# **TRANSMITTAL MEMO**

TO: r FR: r	MISSISQUOI BASIN WATER QUALITY COUNCIL (BWQC) MISSISQUOI BASIN CLEAN WATER SERVICE PROVIDER (CWSP) STAFF
RE: 1	MATERIALS FOR MEETING ON 6/4/25
DA: I	MAY 28, 2025

Hello again. The next meeting of the Basin Council will take place on Wednesday, June 4, starting at 11 AM, via Zoom. Please find brief comments about each of the agenda topics below. Please let Dean Pierce know if you have any questions regarding the agenda or the meeting.

# Introductions/Meeting protocols/Conflict of interest disclosures, if any

The Conflict of Interest agenda item provides BWQC members and others opportunity to note possible conflicts of interest that could arise later in the meeting. As there are no applications up for review during this meeting, I am not anticipating any disclosures.

# Approval of Minutes

Minutes are included in the meeting packet. If you can, please let us know before the meeting if any part of the minutes needs to be corrected.

# **Budget Adjustments**

One not-yet-reported budget adjustment request will be announced at the meeting.

# Seating of New BWQC Representative

This is a standing agenda item. No new member seatings are anticipated.

# **Application Review**

Four applications were received in response to the round 8 "Call for Projects." A table summarizing the applications is provided below. Additional details, including staff recommendations, are included in the attachments.

Watershed Project ID	Project Phase	Brief Project Description	Amount of Requested Funding (Proposed Phase)	Estimated Total Project Cost (All Phases)
12909	Preliminary Design	West Hill Brook - Strategic Wood Additions Preliminary Design. The scope includes 61 strategic wood installs across 1.47 miles of stream to reengage 1.2 acres of floodplain.	\$6,904	\$55,000 - \$75,000
12562	Final Design	This project proposes to restore the historic channel of a straightened stream segment on Marsh Brook, install low-tech process-based restoration, and replace two culverts. The project will involve filling the artificial straightened channel.	\$91,226	\$536,000
12561	Final Design	This project will extend an existing two-tier channel along 2100 feet of a tributary of the Rock River on a dairy farm in Franklin. The two- tiered channel will be paired with 50-foot wide riparian buffer plantings on either side of the stream.	\$87,360	\$230,000 - \$250,000
12698	Implementation	Implementation of the removal of Sleeper Pond Dam on Mud Creek in Newport Center, VT. This project involves the removal of a failed dam and restoration of the floodplain.	\$217,630.0	\$835,130

# Expedited Project Development Program

Several months ago the BWQC voted to authorize expenditure of funds for project development. This authorization allowed the CWSP to establish a program that expedites the distribution of funds for project development activities. To date, no organizations have accessed funds to date, although one has announced its plans to do so soon. Recent DEC approval of a WPD ID number for project development activities in Basin 6 could increase interest in the program. CWSP Staff will brief BWQC members on the effects creation of the new WPD ID number could have.

# **O&M Program Evolution**

CWSP staff intend to deliver a brief presentation on several O&M Program developments. These include steps the CWSP will take to contract with partner organizations interested in providing O&M services. A memo describing results of a recent survey relating to the partner organizations is included in the packet.

# <u>Updates</u>

The is a standing agenda item.

# Future meeting topics and conclusion

As part of this agenda item, members will have an opportunity to suggest future meeting topics, etc.

Thanks to all who participate.

#### AGENDA

#### Missisquoi Basin Water Quality Council (BWQC) <u>Wednesday</u>, June 4, 2025 11:00 AM -1:00 PM

#### Remote /Zoom meeting

(Zoom details below)

- 1. Welcome and introductions
- 2. Meeting protocols
- 3. Conflict of interest declarations, if any
- 4. Review/adjust and approve agenda
- 5. Approval of minutes
- 6. Public comment not related to items on agenda
- 7. Report on budget adjustments, if any
- 8. Seating of new RPC Representative, if any
- 9. Application review (4 project applications received)

#### **10. Expedited Project Development Program**

#### 11. O&M program

- 12. Updates, including public participation
- 13. Conclusion

Please Note: 1	Please Note: The schedule for the upcoming application round in MISSISQUI Basin is as follows:						
Round #	Open	Deadline					
9	August 13, 2025	September 17, 2025					
10	December 17, 2025	January 21, 2026					

#### Join Zoom Meeting

https://us02web.zoom.us/j/81332571725?pwd=UktCekQ5R2ZSbVNtMXlUclpYNVl3UT09 Meeting ID: 813 3257 1725 Passcode: 103651 One tap mobile +13052241968,,81332571725# US +13092053325,,81332571725# US

Dial by your location +1 309 205 3325 US +1 646 558 8656 US (New York)

Staffing provided by Northwest Regional Planning Commission (NRPC), the Basin 6 Clean Water Service Provider. NRPC's physical / mailing address is 75 Fairfield Street, St. Albans, Vermont 05482.

In accordance with provisions of the Americans with Disabilities Act (ADA) of 1990, and Vermont's Open Meeting Law, the NRPC will ensure public meeting sites are accessible to all people or provide an opportunity to request accommodations. Requests for free interpretive or translation services, assistive devices, designation of a physical meeting location, electronic access to a meeting, or other requested accommodations, should be made to Amy Adams, NRPC Title VI Coordinator, at 802- 524-5958 or aadams@nrpcvt.com, no later than 2 business days prior to the meeting for which services are requested. Welcome and introductions

Meeting protocols

Conflict of interest declarations, if any

Review/adjust and approve agenda

#### AGENDA

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### Missisquoi Basin Water Quality Council (BWQC) <u>Wednesday</u>, April 2, 2025 11:00 AM -1:00 PM

#### Remote /Zoom meeting

Meeting video posted at <a href="https://youtu.be/yKf1n7hfTjg">https://youtu.be/yKf1n7hfTjg</a>

# A VIDEO RECORDING OF THE MEETING IS AVAILABLE THROUGH THE NRPC YOUTUBE CHANNEL (Link above).

# THE WRITTEN MINUTES ARE A SYNOPSIS OF THE DISCUSSION AT THE MEETING. MOTIONS ARE AS STATED. MINUTES WILL BE SUBJECT TO CORRECTION BY THE COUNCIL. CHANGES, IF ANY, WILL BE RECORDED IN THE MINUTES OF THE NEXT MEETING OF THE COUNCIL

Council Members: Lauren Weston (Q), Heidi Britch-Valenta (Q), Lindsey Wight (Q), Kent Henderson (Q), Dan Seeley (Q), Sarah Downes (Q), Allaire Diamond (Q), Ted Sedell(Q\*), Beth Torpey(Q\*), Bridget Butler, Mel Auffredou

Q= towards quorum \*=arrived after start

Staff: Dean Pierce, Cliff Jenkins, Nora Brown

Others present: Josh Serpe (FNLC), Chris Rottler (DEC), Karen Bates (DEC), Jim Pease, Jim's Al Notetaker, Daniel's Al Notetaker

#### 1. Welcome and introductions

Lindsey Wight opened the meeting at 11:02 as Chair. A round of introductions was made.

#### 2. Meeting protocols

Lindsey Wight reviewed the norms for meeting on Zoom.

#### 3. Conflict of interest declarations, if any

No conflict of interest declarations were made.

#### 4. Review/adjust and approve agenda

Sarah Downes motioned to approve the agenda. Dan Seeley seconded. Motion carried.

### 5. Approval of minutes

Sarah Downes motioned to approve the minutes. Dan Seeley seconded. Motion carried.

#### 6. Public comment not related to items on agenda

No public comments were made.

#### 7. Report on budget adjustments, if any

No budget adjustments were reported.

#### 8. Seating of new RPC Representative, if any

No new representatives were seated.

#### 9. NRPC Private Roads Study

Cliff Jenkins provided an overview of NRPC's upcoming private roads study, which was awarded by DEC based on NRPC's previous work developing a road erosion inventory methodology for private roads around Lake Carmi. The study developed a methodology for identifying and prioritizing private road segments for remediation, drawing on DEC's MRGP standards, which proved difficult to adapt to private property. NRPC also developed outreach materials to promote landowner buy-in to the identified projects. The goal of the upcoming study is to adapt this methodology to the entire Champlain Basin and identify private road phosphorus reduction projects eligible for CWSP funding. These unregulated, often unpaved roads are a major source of phosphorus runoff.

The project timeline includes two phases. Phase I (Fall/Winter 2025) will focus on technical resource development, including GIS mapping of private roads, identification of priority HUC-12s, and creation of landowner communication materials. Phase II (Spring 2026 onward, expected multi-year effort) will involve program management and implementation, monitoring of subcontracts, reporting, and stakeholder communication. The private roads REI methodology will then come online following the rollout of the forest road REI methodology.

Jim Pease asked whether the study applies to paved private roads as well, and Cliff Jenkins clarified that it does. Jim Pease then asked about how this project overlaps with the 3 acre permit requirement for developed lands. Dean Pierce clarified that since CWSPs may only fund non-regulatory activities, the results of the study won't directly overlap with 3 acre requirements.

Kent Henderson asked about the prioritization criteria, and Cliff Jenkins answered that prioritization explained that existing MRGP standards and landowner cooperation would guide decisions, but that determining these criteria is one of the goals of the study. Projects with higher landowner willingness will receive higher priority scores.

Kent Henderson then asked about whether these projects would be entirely or conditionally exempt from cultural resource review requirements. Dean Pierce answered that, per his reading of the policy, they would be

conditionally exempt, and that he would ask DEC to whether level of review might change in the next update of its funding policy.

Heidi Britch-Valenta asked about operations and maintenance (O&M) agreements with landowners and whether they would require an HOA or other cooperative entity. Cliff Jenkins noted that determining the requirements is part of Phase I. Dean added that projects involving organized entities like HOAs would be easier to manage and in his opinion more likely to be pursued for implementation.

Jim Pease asked whether CWSP funds can be used for private road maintenance. Dean Pierce answered that CWSP funds cannot pay for normal maintenance activities. But, the boundary between normal road maintenance and maintenance of water quality improvements might not always clear. So determining exactly what work can be covered by CWSPs will be complicated.

### 10. Training on O&M

Nora Brown provided training on Operations and Maintenance. She went over the basic requirements for implementer organizations and recent updates to the Site Access License/Easement Agreement templates shared in October 2024 by DEC, which included the addition of a plain-language cover letter and a designated "landowner liaison" role. She noted DEC funding policy states that easements are required for projects receiving over \$200,000 in state investment for the implementation phase only.

Lauren Weston asked about adopting old projects and whether CWSP funding could be used for related O&M activities. Dean Pierce answered that CWSPs can achieve some of their P reduction targets through adoption and offered to include this as an agenda item at a future meeting.

Allaire Diamond asked about projects hosted on land with an existing conservation easement including language about access and whether these agreements could replace fill the CWSP requirement for site access licenses/easements, helping minimize potential points of conflict with landowners. Chris Rottler offered to bring this issue to the O&M team at DEC.

Jim Pease expressed concern with the ability of landowners to terminate site access easements with 180 days of notice. Dean Pierce agreed that this could be an issue, particularly if a cancellation made the CWSP less eager to fund larger projects. Chris Rottler shared that the cancellable easement was meant to be a middle ground between more restrictive language to protect investments and the willingness of landowners to sign on.

# 11. Project Sharing (Round Table)

Lauren Weston reported successes in landowner outreach for tree plantings. She provided updates on several projects, including the Trout Brook Reservoir dam removal final design, where most permit applications are now submitted. The Marsh Brook Floodplain Restoration is progressing with Fitzgerald Environmental, and the Sandy Bay SWA project will also involve Fitzgerald. The Montgomery flood resilience development is continuing to progress, albeit slowly. FCNRCD is also working to streamline final design requirements for the Black Woods lakeshore bioengineering project and is hosting multiple tree plantings this spring that community members can sign up for.

Dean Pierce thanked everyone for their ongoing project work and noted that partner organizations are essential. He provided an update on project development work using the FFI tool that had been split between NRPC and MRBA. Progress has been slow due to staffing changes and waiting for FFI tool enhancements. Lindsey Wight shared that MRBA has been using the FFI tool to identify projects, and they plan to ground truth probable sites by the end of summer. She also shared that MRBA will be delaying implementation of its Trout River stream restoration project to next year due to limited capacity. Two other projects, project development in North Troy and for the Sleeper Dam Removal, are moving along, with dam removal permits hopefully being signed this week.

Allaire Diamond asked about trends and challenges related to permitting, especially wetlands and historic preservation. Ted Sedell shared that for one of his projects, early coordination involving site visits with wetlands staff helped smooth the process. Lauren Weston noted that some dam removal projects unexpectedly required individual permits.

Karen Bates pointed out that process changes often happen without clear communication, making it difficult to stay updated. Allaire Diamond expressed a desire for DEC staff to be on the same page to help implement more projects.

Lauren suggested adding information about recent regulatory changes to project screening forms to help track updates. Dean agreed, emphasizing that it would be useful if DEC could communicate changes more proactively during project screening.

Jim Pease announced that Watershed Consulting recently signed a contract with LCBP to conduct stormwater and illicit discharge work in St. Armand, Quebec, on the Rock River.

# 12. Introduction to WISPr funding (12:30 start)

Katherine King of DEC provided the council with an overview of the WISPr program (Water Infrastructure Sponsorship Program), which allows municipalities to use the Clean Water State Revolving Fund (CWSRF) in a unique way to fund natural resource projects without incurring costs.

She explained that WISPr allows municipalities with CWSRF loans for water pollution and abatement projects to sponsor natural resource projects that improve water quality. Eligible project types include dam removal, floodplain and stream restoration, land conservation, river corridor and wetland easements, riparian buffers, wetland restoration, and lakeshore erosion repair. Projects must provide a water quality benefit either by restoring or protecting a natural resource in perpetuity.

The program allows for up to 10% of the base loan cost to be directed to funding a natural resource project or projects. The administrative rate on the loan would then be reduced, which can produce savings for municipalities. Municipalities can either implement their own projects or partner with a third-party implementer, such as a nonprofit, RPC, conservation district, watershed group, or another municipality.

Katherine noted that WISPr only funds implementation and construction, not planning or design. Timing is crucial, as the loan application should align with the design and construction phases of the CWSRF-funded project. She also highlighted that WISPr is well-suited for costly projects with low phosphorus reduction potential since it isn't focused on P credits. Operations and maintenance can be adopted by CWSPs, potentially earning credits.

Heidi asked for clarification on project eligibility, particularly concerning natural resource protection, as some stormwater projects do not qualify. Katherine explained that projects focused on bioengineering and natural resource restoration are prioritized, while hard infrastructure is automatically disqualified.

Dean asked how eligibility can be determined as early as possible, and Katherine replied that watershed planners, in coordination with the rivers program, assess eligibility, especially for GSI-related stormwater projects. Having projects listed in basin plans is beneficial but not mandatory.

# 13. Updates:

Kent Henderson took over as chair at 10:45 when Lindsey Wight departed the meeting.

Dean Pierce shared that NRPC is about to formally adopt cost effectiveness thresholds projects in both of its basins. These thresholds are \$50,000/kg for stormwater projects and \$30,000/kg for all other project types. He noted that this policy is in response to a DEC request intended to help guide where applicants seek funding, whether from the CWSP or another source. This policy would allow for both partial funding and special exceptions in exceptional circumstances.

Dean Pierce then turned council members' attention to a recent DEC memo summarizing the evaluation process recently undergone by Addison County RPC ahead of its renewal as Otter Creek CWSP. He noted that all CWSPs must undergo this process before their assignments expire in June 2027, but this process has been staggered, and NRPC's re-assignment will take place in roughly one year.

Nora Brown provided an update on the CWSP communications working group that she is participating in, including the group's plans to create fact sheets for use by watershed organizations to familiarize landowners with the funding program. She also shared that the group had met with Rebecca Kelley, Chief Communications Officer for the state, to discuss tying this work to an overarching cultural campaign to foster environmental stewardship related to water quality.

Dean Pierce then shared that NRPC's Public Participation Policy, which was adopted on October 30 of last year, will be shared with council members as part of its rollout to all NRPC committees. Catherine Dimitruk, Executive Director of NRPC, encourages recipients of CWSP funds to consider the policy's recommendations in putting together projects and determining level of participation to include.

Lauren Weston notified members that she will be submitting a project to the upcoming funding round hosted on property owned by an NRPC staff member. Dean Pierce added that additional language will be required as part of the approval motion when the project is presented to BWQC members for a vote.

The next meeting of the council will take place on June 4, with the next funding round opening on April 16.

### 14. Conclusion

Dan Seeley motioned to adjourn. Ted Sedell seconded. Motion carried. Meeting adjourned at 1:01pm.

Public comment not related to items on agenda Seating of new RPC Representative, if any Report on budget adjustments, if any Application review (4 project applications received)

# MEMO

TO:	MISSISQUOI BASIN WATER QUALITY COUNCIL (BWQC)
FR:	MISSISQUOI BASIN CLEAN WATER SERVICE PROVIDER (CWSP) STAFF
RE:	REVIEW OF APPLICATIONS SUBMITTED IN RESPONSE TO CALL FOR PROJECTS
DA:	MAY 28, 2025

\_\_\_\_\_

Four applications were received in response to the round 8 "Call for Projects." One of the applications is in the Implementation category, while the other seven are in the Design/Implementation category. The total funding request in the round is \$403,119 (of which \$217,630 would fund implementation).

The total estimated annual phosphorus reduction potential is roughly 73 kilograms. To achieve that reduction through implementation would cost an estimated \$1.6 million, regardless of source--although known outside funding sources would reduce the CWSP share of costs to \$1.1 million. (Staff appreciates the challenges associated with estimation of future costs, but doing so is necessary to understand potential future financial obligations.)

		WPD ID	Project type	Annual p reduction kg	Any one time P reduction kg	Annual plus (onetime / design life) P reduction kg	Funding request (next project stage)	Proposed cost (next project stage)	Estimated Total cost (all project stages) using midpoint of ranges where provided	Estimated Total cost minus other funding sources CWSP STAFF ADJUSTMENTS/ or BWQC action	cost per kg annual P reduction	design life (yr)
Lindsey Wight	Implementation of the removal of Sleeper Pond Dam, on Mud Creek in Newport Center, VT. This ongoing project has final	12698	Implementation	30.28	0.00	30.28	\$217,630	\$ 757,130	\$ 835,130	\$357,130	\$11,794	99
Lauren Weston	West Hill Brook - Strategic Wood Additions Preliminary Design	12909	Preliminary Design	4.81	2.73	5.08	\$6,904	\$ 6,904	\$ 65,000	\$65,000	\$13,514	10
Lauren Weston	This project proposes to restore the historic channel of a straightened stream segment on Marsh Brook, installation of low-tech process-based restoration, and two	12562	Final Design	22.4	29.3	25.33	\$91,226	\$ 91,226	\$ 536,000	\$536,000	\$23,929	10
Lauren Weston	This project will extend an existing two tier channel along 2100 feet of a tributary of the Rock River. This site is located on a dairy farm in Franklin. The two-tiered channel will be paired with 50 foot wide riparian buffer plantings on either side of the stream.	12561	Final Design	16.3	32.1	19.51	\$87,360	\$ 87,360	\$ 240,000	\$240,000	\$14,724	10

Table 1. Round 8 Quantitative Project Summary.

Copies of complete applications are included in the following pages. Applicants have been asked to attend the meeting to make brief presentations regarding their proposals.

Staff will be prepared to answer questions about the CWSP recommendations, which are that the Basin Council authorize funds for projects 12909, 12562, 12561, and 12698 up to the amounts requested--pending clarification of some issues relating to a) cultural resource review and b) budget.

Staff will also be prepared to answer questions about potential future financial obligations, mentioned above.

ADDITIONAL MATERIAL RELATING TO THE RECOMMENDATIONS MAY BE DISTRIBUTED PRIOR TO THE MEETING.

The PDF file containing the complete applications is very large (uncompressed, it runs 47 megabytes).

So, we are making the material available through a "direct download" via the following link rather than via email.

https://acrobat.adobe.com/id/urn:aaid:sc:VA6C2:73d10043-d45f-4531-8dac-0e46543dddc1

(A version of the complete packet including the application files can be downloaded via the BWQC Page on NRPC's website.)

https://www.nrpcvt.com/services-programs/water-resources/cwsp-agendas-minutes/

- Project 12909 (West Hill Brook Strategic Wood Additions Preliminary Design): This project is
  in the Preliminary Design phase and is applying for \$6,904.00 out of an estimated total project
  cost (all phases) of \$55,000 \$75,000. It is estimated to provide an annual phosphorus reduction
  benefit of 4.81 kg/yr and a one-time reduction of 2.73 kg. The estimated design life is 10 years.
- **Project 12562 (Marsh Brook Stream Restoration Final Design):** This project is in the Final Design phase with a requested funding amount of **\$91,225.60** out of an estimated total project cost (all phases) of **\$536,000.00**. It is estimated to provide an annual phosphorus reduction benefit of **22.4 kg/yr** and a one-time reduction of **29.3 kg**. The estimated design life is **10 years**.

Consistent with DEC Guidance, any motion authorizing funds for this application must acknowledge that a member of the NRPC staff has an ownership interest in the property on which the project is located.

- Project 12561 (Rock River Tributary Two Tier Channel Final Design): This project is in the Final Design phase, requesting \$87,359.50 towards an estimated total project cost (all phases) of \$230,000 \$250,000. It is estimated to provide an annual phosphorus reduction benefit of 16.3 kg/yr and a one-time reduction of 32.1 kg. The estimated design life is 10 years.
- Project 12698 (Sleeper Pond Dam Removal Implementation): This project is in the Implementation phase and is applying for \$217,630.00 out of an estimated total project cost (all phases) of \$835,130.00. It is estimated to provide a significant annual phosphorus reduction benefit of 30.28 kg/yr. The design life indicated in the application is Perpetual.

Step/Phase	Implementation
Basic Eligibility	Yes
Applicant Name	Lindsey Wight
Applicant Organization	Missisquoi River Basin Association
Applicant Email	lindsey@mrbavt.com
Applicant telephone	+1 (802) 933-3645
Project ID from WPD	12698
	Implementation of the removal of Sleeper Pond Dam, on Mud Creek in Newport
	Center, VT. This ongoing project has final design as of November 2024, and
Departmention of Project	implementation will allow for the removal of this failed dam and restoration of the
Project Latitude	1000dpiain.
Project Latitude	72 30810
Project Longitude	-72.30019
Annual B Baduatian KC	
Annual P Reduction KG	30.20
KG	
Total Cost of Proposed Phase	757130.00
Amount of Funding	\$217 630.00
Requested (Proposed	· · · · · · · · · · · · · · · · · · ·
Phase)	
Non DEC Funding as part	\$478 000 00
of Total Project Costs (a	••••
Total Project Costs (All	\$835,130,00
Phases)	· · · · · · · · · · · · · · · · · · ·
Design Life	Perpetual
Adjusted Design Life	
Estimated Annual O&M	\$1,000,00
cost total	
Conformance with	10
Tactical Basin Plan TBP	
Number of Co-benefit	4
Areas	
DEC Screening Form	Yes
Uploaded	
Map of Project Area	Yes
Uploaded	
Project Budget Uploaded	Yes
Project Schedule	Yes
Uploaded	
Landowner Support	Yes
uploaded	
Phosphorus Calculator	Yes
Created	05/21/25 3:27 PM
Using As Match	No
Cultural Resource Review	Yes

MRBA Budget for C					
	Contractor	Personnel	mileage	indirect	TOTAL
Bid and Construction	\$6,000	\$0	\$0	\$0	\$6,000
Soil Testing	\$12,000	\$910	\$163	\$107	\$13,180
Removal	\$65,450	\$5,837	\$201	\$604	\$72,092
Wood Addition		\$2,756	\$171	\$293	\$3,220
Floodplain Revegeta	\$20,000	\$2,756	\$171	\$293	\$23,220
Bank Stabilization	\$33,000	\$468	\$163	\$63	\$33,694
Grass lined Swale	\$5,000	\$3,224	\$161	\$339	\$8,724
Reporting	\$0	\$910	0	\$91	\$1,001
Contingency (10% o	\$56,500	\$0	0	\$0	\$56,500
TOTAL	\$197,950	\$16,861	\$1,030	\$1,789	\$217,630

		2025										
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Stakeholder Me	eetings											
Contactor Sele	ction											
Kickoff Meeting												
Construction												
Restoration												
Reporting												

# APPENDIX A. CLEAN WATER INITIATIVE PROGRAM - PROJECT ELIGIBILITY SCREENING FORM

This fillable PDF form is designed to assist with project review by systematically walking through all eligibility criteria. It should be completed for all projects seeking funding for 30% + design or implementation work. It may be applied to projects seeking funding for assessment or development if helpful for determining their alignment with eligibility criteria 2, 3, 6, and 8.

