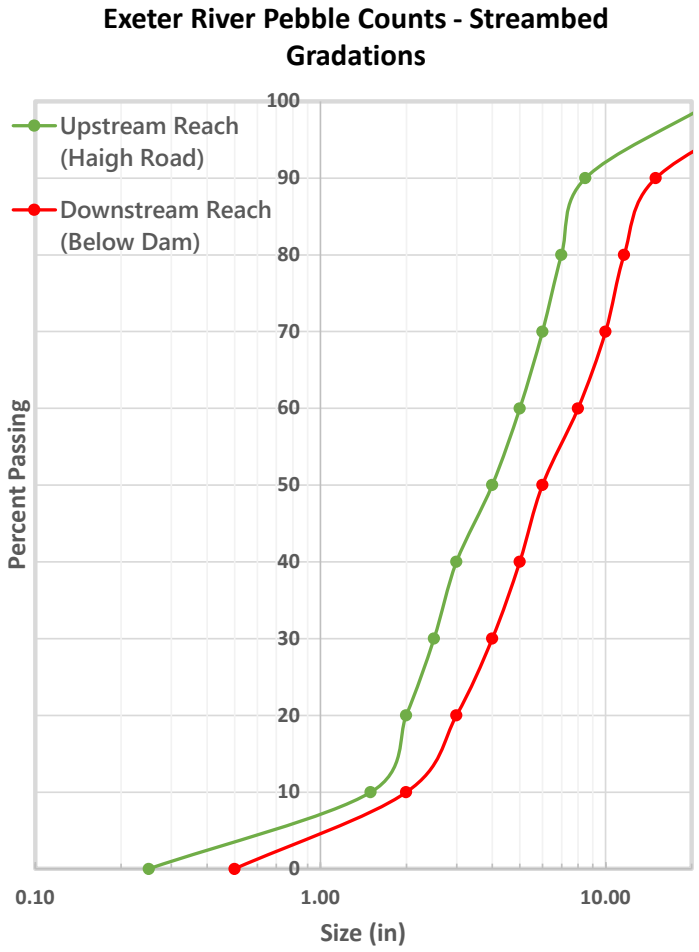
Project Number
52151.09

Site Visit

- Reference reach analysis @ downstream of Cross Rd & Haigh Road
  - Channel geometry
  - Pebble count
- Kayak investigation of Stoney Water Road Slope

Streambed Gradation

- Pebble Counts were performed below Pickpocket Dam and upstream of the Haigh Road bridge
  - Large boulders and bedrock outcrops were noted downstream of the dam
  - Smaller boulders and a smaller gradation overall was observed in the Haigh Road reach
  - Median pebble size was 6” below the dam and 4” at Haigh Road



Probing Investigation

- Conducted sediment probing in October
- Completed probes along proposed horizontal alignment to verify that the design vertical depth could be achieved
- Low flow conditions allowed probing in close proximity to the dam
- Results confirmed that the depth is achievable