# Step 1: Conduct Eligibility Criteria #1 Screening: Project Purpose

Table 1A: Project Purpose					
From the drop-down list to the right, please select which of the four objectives of Vermont's Surface Water Management Strategy this project addresses. If multiple, please list below:	Multiple				
Minimize flood and fluvial erosion hazards, Protect and restore acquatic and riparian habitats, Minimize anthropogenic nutrient and organic pollution					

# **Step 2:** Conduct Eligibility Criteria #2 Screening: Project Types and Standards

Disconsidered the most representative project type from the dran down list	T	
to the right. <sup>1,2</sup> If multiple BMPs are included in the project, please list below:	Dam Removal - In	nplementation
Is the project type an eligible project type for the funding program you are applying to as listed in column B of the <u>CWIP Project Types Table</u> ?	Yes	No
(Answer must be YES to proceed)		-
Does the project meet the project type definitions and minimum standards as provided in column C of the <u>CWIP Project Types Table</u> ?	Yes	No
(Answer must be YES to proceed)		
Will the project result in the standard performance measures, milestones, and deliverables as defined by project type in columns D-F of the <u>CWIP</u> <u>Project Types Table</u> ?	Yes	No
(Answer must be YES to proceed)		
Is the project listed as an ineligible project or activity in the <u>CWIP Funding</u> <u>Policy</u> ? If Yes, please explain below how project meets the allowable exceptions within the CWIP Funding Policy.	Yes O	No
(Answer must be NO to proceed, unless reasonable justification is provided above)		

# **Step 3:** Conduct Eligibility Criteria #3 Screening: Watershed Projects Database

Verify project has been recorded in the <u>Watershed Project Database</u> (WPD). Each project must have a Watershed Project Database number specific to the proposed project phase (for example,

<sup>&</sup>lt;sup>1</sup> Note that Road/Stormwater Gully project-types must not otherwise be considered intermittent or perennial streams by the DEC Rivers Program and therefore project proponent must show documentation of this determination in order to select this project type.

<sup>&</sup>lt;sup>2</sup> One project may include multiple best management practices (BMPs) that cross "project types." For example, a single project may include both stormwater and lake shoreland BMPs. Proponents should use their best judgement in selecting the most representative project type for the purposes of eligibility screening and reporting.

a final design will have a different WPD-ID from a preliminary design even if for the same project). If the project, or the specific phase, is not yet in the Watershed Project Database, follow directions provided in the CWIP Funding Policy to secure a WPD-ID. Please see <u>CWIP</u> Funding Policy for more information on the WPD-ID.

Table 3A. WPD-ID					
Watershed Project Database ID number assigned	11349 (parent)				
Watershed Project Database Project Name	Sleeper Fond/Mud Creek Dam Removal in Newport Center Final Design (parent)				

# Step 4: Conduct Eligibility Criteria #4 Screening: Natural Resource Impacts<sup>3</sup>

Agency of Natural Resources (ANR) permit screening for natural resource impacts includes 1) an initial desktop review to identify which ANR permitting programs should be contacted, 2) a review by the relevant ANR permitting staff, and 3) a response summary from the project proponent addressing any permitting staff concerns. <sup>4</sup>

- Table 4. Natural Resource Impacts facilitates a high-level desktop review of the most likely ANR permits to apply to clean water projects. Project proponents should answer all the questions to identify likely permit needs.<sup>5</sup> Please note that "project site" may include both the active restoration location as well as any additional impact footprint related to staging, site access, or storage of waste or disposed materials.
- 2) If responses to the Table 4. Natural Resource Impacts desktop review trigger a permitting staff consultation, Table 4 provides appropriate contact information.
  - a. Proponents should send the identified permitting staff the following:
    - i. The watersheds project database identification number (WPD-ID) (if available),
    - ii. Project location (GPS coordinates)
    - iii. Summary of proposed scope of work, and
    - iv. Any other relevant information they request that will be utilized in their review.
  - b. <u>Proponents should clarify they are seeking permitting staff input on potential</u> permitting needs, permit-ability of proposed scope of work, and other design considerations but they are NOT seeking a formal permit determination.
  - c. Project proponents must attempt to communicate with the permitting staff and provide them with at least thirty days to review the project and provide a

<sup>&</sup>lt;sup>3</sup> Easements and Riparian Buffer Plantings are excluded from this eligibility requirement/step.

<sup>&</sup>lt;sup>4</sup> In cases where this screening may have already occurred in a prior project phase, project proponents may supply attachments or links to relevant permit needs assessment documents in place of completing Table 4.

<sup>&</sup>lt;sup>5</sup> Entities selected for funding are expected to perform due diligence to ensure all applicable permits (including non-ANR state, local, and federal permits) are discovered and secured prior to implementation. The <u>ANR Permit</u>

<sup>&</sup>lt;u>Navigator</u> and an Environmental Compliance Division Community Assistance Specialist can help confirm ANR permitting needs for any projects once selected for funding.

response. Project proponents are encouraged to perform this screening during a project development phase as opposed to during a project solicitation round to allow for more time for feedback. Permitting feedback may be up to one year old.

- 3) Proponents should summarize permitting staff feedback and how the proposed scope of work will address this at the bottom of Table 4. Specifically, please include:
  - a. Which permits or permit amendment are needed or might be needed?<sup>6</sup>
  - b. What type might be needed? (e.g., a general or individual permit<sup>7</sup>)?
  - c. What concerns were voiced by permitting staff?
  - d. How will the proposed scope of work address these concerns?8

I. Act 250 Permits		
1. Have any Act 250 (Vermont's Land Use and Development Control Law) Permits been issued in the project site's parcel location? <sup>9</sup>	Yes	No
If <b>yes</b> , please provide the permit number and list any water resource PermitNumber:	issues or natural re	esource issues found <sup>10</sup>
Resourcelssues: 	opropriate regulator	y contact for an Act
Resourcelssues: If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the ap 250 consultation. Regulatory Point of Contact Name/Position:	opropriate regulator	y contact for an Act
Resourcelssues: If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the ap 250 consultation. Regulatory Point of Contact Name/Position: II. Lake and Shoreland	opropriate regulator	y contact for an Act

<sup>9</sup> An Act 250 Permit is required for certain categories of development, such as subdivisions of 10 lots or more, commercial projects on more than one acre or ten acres (depending on whether the town has permanent zoning and subdivision regulations), and any development above the elevation of 2,500 feet. The <u>ANR Atlas Clean Water</u> <u>Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located on an Act 250 parcel. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>10</sup>Note that Act 250 permit amendments may require more extensive review of project impacts to natural resources including wildlife habitat, significant natural communities, and riparian zones. Please consult with the Act 250 District Coordinator regarding the nature and scope of that review and what bearing it may have on your project design.

<sup>&</sup>lt;sup>6</sup> Occasionally permit staff may indicate they need a field visit or to see more completed designs prior to making a permit need determination.

<sup>&</sup>lt;sup>7</sup> Design phase projects that require an individual wetlands permit must have the permit in hand at the close of the final design phase. Implementation phase projects must have the individual permit in hand to be eligible for funding.
<sup>8</sup> Examples could include planned design changes or inviting permitting staff to stakeholder meetings.

<sup>\*</sup> Examples could include planned design changes of inviting permitting start to stakeholder meetings.

level (shoreline) of a lake or pond? 11			
If <b>yes</b> , you might need either a Shoreland Protection Act Permit or a Lake Encro <u>Quality Project Screening Tool</u> to find the Lakes and Ponds Program contact fo	oachment P r your proje	ermit. Use ct's region	the <u>Water</u>
Regulatory Point of Contact Name/Position:			
Laura Woods, Region 2			
III. Rivers, River Corridors, and Flood Hazard Areas			
<b>1</b> . Is there any portion of the project site located within 100' of a river corridor mapped Federal Emergency Management Agency (FEMA) flood hazard area <sup>12</sup> stormwater pond's pipe draining into a river corridor area)? Any permanent excavation/filling or construction within a flood hazard area or river corridor mapped regulatory requirements through municipal bylaws or through state authorities	<b>and/or</b> ' (e.g. a ay trigger	Yes	No
If <b>yes</b> , you will need to speak with a <u>Floodplain Manager</u> . Use the <u>Water Quality</u> the Floodplain Manager for your project's region.	Project Scr	eening To	<u>ol</u> to find
Regulatory Point of Contact Name/Position:			
Sasha Peeler, Northeast Region			
2. Is any portion of the project site within a perennial river or stream channel? $^{\mbox{13}}$	Yes	$oldsymbol{eta}$	NoO
If <b>yes</b> , you will need to speak with a <u>Stream Alteration Engineer.</u> Use the <u>Water</u> find the Stream Alteration Engineer for your project's region.	Quality Pro	ect Scree	ning Tool to
Regulatory Point of Contact Name/Position:			
Ben Matthews			
V. Wetland			

<sup>&</sup>lt;sup>11</sup> The <u>ANR Atlas Clean Water Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Lakeshore permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>&</sup>lt;sup>12</sup> FEMA mapped Flood Hazard Areas are not available statewide on the ANR Natural Resources Atlas. For projects located in Grand Isle, Franklin, Lamoille, Addison, Essex, Orleans, Caledonia, and Orange Counties, maps are available via the FEMA Flood Map Service Center: <u>https://msc.fema.gov/portal/home</u>. ANR Floodplain Managers are available to provide technical assistance if needed.

<sup>&</sup>lt;sup>13</sup> Stream Alteration Permits regulate all activities that take place within perennial river and stream channels. Examples of regulated activities include streambank stabilization, dam removal, road improvements that encroach on streams, and bridge/culvert construction or repair. The <u>ANR Atlas Clean Water Initiative Program Grant</u> <u>Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Stream Alteration permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

1. Does the <u>Wetland Screening Tool<sup>14</sup></u> provide a result of wetlands likely, very likely, or present at the project site?	Yes	No
2. Does your project site involve land that is in or near an area that has <u>any</u> of the following characteristics: o Water is present – ponds, streams, springs, seeps, water filled depressions, soggy ground under foot, trees with shallow roots or water marks? o Wetland plants, such as cattails, ferns, sphagnum moss, willows, red maple, trees with roots growing along the ground surface, swollen trunk bases, or flat root bases when tipped over? o Wetland Soils – soil is dark over gray, gray/blue/green? Is there presence of rusty/red/dark streaks? Soil smells like rotten eggs, feels greasy, mushy or wet? Water fills holes within a few minutes of digging? (See Landowners Guide to Wetlands for additional information on identifying wetlands onsite.)	Yes No Not Sure	<ul> <li>O</li> <li>O</li> </ul>
If you answered <b>yes</b> or <b>not sure</b> to <u>either</u> of the above questions, you will need to co <u>Ecologist</u> using the <u>Wetland Inquiry Form</u> . The District Wetlands Ecologist can help locations of wetlands and whether you need to hire a Wetland Consultant to condu Alternatively, if you answered <b>yes</b> or <b>not sure</b> to <u>either</u> of the above questions, you of Wetland Consultant in the proposed scope of work. Any activity within a Class I or II zone (minimum of 100 feet and 50 feet respectively) which is not exempt or consid- under the <u>Vermont Wetland Rules</u> requires a permit. All permits must go through re- process, which takes at minimum 6 weeks for a General Permit and 5 months for a <b>Regulatory Point of Contact Name/Position</b> : <b>Shannon Morrison</b>	ontact your determine t ct a wetland can simply b wetland or lered an "al wiew and p in Individua	District Wetlands he approximate d delineation. Dudget for a wetland buffer lowed use" ublic notice I Permit.
1. Is your project a Wetland Restoration project type?	Yes	No
If you answered yes, under the <u>Vermont Wetland Rules</u> you will need an "allowed u DEC Wetlands Program. Contact your <u>District Wetlands Ecologist</u> using the <u>Wetland</u> <b>Regulatory Point of Contact Name/Position</b> : <b>V. Fish and Wildlife</b>	ise" determ Inquiry For	ination from the <u>m</u> .
<ul> <li>State law protects endangered and threatened species. No person may take or possess such species without a Threatened &amp; Endangered Species Takings permit.</li> <li><b>1.</b> Does your project involve cutting down trees larger than 5 inches in diameter in any of the following towns? Addison Arlington Benson Brandon Bridgort</li> </ul>	Yes O	No

<sup>&</sup>lt;sup>14</sup> To view the Wetland Screening Tool introduction video, see <u>https://youtu.be/6lv5en0AB10</u>

<ol> <li>Is the project site within 1 mile of a mapped<sup>15</sup> Significant Natural Community or Rare. Threatened, or Endangered Species?</li> </ol>	Yes 🔘	No 💽
If <i>yes</i> to either of the above questions, connect with the VT Fish and Wildlife depart (everett.marshall@vermont.gov 802-371-7333) to discuss your project and any neo Regulatory Point of Contact Name/Position:	ment cessary permit	tting.
VI. Stormwater		
1. Will the project disturb more than an acre of land during construction, add or redevelop impervious surface, create new development or <u>otherwise require a</u> <u>Stormwater permit?</u>	Yes 🔘	No 💽
If <b>yes</b> , forward to the appropriate <u>Stormwater specialist</u> to ensure necessary permit Project Screening Tool to find the Stormwater specialist for your project's region.	ting. Use the	Water Quality
Regulatory Point of Contact Name/Position:		
VII. Solid Waste		
2. Will you be creating any debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry, and mortar) with your project that you intend to bury on site? <sup>16</sup>	Yes	No
If yes, connect with the Waste Management & Prevention Division (dennis.fekert@v to discuss your project and any necessary permitting.	/ermont.gov 8	02-522-0195)
Regulatory Point of Contact Name/Position:		
<ul> <li>Provide below or attach a narrative summary of Table 4 findings. Please include:</li> <li>a. Which permits or permit amendment are needed or might be needed</li> <li>b. What type might be needed? (e.g. a general or individual permit)?</li> <li>c. What concerns were voiced by permitting staff?</li> <li>d. How will the proposed scope of work address these concerns?</li> </ul>	ed?	
Wetlands, Stream Alteration; no concerns during design phase. Concerns included contingencies for upstream railroad culvert and inlet of a small tributhat sediment will be removed from the restored stream channel and disposed of in an addressed by the engineer directly and in the design plans.	utary, as well a upland area; t	s assurance hese were
Is the project, as proposed, reasonably considered permit-able by all applicable	Yes	

<sup>15</sup> Find both of these layers on the ANR Atlas under Atlas Layers/Fish and Wildlife. Use the Measurement tool to 1) Plot Coordinates for your project 2) select the coordinates from the left panel 3) select the Radius Tool 4) click on your project location 5) Indicate 1 mile distance 6) look for overlap with either of these mapped layers.

<sup>16</sup> If your project will result in the transfer and disposal of debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry and mortar), you do not need a permit from this office as long as you hire a <u>licensed solid waste hauler</u> and bring the material to a certified facility.

ANR permitting programs?	
(Answer must be Yes to continue)	

# **Step 5:** Conduct Eligibility Criteria #5-8 Screenings

Table 5A. Eligibility Criteria 5-8	
Landowner and Operation and Maintenance Responsible Party Support. Project identifies and demonstrates commitment from a qualified and willing operation and maintenance responsible party. Project demonstrates landowner support for the proposed project phase.	Yes No
(Answer must be YES to proceed)	
Budget. Project budget includes ineligible expenses. (Answer must be NO to proceed)	Yes 🔿 No 💽
<b>Leveraging</b> . Proposed leveraging meets required leveraging levels (if applicable), meets the definition of leveraging, and comes from eligible sources (Answer must be YES or N/A to proceed)	Yes No N/A
Funding Program Specific Eligibility. Project meets additional funding program eligibility requirements*. Please list applicable funding program below: Enhancement (Dam Removal Design and Implementation Block Grant_	Yes No
(Answer must be YES to proceed) *If Water Quality Restoration Formula Grant, complete Step 6 below	

# Step 6: Screening Projects on Agricultural Lands (Water Quality Restoration Formula Grants Only)

For Water Quality Restoration Formula Grant projects, please complete the following information as part of your Funding Program Specific Eligibility Screening (Criteria 8). Please note this must be completed for all projects located on agricultural lands regardless of project type. See <u>CWIP Project Types Table</u> for eligible project types.

ie 6A. Screening Projects on Agricultural La	
<ol> <li>Is the proposed project located on a jurisdictional farm operation<sup>17</sup>?</li> </ol>	<b>Yes -</b> Proceed to next question below.
Complete a preliminary review to	

<sup>&</sup>lt;sup>17</sup> Jurisdictional farm operations are required to meet Vermont's Required Agricultural Practices (RAPs).

e <u>termination</u> process. This form must be by the farm andowner seeking the ion.	
ricultural projects include limited to Production Area (e.g. Waste Storage eavy Use Area, Diversion) stock Exclusion, Filter Strip, Reduced Tillage, Manure	<ul> <li>Yes - Agricultural Projects on jurisdictional farms are not an eligible project type. You can provide a referral to an applicable state or federal agricultural <u>assistance</u> <u>program</u>, or a local organization.</li> <li>No- The natural resource, innovative, or other project type will require an agricultural project review and approval from the Vermont Agency of Agriculture, Food and Markets</li> </ul>
not an exhaustive list of all practices.	<ul> <li>(VAAFM) to ensure a consistent approach on farms statewide that follows rules, regulations, and laws in place. Please follow Steps 1 &amp; 2 below.</li> <li>Step1- Please submit a detailed description of the project, project site, project details, landowner, farm operation, and any other relevant information to VAAFM at AGR.WaterQuality@Vermont.gov.</li> <li>Step2- Once you complete this Agricultural Project Review, please allow 30 days for a response. Once that response has been received, please include a summary of the response in the next section.</li> </ul>
Review Status & Summary:	
Status	
Approved	
	<b>Review Status &amp; Summary:</b> Approved

<sup>&</sup>lt;sup>18</sup> Note CWIP's Agricultural Pollution Prevention project type eligibility is limited to land where owner or operator is <u>not</u> a jurisdictional farm (i.e., <u>not</u> required to meet the Required Agricultural Practices (RAPs)). As such, projects that meet the definition of the Agricultural Pollution Prevention project type in the <u>Appendix B. Project Types Table</u> are <u>not</u> subject to review by VAAFM.

Please include a summary of the response here:

Please note that it is expected that all projects with the status "submitted/pending" will be "approved" prior to a project approval for funding.

# Floodplain and Stream Restoration Estimated Phosphorus Reduction Calculator kg of TP - Stream Stability P Reduction + Storage P Reduction Stream Stability P Reduction - project type and basin P reduction factor (Ib/acre/yr) \* acres \* kg per Ib

tracem Journey - Resolution - project type and ceasin - Resolution and Injuried graph and the set as Age Prot Storage P Reduction = pre- to post-resortantion Anage (in contextity) factor (Blaczer(y)) <sup>2</sup> areas <sup>*</sup> kg per lb * 50% offer year 1											
Variable	Value	Unit	Notes								
Unit conversion	0.454	lb to kg	Not all floodplain : (ex: floodplain cor Resources Restora	Theodyliam and stream restoration projects receive as torage P reduction credit. If a project does not effectively change the ability of a stream or river to access a floodyliam, select matching floodyliam connectivity project system of the ability of a stream or river to access a floodyliam, select matching floodyliam connectivity prot-restoration = Nov floodyliam connectivity prot-restoration = N							
Consecutive year storage p reduction	50%	of year 1	The Functioning F specifications, and outcomes to infor types implemente and buffer plantin	xe Functioning Roodplains initiative (FFI) web application (coming soon) is equipped to generate the most accurate estimation of phosphorus reduction achieved through a floodplain or stream restoration project based on more detailed project sectifications, and will ultimately be used for phosphorus accounting purposes by VT BCC. This tool was developed as an interim solution to provide high elevel stimation of phosphorus reductions and can be used to help compare potential project used in a stream restoration provide the metime tool are based on FFI project and watershed. This interim tool cannot be used to accurately accounting for instaded participation, enabled project used in a single bactanion however, the FFI tool will allow for calculation of existented phosphorus reduction of multiple project components, such as a river corridor easement layered on a floodplain restoration doubler planting.							e detailed project Ip compare potential project ices (i.e. multiple project on a floodplain restoration
Input*	Dropdown*	Dropdown*	Input Value*	Input Value	Dropdown*	Dropdown*	Output value	Output value	Output value	Output value	Output value
					Floodplain	Floodplain			Consecutive Year		Estimated Annual P
			Acres	Number of Culverts	Connectivity Pre-	Connectivity Post	- Stream Stability P	Year 1 Storage P	Storage P Reduction	Estimated Year 1 P	Reduction After
Project Identifier	Basin	Project Type	Restored	Replaced (if applicable)	Restoration	Restoration	reduction (lb/yr)	Reduction (lb)	(lb/yr)	Reduction (kg)	Year 1 (kg/yr)
Sleeper Pond Dam removal	Missisquoi	Remove hard constraint	4.50		Moderate	High	9.90	45.00	22.50	) 24.90	14.70
		Wood addition in 3rd and									
Sleeper Pond wood addition	Missisquoi	4th order streams	2.00		Moderate	High	2.20	20.00	10.00	10.07	5.53
		Floodplain Restoration with									
Sleeper pond floodplain reveg	( Missisquoi	Buffer Revegetation	1.60		Moderate	High	4.64	16.00	8.00	9.36	5.73
		Stabilize Gully on Perennial									
Mudd Brook bank stabilization	n Missisquoi	Stream	0.07		Low	Low	6.90	0.00	0.00	3.13	3.13

#### Gully or Outlet Stabilization Estimated Phosphorus Reduction Calculator

Sediement Erosion Rate = [volume of e	erosion treated (ft^3) * sediment	bulk density (kg / ft^3)] / age of eros	ion (years)							
TP Loading Rate = sediment erosion ra	TP Loading Rate = sediment erosion rate (kg/year) * sediment to TP weight conversion (kg P / kg sediement)									
Variable	Value	Unit	Notes							
Average sediment P content	0.000694	kg TP / kg sediment	The calculation of estimated annua projects that are implemented adja Road tab.	c calculation of estimated annual phosphorus reduction in this tab applies only to gally or outlet stabilization implemented in intermittent or ophemeral streams adjacent to reads or other developed lands with ourls and catch basins. For gally stabilization jaces that are implemented adjacent to a perennial stream, use the 'Stabilize Gally on Perennial Stream' project type in the Floodplain and Stream tab of this tool. For projects that address ensition on uncurbed roads without catch basins, use the Private ad rob.						
Sediment bulk density	35.08	kg / ft <sup>2</sup>								
Phosphorus reduction efficiency (partial mitigation) Phosphorus reduction efficiency (full mitigation)	40%	percent of load percent of load	All erosion is generally characterized by a depth of less than 11t dially resion is generally characterized by a depth of great rhan 11t of all spin of exosion is unknown, default values are as follows: all of all spin of exosion is unknown, default values are as follows: all of all spin of the accounting methods and metrics, please see Standard Operating Procedures for Tracking & Accounting of Developed Lands Regulatory projects & Non-Regulatory Cean Water Projects, available on the VT DEC website.							
Input	Input*	Input*	Input*	Dropdown*	Input*	Output value	Output value	Output value	Output value	
Project Identifier	Average Legnth of Gully (ft)	Average Width of Gully (ft)	Average Depth of Gully (ft)	Level of Erosion Mitigation	Estimated Gully Age (years)	Gully Volume (ft <sup>3</sup> )	Sediment Erosion Rate (kg/yr)	TP Loading Rate (kg/yr)	Estimated P Load Reduction (kg/yr)	
Example Gully 1	50	10		5 Fully mitigated	1	15 2,500.00	5,846.67	4.06	3.25	
Sleeper Pond splash pad and grass line	. 63	3		1 Fully mitigated		15 189.00	442.01	0.31	0.25	
Sleeper Pond splash pad and grass line	121	. 4		1.5 Fully mitigated	:	15 726.00	1,697.87	1.18	0.94	

Cost Effectiveness Calculator for Formu	Notes								
Cost effectiveness of a project with a design life 15 years or gr Cost effectiveness ( $S/kg/yr$ ) = total capital project cost (dollars) Cost effectiveness (for a project with less than 15-year design I Cost effectiveness ( $S/kg/yr$ ) = (15 years/design life years) <sup>1</sup> (Total	eater: for design and construction / annual average phosphor ife: I Project Cost \$) /Average annual P load reduction	us load reduction (kg/yr)	The obligation of car effectiveness, and it in the total intermediate base and to dome paging proteinations for protein proposed to Mendel under formula practime. The card effectiveness closed are interparted in the set of the set						
			Lot	lock					
Input	Input	Output	Input	Input	Input	Output Value	Output Value		
				Estimated Project Cost to be					
			Total Estimated Project Cost	Covered by Formula Grant Funds	Calculated Estimated P Load	<b>Total Project Estimated Cost</b>	Formula Grant Estimated		
Project ID	Project Type	Estimated Project Type Design Life	(design and construction)	(design and construction)	Reduction (kg/yr)	Effectiveness (\$/kg/yr)	Cost Effectiveness (\$/kg/yr)		
Sleeper Pond Dam removal	Active Stream/Floodplain Restoration		15 \$473,450.0	0 \$70,450.00	14.6963808	\$32,215.41			
Sleeper Pond wood addition	Active Stream/Floodplain Restoration		10 \$104,000.0	0 \$30,000.00	5.5338224	\$28,190.28	\$8,131.81		
Sleeper pond floodplain revegetation	Active Stream/Floodplain Restoration		10 \$20,000.0	0 \$20,000.00	5.73340288	\$5,232.49	\$5,232.49		
Mudd Brook bank stabilization riprap	Active Stream/Floodplain Restoration		10 \$210,500.0	0 \$70,000.00	3.1297848	\$100,885.53	\$33,548.63		
Sleeper Pond splash pad and grass lined swale west	Grass Conveyance Swale		10 \$4,000.0	0 \$4,000.00	0.25	\$24,000.00	\$24,000.00		
Sleeper Pond splash pad and grass lined swale east	Grass Conveyance Swale		10 \$4,000.0	0 \$4,000.00	0.94	\$6,382.98	\$6,382.98		
Total for dam removal projects			\$815,950.0	0 \$198,450.00	30.28339088	\$26,943.81	\$6,553.10		

Archaeological Resources Assessment Report for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont

Submitted to:

Ellen Fox Missisquoi River Basin Association 2839 VT Route 105 East Berkshire, VT 05447

Submitted by:

Charles Knight, Ph.D. Crown Consulting Archaeology, LLC PO Box 358 50 Main Street Winooski, VT 05404-0358

November 20, 2024

CCA Report No. 2024-046

# Archaeological Resources Assessment Report for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont

#### **Project Description**

The Missisquoi River Basin Association, with assistance from SLR, proposed the Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont (Figure 1). The Sleeper Pond dam in Newport Center is in poor to critical condition. It is partially breached and continues to impound water (and sediment) above the dam. Dam failure would cause a release of impounded sediment, water, and concrete. There is an opportunity to restore the streamflow and floodplain of Mudd Creel (aka Dunn Creek.)

This proposed dam removal process consists of several actions (Figures 2-4): Removal of concrete dam down to bedrock Protection of bridge and river banks between dam and wide portion of the impoundment with riprap Removal of sediment most likely to erode downstream Restoration of the channel and impoundment with vegetation and wood Replacement and protection of water line located in the impoundment.

Benefits of removal of the existing dam and restoration of the impoundment to a natural river channel and riparian floodplain include: reduction of flood water surface elevations in the impoundment and downstream, minimization of erosion risk and water quality impacts associated with uncontrolled sediment releases, and removal of impounded sediment and reestablishment of natural sediment transport which will help keep downstream channels more stable and reduce erosion associated with a sediment starved condition.

The sediment is proposed to be left in areas that are most vegetated and hydraulicly sheltered in the hydraulic shadow of upstream and downstream constrictions and therefore least likely to move. Some of the remaining sediment will create the floodplain areas on either side of the pilot channel and may be eroded as the channel migrates to find more stable geometry. No sediment is proposed to be removed upstream of station 7+00, where sediment depths are 1-2 feet deep and well vegetated outside of the channel.

The existing impoundment will be accessed on the east and west sides. Access will be on clean timbertrack mats (Figure 5). This study will be performed as part of the Section 106 permitting process.

#### The Archaeological Resources Assessment (ARA)

The goal of an ARA (or "review") is to identify portions of a specific project's Area of Potential Effects (APE) that have the potential for containing pre-Contact and/or historic sites. An ARA is to be accomplished through a "background search" and a "field

inspection" of the project area. For this study, reference materials were reviewed following established guidelines. Resources examined included the National Register of Historic Places (NRHP) files; the Historic Sites and Structures Survey; and the USGS master archaeological maps that accompany the Vermont Archaeological Inventory (VAI). Relevant town histories and nineteenth-century maps also were consulted. Based on the background research, general contexts were derived for pre-Contact and historic resources in the study area.

#### Archaeological Site Potential

There are no known archaeological sites within or adjacent to the proposed project parcel. In fact, there are no known archaeological sites within 6 km of Newport Center. The lack of known archaeological sites in the general area does not necessarily mean that the area has been devoid of habitation in the past, but rather it may only reflect the fact that little development that would stimulate a regulatory review for archaeological resources has occurred in the area. The project area lies adjacent to Mud (a.k.a Dunn) Creek, which flows to the northwest and ultimately drains into the Missisquoi River, which would make it somewhat of a connecting thoroughfare between the Missisquoi River and the Lake Memphremagog drainage system. As a result, the banks of Mud Creek may be relatively sensitive for pre-Contact Native American or more recent Euroamerican archaeological sites.

In 1992, a proposed culvert crossing of the Mud Creek along VT Rte. 105, immediately north of Newport Center was reviewed by the VDHP. They, along with the VTrans archaeologist at the time, determined that the proposed project would not impact known archaeological sites and that no additional archaeological study was required (Gilbertson 1992).

In regard to historic period resources, the historic 1859 Wallings map depicts a sawmill to the northwest of the Cross Road crossing of the Mud Creek, where the current Fire Department building sits on a broad fill layer (Figure 6). The later 1878 Beers Atlas sheds more detail on the structures in this location, placing the W. H. Willey's sawmill further to the west on the spot of the earlier James H. Crawford sawmill built in 1855 and, according to land records, sold to Willey in 1872 who kept the sawmill running until 1902 (Figure 7). A little further to the east a Shingle Factory closer to Mud Creek exists, which was originally built by Thomas Reagan in 1872, but then quickly sold to James Crawford in 1873 who kept it in business until 1885 (see Figure 7). On the later 1920 USGS map (Figure 8) no structures are depicted on this land, and over the next few decades it was sold several times until it came to be used as a mechanics shop in 1965.

Adjacent to the reservoir area, no structures are depicted on either side of the reservoir limits on the Wallings map, but on the Beer map one structure labelled as a Shoe Shop is depicted along the west side of VT Rte. 105, on the eastern shoreline of the reservoir (see Figure 7). On the later 1920 USGS map the shoe shop is not clearly depicted, or is part of a larger building that extends north to the corner (see Figure 8).
Historic land records indicate that the shoe shop was a Blacksmith shop that was started by H.S. Wright in 1877 and sold by his son in 1921 to A. Poirier. Sometime during the ownership by A. Poirier before 1934 the Blacksmith shop burned down. The lot went through several more owners until it was sold to the Town of Newport Center in 1944. At that time a new building was built and is visible on the historic 1923 and 1950 USGS maps (Figures 8 & 9). In addition, this can be seen on the historic 1952 aerial photograph (Figure 10a). However, at some point in the 1950s this building also burned down and was replaced with what is the current Town Garage #2 building, which is depicted in the historic 1962 aerial photograph (Figure 10b). At the same time, the 1952 and 1962 aerial photographs show how much larger the reservoir was, bordering the western edge of Town Garage #2.

The 1981 blueprints of the existing water system surrounding the Newport Center dam area show a water line passing diagonally through the western edge of the Town Garage #2 building, and connecting to a well house, several pump suction lines, and the old Town well on the west side of Sleeper Pond, in the area of the western access road corridor (Figure 11). The 2018 existing water system plans depict a waterline passing along the western edge of Town Garage #2 and parallel to VT Rte. 105, then cutting across Sleeper Pond to connect with the existing Town well and well house (Figure 12).

In 2002, a new fire station was reviewed for construction in Newport Center, on the vacant lot to the northwest of the intersection of Cross Road and Searls Road, where the old shingle factory stood 100 years earlier (Figure 13). As discussed in the documents presented to the VDHP, the fire station location would occupy a piece of land that had formerly been occupied by a car garage company until approximately 1987. The VDHP concluded that the proposed fire station construction project "will have no effect on any historic properties that are eligible for the National Register of Historic Places." (Wadhams 2002). This determination was based on the fact that the lot of the proposed fire station location was small and likely excessively disturbed by the previous car garage (Figure 14). This lot is also the location of the historic shingle factory, of which there are no remains to be seen. Any subsurface remains of this historic structure have been extensively disturbed by the construction of the historic buildings on that property throughout the 20<sup>th</sup> Century, including the car garage and new fire station.

The Newport Town School, built in 1955, was determined by the VDHP to de eligible for inclusion on the National Register of Historic Places, but has yet to be listed on it. As of 2024, no properties within the Town of Newport Center have been listed on either the State or National Register of Historic Places.

#### **Desk Review**

As part of the desk review, the Vermont Division of Historic Preservation's (VDHP) 2015 predictive model matrix for identifying pre-Contact Native American archaeological sites is employed for the project area. As stated in the VDHP Guidelines: "The predictive model is intended to identify areas with a high potential for containing significant precontact Native American sites." A completed matrix for the proposed

project is presented in Figure 15. As can be seen, the Sleeper Pond Dam Removal (VT ID 142.01) Project area scores 36 on the Predictive Model, due to it being located within 90 m of Mud Creek (12), within 90 m of a wetland (12), and along a natural travel corridor (12). The soil in the project area is a mix of Lamoine silt loam and Colonel-Cabot complex, which consists of very deep, somewhat poorly drained soils formed in glaciolacustrine or glaciomarine deposits on coastal lowlands and river valleys.

### Site Visit

A field inspection of the project area was carried out on November 12, 2024 by Charles Knight, Principal Investigator of Crown Consulting Archaeology, LLC. Knight walked the entire project area, taking soil cores in all the access corridor locations. Three principal areas of the proposed project will be impacted outside of the soil removal area. These are the access corridors, one being across a small park next to Town Garage #2, off of VT Rte. 105, another along the edge of a residential yard on the southwest side of the Cross Road bridge crossing, and the final to access the dam, off the northwest side of Cross Road, just west of the bridge crossing (see Figure 4).

The proposed access road across the park next to Town Garage #2 will drop slightly to the reservoir's edge, crossing a swale (Figure 16). On the surface, the proposed access road off of VT Rte. 105 looks highly archaeologically sensitive, due to its location next to the Mud Creek channel. However, multiple soil cores throughout the area encountered impenetrable fill within 10 inches of the surface (Figures 17-19). This contrasted markedly with a soil core taken in the reedy reservoir edge, off of the mowed portion of the park, where deep sand deposits were encountered (Figure 20). The fact that fill was encountered throughout the proposed access road corridor is not entirely surprising, given the fact that much of the park was under water for most of its existence due to the eastern reach of the reservoir. As such, the park appears to have been heavily altered with material to fill-in the area that was typically underwater and create a gentler slope down to the water's edge from VT Rte. 105. The natural drop in elevation can be seen along an old driveway along the northern edge of the park parcel (Figures 21 & 22a). Additionally, at least one, but possibly two water lines cut through the park area west of the Town Garage #2 building, as depicted in the historic water system plans (see Figures 11 & 12). Finally, the eastern edge of the park area, where the historic blacksmith shop and northern portion of the Town garage building previously sat has been turned into street-side parking through a bump-out in the road (Figure 22b). As a result, this eastern access corridor alignment is not considered to be archaeologically sensitive.

A second access road is proposed for the west side of the reservoir, southeast of the Cross Road bridge crossing (see Figure 4). This access road will pass over the edge of a residential yard (Figure 23). A series of soil cores were taken along the edge of the pond within the limits of the proposed access road corridor, and all hit fill within 6-8 inches of the surface (Figures 24 & 25). This fill is likely representing the existing well house and suction pump lines that are depicted on the 1981 blueprints of the existing water system (see Figure 11). The access road will extend approximately 150 ft

southeast of Cross Road. Beyond the access road corridor, the landform slopes down gradually, then drops suddenly to the reservoir (Figure 26). This southern area is where the town well, and some of the suction pump lines exist. The area is not archaeologically sensitive.

The third access road corridor will access the actual dam removal, on the northwest corner of the Cross Road bridge crossing (see Figure 4). It will follow the end of the landform that extends northeast from the fire station, and consists of a small triangle of land (Figure 27). The area has been heavily disturbed, with erosion and slumping to the north into Mud Brook, while the actual access corridor consists of fill over bedrock (Figure 28). Considering the existing erosion, fill, and past disturbances from the fire station construction and previous vehicle garage, this area is not archaeologically sensitive.

#### Conclusions

The Missisquoi River Basin Association propose the Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont. Crown Consulting Archaeology, LLC., conducted an Archaeological Resources Assessment of the proposed project area and identified no areas of archaeological sensitivity within the proposed project's Area of Potential Effects. This includes the dam removal area and the three access corridors. Although two of the access corridors sit adjacent to areas that once contained historic structures, modern disturbances such as fires, episodes of land re-use that involved large amount of filling and grading, and existing water system construction has destroyed any subsurface remains of these structures. These historic disturbances have also disturbed the natural soils so much that no remains of pre-Contact Native American sites are expected in the project area either. The soil removal activities within Sleeper Pond will not impact the banks of the pond, and therefore they will not impact archaeologically sensitive areas. In addition, the actual dam removal will cross a point of land that consists of fill over bedrock that has been extensively disturbed in the 20<sup>th</sup> Century, and all access will occur on clean timbertrack mats. As a result, no portion of the proposed project will disturb intact soils or potentially buried archaeological sites and therefore, no additional archaeological study is recommended as part of the Section 106 permitting process.

Thank you for working with us on this project. Please let me know if you have any questions or comments.

Charles Knight, Ph.D. Principal Investigator

# Citations

Gilbertson, Eric. 1992 RE: Troy-Newport F034-2(10)S. AOT. Letter on file with the VDHP.

Wadhams, Emily

2002 Re: Proposed New Fire Station, Newport Center, VT. USDA. Letter dated April 9, 2002, on file with the VDHP.



Figure 1. Map showing the location of the proposed Sleeper Pond Dam Removal (VT ID 142.01), in relation to known archaeological sites and archaeological sensitivity factors, Newport Center, Orleans County, Vermont.



Figure 2. Engineering drawing of the overall site plan of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 3. Engineering drawing close-up of the dam removal portion of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 4. Engineering drawing of the entire APE of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 5. Engineering drawing showing the proposed beaver dam analogs and access points for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.

H.Larubee L.Peahody SPeabo Mistanson H.S.Pie Hill W. T. Jurkins oopers Shop lider IN Hancher SUT lifer (ran ter Ray A Marris () Sitti 1/11 Whip ere

Figure 6. Historic 1859 Wallings map showing the location of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.

R. Manus c. Baker ECH R JHW Erwin stone m GL.Ste ston Stor Spauldin Q.D.Per B.S.Ch Sec. RSSR STR 111 diller Jenkin J D. Percy Mins. The H pane G.L. slee EASTERN COUNTIES R.R. 1.11 er 21 6h

Figure 7. Historic 1878 Beer's atlas showing the location of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 8. Historic 1920 (a), and 1923 (b) USGS topographic maps showing structures along the west side of VT Rte. 105 in the location of the eastern access road of the Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 9. Historic 1953 USGS topographic map depicting several structures along the west side of VT Rte. 105 in the location of the eastern access road of the Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.





Figure 10. Historic aerial photographs from 1962 (a) and 1965 (b) depicting structures along the west side of VT Rte. 105 in the location of the eastern access road of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 11. 1981 blueprints showing the existing water system surrounding Sleeper Pond crossing areas of the proposed access corridors on either side of the pond, for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 12. 2018 water system map of the existing water lines cutting through the Sleeper Pond area and the APE of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 13. Newport Center lot map showing the location of the new fire station to the northwest of the Cross Road bridge crossing over Mud Creek, for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 14. A Lidar image showing the limits of the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont

# VERMONT DIVISION FOR HISTORIC PRESERVATION Environmental Predictive Model for Locating Pre-contact Archaeological Sites

ounty Orleans		Town Newport	
Staff Init.		Date November 8, 20	
Proximity	Value	Assigned Score	
30 22C	-4-2	Law and the second s	
0-90 m	12	12	
90- 180 m	6		
0-90 m	8		
90-180 m	4		
1000			
0-90 m	12		
90 –180 m	6		
0 – 90 m	8		
90 - 180 m	4		
0 00			
$0 - 90 \mathrm{m}$	8		
90 – 180 m	4		
0 - 90  m	8		
90 – 180 m	4		
	37		
	52		
	32		
	32		
in the second second			
0-90 m	12		
90 -180 m	6		
0.00 m	12		
90 -180 m	6		
90 -100 m	0		
	12		
0-90 m	12	12	
90 -180 m	6		
	32		
	12		
	12		
	12		
	Proximity           0-90 m           90-180 m           0-90 m           90-180 m	Proximity         Value           0-90 m         12           90-180 m         6           0-90 m         8           90-180 m         4           0-90 m         8           90-180 m         6           0-90 m         8           90-180 m         6           0-90 m         8           90-180 m         4           0-90 m         92           0-90 m         12           90-180 m         6           0-90 m         12           90-180 m         6           12         0-90 m           90-180 m         6           12         12           0-90 m         12           12         12           12         12           12         12	

32 32 12 8 4 32 32	12
32 12 8 4 32 32	12
12 8 4 32 32	12
12 8 4 32 32	12
8 4 32 32	
32	
32	
·	
32	
32	
32	
	-
- 32	
- 32	
	Total Score: 36
	-32 -32

April 8, 2015

Figure 15. Completed VDHP predictive model matrix of the APE for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.





Figure 16. Photos looking southwest along the access corridor in the park (a), and north across the western end of the access corridor (b), for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 17. Photos looking at a soil core taken in the eastern portion of the access corridor (a), and the location of the soil core (b), for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 18. Photos looking at a soil core taken in the middle of the access corridor (a), and the location of the soil core (b), for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 19. Photos looking at a soil core taken in the western portion of the access corridor (a), and the location of the soil core (b), for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 20. Photos looking northwest across the reedy area of the eastern bank of Sleeper Pond (a), and the soil core taking in this location (b), for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.





Figure 21. Photos looking southeast (a), and northwest (b) at the swales in the northern and western halves (respectively) of the access corridor park, for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.





Figure 22. Google Street View image looking south at the park and old driveway slope along its northern boundary (a), and south at the space for parking west of VT Rte. 105 (b), for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.





Figure 23. Photos looking south (a) and southeast (b) at the access road corridor to the southwest of the Cross Road bridge crossing, for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.





Figure 24. Photos looking north (a) and southeast (b) at soil core locations along the corridor of one of the access roads (a & b) for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 25. Photos looking northwest at soil core locations along the corridor of one of the access roads (a & b) for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.





Figure 26. Photos looking southeast (a & b) at the western banks of Sleeper Pond for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 27. Photos looking southwest at the embankment leading to the dam (a), and northeast at the remains of the dam (b), for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.



Figure 28. Photos looking northeast (a) and southwest (b) at the embankment on the northwest corner of the Cross Road bridge crossing for the proposed Sleeper Pond Dam Removal (VT ID 142.01), Newport Center, Orleans County, Vermont.

# Vermont Division for Historic Preservation Determination of Eligibility (DOE) Form

A "Determination of Eligibility" is a decision regarding whether a district, site, building, structure, or object meets the State or National Register Criteria for Evaluation, although the property is not formally listed in the State or National Register.

Please complete this form by clicking in the checkboxes and entering text in the grey fields.

# <u>SECTION I</u>

**Property Address:** Adj. to Cross Road, .08 mile southwest of VT Rte. 105, 44°57'0.54141"N, 72°18'29.33689"W, Newport Center, Orleans County, Vermont 05857

Property Name: Sleeper Pond Dam

# This DOE is for the:

- □ State Register of Historic Places
  - □ State project 22 VSA 14 review
  - □ Act 250 project Criterion 8 review
  - □ State Tax Credits
  - □ Barn Grant Application
  - □ Historic Preservation Grant Application
  - □ VDHP staff request
  - Other \_\_\_\_\_
- ☑ National Register of Historic Places
  - ☑ Federal project Section 106 review
  - □ Federal Tax Credits (RITC)
  - □ VDHP staff request
  - □ Other

# Who is making this request?

□ Division for Historic Preservation Staff: <u>Name</u>, <u>Title</u>

-or-

<u>Polly S. Allen</u>

<u>(Independent Consultant on behalf of Ellen Fox for Missisquoi River Basin Association (MBRA)</u> 802.586.2042, polly.s.allen@gmail.com, ellen@mrbavt.com May 2, 2025

# SECTION II

### **Eligibility Recommendation**

$\boxtimes$	Does <b>NOT</b> meet the Criteria for Evaluation and is NOT eligible for the State/National Register of Historic Places						
	Meets the Criteria for Evaluation and is eligible for the State/National Register of Historic Places						
Numbe Buildin	er of Resources: g Structure <u>1</u> Site Object						
Evalua <sup>.</sup>	ted under:       □       Criterion A: Event       □       Criterion C: Design/Construction         □       Criterion B: Person       □       Criterion D: Information Potential         Criteria Considerations:						
Integrity: $oxtimes$ Setting $oxtimes$ Location $\Box$ Design $oxtimes$ Materials $\Box$ Workmanship $oxtimes$ Feeling $oxtimes$ Association							
Period of Significance: <u>n/a</u>							
Level c	f Significance:  Local  State  National						
Justification for Eligibility Recommendation: See Attached Continuation Sheet							

# SECTION III

### **Required** Attachments:

- Survey or Inventory Form (VARI, cemetery, culvert, bridge, landscape, VAI)
- Recent photographs of the property showing exterior views of each elevation; overall views of the property and the surrounding context. If available, include copies of historic views as well.
   For a historic district, include streetscape views showing how the properties relate to each other.
- Map showing the location of the property in relation to streets, intersections, or widely recognized features. For a historic district, include an approximate boundary showing the extent of the district.