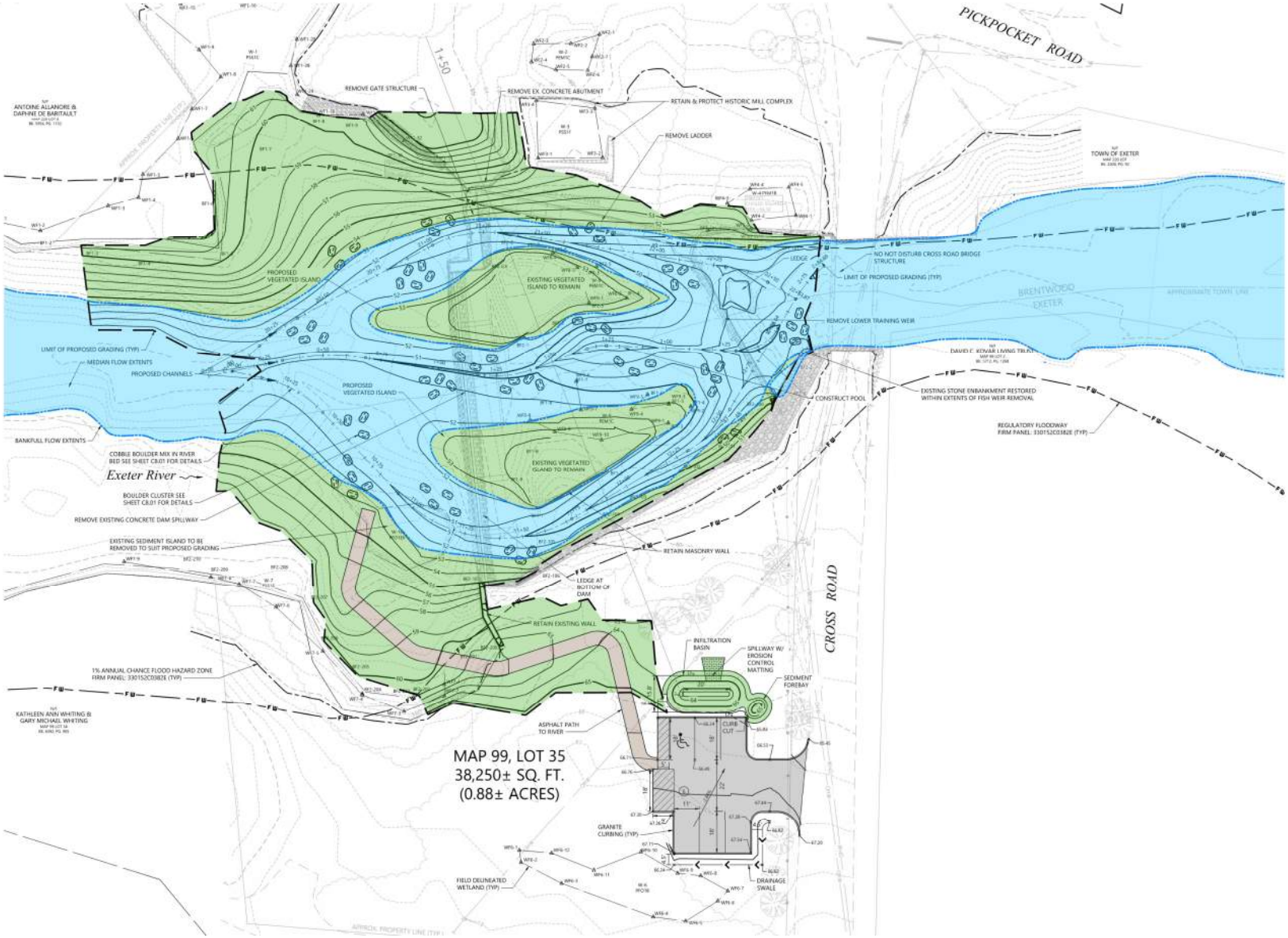
Fish Passage Design

Design Criteria - Alewife

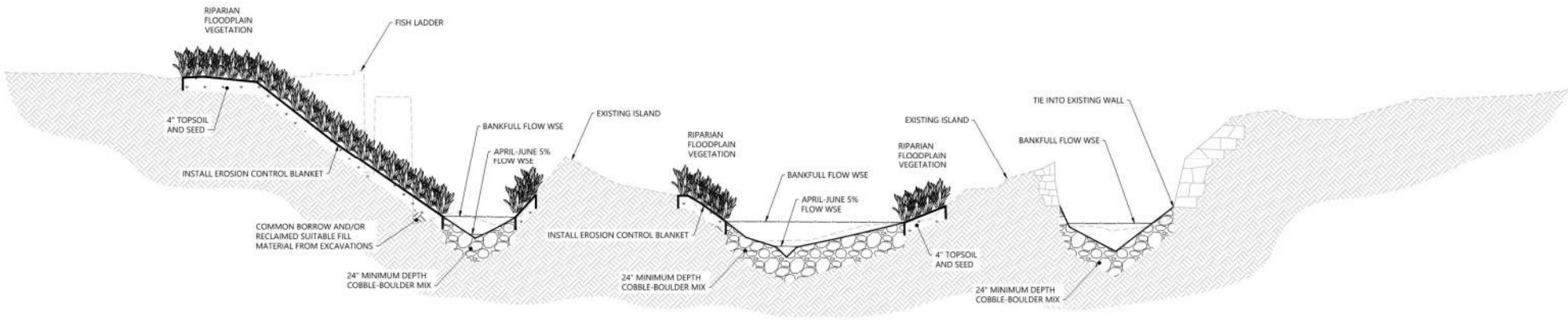
- Criteria are based on species body morphology, swimming ability, behavior, and hydraulics
- Maximum slope of 5%
- 1-2 ft/s sustained swimming
- 2-4 ft/s prolonged swimming
- Minimum depth of 6 inches
- Minimum pool spacing of 10 feet
- Minimum pool depth of 2.25 feet