Please email this form and all required attachments to:

ACCD.projectreview@vermont.gov Questions? Call Elizabeth Peebles at (802) 505-1147

Section IV		*for completion by VDHP staff only			
Division for Historic Preserv	ation Determination o □Not Eligible	r Concurrence:			
Criteria: 🗆 A 🛛 B 🔤 C	D Criteria Consid	derations:			
Integrity: $\Box$ Setting $\Box$ Location $\Box$ Design $\Box$ Materials $\Box$ Workmanship $\Box$ Feeling $\Box$ Association					
Number of Resources: Building	Structure	Site Object			
Staff Comments:					
Requires Vermont Advisory ( Advisory Council Finding:	Council Review? 🗆 Yes ——	No Not Applicable Date: <u>mm/dd/yyyy</u>			
Recorded by: <u>Name, Title</u>		Date: mm/dd/yyyy			
Signature:					
### **CONTINUATION SHEET**

### **Justification for Eligibility Recommendation**

As detailed in the Historic Context presented in the accompanying Vermont Architectural Resource Inventory (VARI) Record, the Sleeper Pond Dam was developed in 1937 to provide the rural community of Newport Center with fire protection and ice supplies. The concrete dam was developed on Mud Creek in the center of the village at the location of an earlier mill-related timber crib dam, with the earlier dam removed as part of this dam's construction. As a common and small-scale infrastructural reflection of community development in Vermont, the 1937 dam does not appear to convey significance under the criteria of the NRHP. In addition, material alterations to the dam's original form somewhat undermine the ability of the resource to convey physical attributes from the development period, most notably with the removal and deterioration of operating gate infrastructure and ongoing sedimentation of the dam's associated water body, Sleeper Pond.

Under Criterion A, the development of the fire pond dam does not reflect significant trends, events, or social developments at the local, state, or national level. The development of fire protection infrastructure was a common mandate for the state's communities during the period and beyond, reflecting the need for rural fire departments to access key water supplies in the event of community fires. Similarly, the adaptation of a nineteenth-century mill pond was not noteworthy, and represented common strands of infrastructural adaptation that saw an array of mill ponds become fire and ice harvesting features as well hydroelectric-based infrastructure.

Under Criterion B, the dam is not associated with the significant activities of a noteworthy individual at the local, state, or national level. While the dam spans "Sleeper Pond," named for noteworthy early settler George L. Sleeper, the dam was built decades after Sleeper's death and does not reflect associations with his life or activities.

Under Criterion C, the small dam is not significant or noteworthy in its construction, design, or materials, and was developed decades after the introduction of reinforced concrete dam technology at a far larger and more complex scale across the county, state, and nation. In addition, the dam's contractor F.H. Sabourin is not a noteworthy engineer, architect, or industrial designer, with a common portfolio that is generally reflective of the commercial, residential, and infrastructural development of the period.

This record does not include formal evaluation under Criterion D, but does note that the information included in the accompanying VARI record demonstrates a robust archival record related to the development of the dam through the historic period.

In addition to a general lack of significance, as detailed above, the integrity of the Sleeper Pond Dam is generally fair, with the property's identity as a 1930s concrete water storage dam partially conveyed by the seven aspects of integrity recognized by the NRHP. The integrity of the property's location on Mud Creek as it meanders through Newport Town is intact. The property's community setting and water storage associations are generally in place, though the deterioration, vegetative and sediment overgrowth, and partial breaching of the dam and corresponding lowering of the pond level somewhat undermine these aspects of integrity. While the design and materials of the dam as a reinforced concrete buttress dam are generally intact, the removal of any original gate and stem operational

apparatus undermines aspects of the dam's basic operational design. This partial undermining of design and materials from the historic development period somewhat precludes the property's ability to convey both workmanship and feeling as a storage pond dam. As such, while generally indicative of water management development and evolution from the 1930s onward on Mud Creek, the Sleeper Pond Dam retains only fair integrity to convey associations to the development period.

STATE OF VERMONT	SURVEY NUMBER: No Previous Survey			
Division for Historic Preservation	(Assigned by VDHP)			
	Listed III State Register L			
VERMONT ARCHITECTURAL				
RESOURCE INVENTORY	Date.			
	PRESENT FORMAL NAME: Sleeper Pond Dam, Mud			
Individual Property Survey Form	Creek Dam			
	ORIGINAL FORMAL NAME: Sleeper Pond Dam, Mill			
	Pond Dam, Mud Creek Dam			
COUNTY: Orleans	PRESENT USE: Obsolete / partially breached dam			
10WN: Newport Town (Newport Center)	ORIGINAL USE: Ice Pond and Fire Suppression			
ADDRESS: Cross Road, .08 mile southwest of VI	ARCHITECT/ENGINEER: F.H. Sabourin			
COMMON NAME: Sleeper Pond Dam	BUILDER/CONTRACTOR: E.H. Sabourin			
PROPERTY TYPE: Dam	DATE BUILT: 1937			
OWNER: Newport Town				
ADDRESS: 102 Vance Hill Road, Newport Center, VT	05857			
ACCESSIBILITY TO PUBLIC:	PHYSICAL CONDITION OF STRUCTURE:			
Yes 🛛 No 🖾 Restricted 🛛	Good 🗌 🛛 Fair 🗌 Poor 🛛			
	STYLE: Reinforced Concrete Buttress Dam			
Structural System:				
1 Foundations Stone Drick Constant	o⊠ Concrete Block⊡			
1. <u>Foundation</u> . Stone Blick Concret				
2. Wall Structure				
a. Wood Frame. Post & Beam Print				
b. Load Bearing Masonry: Brick				
c. Metal: Iron $\Box$ Steel $\boxtimes$ d. Other:				
3. <u>Wall Cladding:</u> Clapboard □ Board & B	atten $\Box$ Wood Shingle $\Box$ Shiplap $\Box$			
Novelty ☐ Asbestos Shingle ☐ Aluminu	m Siding $\Box$ Asphalt Shingle $\Box$ Vinyl Siding $\Box$			
Brick Veneer□ Stone Veneer□ Other				
4. Roof Structure				
Truss: Wood ☐ Iron ☐ Steel ☐ Concre	te 🗌 Other:			
5. Roof Covering: Slate  Wood Shingle	] Asphalt Shingle∏ Sheet Metal∏			
Built Up Rolled Tile Standing S	eam∏ Other			
6 Engineering Structure: Reinforced Conc	rete Butress Dam			
7 Other:				
Annendages: Porches Towers Cupolas	☐ Dormers□ Chimneys□ Sheds□			
Elle Winge Boy Window Other:	Two wood outlet gates (non operable)			
	Two wood outlet gates (non-operable)			
Saw Looth U With Monitor U With Bello	$rast \sqcup With Parapet \sqcup With False Front \sqcup$			
Other:				
Number of Stories:				
Entrance Location:				
Number of Bays:				
Approximate Dimensions: Width: 60 feet, Heigh	t from stream bed: 12 feet.			

### ADDITIONAL ARCHITECTURAL OR STRUCTURAL DESCRIPTION:

The Sleeper Pond Dam is located in Newport Town (Newport Center), spanning Mud Creek (aka Dunn Brook, Mudd Creek) immediately downstream from its passage under Cross Road in the center of the village. The dam was constructed in 1937 to replace an earlier wood crib mill pond dam at the site and was developed to form an ice pond and provide town fire protection. The dam is of a buttressed reinforced concrete form and has an approximate length of 60 feet across the stream channel (Mud Creek) and a height of 12 feet from the stream bed. The dam ties directly into the framing bedrock on either side of the stream channel. The dam is in poor condition, with numerous evident areas of spalling concrete and areas of vegetative overgrowth covering the west side of the dam's crest. As designed, the dam appears to have been developed with a single spillway at the dam's east side, with two low level control outlets (LLO) punctuating the dam's face, one of an approximate 3' by 3' dimension and the other of a smaller 1' by 1' form. At present, the spillway has been partially breached, with an irregular form of spalling concrete across the spillway that causes steady overtopping of the dam. The LLO are non-operational, with no evident stems or operational infrastructure noted in field documentation. The two non-operational gates are of wood construction, with evident seepage at both openings. The downstream face of the dam is in similarly poor condition, with numerous areas of spalled concrete and evident areas of concrete patching over the original board-formed material. Two minor buttresses extend from the flat concrete face in the east-center of the dam. The buttresses also exhibit notable deterioration of the original concrete form. The downstream pool of the dam is narrow and of irregular bedrock, with a narrow rocky watercourse framing Mud Creek as it flows downstream to return to a flat watercourse framed by generally agricultural development. Please refer to Continuation Sheets for photographs of the property and its surrounding context.

RELATED RESOURCES ON THE PROPERTY: The dam spans Mud Creek approximately 35 feet downstream of Cross Road in the village of Newport Center and is located on an approximately 2.15-acre pond (Sleeper Pond). While the pond was originally developed as a mill pond in the nineteenth century, the current dam was placed by the Town of Newport in 1937 following the cessation of milling activities to provide town ice and fire protection functions.

HISTORICAL OVERVIEW: See **Continuation Sheets** for a detailed historic context.

REFERENCE CITATIONS: See **Continuation Sheets** for sources used in documentation.

SURROUNDIN	G ENVIF	RONMEN	T: Open 🗆 🛛 We	oodland 🛛	
Scattered Build	ings 🗆	Moderat	tely Built Up 🖂	Densely Built	Up 🗆
Residential 🖂	Comme	ercial 🗆	Agricultural 🖂	Industrial 🛛	Mixed Use $\Box$

Roadside Strip Development 
Other: Village Center development

RECORDED BY: Polly Seddon Allen, Senior Architectural Historian

ORGANIZATION: Independent Consultant on behalf of Missisquoi River Basin Association (MRBA)

DATE RECORDED: Field Documentation on April 17, 2025, research conducted through April 2025.

### ADDITIONAL ARCHITECTURAL DESCRIPTION (CONTINUATION)

### **Integrity Analysis**

The integrity of the Sleeper Pond Dam is generally fair, with the property's identity as a 1930s concrete water storage dam partially conveyed by the seven aspects of integrity recognized by the NRHP. The integrity of the property's *location* on Mud Creek as it meanders through Newport Town is intact. The property's community *setting* and water storage *associations* are generally in place, though the deterioration, vegetative overgrowth, and partial breaching of the dam and corresponding lowering of the pond level somewhat undermine these aspects of integrity. While the *design* and *materials* of the dam as a reinforced concrete buttress dam are generally intact, the removal of any original gate and stem operational apparatus undermines aspects of the dam's basic operational design. This partial undermining of *design* and *materials* from the historic development period somewhat precludes the property's ability to convey both *workmanship* and *feeling* as a storage pond dam. As such, while generally indicative of water management development and evolution from the 1930s onward on Mud Creek, the Sleeper Pond Dam retains only fair integrity to convey any potentially significant associations.

### HISTORICAL OVERVIEW

**New Concrete Dam Nearly Finished at Newport Center:** Dam will form pond to supply ice as well as fire protection for the community, replacing the wood structure on the mill pond here...

Orleans County Monitor, October 13, 19371

### **Contextual Overview**

The Sleeper Pond Dam was constructed by the Town of Newport in 1937 to provide the community with fire protection and ice supplies. The concrete dam was developed on Mud Creek in the center of the village of Newport Center at the location of an earlier mill-related timber crib dam, with the earlier dam removed as part of this dam's construction. At the time of the 1937 dam's development, Newport Center's nineteenth century timber and shingle mills had shuttered, leaving the nineteenth century mill pond, Sleeper Pond, as an obsolete industrial vestige that was repurposed for community functions as part of this infrastructural development. While the Town of Newport has continued to own and manage the Sleeper Pond Dam to the present, its functions as a community fire suppression feature have been supplanted by development of other fire protection infrastructure and its role as an ice storage feature became technologically obsolete through the twentieth century as refrigeration supplanted ice harvesting. At present, the concrete buttress form of the dam exhibits notable deterioration, and the associated pond has been infilled by successive years of sedimentation of the stream channel. The dam is denoted as a "Low Hazard Potential Dam" by the Vermont Department of Environmental Conservation (DEC), who has recommended continued monitoring of the dam's physical deterioration. Based upon the dam's functional obsolescence and deteriorating form, the Town of Newport is proposing to remove the dam and restore the Mud Creek stream channel through the village of Newport Center, improving both water quality and mitigating flood risk. As an infrastructural representative of Vermont's evolving relationship to its waterways through the nineteenth and twentieth centuries

<sup>&</sup>lt;sup>1</sup> "New Concrete Dam Nearly Finished at Newport Center," Orleans County Monitor, October 13, 1937.

and beyond, the Sleeper Pond Dam is indicative of the state's intimate and complex functional and developmental relationship to water over time.<sup>2</sup>

### **Community Development of Newport Center**

Located in the northernmost lands of Vermont and bounded by Canada on the north, Lake Memphremagog, Coventry, and Irasburg on the east, Troy on the west, and Irasburg and Lowell on the south, the Town of Newport developed in a diffuse pattern, with largely agricultural settlement predicated around the town's multiple water bodies and anchored around several compact villages. While Newport's earliest and most notable development occurred on the southern shores of Lake Memphremagog, forming the present City of Newport, by the mid-nineteenth century settlement had expanded to include substantive agricultural growth in the town's hinterlands as well as several small village settlements.<sup>3</sup>

The village of Newport Center emerged during this early settlement period as one of the town's foremost villages, located approximately eight miles west of Lake Memphremagog and situated in the center of the town, serving as a cross-roads to the agricultural hinterlands of Newport as well as the towns of Troy, Jay, Westfield, and Lowell. By 1859, Newport Center was defined by a scattered assemblage of agricultural development as well as a sawmill, located on the west bank of Mud Creek at the general location of the dam documented as part of this recordation (see **Figure 1**). By 1878, this rural outpost had surged in development, with notable community growth including extensive residential development, construction of additional mill infrastructure, commercial and institutional development, and rail connectivity, with the Southeastern Counties Railroad (aka Missisquoi and Clyde Rivers Railroad), established in 1873, extending around the southern periphery of the village (see **Figure 2**).

The notable expansion of Newport Center during the mid-nineteenth century period reflected larger demographic growth across the Town of Newport, with the population rising from 748 in 1850 to 2500 in 1880. The growth also reflected the boosterism of notable early settler George Little Sleeper, born in Littleton, New Hampshire in 1819. Beginning circa 1860, Sleeper initiated a concerted period of development in Newport Center, laying out streets, selling town lots, and establishing the village's dominant store, millinery, post office, and hotel, located in the center of the village just east of the current dam site (**Figure 5**). Sleeper also served as a Commissioner of the Missisquoi Railroad, which ultimately came to serve as a vital commercial, agricultural, and industrial artery for the town.<sup>4</sup>

Within this context of community development in Newport Center, the waters of Mud Creek assumed a central functional and economic role. By the 1850s, if not earlier, a sawmill stood on the west bank of the creek as it flowed through town, powered by flows from a wood crib dam. As documented in period accounts, this original mill, owned by Bartlett & Jenkins, burned in 1867. By the late 1870s, the original sawmill site was developed with a shingle mill and an additional sawmill stood on the east bank of the stream slightly downstream, both powered by the dam spanning the creek (see **Figure 2**). As detailed on the Beers Map of 1878, both the sawmill and shingle mill appear to have been owned by W.H. Willey, who, according to period accounts, also owned "thirty acres of timber land just south of the village," providing ample timber for processing. By the 1880s, the shingle mill appears to have been owned by L.D. Meacham, with "a slight blaze of the mill," reported in 1886. By the twentieth century, local periodicals contain scant reference to the mills of Newport Center, and research indicates that the processing facilities, like many other small-scale water-powered mills across the state, succumbed to changing market and technological conditions,

<sup>&</sup>lt;sup>2</sup> SLR, "Technical Memorandum: Sleeper Pond Dam Removal Design Memorandum," November 8, 2024, provided by Missisquoi River Basin Association.

<sup>&</sup>lt;sup>3</sup> Henry Francis Walling. *Map of the Counties of Orleans, Lamoille, and Essex Vermont,* 1859.

<sup>&</sup>lt;sup>4</sup> "Missisquoi Railroad," Vermont Daily Transcript, February 22, 1869

shuttering through the period. While George Sleeper died in 1904, his legacy continued to reverberate through Newport Center, with the obsolete mill pond continuing to be known as Sleeper Pond through successive generations.<sup>5</sup>

### 1930s Development of the Sleeper Pond Dam

By 1937, the mills that had undergirded development of Sleeper Pond were shuttered, with aerial imagery from the mid-twentieth century indicating that all vestige mill remnants were cleared from the site. The original timber crib dam remained in place, however, with the "old mill pond," an established physical facet of Newport Center's community dimensions. Likely to address deterioration of this original structure, in October 1937, the Town commissioned replacement of the dam, with Newport-contractor F.H. Sabourin removing the existing dam and rebuilding the concrete structure in a reported "5 ½ days" using "360 bags or 18 tons of concrete." Sabourin was locally active across a range of development projects and real estate transactions from the 1920s to the 1950s, with commissions including residential, commercial, and small-scale industrial development centered around Newport.<sup>6</sup>

While the new dam was not developed to serve industrial purposes, it was designed for specific community needs, foremost to allow Sleeper Pond to be used as a fire protection source, and secondarily as an ice harvesting source. The dam's development was a reflection of a common community need during the period and beyond, with Vermont's towns and villages scarred by successive catastrophic fires of the state's primarily wood-frame building stock, necessitating secure water supplies. Within this overarching context, the design of the dam was common and modest, reflecting standard best practices in small-scale dam design. While the buttressed concrete form of the dam stood in contrast to the earlier era's timber crib form, it followed buttressed concrete dam principles that had been in place from the earliest years of the twentieth century, with reinforced buttressed concrete an economical and standard adaptation for smallscale dam development that built upon centuries of buttressed masonry development. The historic record reveals little reference to Sleeper Pond or its dam through the twentieth century, and it appears to have been generally maintained as a fire pond for much of the historic period, with the Newport Center fire department ultimately built in the late twentieth century adjacent to the sitestanding on the general location of the earlier nineteenth century shingle mill. Over the century, sedimentation in-filled areas of the pond's extent, with corresponding deterioration of the dam itself undermining its storage functions. By the close of the historic period and to the present, the dam and its associated storage pond again ebbed toward functional obsolescence, reflecting successive waves of infrastructural development in the rural community. Within this context, the current proposed removal project reflects yet another progression, with the effort intended to restore the flow of Mud Creek through the center of the small village of Newport Center.<sup>7</sup>

<sup>&</sup>lt;sup>5</sup> "Newport Center," Vermont Chronicle, July 27, 1867; "Newport Center," Argus and Patriot, April 7, 1886; "Bankrupt Sale at Auction," Express and Standard, June 6, 1876; "Recent Deaths," St. Albans Daily Messenger, October 6, 1904.

<sup>&</sup>lt;sup>6</sup> "New Apartments Now Finished," *Express and Standard*, March 18, 1927; "New Modern Ford Plant," *Express and Standard*, January 13, 1928; "Fire Station Nearly Finished," *Express and Standard*, December 11, 1925.

<sup>&</sup>lt;sup>7</sup> Donald C. Jackson. *Building the Ultimate Dam: John Eastwood and the Control of Water in the West* (Norman, OK: University of Oklahoma Press, 2005), 27-34; "New Concrete Dam Nearly Finished at Newport Center," *Orleans County Monitor*, October 13, 1937.

### **REFERENCE CITATIONS (CONTINUED)**

### **Books and Technical Reports**

Hemenway, Abby Maria. *The Vermont Historical Gazetteer: Volume III.* Claremont, NH: The Claremont Manufacturing Company, 1877.

Dumas, Sarah A. *Orleans County*. Mount Pleasant, South Carolina: Old Stone House Museum/Arcadia Publishing, 2011.

Jackson, Donald C. *Building the Ultimate Dam: John Eastwood and the Control of Water in the West*. Norman, Oklahoma: University of Oklahoma Press, 2005.

### **Periodicals**

Argus and Patriot Express and Standard Orleans County Monitor St. Albans Daily Messenger Vermont Chronicle

### <u>Maps</u>

F.W. Beers, Atlas of the Counties of Lamoille and Orleans, Vermont, 1878.

Henry Francis Walling. Map of the Counties of Orleans, Lamoille, and Essex Vermont, 1859.

### **Records and Data Repositories**

Goodrich Memorial Library Local History Room

Orleans County Historical Society (Old Stone House Museum)

Vermont Division for Historic Preservation Online Resource Center

Vermont History Explorer, Orleans County Town United States Census Records

### ADDITIONAL DOCUMENTATION

. UL Tancoc (rat A. Roger Harris O Surve. ble here

Figure 1: H.F. Walling, Map of the Counties of Orleans, Lamoille, and Essex Vermont, 1859.

Red circle indicating location of current 1937 dam, developed to replace a nineteenth century timber crib dam at site. Note the location of the sawmill adjacent to dam site, powered by wood crib dam that was removed with this new construction in 1937.



Figure 2: F.W. Beers, Atlas of the Counties of Lamoille and Orleans, Vermont, 1878.

Note that the mill pond is shown in greater detail than Figure 1 and that it is now developed with a shingle-mill directly adjacent to the present dam site and that an additional sawmill is located slightly downstream. Also note the substantial growth of Newport Town from the earlier map, with an expanded residential grid and multiple stores, hotel, post office, and railroad alignment. This growth was largely driven by settler George Little Sleeper, who operated a store, hotel, and post office adjacent to the site and was a notable town promoter through the period. The name Sleeper Pond is derived from this early settlement.



**Figure 3:** Looking east across Sleeper Pond toward the center of Newport Town (Newport Center). Note railroad in foreground. Dam location not visible in this photograph but is at north (left) end. (*Orleans County Historical Society*)



Figure 4: Express and Standard, April 21, 1874

Advertisement for shingle mill developed immediately adjacent to site of current dam, then developed with a timber crib dam, removed with construction of current dam.



Figure 5: Express and Standard, July 14, 1874

In the mid-nineteenth century, George Little Sleeper emerged as the foremost booster of Newport Center, selling lots, laying out streets, and operating the largest commercial concern in the village, here termed, "The People's Cheap Store."

# New Concrete Dam N e a r l y Finished At Newport Center

Dam Will Form Pond To Supply Ice As Well As Fire Protection For Community

NEWPORT CENTER, Oct. 7, (Special)—The work of constructing a reinforced concrete and steel dam to replace the wood structure on the mill pond here is nearing completion. Pouring of cement began Wednesday, Sept. 29, and was completed October 5th occupying only five days and a half of time. The dam is 50 feet in length on top and 12 feet high, four feet thick at the bottom and 20 inches at the top.

In the construction 360 bags, or 18 tons of cement were used.

The dam is made more substantial and secure against high water by being tied into solid ledge at the ends.

The pond is used to supply the town with ice and on several occasions has supplied the Newport pumping engine with water for fire fighting.

F. H. Sabourin, Newport, was the contractor for the building of the dam.

Figure 6: Orleans County Monitor, October 13, 1937

Newspaper account detailing development of subject dam, developed for fire suppression and ice pond purposes.



**Figure 7:** Aerial imagery of Sleeper Pond and site of subject dam, in red, 1962. (Vermont Center for Geographic Information, VCGI)



**Figure 8:** Aerial imagery of Sleeper Pond and site of subject dam, in red, 2018. Note reduced expanse of Sleeper Pond, indicative of partial dam breach that has limited capacity and continued sedimentation.

(Vermont Center for Geographic Information, VCGI)

### PHOTOGRAPHS



**Photograph 1:** Upstream of Sleeper Pond Dam, facing northwest toward dam face. Note vegetative growth encroaching across west side of the dam crest. Note modern retaining wall on east side downstream of dam, not a functional or operational element of the dam.



Photograph 2: Downstream of dam, looking east across dam toward overtopped spillway.



Photograph 3: Looking east across dam, note concrete buttresses on downstream face of dam.



Photograph 4: Looking across dam. Two non-operable LLO in near (west) area of dam's downstream face.



Photograph 5: Detail of non-operating dam LLO.



Photograph 6: Looking downstream from dam pool. Note framing bedrock and mature tree growth.



Photograph 7: Detail of buttress on bedrock (one of two) as well as areas of patched concrete on dam face.



**Photograph 8:** Looking upstream at Sleeper Pond from Cross Road, immediately upstream from dam. The pond exhibits notable vegetative encroachment and sedimentation that has shrunk the water body's expanse.







### Natural Resources Atlas Vermont Agency of Natural Resources

vermont.gov

VERM ONT



January 5, 2023

**Karina Dailey** Vermont Natural Resources Council **11 Baldwin Street** Montpelier, VT 05602

Dear Lindsey Wight, Karina Dailey, Chris and Betty Barret, and Gail Demers,

We, the Selectboard of the Town of Newport (Newport Center,) support your efforts to proceed with a final design plan and report, for the possible removal of Sleeper Pond Dam in Newport Center.

Given the state of disrepair at the dam, some action will be required moving forward. We want to mitigate Town liability of any potential hazard and ensure public safety. Other benefits of dam removal, while they are not priorities for us, are welcome as part of this design. We emphasize that the process must be collaborative and community members will participate in the design process to reach agreement about the plan, and that this project will not create expense for the Town of Newport.

Sincerely,

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selin

aterman

	Preliminary Design
Basic Eligibility	Yes
Applicant Name	Lauren Weston
Applicant Organization <b>n</b>	Franklin County NRCD
Applicant Email	lauren@franklincountynrcd.org
Applicant Phone	+1 (802) 582-3133
WPD ID	12909
Description of Project	West Hill Brook - Strategic Wood Additions Preliminary Design
Description of Project	
Project Latitude	44.81126
Project Longitude	-72.65488
Project Phase	Preliminary Design
Annual P reduction KG G	4.81
Any one time P reduction KG	2.73
Total Cost of Proposed	6904.00
Phase	
Amount of Funding	\$6,904.00
Requested (Proposed	
Phase)	
Non DEC Funding as part	\$0.00
of Total Project Costs (a	
Total Project Costs (All	55000-75000
Phases)	
	10
Estimated Annual O&M	2 people days of O&M across the project's design life (\$1600 for 10 years, so \$160
cost total	per year)
Conformance with	10
Tactical Basin Plan TBP	
Number of Co-benefit	2
Areas	
DEC Screening Form	Yes
Uploaded	
Map of Project Area	Yes
Uploaded	
bet	Yes
Project Schedule	Yes
Uploaded	
Landowner Support	Yes
uploaded	
Phosphorus Calculator	Yes
Tool uploaded	
-	05/21/25 9:30 AM
	No
view	Yes

### **Budget Table**

Personnel - \$1400 (20 hours at \$70/hr)

Mileage - \$224 (using \$0.7/mi)

Contractor - \$5280 (Estimate from Redstart with 10% contingency)

Cultural Resources Review not expected based on previous similar projects

Total:

\$6904



Summary of SWA Scope: 61 strategic wood installs to be done across 1.47 miles of stream. Current scope of work will reengage 1.2 acres of floodplain

#### Assessment of Floodplain Reconnection Potential:

Two areas of enormous potential for floodplain reconnection through SWA. Both have powerful streams reaching low-gradient areas, with small tributaries coming in from the sides, with moderate incision and some amount of sinuosity and anastomosis present. Forest cover is mature northern hardwoods here, distinct from other areas at similar elevation that are dominated by speckled alder and other wet-loving shrubs.

Despite some steepness and areas of challenging access and operability, lots of potential floodplain reconnection can be found throughout the stream network at higher elevations. More precise estimates of floodplain area will occur during Final Design.

# Legend

- Town Road
- 50' Contour Line
- Town Line
- Parcel Boundary
- **WT** Subwatershed Boundaries HUC12
- Proposed Formula Grant Streams
- Proposed Formula Grant Floodplain

Coordinate System: NAD 1983 StatePlane Vermont FIPS 4400 This map was created from the Town tax maps, handheld GPS points, and on the ground observations. \*\*\*THIS IS NOT A SURVEY\*\*\*



0 537.5 1,075

2,150 Feet

Map Created By: Redstart DATE: 5/2025

West Hill Brook Trib 1 💐

West Hill Brook S2

Outlet Trout River

West Hill Brook S1





## West Hill Brook Strategic Wood Additions – Preliminary Design Project Schedule

Deliverable	Anticipated Completion Date
Preliminary documentation of stream	End of October 2025
incisions and opportunities for floodplain	
engagement	
DEC programmatic staff comments on design	Early November 2025
VDHP Project Review Forms Submitted	Early November 2025
Preliminary Design Report	Early November 2025
Media Announcement	Early November 2025
Final Performance Report or ANR Online	Early November 2025
Clean Water Project - Project Closeout Form	
(once available)	
Batch Import File or ANR Online Clean Water	Early November 2025
Project - New Project Form (once available)	

Activity	Person Days
West Hill Brook field work to measure	
streams (1.5 miles)	3
Data review and processing	2
VDHP Review and Permitting	0.5
Meetings for implementation, Landowner	
correspondence for site access	
agreements	0.5
Total:	6 pople days
	60 hours

# Strategic Wood Addition on Perennial Streams

P	Please consult SWA Crediting Guidance	Calculations completed through the use of this tool should <b>or</b> benefit of an SWA project include first estimating the acres o summing the two credit types. Final design and as-built proje designs row information can be completed at the reach level, suitable for SWA or eligible for phosphorus reduction calculat	Ily be applied in perennial stream settings. f enhanced floodplain connection and anticpa ct phase calculations should be completed for with total floodplain acreage and representa ions, see the linked SWA crediting guidance (	Calculations for estimating phosphrous redu ted chnage in incision ratio, then multiplyin r each distinct floodplain pocket as a unique tive bankfull and floodplain height informati left) for more information.	uctions associated with SWA on intermit g by watershed-specific FFI metrics for s row below, and these rows can be sum on summarized within continuous reach	ttent streams are not currently available. Th separate floodplain storage and stream stab nmed to a project total using the summary ta nes with similar geomorphic characteristics (	e steps for estimating the phosphorus reductic ility credits per reconnected acre, and lastly ible with green headers (right). For preliminary e.g., width, slope, bed material). Not all sites	on /are calculate project total here	Project Identifier	Project Total Reconnected Floodplain Acres 1.18	Annual Stream Stabilit P Reduction (kg/yr) 62.02	ty Annual Storage P Reduction (kg/yr) 80 2.7	Year 1 Additional Storag P reduction (kg) 28 2.7	Estimated Project e Total Annual P Reduction (kg/yr) 28 4.808
To be ne or po ide pro	o add a new project calculation, enter new a project identifier in the row directly elow the last row of data. The preset functions will automatically populate in the ew row. If calculating for more than one floodplain pocket (final/as-built designs) r stream reach (preliminary design) within a single project, use one row for each ocket and use a single project identifier for all rows, then enter the same project dentifier in cell J5 to calculate the estimated phosphorus reduction for the full roject.	To determine HUC12 - visit the ANR Atlas (click here), turn on 'ANR Basemap Data', 'Watershed Boundary Dataset (WBD)', and 'Subwatershed (HUC12)' layers, enter the project lat/lon the search bar, and click on the search result to zoom to the project location. HUC12 name and number will display in gree outlined text.	<ul> <li>Desktop-based or field-based floodplain acreage estimate, restricting extent of estimated floodplain to the river corridor as described in the SWA Crediting Guidance (Step 1)</li> </ul>	Floodplain storage credit can include reconnected floodplain area outside of the mapped river corridor, if applicable. This area is credited at 50%.	See SWA Crediting Guidance	See SWA Crediting Guidance	Calculated based on bankfull height a floodplain height	Potential Achievable IR assuming 0.5ft aggradation in channel behind structure nd With additional data this 0.5ft assumpt may be subject to change in future iterations of this guidance. See SWA Crediting Guidance for more informatio	on Credit multiplier is determined based on HUC12 project location 1.	Universal storage credit for 'Moderate' to d 'High' vertical reconnection, used for all projects and taken from the 2023 FFI Manual Table 5-2 Page 53	Stream stability credit is dependent on achieving an adequate change in incision rat which is not possible in all contexts. See SWA crediting guidance for more information.	tio,	Additional storage in year one is credited towards the project but n recommended for use in assessing cost effectiveness	ot 3
In	nput*	Dropdown*	Input Value* Estimated Reconnected	Input Value* Estimated Reconnecte	Input Value*	Input Value*	Output value	Output value	Output value	Output value	Output value	Output value	Output value	Output value
Ρ	Project Identifier	Project Location HUC12	Floodplain Area within the River Corridor (acres)	Floodplain Area outside the River Corridor (acres)	Estimated Bankfull Height (	(ft) Estimated Floodplain Heigh	t (ft) Existing Incision Ratio	Proposed Post- Implementation Incision Ra	Stability Credit Multiplier io (kg/acre/year)	Storage Credit Multiplier (kg/acre/yr)	Annual Stream Stabilit P Reduction (kg/yr)	ty Annual Storage P Reduction (kg/yr)	Year 1 Additional Storag P reduction (kg)	e Estimated Annual P Reduction (kg/yr)
re -> T	hirty Acre Woodland	043001070302 - Outlet Trout River	0.500		1.5	500	2.000 1.3	300 1.	000 1.75	4 2.30	0 0.8	77 1.1	50 1.1	50 2.027
T	hirty Acre Woodland	043001070302 - Outlet Trout River	0.212		1.5	500 2	2.000 1.3	300 1.	000 1.75	4 2.30	0 0.3	72 0.48	38 0.4	88 0.859
T	hirty Acre Woodland	043001070302 - Outlet Trout River	0.362		1.5	500 2	2.000 1.3	300 1.	000 1.75	4 2.30	0 0.63	35 0.83	33 0.8	33 1.468
T	hirty Acre Woodland	043001070302 - Outlet Trout River	0.112		1.5	500 2	2.000 1.3	300 1.	000 1.75	4 2.30	0 0.1	96 0.2	58 0.2	58 0.454

Cost Effectiveness Calculator for Form	ula Grant Project Prioritization		Notes					
Cost effectiveness of a project with a design life 15 years or greater: Cost effectiveness (\$/kg/yr) = total capital project cost (dollars) for design and construction / annual average phosphorus load reduction (kg/yr)			The calculation of cost effectiveness used in this tool is intended to be used to inform project prioritization for projects proposed to be funded under Formula Grants. The cost effectiveness calculation in this tool considers the project lifespan in the context of the 15-year Formula Grant implementation timeframe and utilizes the cost effectiveness formula presented in Chapter 6 of Act 76 Guidance. The cost effectiveness equation used in this tool is subject to revision following conclusion of the public notice period for Chapter 6 of the Act 76 Guidance Document. Cost effectiveness metrics presented elsewhere, such as in the Vermont Clean Water Initiative Performance Report, may use a different equation to calculate cost effectiveness.					
Cost effectiveness for a project with less than 15-year design Cost effectiveness (\$/kg/yr) = (15 years/design life years)*(To	n life: otal Project Cost \$) /Average annual P load reduction		For more information on Act 76 and Gui	idance, please visit https://dec.vermont.gov/wa	ter-investment/statues-rules-policies/act-76			
Enter the project ID exactly entered in the phosphorus calculator tak to autofill calculated estimated P load reduction.	3		It is recommended that cost effectiveness is calculated with and without inclusion of any anticipated match or leveraged funds, if applicable.	<i>Optional</i> if different than total project costs. Consider Chapter 6 Guidance on co-funded projects and proportional credit for co-funde that are reporting partners.	Value will autofill based on project ID. If project type is a stormwater treatment practice, calculated estimated P load rs reduction should be copied and pasted from the STP calculator output.	m		
Input	Input	Output	Input	Input	Input	Output Value	Output Value	
Project ID	Project Type	Estimated Project Type Design Life	Total Estimated Project Cost (design and construction)	Estimated Project Cost to be Covered by Formula Grant Funds (design and construction)	Calculated Estimated P Load Reduction (kg/yr)	Total Project Estimated Cost Effectiveness (\$/kg/yr)	Formula Grant Estimated Cost Effectiveness (\$/kg/yr)	
Thirty Acre Woodland	Strategic Wood Addtion		10 \$48,000.00	\$48,000.0	0 4.8	1 \$14,974.13	3 \$14,974.13	



## APPENDIX A. CLEAN WATER INITIATIVE PROGRAM - PROJECT ELIGIBILITY SCREENING FORM

This fillable PDF form is designed to assist with project review by systematically walking through all eligibility criteria. It should be completed for all projects seeking funding for 30% + design or implementation work. It may be applied to projects seeking funding for assessment or development if helpful for determining their alignment with eligibility criteria 2, 3, 6, and 8.

## Step 1: Conduct Eligibility Criteria #1 Screening: Project Purpose

Table 1A: Project Purpose	
From the drop-down list to the right, please select which of the four objectives of Vermont's Surface Water Management Strategy this project addresses. If multiple, please list below:	

# **Step 2:** Conduct Eligibility Criteria #2 Screening: Project Types and Standards

Table 2A: Project Types and Standards		
Please select the most representative project type from the drop-down list to the right. <sup>1,2</sup> If multiple BMPs are included in the project, please list below:		
Is the project type an eligible project type for the funding program you are applying to as listed in column B of the <u>CWIP Project Types Table</u> ? (Answer must be YES to proceed)	Yes	No
Does the project meet the project type definitions and minimum standards as provided in column C of the <u>CWIP Project Types Table</u> ?	Yes	No
Will the project result in the standard performance measures, milestones, and deliverables as defined by project type in columns D-F of the <u>CWIP</u> <u>Project Types Table</u> ? (Answer must be YES to proceed)	Yes	No
Is the project listed as an ineligible project or activity in the <u>CWIP Funding</u> <u>Policy</u> ? If Yes, please explain below how project meets the allowable exceptions within the CWIP Funding Policy.	Yes	No
(Answer must be NO to proceed, unless reasonable justification is provided above)		

# **Step 3:** Conduct Eligibility Criteria #3 Screening: Watershed Projects Database

Verify project has been recorded in the <u>Watershed Project Database</u> (WPD). Each project must have a Watershed Project Database number specific to the proposed project phase (for example,

<sup>&</sup>lt;sup>1</sup> Note that Road/Stormwater Gully project-types must not otherwise be considered intermittent or perennial streams by the DEC Rivers Program and therefore project proponent must show documentation of this determination in order to select this project type.

<sup>&</sup>lt;sup>2</sup> One project may include multiple best management practices (BMPs) that cross "project types." For example, a single project may include both stormwater and lake shoreland BMPs. Proponents should use their best judgement in selecting the most representative project type for the purposes of eligibility screening and reporting.

a final design will have a different WPD-ID from a preliminary design even if for the same project). If the project, or the specific phase, is not yet in the Watershed Project Database, follow directions provided in the CWIP Funding Policy to secure a WPD-ID. Please see <u>CWIP</u> Funding Policy for more information on the WPD-ID.

Table 3A. WPD-ID	
Watershed Project Database ID number assigned	
Watershed Project Database Project Name	

### Step 4: Conduct Eligibility Criteria #4 Screening: Natural Resource Impacts<sup>3</sup>

Agency of Natural Resources (ANR) permit screening for natural resource impacts includes 1) an initial desktop review to identify which ANR permitting programs should be contacted, 2) a review by the relevant ANR permitting staff, and 3) a response summary from the project proponent addressing any permitting staff concerns. <sup>4</sup>

- 1) Table 4. Natural Resource Impacts facilitates a high-level desktop review of the most likely ANR permits to apply to clean water projects. Project proponents should answer all the questions to identify likely permit needs. <sup>5</sup> Please note that "project site" may include both the active restoration location as well as any additional impact footprint related to staging, site access, or storage of waste or disposed materials.
- **2)** If responses to the **Table 4**. **Natural Resource Impacts** desktop review trigger a permitting staff consultation, **Table 4** provides appropriate contact information.
  - a. Proponents should send the identified permitting staff the following:
    - i. The watersheds project database identification number (WPD-ID) (if available),
    - ii. Project location (GPS coordinates)
    - iii. Summary of proposed scope of work, and
    - iv. Any other relevant information they request that will be utilized in their review.
  - b. <u>Proponents should clarify they are seeking permitting staff input on potential</u> <u>permitting needs, permit-ability of proposed scope of work, and other design</u> <u>considerations but they are NOT seeking a formal permit determination.</u>
  - c. Project proponents must attempt to communicate with the permitting staff and provide them with at least thirty days to review the project and provide a

<sup>&</sup>lt;sup>3</sup> Easements and Riparian Buffer Plantings are excluded from this eligibility requirement/step.

<sup>&</sup>lt;sup>4</sup> In cases where this screening may have already occurred in a prior project phase, project proponents may supply attachments or links to relevant permit needs assessment documents in place of completing Table 4.

<sup>&</sup>lt;sup>5</sup> Entities selected for funding are expected to perform due diligence to ensure all applicable permits (including non-ANR state, local, and federal permits) are discovered and secured prior to implementation. The <u>ANR Permit</u>

<sup>&</sup>lt;u>Navigator</u> and an Environmental Compliance Division Community Assistance Specialist can help confirm ANR permitting needs for any projects once selected for funding.

response. Project proponents are encouraged to perform this screening during a project development phase as opposed to during a project solicitation round to allow for more time for feedback. Permitting feedback may be up to one year old.

- **3)** Proponents should summarize permitting staff feedback and how the proposed scope of work will address this at the bottom of **Table 4**. Specifically, please include:
  - a. Which permits or permit amendment are needed or might be needed?<sup>6</sup>
  - b. What type might be needed? (e.g., a general or individual permit<sup>7</sup>)?
  - c. What concerns were voiced by permitting staff?
  - d. How will the proposed scope of work address these concerns?8

Table 4A: Natural Resource Impacts						
I. Act 250 Permits						
1. Have any Act 250 (Vermont's Land Use and Development Control Law) Permits been issued in the project site's parcel location? <sup>9</sup>	Yes	No				
If yes, please provide the permit number and list any water resource	e issues or natural	resource issues found <sup>10</sup> :				
PermitNumber:						
Resourcelssues:						
If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the a 250 consultation.	ippropriate regulate	ory contact for an Act				
Regulatory Point of Contact Name/Position:						
II. Lake and Shoreland						
1. Is the project site located within 250 feet of the mean water	Yes	No				

<sup>9</sup> An Act 250 Permit is required for certain categories of development, such as subdivisions of 10 lots or more, commercial projects on more than one acre or ten acres (depending on whether the town has permanent zoning and subdivision regulations), and any development above the elevation of 2,500 feet. The <u>ANR Atlas Clean Water</u> <u>Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located on an Act 250 parcel. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>&</sup>lt;sup>6</sup> Occasionally permit staff may indicate they need a field visit or to see more completed designs prior to making a permit need determination.

<sup>&</sup>lt;sup>7</sup> Design phase projects that require an individual wetlands permit must have the permit in hand at the close of the final design phase. Implementation phase projects must have the individual permit in hand to be eligible for funding.

<sup>&</sup>lt;sup>8</sup> Examples could include planned design changes or inviting permitting staff to stakeholder meetings.

<sup>&</sup>lt;sup>10</sup>Note that Act 250 permit amendments may require more extensive review of project impacts to natural resources including wildlife habitat, significant natural communities, and riparian zones. Please consult with the Act 250 District Coordinator regarding the nature and scope of that review and what bearing it may have on your project design.

level (shoreline) of a lake or pond? 11				
If <i>yes</i> , you might need either a Shoreland Protection Act Permit or a Lake Encroachment Permit. Use the <u>Water</u> <u>Quality Project Screening Tool</u> to find the Lakes and Ponds Program contact for your project's region.				
Regulatory Point of Contact Name/Position:				
III. Rivers, River Corridors, and Flood Hazard Areas				
<b>1.</b> Is there any portion of the project site located within 100' of a river corridor and/or mapped Federal Emergency Management Agency (FEMA) flood hazard area <sup>12</sup> ? (e.g. a stormwater pond's pipe draining into a river corridor area)? Any permanent			Yes	No
excavation/filling or construction within a flood hazard area or river corridor may trigger regulatory requirements through municipal bylaws or through state authorities.				
If <i>yes</i> , you will need to speak with a <u>Floodplain Manager</u> . Use the <u>Water Quality Project Screening Tool</u> to find the Floodplain Manager for your project's region.				
Regulatory Point of Contact Name/Position:				
<b>2.</b> Is any portion of the project site within a perennial river or stream	channel?	Yes		No
If <i>yes</i> , you will need to speak with a <u>Stream Alteration Engineer</u> . Use the <u>Water Quality Project Screening Tool</u> to find the Stream Alteration Engineer for your project's region.				
Regulatory Point of Contact Name/Position:				
IV. Wetland				

<sup>&</sup>lt;sup>11</sup> The <u>ANR Atlas Clean Water Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Lakeshore permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>&</sup>lt;sup>12</sup> FEMA mapped Flood Hazard Areas are not available statewide on the ANR Natural Resources Atlas. For projects located in Grand Isle, Franklin, Lamoille, Addison, Essex, Orleans, Caledonia, and Orange Counties, maps are available via the FEMA Flood Map Service Center: <u>https://msc.fema.gov/portal/home</u>. ANR Floodplain Managers are available to provide technical assistance if needed.