	Apr-June Q5	Apr-June Q95	Median	Bankfull
Flow (ft^3)	17.1	427.4	66.1	504.3
Pool Depth (ft)	2.6	4.9	3.3	5
Pool Velocity (ft^2)	0.8	1.28	1.61	1.47
Channel Depth (ft)	0.5	1.87	0.9	2.1
Channel Velocity (ft^2)	2.85	4.84	2.25	4.85

Design


PICKPOCKET ROAD
CROSS ROAD
Exeter River
MAP 99, LOT 35
38,250± SQ. FT.
(0.88± ACRES)
REMOVE GATE STRUCTURE
REMOVE EX. CONCRETE ABUTMENT
RETAIN & PROTECT HISTORIC MILL COMPLEX
REMOVE LADDER
PROPOSED VEGETATED ISLAND
EXISTING VEGETATED ISLAND TO REMAIN
NO NOT DISTURB CROSS ROAD BRIDGE STRUCTURE
LIMIT OF PROPOSED GRADING (TYP)
REMOVE LOWER TRAINING WEIR
MEDIAN FLOW EXTENTS
PROPOSED CHANNELS
CONSTRUCT POOL
EXISTING STONE ENBANKMENT RESTORED WITHIN EXTENTS OF FISH WEIR REMOVAL
REGULATORY FLOODWAY FIRM PANEL: 33015ZC038ZE (TYP)
BANKFULL FLOW EXTENTS
COBBLE BOULDER MIX IN RIVER BED SEE SHEET C8.01 FOR DETAILS
BOULDER CLUSTER SEE SHEET C8.01 FOR DETAILS
REMOVE EXISTING CONCRETE DAM SPILLWAY
EXISTING SEDIMENT ISLAND TO BE REMOVED TO SUIT PROPOSED GRADING
RETAIN MASONRY WALL
LEDGE AT BOTTOM OF DAM
RETAIN EXISTING WALL
INFILTRATION BASIN
SPILLWAY W/ EROSION CONTROL MATTING
SEDIMENT FOREBAY
ASPHALT PATH TO RIVER
CURB CUT
GRANITE CURBING (TYP)
FIELD DELINEATED WETLAND (TYP)
DRAINAGE SWALE
1% ANNUAL CHANCE FLOOD HAZARD ZONE FIRM PANEL: 33015ZC038ZE (TYP)
ANTOINE ALLANORE & DAPHNE DE BARTAULT
KATHLEEN ANN WHITING & GARY MICHAEL WHITING
TOWN OF EXETER
BRENTWOOD
EXETER