<sup>&</sup>lt;sup>13</sup> Stream Alteration Permits regulate all activities that take place within perennial river and stream channels. Examples of regulated activities include streambank stabilization, dam removal, road improvements that encroach on streams, and bridge/culvert construction or repair. The <u>ANR Atlas Clean Water Initiative Program Grant</u> <u>Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Stream Alteration permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."
1. Does the <u>Wetland Screening Tool</u> <sup>14</sup> provide a result of wetlands likely, very		No
likely, or present at the project site?		
2. Does your project site involve land that is in or near an area that has <u>any</u> of the	N	
Tollowing characteristics:	Yes	
sody ground under foot trees with shallow roots or water marks?		
o Wetland plants, such as cattails, ferns, sphagnum moss, willows, red maple,	No	
trees with roots growing along the ground surface, swollen trunk bases, or flat	110	
root bases when tipped over?		
o Wetland Soils – soil is dark over gray, gray/blue/green? Is there presence of	Not Sure	
rusty/red/dark streaks? Soil smells like rotten eggs, feels greasy, mushy or wet?		
Water fills holes within a few minutes of digging? (See <u>Landowners Guide to</u>		
weitands for additional mormation on identifying weitands onsite.)		
If you answered <b>ves</b> or <b>not sure</b> to either of the above questions, you will need to co	u Dintact your Dis	trict Wetlands
Ecologist using the Wetland Inquiry Form. The District Wetlands Ecologist can help	determine the	approximate
locations of wetlands and whether you need to hire a Wetland Consultant to condu	ct a wetland de	elineation.
Alternatively, if you answered yes or not sure to either of the above questions, you	can simply bud	get for a
Wetland Consultant in the proposed scope of work. Any activity within a Class I or II	wetland or we	tland buffer
zone (minimum of 100 feet and 50 feet respectively) which is not exempt or consid	iered an "allow	ed use"
process, which takes at minimum 6 weeks for a General Permit and 5 months for a	an Individual Pe	ermit.
Descriptions Deint of Constant Names (Descriptions)		
Regulatory Point of Contact Name/Position:		
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?	Vac	Na
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?	Yes	No
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?	Yes	No
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed upper statement of the statement wetland Rules"	<b>Yes</b> use" determina	No tion from the
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetlands	Yes use" determina I Inquiry Form.	No tion from the
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:	Yes use" determina I Inquiry Form.	No tion from the
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife	Yes use" determina I Inquiry Form.	No tion from the
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or	Yes use" determina I Inquiry Form.	No tion from the
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or possess such species without a Threatened & Endangered Species Takings	Yes use" determina Inquiry Form.	No tion from the
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or possess such species without a Threatened & Endangered Species Takings permit.         1. December of the protect in the period of the protect in the period of the protect in the period.	Yes use" determina I Inquiry Form. Yes	No tion from the No
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or possess such species without a Threatened & Endangered Species Takings permit.         1. Does your project involve cutting down trees larger than 5 inches in diameter in any of the following towns? Addison Arlington Benson Brandon Bridgert	Yes use" determina Inquiry Form.	No tion from the No
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetlanc         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or possess such species without a Threatened & Endangered Species Takings permit.         1. Does your project involve cutting down trees larger than 5 inches in diameter in any of the following towns? Addison, Arlington, Benson, Brandon, Bridport, Bristol, Charlotte, Cornwall, Danby, Dorset, Fair Haven, Ferrisburgh	Yes use" determina I Inquiry Form.	No tion from the
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or possess such species without a Threatened & Endangered Species Takings permit.         1. Does your project involve cutting down trees larger than 5 inches in diameter in any of the following towns? Addison, Arlington, Benson, Brandon, Bridport, Bristol, Charlotte, Cornwall, Danby, Dorset, Fair Haven, Ferrisburgh, Hinesburg, Manchester, Middlebury, Monkton, New Haven, Orwell. Panton.	Yes use" determina I Inquiry Form.	No tion from the No
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u         DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland         Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or possess such species without a Threatened & Endangered Species Takings permit.         1. Does your project involve cutting down trees larger than 5 inches in diameter in any of the following towns? Addison, Arlington, Benson, Brandon, Bridport, Bristol, Charlotte, Cornwall, Danby, Dorset, Fair Haven, Ferrisburgh, Hinesburg, Manchester, Middlebury, Monkton, New Haven, Orwell, Panton, Pawlet, Pittsford, Rupert, Salisbury, Sandgate, Shoreham, Starksboro, St.	Yes use" determina I Inquiry Form.	No tion from the No
Regulatory Point of Contact Name/Position:         1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed of DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetlance Regulatory Point of Contact Name/Position:         V. Fish and Wildlife         State law protects endangered and threatened species. No person may take or possess such species without a Threatened & Endangered Species Takings permit.         1. Does your project involve cutting down trees larger than 5 inches in diameter in any of the following towns? Addison, Arlington, Benson, Brandon, Bridport, Bristol, Charlotte, Cornwall, Danby, Dorset, Fair Haven, Ferrisburgh, Hinesburg, Manchester, Middlebury, Monkton, New Haven, Orwell, Panton, Pawlet, Pittsford, Rupert, Salisbury, Sandgate, Shoreham, Starksboro, St. George, Sudbury, Sunderland, Vergennes, Waltham, West Haven, Weybridge,	Yes Use" determina Inquiry Form. Yes	No tion from the No

<sup>&</sup>lt;sup>14</sup> To view the Wetland Screening Tool introduction video, see <u>https://youtu.be/6lv5en0AB1o</u>

2. Is the project site within 1 mile of a mapped <sup>15</sup> Significant Natural Community or Rare, Threatened, or Endangered Species?	Yes	No
If <i>yes</i> to either of the above questions, connect with the VT Fish and Wildlife departm (everett.marshall@vermont.gov 802-371-7333) to discuss your project and any nece	nent essary permi	tting.
Regulatory Point of Contact Name/Position:		
VI. Stormwater		
1. Will the project disturb more than an acre of land during construction, add or redevelop impervious surface, create new development or <u>otherwise require a</u> <u>Stormwater permit</u> ?	Yes	No
If <i>yes</i> , forward to the appropriate <u>Stormwater specialist</u> to ensure necessary permitt <u>Project Screening Tool</u> to find the Stormwater specialist for your project's region.	ing. Use the	<u>Water Quality</u>
Regulatory Point of Contact Name/Position:		
VII. Solid Waste		
2. Will you be creating any debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry, and mortar) with your project that you intend to bury on site? <sup>16</sup>	Yes	No
If yes, connect with the Waste Management & Prevention Division (dennis.fekert@ve to discuss your project and any necessary permitting.	ermont.gov 8	02-522-0195)
Regulatory Point of Contact Name/Position:		
<ul> <li>Provide below or attach a narrative summary of Table 4 findings. Please include:</li> <li>a. Which permits or permit amendment are needed or might be needed</li> <li>b. What type might be needed? (e.g. a general or individual permit)?</li> <li>c. What concerns were voiced by permitting staff?</li> <li>d. How will the proposed scope of work address these concerns?</li> </ul>	d?	
Is the project, as proposed, reasonably considered permit-able by all applicable	Yes	No

<sup>&</sup>lt;sup>15</sup> Find both of these layers on the ANR Atlas under Atlas Layers/Fish and Wildlife. Use the Measurement tool to 1) Plot Coordinates for your project 2) select the coordinates from the left panel 3) select the Radius Tool 4) click on your project location 5) Indicate 1 mile distance 6) look for overlap with either of these mapped layers.

<sup>&</sup>lt;sup>16</sup> If your project will result in the transfer and disposal of debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry and mortar), you do not need a permit from this office as long as you hire a <u>licensed solid waste hauler</u> and bring the material to a certified facility.

ANR permitting programs?	
(Answer must be Yes to continue)	

# **Step 5:** Conduct Eligibility Criteria #5-8 Screenings

Table 5A. Eligibility Criteria 5-8		
Landowner and Operation and Maintenance Responsible Party Support. Project identifies and demonstrates commitment from a qualified and willing operation and maintenance responsible party. Project demonstrates landowner support for the proposed project phase.	Yes	No
(Answer must be YES to proceed)		
Budget. Project budget includes ineligible expenses. (Answer must be NO to proceed)	Yes	No
<b>Leveraging.</b> Proposed leveraging meets required leveraging levels (if applicable), meets the definition of leveraging, and comes from eligible sources	Yes	No N/A
(Answer must be YES or N/A to proceed)		
<b>Funding Program Specific Eligibility.</b> Project meets additional funding program eligibility requirements*. Please list applicable funding program below:	Yes	No
(Answer must be YES to proceed)		
*If Water Quality Restoration Formula Grant, complete Step 6 below		

# Step 6: Screening Projects on Agricultural Lands (Water Quality Restoration Formula Grants Only)

For Water Quality Restoration Formula Grant projects, please complete the following information as part of your Funding Program Specific Eligibility Screening (Criteria 8). Please note this must be completed for all projects located on agricultural lands regardless of project type. See <u>CWIP Project Types Table</u> for eligible project types.

Table 6A. Screening Projects on Agricultural Lan	ds
<ol> <li>Is the proposed project located on a jurisdictional farm operation<sup>17</sup>?</li> </ol>	Yes - Proceed to next question below.
Complete a preliminary review to	

<sup>&</sup>lt;sup>17</sup> Jurisdictional farm operations are required to meet Vermont's Required Agricultural Practices (RAPs).

determine i <u>operation</u> , a consultation the <u>farm de</u> Please note submitted k operation/la determinati	f it is a jurisdictional farm and any case that requires n with AAFM will occur via etermination process. This form must be by the farm andowner seeking the ion.	<b>No</b> <sup>18</sup> - There is no additional requirements related to agricultural review for these projects.
2. Is the propos project? Examples of ag but are not Practices – Facilities, H Fence, Live Cover Crop, Injection, R note this is agricultural	ricultural projects include limited to Production Area (e.g. Waste Storage leavy Use Area, Diversion) stock Exclusion, Filter Strip, Reduced Tillage, Manure otational Grazing. Please not an exhaustive list of all practices.	<ul> <li>Yes - Agricultural Projects on jurisdictional farms are not an eligible project type. You can provide a referral to an applicable state or federal agricultural <u>assistance program</u>, or a local organization.</li> <li>No - The natural resource, innovative, or other project type will require an agricultural project review and approval from the Vermont Agency of Agriculture, Food and Markets         (VAAFM) to ensure a consistent approach on farms statewide that follows rules, regulations, and laws in place. Please follow Steps 1 &amp; 2 below.</li> <li>Step 1- Please submit a detailed description of the project, project site, project details, landowner, farm operation, and any other relevant information to VAAFM at AGR.WaterQuality@Vermont.gov.</li> <li>Step 2- Once you complete this Agricultural Project Review, please allow 30 days for a response. Once that response has been received, please include a summary of the response in the next section.</li> </ul>
Agricultural Project	Review Status & Summary:	
Check as	Status	
Applicable	<b>.</b>	
	Submitted/ Pending	
	Approved	
	Denied	

<sup>&</sup>lt;sup>18</sup> Note CWIP's Agricultural Pollution Prevention project type eligibility is limited to land where owner or operator is <u>not</u> a jurisdictional farm (i.e., <u>not</u> required to meet the Required Agricultural Practices (RAPs)). As such, projects that meet the definition of the Agricultural Pollution Prevention project type in the <u>Appendix B. Project Types Table</u> are <u>not</u> subject to review by VAAFM.

Please include a summary of the response here:

Please note that it is expected that all projects with the status "submitted/pending" will be "approved" prior to a project approval for funding.



Ben Machin <ben@redstartconsulting.com>

### **30-Acre Woodlands stream restoration**

3 messages

Ben Machin <ben@redstartconsulting.com>

Wed, May 14, 2025 at 5:34 AM

To: Rick Morrill <rick.morrill.nfcs@gmail.com>, Ethan Dreissigacker <edreissigacker@gmail.com> Cc: Dana Hazen <dana@redstartconsulting.com>

Hi Ethan and Rick,

I hope you are both doing well!

The State of Vermont is ramping up efforts to clean up Lake Champlain, particularly targeting the Phosphorus issues. Because the stream restoration approach we use (see attached for a refresher on Strategic Wood Addition, or "SWA") keeps Phosphorus out of the larger streams and the Lake, they are encouraging organizations to partner with landowners and apply for funding. We have been working with Franklin County Natural Resources Conservation District on numerous tree and shrub plantings along rivers and wetlands, and now on SWA projects. Assuming you're amenable, we'll work with them to submit an application to do some of the necessary further study and modeling of Phosphorus impacts of restoring the streams at 30-acre woodlands. There is an application deadline coming soon, and the work would occur over the next few months.

How does all this sound? Are we OK to proceed with an application?

Thanks, Ben

Redstart http://www.redstartconsulting.com/

1	Redstart	SWA	intro	.pdf
$\sim$	3063K			

 Ethan Dreissigacker <edreissigacker@gmail.com>
 Wed, May 14, 2025 at 8:05 AM

 To: Ben Machin <ben@redstartconsulting.com>
 Cc: Rick Morrill <rick.morrill.nfcs@gmail.com>, Dana Hazen <dana@redstartconsulting.com>

Ben,

I had been thinking the federal funding on this was probably not going to happen, but it's great that there are local options that might help facilitate this work. I think this sounds great. Please go ahead and proceed with the application!

Thanks,

Ethan [Quoted text hidden]

Step/Phase	Final Design
Basic Eligibility	Yes
Applicant Name	Lauren Weston
Applicant Organization	Franklin County Natural Resources Conservation District
Applicant Email	lauren@franklincountynrcd.org
Applicant telephone	+1 (802) 582-3133
Project ID from WPD	12562
	This project proposes to restore the historic channel of a straightened stream
	segment on Marsh Brook, installation of low-tech process-based restoration,
	and two culvert replacements. The project will involve filling the artificial
Description of Project	straightened channel.
Project Latitude	44.95305
Project Longitude	-72.842/9
Project Phase	Final Design
Annual P Reduction KG	22.4
Any one time P reduction	29.3
KG	
Total Cost of Proposed	91225.60
Phase	
Amount of Funding	\$91,225.60
Requested (Proposed	
Phase)	
Non DEC Funding as part	\$0.00
of Total Project Costs (a	
Total Project Costs (All	\$536,000.00
Phases)	
Design Life	10
Adjusted Design Life	
Estimated Annual O&M	\$5,000.00
cost total	
Conformance with	10
Tactical Basin Plan TBP	
Number of Co-benefit	3
Areas	
DEC Screening Form	Yes
Uploaded	
Map of Project Area	Yes
Uploaded	
Project Budget	Yes
Project Schedule	Yes
Uploaded	
Landowner Support	Yes
uploaded	
Phosphorus Calculator	Yes
Tool uploaded	
Created	05/16/25 4:33 PM
Using As Match	No
Cultural Resource	Yes

#### **CWSP Project Budget**

**Franklin County Natural Resources Conservation District** Marsh Brook Stream Restoration - Final Design

Personnel (Name, Title)	Tasks/Responsibilities	Hours	Hourly Rate	Salary Expense
Lauren Weston, District Manager	Grant management, staff oversight, design review and oversight	20.00	\$75.00	\$1,500.00
Kerry Brosnan, Natural Resources Planner	Procurement process, coordination with contractor and landowners, field visits, review contractor's produced materials	35.00	\$70.00	\$2,450.00
Mel Auffredou, Senior Natural Resources Planner	Procurement process, coordination with contractor and landowners, field visits, review contractor's produced materials	35.00	\$70.00	\$2,450.00
Personnel Subtotal				\$6,400.00

Anticipated Travel	Purpose	Miles	Mileage Rate	Travel Expense
Travel to Franklin	3 site visits with contractors and landowners	108.00	\$0.70	\$75.60
Travel Subtotal				\$75.60

Contractual	Description/Use	# of Units	Unit Cost	Contract. Expense
Engineering Design Contractor	Field visits, Final Design Draft, permitting, Final Design Report, Cost Opinions, Bid- Phase services	1.00	\$74,750.00	\$74,750.00
Historic and Cultural Review	Background research, field work, report writing, mapping, and production of Archaeological Resources Assessment and additional investigations as needed	1.00	\$10,000.00	\$10,000.00
Contractual Subtotal	•			\$84,750.00

# Marsh Brook Stream Restoration – Final Design Schedule

Task #	Title	Description	Schedule
1	Hire Consultants	It is expected that two consultants will be needed for this project, including an engineering firm and an archaeological consultant. FCNRCD will prepare requests for proposals for each scope of work, solicit proposals following CWSP guidelines, select consultants, and execute contracts with the consultants.	June – July 2025
2	Initial Project Site Visit	FCNRCD will hold a project kickoff site visit with consultants and landowners to discuss data collection needs and adjust any timelines as needed.	July 2025
3	60% Design	The engineering consultant will create a draft design plan, drawings, and specifications.	July – September 2025
4	Stakeholder Meeting	FCNRCD will hold a site visit with regulators, consultants, and landowners to finalize the design draft and permitting requirements.	September 2025
5	Final Design Report & Cost Opinions	The engineering consultant will create a Final Design Report, including: a summary of existing site conditions; updated 100% Conceptual design sheets showing typical cross-section(s) and longitudinal profile; and feasibility summary, including stakeholder and regulator feedback and site-specific constraints. The engineering consultant will also create a 10-year access license or easement plan and 10-year operation and maintenance plan in coordination with FCNRCD. They will also complete an initial engineer's opinion of probable cost for permitting, construction, construction oversight, and long-term maintenance and operation.	October 2025 – March 2026
6	Permitting	The Engineering consultant will complete any relevant permit-required assessments or plans and submit required permit applications.	February – June 2026
7	Bid-Phase Services	The engineering consultant will work alongside FCNRCD to draft request for bid documents, assist with bid process including site visit and bid review, and contractor selection processes	March – June 2026

# Franklin County Natural Resources Conservation District

8	Reporting	requirements. Deliverables will include DEC Programmatic staff comments on design, signed VDHP Project Review Form, Final Design Report, 10-year O&M Plan, 10-year access licenses or easement documentation, relevant permit materials, Media Announcement, Final Performance Report or ANR Online Clean Water Project – Project Closeout Form (once available) and/or Batch Import File or ANR Online Clean Water Project – New Project Form	June – July 2026
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# APPENDIX A. CLEAN WATER INITIATIVE PROGRAM - PROJECT ELIGIBILITY SCREENING FORM

This fillable PDF form is designed to assist with project review by systematically walking through all eligibility criteria. It should be completed for all projects seeking funding for 30% + design or implementation work. It may be applied to projects seeking funding for assessment or development if helpful for determining their alignment with eligibility criteria 2, 3, 6, and 8.

# Step 1: Conduct Eligibility Criteria #1 Screening: Project Purpose

Table 1A: Project Purpose	
From the drop-down list to the right, please select which of the four objectives of Vermont's Surface Water Management Strategy this project addresses. If multiple, please list below:	Multiple
Protect and restore aquatic and riparian habitats, Minimize flood and fluvial erosion hazards	

# **Step 2:** Conduct Eligibility Criteria #2 Screening: Project Types and Standards

Diagona select the most representative project type from the dress down list		
to the right. <sup>1,2</sup> If multiple BMPs are included in the project, please list below:	Floodplain/Stream Resto	ration - Final Engineering Design
Is the project type an eligible project type for the funding program you are applying to as listed in column B of the <u>CWIP Project Types Table</u> ?	Yes	No
(Answer must be YES to proceed)	$\sim$	U
Does the project meet the project type definitions and minimum standards as provided in column C of the <u>CWIP Project Types Table</u> ?	Yes	No
(Answer must be YES to proceed)		
Will the project result in the standard performance measures, milestones, and deliverables as defined by project type in columns D-F of the <u>CWIP</u> <u>Project Types Table</u> ?	Yes	No
(Answer must be YES to proceed)		
Is the project listed as an ineligible project or activity in the <u>CWIP Funding</u> <u>Policy</u> ? If Yes, please explain below how project meets the allowable exceptions within the CWIP Funding Policy.	Yes	No
(Answer must be NO to proceed, unless reasonable justification is provided above)		

# **Step 3:** Conduct Eligibility Criteria #3 Screening: Watershed Projects Database

Verify project has been recorded in the <u>Watershed Project Database</u> (WPD). Each project must have a Watershed Project Database number specific to the proposed project phase (for example,

<sup>&</sup>lt;sup>1</sup> Note that Road/Stormwater Gully project-types must not otherwise be considered intermittent or perennial streams by the DEC Rivers Program and therefore project proponent must show documentation of this determination in order to select this project type.

<sup>&</sup>lt;sup>2</sup> One project may include multiple best management practices (BMPs) that cross "project types." For example, a single project may include both stormwater and lake shoreland BMPs. Proponents should use their best judgement in selecting the most representative project type for the purposes of eligibility screening and reporting.

a final design will have a different WPD-ID from a preliminary design even if for the same project). If the project, or the specific phase, is not yet in the Watershed Project Database, follow directions provided in the CWIP Funding Policy to secure a WPD-ID. Please see <u>CWIP</u> Funding Policy for more information on the WPD-ID.

Table 3A. WPD-ID		
Watershed Project Database ID number assigned	12562	
Watershed Project Database Project Name Marsh Brook Stream Restoration - Final Design - Frank		

## Step 4: Conduct Eligibility Criteria #4 Screening: Natural Resource Impacts<sup>3</sup>

Agency of Natural Resources (ANR) permit screening for natural resource impacts includes 1) an initial desktop review to identify which ANR permitting programs should be contacted, 2) a review by the relevant ANR permitting staff, and 3) a response summary from the project proponent addressing any permitting staff concerns. <sup>4</sup>

- Table 4. Natural Resource Impacts facilitates a high-level desktop review of the most likely ANR permits to apply to clean water projects. Project proponents should answer all the questions to identify likely permit needs.<sup>5</sup> Please note that "project site" may include both the active restoration location as well as any additional impact footprint related to staging, site access, or storage of waste or disposed materials.
- 2) If responses to the Table 4. Natural Resource Impacts desktop review trigger a permitting staff consultation, Table 4 provides appropriate contact information.
  - a. Proponents should send the identified permitting staff the following:
    - i. The watersheds project database identification number (WPD-ID) (if available),
    - ii. Project location (GPS coordinates)
    - iii. Summary of proposed scope of work, and
    - iv. Any other relevant information they request that will be utilized in their review.
  - b. <u>Proponents should clarify they are seeking permitting staff input on potential</u> permitting needs, permit-ability of proposed scope of work, and other design considerations but they are NOT seeking a formal permit determination.
  - c. Project proponents must attempt to communicate with the permitting staff and provide them with at least thirty days to review the project and provide a

<sup>&</sup>lt;sup>3</sup> Easements and Riparian Buffer Plantings are excluded from this eligibility requirement/step.

<sup>&</sup>lt;sup>4</sup> In cases where this screening may have already occurred in a prior project phase, project proponents may supply attachments or links to relevant permit needs assessment documents in place of completing Table 4.

<sup>&</sup>lt;sup>5</sup> Entities selected for funding are expected to perform due diligence to ensure all applicable permits (including non-ANR state, local, and federal permits) are discovered and secured prior to implementation. The <u>ANR Permit</u>

<sup>&</sup>lt;u>Navigator</u> and an Environmental Compliance Division Community Assistance Specialist can help confirm ANR permitting needs for any projects once selected for funding.

response. Project proponents are encouraged to perform this screening during a project development phase as opposed to during a project solicitation round to allow for more time for feedback. Permitting feedback may be up to one year old.

- 3) Proponents should summarize permitting staff feedback and how the proposed scope of work will address this at the bottom of Table 4. Specifically, please include:
  - a. Which permits or permit amendment are needed or might be needed?<sup>6</sup>
  - b. What type might be needed? (e.g., a general or individual permit<sup>7</sup>)?
  - c. What concerns were voiced by permitting staff?
  - d. How will the proposed scope of work address these concerns?8

Table 4A: Natural Resource Impacts     I. Act 250 Permits		
lf <b>y<i>es</i></b> , please provide the permit number and list any water resourc <b>PermitNumber</b> :	e issues or natural re	source issues found <sup>10</sup>
Resourcelssues:		
the second state and the second state and the	appropriate regulator	Constant for an Ant
If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the a 250 consultation.	· · · · · · · · · · · · · · · · · · ·	Contact for an Act
If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the a 250 consultation. Regulatory Point of Contact Name/Position:		Contact for an Act
If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the a 250 consultation. Regulatory Point of Contact Name/Position: II. Lake and Shoreland		

<sup>9</sup> An Act 250 Permit is required for certain categories of development, such as subdivisions of 10 lots or more, commercial projects on more than one acre or ten acres (depending on whether the town has permanent zoning and subdivision regulations), and any development above the elevation of 2,500 feet. The <u>ANR Atlas Clean Water</u> <u>Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located on an Act 250 parcel. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>&</sup>lt;sup>6</sup> Occasionally permit staff may indicate they need a field visit or to see more completed designs prior to making a permit need determination.