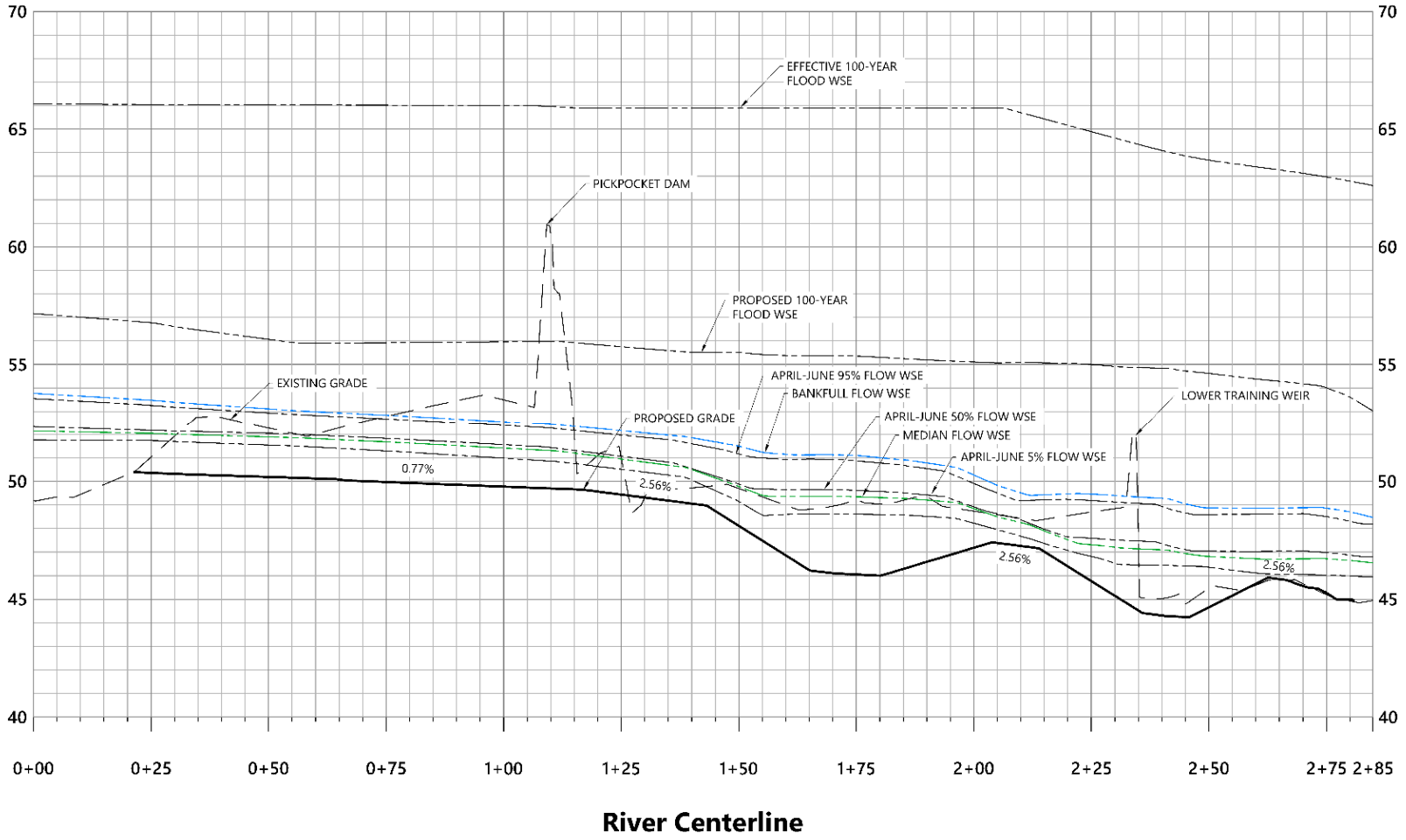
Typical Cross Section



TYPICAL SECTION (STA 1+50)

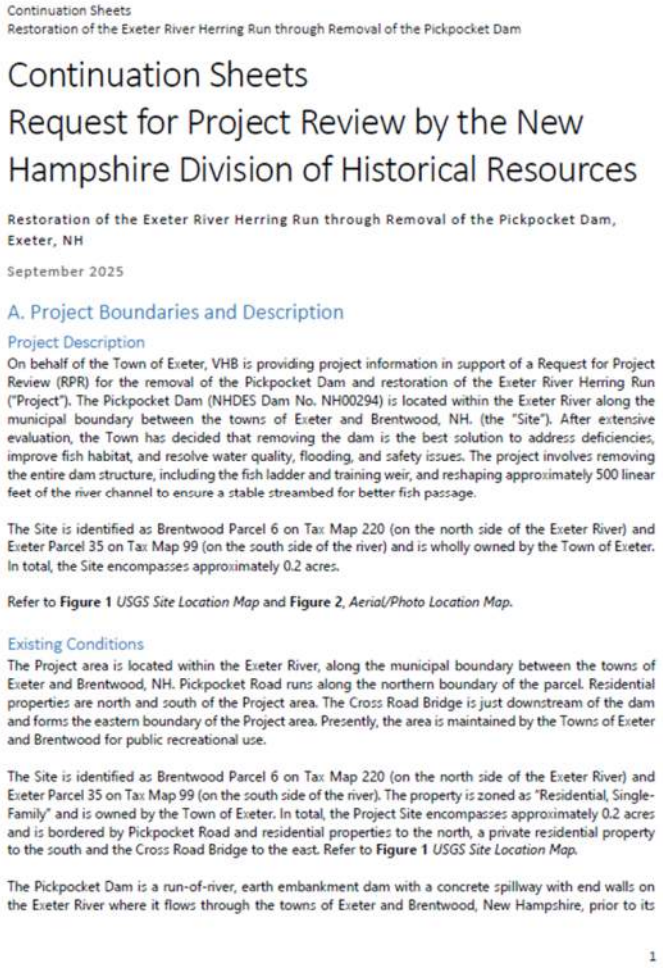
NTS

Channel Profile



Cultural Resources

- Submitted Request for Project Review (RPR) in September 2025
- Dam determined eligible for listing
- Dam removal would result in an *Adverse Effect* (October 13, 2025)
- NHDHR Requires Phase IB Archaeological Investigation
  - Phase IB Archaeological field work completed
- Development of Memorandum of Agreement to stipulate historic mitigation (next phase)



Continuation Sheets
Restoration of the Exeter River Herring Run through Removal of the Pickpocket Dam

Continuation Sheets
Request for Project Review by the New Hampshire Division of Historical Resources

Restoration of the Exeter River Herring Run through Removal of the Pickpocket Dam, Exeter, NH

September 2025

A. Project Boundaries and Description

Project Description

On behalf of the Town of Exeter, VHB is providing project information in support of a Request for Project Review (RPR) for the removal of the Pickpocket Dam and restoration of the Exeter River Herring Run ("Project"). The Pickpocket Dam (NHDES Dam No. NH00294) is located within the Exeter River along the municipal boundary between the towns of Exeter and Brentwood, NH. (the "Site"). After extensive evaluation, the Town has decided that removing the dam is the best solution to address deficiencies, improve fish habitat, and resolve water quality, flooding, and safety issues. The project involves removing the entire dam structure, including the fish ladder and training weir, and reshaping approximately 500 linear feet of the river channel to ensure a stable streambed for better fish passage.

The Site is identified as Brentwood Parcel 6 on Tax Map 220 (on the north side of the Exeter River) and Exeter Parcel 35 on Tax Map 99 (on the south side of the river) and is wholly owned by the Town of Exeter. In total, the Site encompasses approximately 0.2 acres.

Refer to **Figure 1** *USGS Site Location Map* and **Figure 2**, *Aerial/Photo Location Map.*

Existing Conditions

The Project area is located within the Exeter River, along the municipal boundary between the towns of Exeter and Brentwood, NH. Pickpocket Road runs along the northern boundary of the parcel. Residential properties are north and south of the Project area. The Cross Road Bridge is just downstream of the dam and forms the eastern boundary of the Project area. Presently, the area is maintained by the Towns of Exeter and Brentwood for public recreational use.

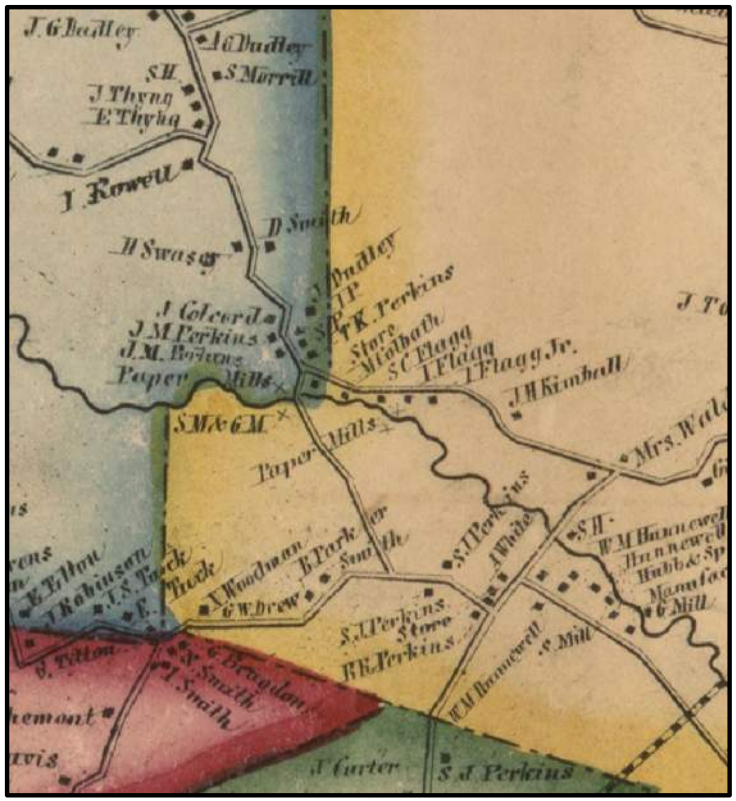
The Site is identified as Brentwood Parcel 6 on Tax Map 220 (on the north side of the Exeter River) and Exeter Parcel 35 on Tax Map 99 (on the south side of the river). The property is zoned as "Residential, Single-Family" and is owned by the Town of Exeter. In total, the Project Site encompasses approximately 0.2 acres and is bordered by Pickpocket Road and residential properties to the north, a private residential property to the south and the Cross Road Bridge to the east. Refer to **Figure 1** *USGS Site Location Map.*

The Pickpocket Dam is a run-of-river, earth embankment dam with a concrete spillway with end walls on the Exeter River where it flows through the towns of Exeter and Brentwood, New Hampshire, prior to its