 <sup>&</sup>lt;sup>7</sup> Design phase projects that require an individual wetlands permit must have the permit in hand at the close of the final design phase. Implementation phase projects must have the individual permit in hand to be eligible for funding.
 <sup>8</sup> Examples could include planned design changes or inviting permitting staff to stakeholder meetings.

<sup>\*</sup> Examples could include planned design changes of inviting permitting start to stakeholder meetings.

<sup>&</sup>lt;sup>10</sup>Note that Act 250 permit amendments may require more extensive review of project impacts to natural resources including wildlife habitat, significant natural communities, and riparian zones. Please consult with the Act 250 District Coordinator regarding the nature and scope of that review and what bearing it may have on your project design.

level (shoreline) of a lake or pond? 11		
If <b>yes</b> , you might need either a Shoreland Protection Act Permit or a Lake Encroa Quality Project Screening Tool to find the Lakes and Ponds Program contact for y	chment Permit. Use /our project's region.	the <u>Water</u>
Regulatory Point of Contact Name/Position:		
III. Rivers, River Corridors, and Flood Hazard Areas		
<b>1.</b> Is there any portion of the project site located within 100' of a river corridor ar mapped Federal Emergency Management Agency (FEMA) flood hazard area <sup>12</sup> ? (stormwater pond's pipe draining into a river corridor area)? Any permanent excavation/filling or construction within a flood hazard area or river corridor may regulatory requirements through municipal bylaws or through state authorities.	nd/or e.g. a Yes trigger	No
If <b>yes</b> , you will need to speak with a <u>Floodplain Manager</u> . Use the <u>Water Quality F</u> the Floodplain Manager for your project's region.	Project Screening Toc	<mark>l</mark> to find
Regulatory Point of Contact Name/Position:		
Rebecca Pfeiffer		
2. Is any portion of the project site within a perennial river or stream channel?	Yes 💽	NoO
If <b>yes</b> , you will need to speak with a <u>Stream Alteration Engineer.</u> Use the <u>Water Q</u> find the Stream Alteration Engineer for your project's region.	uality Project Screen	<u>ing Tool</u> to
Regulatory Point of Contact Name/Position:		
Staci Pomeroy		
IV. Wetland		

<sup>&</sup>lt;sup>11</sup> The <u>ANR Atlas Clean Water Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Lakeshore permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>&</sup>lt;sup>12</sup> FEMA mapped Flood Hazard Areas are not available statewide on the ANR Natural Resources Atlas. For projects located in Grand Isle, Franklin, Lamoille, Addison, Essex, Orleans, Caledonia, and Orange Counties, maps are available via the FEMA Flood Map Service Center: <u>https://msc.fema.gov/portal/home</u>. ANR Floodplain Managers are available to provide technical assistance if needed.

<sup>&</sup>lt;sup>13</sup> Stream Alteration Permits regulate all activities that take place within perennial river and stream channels. Examples of regulated activities include streambank stabilization, dam removal, road improvements that encroach on streams, and bridge/culvert construction or repair. The <u>ANR Atlas Clean Water Initiative Program Grant</u> <u>Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Stream Alteration permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

	Yes	No
2. Does your project site involve land that is in or near an area that has <u>any</u> of the following characteristics: <ul> <li>o Water is present – ponds, streams, springs, seeps, water filled depressions, soggy ground under foot, trees with shallow roots or water marks?</li> <li>o Wetland plants, such as cattails, ferns, sphagnum moss, willows, red maple, trees with roots growing along the ground surface, swollen trunk bases, or flat root bases when tipped over?</li> <li>o Wetland Soils – soil is dark over gray, gray/blue/green? Is there presence of rusty/red/dark streaks? Soil smells like rotten eggs, feels greasy, mushy or wet? Water fills holes within a few minutes of digging? (See Landowners Guide to Wetlands onsite.)</li> </ul>	Yes No Not Sure	<ul> <li>O</li> <li>O</li> </ul>
If you answered <b>yes</b> or <b>not sure</b> to <u>either</u> of the above questions, you will need to co <u>Ecologist</u> using the <u>Wetland Inquiry Form</u> . The District Wetlands Ecologist can help locations of wetlands and whether you need to hire a Wetland Consultant to condu Alternatively, if you answered <b>yes</b> or <b>not sure</b> to <u>either</u> of the above questions, you Wetland Consultant in the proposed scope of work. Any activity within a Class I or II zone (minimum of 100 feet and 50 feet respectively) which is not exempt or consid	ontact your determine ct a wetlan can simply wetland or lered an "a	District Wetlar the approxima d delineation. budget for a wetland buffe llowed use"
under the <u>Vermont Wetland Rules</u> requires a permit. All permits must go through reprocess, which takes at minimum 6 weeks for a General Permit and 5 months for a <b>Regulatory Point of Contact Name/Position</b> : Krystal Sewell	view and p Individua	ublic notice al Permit.
under the <u>Vermont Wetland Rules</u> requires a permit. All permits must go through re process, which takes at minimum 6 weeks for a General Permit and 5 months for a <b>Regulatory Point of Contact Name/Position</b> : Krystal Sewell 1. Is your project a Wetland Restoration project type?	Yes	No
under the Vermont Wetland Rules requires a permit. All permits must go through reprocess, which takes at minimum 6 weeks for a General Permit and 5 months for a Regulatory Point of Contact Name/Position: Krystal Sewell          1. Is your project a Wetland Restoration project type?         If you answered yes, under the Vermont Wetland Rules you will need an "allowed u DEC Wetlands Program. Contact your District Wetlands Ecologist using the Wetland Regulatory Point of Contact Name/Position:         V. Fish and Wildlife	Yes O Ise" determ	No No No No No No No No No No No No No N

<sup>&</sup>lt;sup>14</sup> To view the Wetland Screening Tool introduction video, see <u>https://youtu.be/6lv5en0AB10</u>

	Yes 💽	No 🔿
If <i>yes</i> to either of the above questions, connect with the VT Fish and Wildlife depart (everett.marshall@vermont.gov 802-371-7333) to discuss your project and any ne Regulatory Point of Contact Name/Position: Everett Marshall	ment cessary permit	ting.
VI. Stormwater		
1. Will the project disturb more than an acre of land during construction, add or redevelop impervious surface, create new development or <u>otherwise require a</u> <u>Stormwater permit</u> ?	Yes O	No 💿
If <b>yes</b> , forward to the appropriate <u>Stormwater specialist</u> to ensure necessary perminence <u>Project Screening Tool</u> to find the Stormwater specialist for your project's region.	ting. Use the	Water Quality
Regulatory Point of Contact Name/Position:		
VII. Solid Waste	P-100	
2. Will you be creating any debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry, and mortar) with your project that you intend to bury on site? <sup>16</sup>	Yes	No
If yes, connect with the Waste Management & Prevention Division (dennis fekert@	vermont.gov 8	02-522-0195
to discuss your project and any necessary permitting.		
to discuss your project and any necessary permitting.		
to discuss your project and any necessary permitting. <b>Regulatory Point of Contact Name/Position:</b> Provide below or attach a narrative summary of Table 4 findings. Please include: a. Which permits or permit amendment are needed or might be needed b. What type might be needed? (e.g. a general or individual permit)? c. What concerns were voiced by permitting staff? d. How will the proposed scope of work address these concerns?	ed?	
<ul> <li>Regulatory Point of Contact Name/Position:</li> <li>Provide below or attach a narrative summary of Table 4 findings. Please include:         <ul> <li>a. Which permits or permit amendment are needed or might be needed.</li> <li>b. What type might be needed? (e.g. a general or individual permit)?</li> <li>c. What concerns were voiced by permitting staff?</li> <li>d. How will the proposed scope of work address these concerns?</li> </ul> </li> <li>Staci Pomeroy &amp; Rebecca Pfieffer</li> </ul>	ed?	
<ul> <li>Regulatory Point of Contact Name/Position:</li> <li>Provide below or attach a narrative summary of Table 4 findings. Please include:         <ul> <li>a. Which permits or permit amendment are needed or might be needed.</li> <li>b. What type might be needed? (e.g. a general or individual permit)?</li> <li>c. What concerns were voiced by permitting staff?</li> <li>d. How will the proposed scope of work address these concerns?</li> </ul> </li> <li>Staci Pomeroy &amp; Rebecca Pfieffer</li> <li>a. Which permits or permit amendment are needed?</li> </ul>	ed?	
<ul> <li>Regulatory Point of Contact Name/Position:</li> <li>Provide below or attach a narrative summary of Table 4 findings. Please include: <ul> <li>a. Which permits or permit amendment are needed or might be needed</li> <li>b. What type might be needed? (e.g. a general or individual permit)?</li> <li>c. What concerns were voiced by permitting staff?</li> <li>d. How will the proposed scope of work address these concerns?</li> </ul> </li> <li>Staci Pomeroy &amp; Rebecca Pfieffer <ul> <li>a. Which permits or permit amendment are needed?</li> </ul> </li> </ul>	ed?	
Regulatory Point of Contact Name/Position:          Provide below or attach a narrative summary of Table 4 findings. Please include:         a.       Which permits or permit amendment are needed or might be needed         b.       What type might be needed? (e.g. a general or individual permit)?         c.       What concerns were voiced by permitting staff?         d.       How will the proposed scope of work address these concerns?         Staci Pomeroy & Rebecca Pfieffer         a. Which permit amendment are needed or might be needed?         Stream Alteration Permit, Flood Hazard Area & River Corridor (FHARC) permit         b.       What type might be needed? (e.g. a general or individual permit)?	ed?	

<sup>&</sup>lt;sup>15</sup> Find both of these layers on the ANR Atlas under Atlas Layers/Fish and Wildlife. Use the Measurement tool to 1) Plot Coordinates for your project 2) select the coordinates from the left panel 3) select the Radius Tool 4) click on your project location 5) Indicate 1 mile distance 6) look for overlap with either of these mapped layers.

<sup>&</sup>lt;sup>16</sup> If your project will result in the transfer and disposal of debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry and mortar), you do not need a permit from this office as long as you hire a <u>licensed solid waste hauler</u> and bring the material to a certified facility.

ANR permitting programs?	
(Answer must be Yes to continue)	

# Step 5: Conduct Eligibility Criteria #5-8 Screenings

Table 5A. Eligibility Criteria 5-8	
Landowner and Operation and Maintenance Responsible Party Support. Project identifies and demonstrates commitment from a qualified and willing operation and maintenance responsible party. Project demonstrates landowner support for the proposed project phase.	Yes No
(Answer must be YES to proceed)	
(Answer must be NO to proceed)	Yes 🔿 No 💽
<b>Leveraging</b> . Proposed leveraging meets required leveraging levels (if applicable), meets the definition of leveraging, and comes from eligible sources (Answer must be YES or N/A to proceed)	Yes No N/A
Funding Program Specific Eligibility. Project meets additional funding program eligibility requirements *. Please list applicable funding program below: Water Quality Restoration Formula Grant	Yes No
(Answer must be YES to proceed) *If Water Quality Restoration Formula Grant, complete Step 6 below	

# Step 6: Screening Projects on Agricultural Lands (Water Quality Restoration Formula Grants Only)

For Water Quality Restoration Formula Grant projects, please complete the following information as part of your Funding Program Specific Eligibility Screening (Criteria 8). Please note this must be completed for all projects located on agricultural lands regardless of project type. See <u>CWIP Project Types Table</u> for eligible project types.

able 6A. Screening Projects on Agricultural Lands		
1. Is the proposed project located on a jurisdictional farm operation 12?	Yes - Proceed to next question below.	
Complete a preliminary review to		

<sup>&</sup>lt;sup>17</sup> Jurisdictional farm operations are required to meet Vermont's Required Agricultural Practices (RAPs).

determine if it is a jurisdictional farm operation, and any case that requires consultation with AAFM will occur via the farm determination process. Please note this form must be submitted by the farm operation/landowner seeking the determination. <b>2. Is the proposed project an agricultural project?</b> Examples of agricultural projects include but are not limited to Production Area Practices – (e.g. Waste Storage Facilities, Heavy Use Area, Diversion) Fence, Livestock Exclusion, Filter Strip, Cover Crop, Reduced Tillage, Manure Injection, Rotational Grazing. Please note this is not an exhaustive list of all agricultural practices.		<ul> <li>No<sup>18</sup> - There is no additional requirements related to agricultural review for these projects.</li> <li>Yes - Agricultural Projects on jurisdictional farms are n an eligible project type. You can provide a referral to a applicable state or federal agricultural assistance program, or a local organization.</li> </ul>	
		Agricultural Pr	oject Review Status & Summary:
Check as	Status		
	Submitted / Pending		
	Approved		

<sup>&</sup>lt;sup>18</sup> Note CWIP's Agricultural Pollution Prevention project type eligibility is limited to land where owner or operator is <u>not</u> a jurisdictional farm (i.e., <u>not</u> required to meet the Required Agricultural Practices (RAPs)). As such, projects that meet the definition of the Agricultural Pollution Prevention project type in the Appendix B. Project Types Table are <u>not</u> subject to review by VAAFM.

### Please include a summary of the response here:

Though this project is located on a jurisdictional farm, based on our review your project is determined to be eligible in accordance with section § 39-403 of the Clean Water Service Provider Rule for funding through the Formula Grant Program as a natural resource project.

Please note that it is expected that all projects with the status "submitted/pending" will be "approved" prior to a project approval for funding.



## Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

**Sewell, Krystal T** <Krystal.T.Sewell@vermont.gov> To: Kerry Brosnan <kerry@franklincountynrcd.org> Cc: lauren <lauren@franklincountynrcd.org> Tue, May 13, 2025 at 1:06 PM

Hi Kerry,

Thank you for bumping this back to the top of my emails!

Process-based restoration within Class II wetlands and buffer zones is often considered an allowed use under §6.23 of the Vermont Wetland Rules (*Wetland restoration or stream restoration projects, including dam removals, in accordance with a plan approved by the Secretary*). These projects can trigger permitting when impacts are required to complete the restoration project- such as a temporary access road, removal of trees for access, and if any hard infrastructure are proposed such as rip rap. If there are components of your restoration project that may trigger the need for a wetland permit- then a wetland delineation will be needed. I will need to review and approve a restoration plan. I have attached a template of the information needed for the plan. This also helps ensure we know if there are aspects to the project requiring permitting.

Culvert replacements may be considered routine maintenance and considered an allowed use under §6.12 of the VWR (The maintenance, reconstruction, or routine repair of structures and facilities (including ski trails, public transportation facilities, bulkheads, docks, piers, pilings, paved areas, houses, or other buildings) in compliance with the Vermont Wetland Rules in existence as of the date of their construction or in existence as of February 23, 1990 or additions to such structures or facilities which do not involve substantial expansion or modification in a wetland or buffer).

If culvert replacement results in expansion of 250 square feet or more into wetland or buffer zone, the work may qualify for the WETLANDS GENERAL PERMIT 3-9026 Water Quality Improvement Projects in Significant Wetlands and Buffers- IV(c)(i) Stream crossing structure replacement expansion of existing structure. Wetland and buffer zone impacts may be estimated (if the project qualifies, no delineation is needed).

WetlandGeneralPermit\_3-9026\_Registration.pdf

It seems unlikely- but if the culvert work exceeds the thresholds for 3-9026, the project will need to be reviewed for permitting. If the project triggers permitting for any other aspect (stream restoration or ford crossing) then anything that requires permitting on site will be compiled into one permit application.

The proposed ford may also qualify for the WETLANDS GENERAL PERMIT 3-9026 Water Quality Improvement Projects in Significant Wetlands and Buffers for on farm water quality improvement projects. **On farm projects that qualify are non-reporting**. IV(a)(i) for Stream crossings, trails and walkways on Farms constructed in accordance with NRCS Practice Standards at or below the following thresholds can proceed with the project without further notification to the Wetlands Program:

Maximum Natural Wetland or Buffer Impact (sq. ft)- 500

Maximum Managed Wetland Impact (sq. ft)- 5,000

Franklin County NRCD Mail - Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

#### Maximum Managed Buffer Impact (sq. ft)- 5,000

Maximum Total Allowed Impacts to Wetland and Buffer, natural or managed (sq. ft)- 5,000 per NRCS practice

If on farm water quality projects exceed the thresholds for 3-9026, the project will need to be reviewed for permitting and a wetland delineation will be needed.

I hope this is helpful!

Thank you.

Krystal T. Sewell (she/her) | District Wetlands Ecologist

Vermont Department of Environmental Conservation

Watershed Management Division, Wetlands Program

Davis 3, 1 National Life Dr | Montpelier, VT 05620-3901

802-490-6758

https://dec.vermont.gov/watershed/wetlands

For resources related to flood recovery: https://anr.vermont.gov/flood



From: Kerry Brosnan <kerry@franklincountynrcd.org> Sent: Monday, May 12, 2025 1:50 PM To: Sewell, Krystal T <Krystal.T.Sewell@vermont.gov> Cc: lauren@franklincountynrcd.org> Subject: Re: Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

#### EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.

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Restoration\_NNIS component.docx
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### Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

Pomeroy, Staci <Staci.Pomeroy@vermont.gov> To: Kerry Brosnan <kerry@franklincountynrcd.org>, "Pfeiffer, Rebecca" <Rebecca.Pfeiffer@vermont.gov> Cc: lauren <lauren@franklincountynrcd.org>

Hi Kerry,

Thank you for touching base and providing the 30% design information.

I am familiar with the project and have been included in the design process with FNRCD as the project has been moving forward.

One area to have more information on in the design work, is along the road where the new channel is proposed. This looks to be up against the road in the 30% design. Considerations for long term protection of the road will be important to ensure channel adjustments do not lead to erosion of the road embankment. I support looking at structure replacement for both the Towel Neighborhood Rd and Little Pond rd. as part of the design process. This will help for understanding how potential replacement of these structures will affect normal and flood flows through the system when the stream is restored to its original planform.

This section of Marsh Brook is in a mapped FEMA floodplain, and Rebecca will be able to speak to what may be needed for permitting and map update information if the project changes flood conditions post implmenation.

I look forward to continuing to work with FNRCD on this project.

Please let me know if you have any further questions and/or information needed from me.

Enjoy the afternoon.

Staci





Staci Pomeroy, River Scientist Vermont Department of Conservation

Watershed Management, Rivers Program

111 West Street | Essex Jct., VT 05452

802-490-6191 cell

staci.pomeroy@vermont.gov

http://dec.vermont.gov/watershed/rivers

From: Kerry Brosnan <kerry@franklincountynrcd.org> Sent: Thursday, April 10, 2025 9:37 AM To: Pomeroy, Staci <Staci.Pomeroy@vermont.gov>; Pfeiffer, Rebecca <Rebecca.Pfeiffer@vermont.gov> Cc: lauren <lauren@franklincountynrcd.org> Subject: Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

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## Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

 Pfeiffer, Rebecca <Rebecca.Pfeiffer@vermont.gov>
 Fri, Apr 11, 2025 at 2:11 PM

 To: "Pomeroy, Staci" <Staci.Pomeroy@vermont.gov>, Kerry Brosnan <kerry@franklincountynrcd.org>
 Cc: lauren <lauren@franklincountynrcd.org>

Hi all -

Since this is still in a less designed phase, my comments regarding permitting are:

If this is a farm, then any permits would be under our state Flood Hazard Area & River Corridor (FHARC) permit.

If it is not a farm, then floodplain permitting would be taken on by the Town of Franklin with our technical comments/review providing support to the Town.

Assuming this is a farm and it would fall under the FHARC permit, please note the activities that are called out for various levels of permitting (non-reporting, vs registration, vs general permit).

Please let me know if you have any questions about where a project activity may fall for any permits and we can discuss when you are closer along in your design~

Rebecca

#### Rebecca J. Pfeiffer, CFM (she/her)

VT DEC Watershed Management Division

River Corridor & Floodplain Protection Program Manager | VT NFIP Coordinator

#### C 802.490.6157 | Rebecca.Pfeiffer@vermont.gov



## Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

**Fekert, Dennis** <Dennis.Fekert@vermont.gov> To: Kerry Brosnan <kerry@franklincountynrcd.org> Cc: lauren <lauren@franklincountynrcd.org> Tue, Apr 29, 2025 at 1:04 PM

Does this also apply to the potential disturbance caused by the culvert replacements? Yes.

As I mentioned below, check in with other Programs such as the Rivers Program.

Chris.brunelle@vermont.gov



## Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

Marshall, Everett <Everett.Marshall@vermont.gov> To: Kerry Brosnan <kerry@franklincountynrcd.org> Cc: lauren <lauren@franklincountynrcd.org> Mon, May 12, 2025 at 2:04 PM

Hi Kerry, sorry to be slow in responding. I don't see any issues with RTE species or significant natural communities. Sounds like a great project.

Everett Marshall (he/him)

Information Mgr./Natural Heritage Coord.

Vermont Fish and Wildlife Dept.

Vermont Agency of Natural Resources

Davis 2, 1 National Life Dr | Montpelier, VT 05620-3901

802-371-7333 (cell)

http://anr.vermont.gov/

From: Kerry Brosnan <kerry@franklincountynrcd.org> Sent: Monday, May 12, 2025 1:52 PM To: Marshall, Everett <Everett.Marshall@vermont.gov> Cc: lauren <lauren@franklincountynrcd.org> Subject: Re: Respond by May 10 - CWSP Marsh Brook Stream Restoration Final Design

You don't often get email from kerry@franklincountynrcd.org. Learn why this is important

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## FCNRCD CWSP Rock River & Marsh Brook Project Responses

Gilbert-Fuller, Noah <Noah.Gilbert-Fuller@vermont.gov> Wed, Apr 23, 2025 at 11:14 AM To: dorothy@franklincountynrcd.org>, "Kerry@FranklinCountyNRCD.org" <Kerry@franklincountynrcd.org>

Good morning Dorothy and Kerry,

Thank you for your patience during the CWSP review process. Below are my two responses to the proposed projects you sent to us earlier in the month. The first is for the proposed project on the Rock River tributary at Bouchard Farm LLC, and the second is for the proposed project on the Marsh Brook at the property Chris Wagner hays.

For the Bouchard Farm two-tier channel project:

Though this project is located on a jurisdictional farm, based on our review your project is determined to be eligible in accordance with section § 39-403 of the Clean Water Service Provider Rule for funding through the Formula Grant Program as a natural resource project.

Please be aware that in a two-tier system top of bank is considered the very top where you would stand. Top of bench is within the channel. Please ensure buffer regulations are taken into account in the planning and design of the project, and that there is no possibility that the installed project would cause a violation of section 6.07 or 6.10 of the Required Agricultural Practices.

For the Marsh Brook stream restoration project:

Though this project is located on a jurisdictional farm, based on our review your project is determined to be eligible in accordance with section § 39-403 of the Clean Water Service Provider Rule for funding through the Formula Grant Program as a natural resource project.

Let me know if you have any questions!