1

Phase IB Archeological Investigation

- IAC performed shovel test pits across the site
- Findings from the Phase 1A evaluation were confirmed through field investigations
- The project area was confirmed to be archaeologically complex
- Field work identified both pre-contact and post-contact deposits
- Findings are expected to result in minor design modifications to avoid impacts



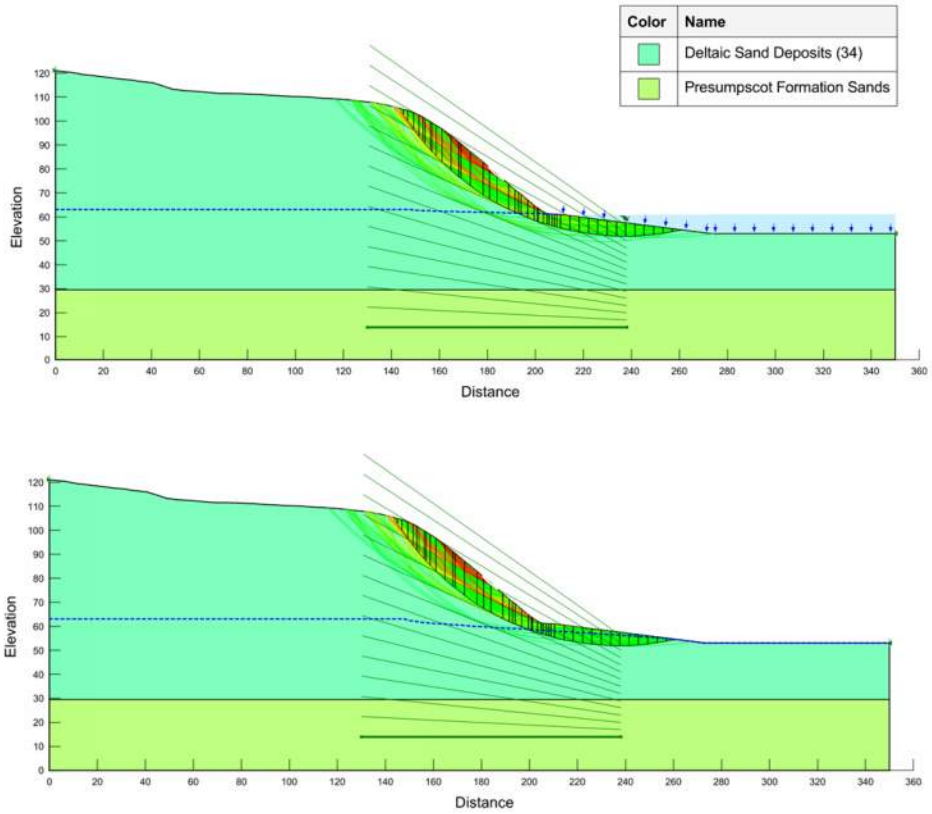
Public Engagement

Subsurface Exploration

- Single 81′ geotechnical boring from ground surface to ~35′ below typical impoundment elevation
  - Groundwater found 5′ above impoundment
  - 77′ of Deltaic Sand Deposits (Medium dense clean sands)
  - Overlying Presumpscot Formation Sands (very dense clean sands)
  - Bedrock not encountered

Slope Stability

- GeoStudio SlopeW model developed using slope geometry and soil parameters
- Evaluated both critical slip surface and groundwater intersecting slip surface under existing and dam removal conditions
- No change in critical slope stability following dam removal
- Marginal improvement in GW intersecting slip surface
- Met with adjacent landowners to discuss findings



Great Bay 2030

- Provided project progress update to the NH Charitable Foundation in April
- Grant Deadline April 2027
- Anticipated Phase 1 Completion August 2026
- Project budget 60% spent of $300,000

Schedule & Next Steps

#	Task	2025						2026						
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
1	Topographic Survey													
2	Wetland Delineation			★										
3	Geotechnical Investigation											★		
4	30% Design										★			
5	60% Design													★
6	Environmental Permitting													★
7	Cultural Resources													
8	Public Engagement				★	★							★	★

★ Project Milestones
Project Tracking

- June/July – Abutters Public Engagement Event
- July 16, 2026 – Present final phase 1 project update at Town of Exeter River Advisory Committee Meeting
- July 31, 2026 – Completion of Final 60% Design Plans
- July 31, 2026 – Rare Species Coordination

Questions?