#### Noah Gilbert-Fuller (he/him)

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Archaeological Resources Assessment for the Proposed Marsh Brook Restoration Project, Franklin, Franklin County, Vermont



Submitted to:

Lauren Weston, District Manager Franklin County Natural Resources Conservation District 50 South Main Street, Suite B-20 St. Albans, VT 05478

Submitted by:

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UVM CAP Report No. 1444.

September 15, 2022

### Archaeological Resources Assessment for the Proposed Marsh Brook Restoration Project, Franklin, Franklin County, Vermont

#### **Project Description**

The Franklin County Natural Resources Conservation District (FCNRCD) is investigating alternatives for restoring a wetland and potentially altering the dimensions of a ditch network and a stream network associated with Marsh Brook in the Lake Carmi Watershed, in Franklin, Franklin County Vermont (Figure 1). The Area of Potential Effects (APE) is located on a larger 389-acre farm situated on both sides of the Towle Neighborhood Road (Figure 2). For project planning purposes, the project's Area of Potential Effect (APE) was defined by aerial images and maps provided on behalf of the FCNRCD. The ARA for the Marsh Brook restoration project was undertaken to comply with State and Federal regulations including Section 106 of the National Historic Preservation Act of 1966, as amended.

#### **Study Goal**

The goal of an Archaeological Resources Assessment (ARA) (or "review") is to identify portions of a specific project's Area of Potential Effects (APE) that have the potential for containing precontact era Native American and/or historic era archaeological sites. An ARA is to be accomplished through documentary research and a field inspection of the proposed project's APE. For this ARA, reference materials were reviewed following established guidelines (VDHP 2017). Resources examined include the National Register of Historic Places (NRHP) files; the Historic Sites and Structures Survey; and the United States Geological Survey (USGS) master archaeological database maps and reports that accompany the Vermont Archaeological Inventory (VAI). Relevant town histories, newspaper articles, nineteenth and twentieth-century maps, and online websites and mapping programs were consulted. Based on this background research, general contexts were derived for potential archaeological resources in the study area.

#### **Environmental Context**

The proposed Marsh Brook Project APE is to be located 2.5 kilometers (1.5 mi.) east of the southeastern bank of Lake Carmi (formerly known as Franklin Pond), found within the Champlain Valley (see Figure 1). The Champlain Valley is described as a region of rolling hills and low mountains, north-south trending ridges, flat lakeshore terraces, and delta plains, all of which are cut by rivers and their tributaries (Howland 1974:10). The Champlain Lowland comprises the northwest part of the state, extending north-south for approximately 160 km (100 mi) and ranges from 16-24 km (10-15 mi) in width, between Lake Champlain to the west and the Green Mountains to the east (Jacobs 1950). This area was once covered by an arm of the Champlain Sea during the early Holocene period (ca. 12,000 cal yr B.P.) and therefore reflects the topography of this ancient lacustrine environment.



Figure 1. USGS topographic map showing the location of the proposed Marsh Brook Project in Franklin, Franklin County, Vermont. Also depicted are the locations of previously recorded archaeological sites near the project area.



Figure 2. Aerial photo with an overlay of precontact Native American and historic era archaeologically sensitive areas of the proposed Marsh Brook Project in Franklin, Franklin County, Vermont.

The underlying bedrock within the project area is mapped as part of the Fairfield Pond Formation (Ratcliffe et al. 2012). This formation is of Cambrian-Neoproterozoic in age and consists of light gray to light green quartz, sericite, chlorite, phyllite, and folded quartzite. Topographic relief throughout the Champlain Valley is controlled by the underlying bedrock, and can often be quite complex. Where they outcrop, bedrock materials may have provided Native American occupants with an essential source of raw material for tool manufacture. For the most part, stone tools were made of quartz, quartzite, and chert, with minor amounts of slate and other sources less frequently (Crock and Lanza 2022). Because this bedrock formation in this area contains quartzite, Native American people may have utilized it where available, although no known quarry sites are identified in the general area.

Lake Carmi is a shallow lake (maximum depth 33 ft / 10 m) that is about 2.8 mi (4.56 km) long and up to about 0.96 mi (1.55 km) wide, connected through its outlet, the Pike River, to the Missisquoi Bay on Lake Champlain. With depths averaging 6 m (20 ft,), the lake provides excellent habitat for warm water fish such as pike and walleye. The lake drains to the north into the Pike River in Quebec Canada. Several small local streams feed into it, including Marsh Brook, which is located just east of site VT-FR-0413 (see Figure 1).

Marsh Brook is an outlet to Little Pond an approximately 24-acre waterbody surrounded by "an extensive marsh" located on the eastern edge of the Town of Franklin<sup>1</sup> (Child 1883:116; Towle 1989:118). Marsh Brook flows from Little Pond westwards about 2.74 mi (4.4 km) along its thread to Lake Carmi. Having existed for thousands of years, this approximately 1,375 acre (5.56 km<sup>2</sup>) natural body of water has, over time, infilled with sediment, particularly in its southern section (Figure 3). The predominant soils found within the project area are Cabot silt loam in the northern section of the APE in an area that has been heavily disturbed by cultivation and historic mills along Marsh Brook and Terric Medisaprists on the southern APE limits consisting of undrained soils on a bogland (USDA 2022). The natural route of parts of Marsh Brook has been altered by agriculture and infrastructure resulting in the redirecting of the flow of water into modified canals that run from the south of the APE into the forested area to the north of the project (see Figure 2).

The project area sits at an elevation of approximately 200 m (656 ft) above mean sea level (a.m.s.l.). Precontact era floral and faunal resources within the local and regional project area are likely to have included a regime of oak, white pine, beech ash, maple, spindly black spruce trees, shrubs particularly mountain holly, pitcher plants, sedges, sphagnum mosses (Thompson and Sorenson 2000). This regime provides important habitats for large mammals such as moose, bear, white-tailed deer, and many other smaller types. The local lake, streams, and wetlands provide a habitat for a variety of amphibians and fish as well as migratory and indigenous avian species. The local environment of Marsh Brook and its associated wetlands

<sup>&</sup>lt;sup>1</sup> The town was originally called 'Huntsburg,' but the name was changed in 1817.

does and has provided human populations with a variety of floral and faunal resources throughout millennia.

Given the relatively flat topography and proximity to Lake Carmi, the project's APE would have been an ideal location for precontact Native American peoples (Crock and Lanza 2022). As such, landforms along Marsh Brook could be expected to have been attractive for Native American populations and thus, are to be deemed archaeologically sensitive (Mandel and Knight 2019). Considering the anticipated age of the landforms in the general project area, a site may date from as early as 9,000 years ago. Due to the long period of potential occupation along this environmental context, it is possible that additional sites could be identified particularly considering the proximity to known archaeological sites identified along the southeastern shores of Lake Carmi and the presence of sensitive areas identified through the predictive model within the APE (Figure 4).



Figure 3. View south of Marsh Brook and modified terrain for the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 4. USGS topographic map with overlay of the project area location (red), in relation to habitability factors that correlate with the location of precontact era Native Americans.

#### **Archaeological Site Potential**

#### **Project Area Precontact Era Native American Sites**

Lake Carmi and associated tributaries including Marsh Brook, have been considered areas of intensive use and occupation by Native Americans prior to the European Conquest (Aldrich 1891: 32) and are considered a highly sensitive archaeological area. As part of the overall investigation for the proposed Marsh Brook Project, state records and archaeological reports were referenced to identify any known prehistoric Native American sites existing within or near the limits of the project area. Current Vermont Archaeological Inventory (VAI) mapping data indicates that there are no known archaeological sites within the current APE and the earliest recorded precontact era Native American site in the area is located 3.8 km (2.4 mi) northwest of the APE, along Lake Carmi. Site VT-FR-0061 was first reported by William Ross, an avocational archaeologist, indicating its location on the north side of a small stream and includes "Early Algonquian pottery, sinew stones, deep fire pits, and calcined bone. Both types of projectile points (triangular and notched)". The inventory is not clear if subsurface excavation was undertaken at the site. The mention of "triangular" projectile points likely represents Levanna types of the Middle to Late Woodland periods, ca. 1,500-400 B.P., whereas "notched" projectile points are more ambiguous in terms of temporal reference, but may represent earlier, Late Archaic period artifacts, ca. 6,000-3,000 B.P.

In 2019, the UVM CAP conducted Phase I and Phase II studies of site VT-FR-413, which was identified at the northern point of the day-use area, at Lake Carmi State Park directly south of Marsh Brook and 2.5 km (1.5 mi.) northwest of the present project area (Mandel and Knight 2019). Site VT-FR-413 is the only known site associated with Marsh Brook and represents a precontact Native American site identified on the basis of three chert debitage specimens, one milky quartz debitage specimen, and four fragments of fire-cracked rock. Ultimately the portion of site VT-CH-0413 within a previous aeration project APE was determined not to be eligible for listing on the National Register of Historic Places (see Figure 1).

More recently in 2021, the UVM CAP conducted a Phase I and Phase II survey at the southeast area of Lake Carmi, of site VT-FR-0425, located approximately 2.3 km (1.4 mi) northwest of the current project's APE (see Figure 1). This site was identified during the survey for a waterline installation and included a low-density lithic distribution that has been associated with small-scale tool manufacturing activities in the area (Crock and Lanza 2022). Based on the results of the Phase I and II studies, the project was redesigned to follow an older, existing waterline and avoid impacts to site VT-FR-0425.

The Vermont Division of Historic Preservation's (VDHP) predictive model for identifying precontact Native American archaeological sites indicates that the northern sections of the APE are not sensitive for archaeological sites (see Figure 4). Even though the model does not show the northern segment of the APE as sensitive, the presence of abandoned natural
channels for the brook, the higher and flat topography of the area, and the presence of nearby archaeological sites indicates there is the potential for the presence of precontact Native American sites on the northern segment of the APE (see Figure 2). The field inspection also confirmed the archaeological sensitivity of the northern APE segment after cores taken on this area indicates the presence of undisturbed soils which could contain unidentified archaeological sites below the current plowzone.

The environmental predictive model reveals a high sensitivity for precontact sites in the central area of the APE on the cultivated fields south of the forested area and on both sides of the modified canals of Marsh Brook (see Figures 2 and 4). The sensitivity of these areas was confirmed during the site visit where it was possible to identify undisturbed local soils below the current plowzone. These central portions of the APE may contain precontact sites as these dryer areas near Lake Carmi and along Marsh Brook were likely intensively used and occupied by Native Americans in the past (Aldrich 1891: 32). This is also supported by the presence of previously identified precontact archaeological sites on the northern section of Marsh Brook (Mandel and Knight 2019).

In addition to the central portion of the APE, its southern limits are also indicated to be highly sensitive for precontact sites in the environmental model. The archaeological sensitivity of these areas was confirmed during the field inspection, but the high degree of disturbance caused by the changes to Marsh Brook, the retention wall with a culvert on the southwest of the APE, and the modified canals, have caused an increase in water saturation in the bog at most of these sensitive areas that are currently underwater or are extremely wet (see Figures 3 and 4). The changes to the natural course of Marsh Brook increase the water levels in these southern sensitive areas on the bog and given that these locations are now flooded it is unlikely that precontact Native American sites are identified in this type of environmental context. The reduced sensitivity of areas of the APE in the central and southern sectors of the APE are also associated with the continuous use of the cultivated fields, the installation of a current power line in the forested areas along Marsh Brook, and where the construction of canals deviated the natural drainage of the Marsh causing a high degree of disturbance to the local soils (see Figure 2).

### **Project Area Historic Era Sites**

This part of 'South Franklin' has long been known as the 'Towle District.' Although Euro-American settlement in this area began shortly after the town was first settled in 1789, the family that it is now named for arrived in the early 1800s (Towle 1989:113). The family patriarch, Reuben Towle Sr. (1762-1849) was born in Chester, New Hampshire, and, as a teenager, served during the American Revolution from 1780 to 1782 (St. Albans Daily Messenger July 8, 1916). After his military service, he moved to Enfield, New Hampshire, married Sarah 'Sally' Clough (1763-1843) in 1786, "and settled on a farm near the Shaker settlement" (St. Albans Daily Messenger July 8, 1916). They had several children including Ann (1787-1856); Theophilus (1790-1869); Elizabeth (1792-1865); Sarah (1795-1875); Dorothy 'Dolly' (1798-1876); Unknown (1800); Jonathan (1802-1863); and Reuben (1804-1857) (St. Albans Daily Messenger July 8, 1916; Vermont Vital Records 1720-1908). Reuben Towle Sr.'s eldest daughter, Ann, married Tristum C. Colcord in ca. 1808, and in ca. 1810 they moved to Franklin, Vermont, where they, according to family history, "built a log cabin a little northwest of where the farmhouse now stands on the Boudreau farm"<sup>2</sup> (Towle 1989:114). Tristum Colcord died in 1813 and Reuben Towle Sr. traveled from New Hampshire to get his daughter (Towle 1989:114).

In 1814, Theophilus Towle, eldest son of Reuben Towle Sr., married Deborah Miller of Canada and moved to Franklin and may have initially settled on land belonging to his father on Lot 9 Range 15<sup>3</sup> (Towle 1989:114; 209; 272). Specifically, on November 19, 1812, Reuben Towle Sr. bought at least 40 acres in the northernmost part of Lot 9 Range 15 from William Hammond (Figure 5) (FLR 2:113). In February of 1815, Reuben Towle Sr. moved to Franklin (Towle 1989:114). Reuben Towle Sr. subsequently made several land purchases and sales. In 1815, Reuben Towle Sr. bought Lot 9 Range 16 (140 acres) from Samuel Hubbard (FLR 2:174). He sold much of the north part of this lot to Theophilus Towle on October 1, 1816 (FLR 2:210).<sup>4</sup> In 1823, Reuben Towle Sr. acquired the 'pond lot' Lot 9 Range 17 (140 acres) through a tax sale (FLR 3:27) but sold this to Reuben Towle Jr. in 1825 (FLR 3:72). On May 5, 1825, Reuben Towle Sr. bought back the north part Lot 9 Range 15 from Theophilus Towle (FLR 3:61).

<sup>&</sup>lt;sup>2</sup> Tristrum Colcord does not appear in the town land records, but his brother, John Colcord does, beginning with a purchase on Lot 9 Range 15 in 1810 (FLR 1:454). On March 3, 1821, John Colcord bought an additional 50 acres in the south half of Lot 9 Range 16 from Theophilus Towle, with the line of division being 57 rods and 4 links (943.2 ft) from the south line of the lot (FLR 2:374).

<sup>&</sup>lt;sup>3</sup> Theophilus Towle later built a house "across the Beaver Meadow" at the end of Little Pond Road on Lot 9 Range 16 (Towle 1989:114; 209; 272). This farm was later occupied by his son, Jonathan Towle (2<sup>nd</sup>) (who was named for his brother) Figure 6 and then his sons, Guy and George Towle (Child 1883:121; *St. Albans Daily Messenger* September 5, 1945; Towle 1989:209, 272-273). This house was torn down between ca. 1962 and 1983 (Google Earth 2022; Vermont Center for Geographic Information 1962).

<sup>&</sup>lt;sup>4</sup> Reuben Towle Sr. also briefly owned Lot 9 Range 14 (140 acres), the Joseph Yaw property, ca. 1819 (FLR 2:347).

In addition to Theophilus Towle another son of Reuben Towle Sr., Jonathan Towle,<sup>5</sup> and two of Reuben Towle Sr.'s daughters<sup>6</sup> "settled on adjoining farms" thereby establishing the 'Towle district' (St. Albans Daily Messenger July 8, 1916; September 5, 1945). Reuben Towle Sr. died on September 15, 1849, at 87 years of age, and his youngest son, Reuben Towle Jr. (1804-1857), succeeded him in the ownership of his farm (Figure 6) (St. Albans Daily Messenger July 8, 1916; September 5, 1945; Vermont Vital Records 1720-1908). Reuben Towle Jr. married Narcissus Stanley (1803-1889) in 1825 and their children included Jay (1826-1834); Reuben III (1828-1903); Anne/Anna (1831-1900); Jane (1833-1903); William Jay (1836-1912); Sarah (1840/1841-1907); Ermina (1845-1925); and Jackson (1846-1860) (St. Albans Daily Messenger September 5, 1945; Towle 1989:273; U.S. Census 1850; Vermont Vital Records 1720-1908). Reportedly, Reuben Towle Jr. lived on the same farm from 1815 until his death in 1857, taking care of his aging parents in the 1830s and 1840s (Child 1883:120; Franklin Grand Lists 1844; Towle 1989:115; U.S. Census 1830, 1840). The town's Grand Lists indicate that Reuben Towle Jr. (1804-1857) operated a sawmill valued at \$96-100 (for tax purposes) on this farm from ca. 1848/1849 to 1854/1855 (Franklin Grand Lists 1848-1855). This sawmill was probably a small enterprise as it did not produce enough to be listed on the Federal Manufacturing Census of 1850<sup>7</sup> (U.S. Census of Manufactures 1850).

Reuben Towle Jr.'s son, William Jay Towle (ca. 1836-1912) eventually succeeded him on this farm (Child 1883:120; *St. Albans Daily Messenger* January 13, 1912; July 8, 1916; September 5, 1945; Towle 1989:273). William J. Towle (1836-1912) married Caroline Marsh in 1857 and their children included Reuben Marsh Towle (1858-1933); Julia (1867); and Carmi (1867-1937) (*St. Albans Daily Messenger* January 13, 1912; October 7, 1933; September 5, 1945). In 1857, prior to taking over his father's farm, William Towle purchased a 65-acre parcel on the line between Lot 8 Range 15 and Lot 9 Range 15 that was formerly owned and occupied by his brother, Reuben Towle III (FLR 9:9). William J. Towle acquired his grandfather's / father's farm ca. 1860-1863 from his mother, who had remarried, and from his siblings (Franklin Grand Lists 1860, 1861; FLR 9:235; 9:236; 9:519; 11:284).<sup>8</sup> William Towle added a few parcels to the old farm including the 65-acre parcel that he bought in 1857 (FLR 9:9) and the land formerly owned by Lathrop Marsh (also known as the Yaw place) on Lot 9 Range 13 and Lot 9 Range 14 from Philo Kendall for \$5,000 on November 21, 1865 (Figure 7) (FLR 10:43). In

<sup>&</sup>lt;sup>5</sup> Johnathan Towle (1802-1863) worked as a carpenter and joiner for "a few years" before purchasing a tract of land on Lot 8 Range 16 and "proceeding to clear off the timber for a farm" (FLR 3:305; 4:88; *St. Albans Daily Messenger* July 8, 1916; Towle 1989:272-273; *Vermont Vital Records 1720-1908*). He married Lorena Daines in 1831 and their children included Edwin R. (1833-1921); Susan (1836-1904); and Mahala (1842-1913) (*St. Albans Daily Messenger* July 8, 1916; Towle 1989:272-273; U.S. Census 1850). Edwin R. Towle took over his father's farm (see Figure 6) who, in turn, passed it on to his son, Herman E. Towle (*Burlington Free Press* August 15, 1921; Towle 1989:272-273).

<sup>&</sup>lt;sup>6</sup> Anne Towle (1787-1856) married John Carpenter Colcord (1787-1869), her first husband's brother, in 1814, and settled on a farm located just north of the Old Towle Cemetery (see Figures 6 and 7) (Towle 1989:115, 272). Her sister, Sarah Towle, married Joseph Yaw, a shoemaker, and settled on a farm that "joined the back" (west side) of Reuben Towle Sr.'s farm (Towle 1989:114. 272).

<sup>&</sup>lt;sup>7</sup> The threshold value of annual product was \$500 for listing in the federal census.

<sup>&</sup>lt;sup>8</sup> Reuben Towle III transferred his interest in his father's estate to his mother on September 19, 1857 (FLR 9:15).

1883, William J. Towle's farm was listed as 360 acres with 100 fruit trees and 40 cows (Child 1883:377).

By the early 1900s, William J. Towle's farm was, at various times, either rented out to tenant farmers or run by his sons (*St. Albans Weekly Messenger* November 8, 1906). On November 24, 1909, William J. Towle sold his farm (except the house and barn on the half acre where he then lived [being one of three homes on the property] and two small lots) to his sons, Ruben M. Towle (1858-1933) and Carmi L. Towle (1867-1937), in exchange for lifetime support and an annual stipend of \$150 (FLR 13:658). Carmi Towle transferred his interest in the property to Reuben M. Towle in 1910 and went into "trade at Franklin Center" (FLR 17:168; 14:458; *St. Albans Daily Messenger* January 13, 1912; September 5, 1945). Reuben M. Towle married Helen Sandilands (1876-1937) of Buxton, England, in 1905 (*Burlington Free Press* October 26, 1937; *St. Albans Daily Messenger* October 7, 1933). Upon his death, Reuben M. Towle's 268-acre farm passed to his only child, Carolyn Towle (1907-1997), the wife of Frederick 'Fred' Boudreau (1904-1992) (*Burlington Free Press* October 26, 1937; Towle 1989:273; *Vermont Wills and Probate 1749-1999*, Estate of Reuben M. Towle, Franklin Vt.)

### Lot 9 Range 15

On February 15, 1800, the original grantee, Dr. Ebenezer Marvin, a former Revolutionary War army surgeon, sold Lot 9 Range 15, to Samuel Sheldon of Litchfield, Connecticut (FLR 1:54; St. Albans Daily Messenger January 12, 1882). Samuel Sheldon sold this lot to William Hammond (1783-1846) of Sheldon, Vermont (FLR 1:418). In 1810, William Hammond sold about 50 acres of this lot described as beginning at the southeast corner of the lot then running west 109 rods (1,798.5 ft); then north 76 rods (1,254 ft); then east 109 rods (1,798.5 ft); then south 76 rods (1,254 ft) to John Colcord (see Figure 5) (FLR 1:454). On November 19, 1812, Hammond sold another 50 acres in Lot 9 Range 15 to Josiah Tuttle (FLR 2:114). This parcel began at the northeast corner of Colcord's parcel; then ran to the northwest corner of Colcord; then south to the southwest corner of Colcord; then west to the southwest corner of the lot; then north far enough to make 50 acres (FLR 2:114). On the same day, November 19, 1812, William Hammond sold the remainder of Lot 9 Range 15, estimated at 40 acres, to Reuben Towle Sr. of Enfield, New Hampshire<sup>9</sup> (see Figure 5) (FLR 2:113). In 1817, Reuben Towle sold all his parts of Lot 9 Range 15 along with the south half of Lot 9 Range 16 to his son, Theophilus Towle (FLR 2:371). Theophilus Towle sold the same land back to Reuben Towle Sr. on May 5, 1825 (FLR 3:61).

Meanwhile, in 1816, Josiah Tuttle of Sheldon, Vermont, sold his 50-acre parcel on Lot 9 Range 15, then bounded south by John Colcord; east and north by Reuben Towle Sr., and west by Joseph Yaw's farm, to Henry Currier of Franklin, Vermont, for \$300 (Figure 5) (FLR 2:237). Henry Currier sold the same property to Thomas Marsh in 1817 but bought it back in 1819 (FLR 2:238; 2:346). On March 30, 1827, Henry Currier sold this property to Horace Currier (1809-1887) for \$400 (FLR 3:195; U.S. Census 1850; *Vermont Vital Records 1720-1908*). In a

<sup>&</sup>lt;sup>9</sup> The Currier and Towle families appear to be interconnected through the Clough family.

mortgage dated 1840, Horace Currier described this 50-acre parcel as where he then lived (FLR 5:120). On November 4, 1854, Horace and Jane (Olmstead) Currier along with Betsey Currier sold this 50-acre property to Reuben Towle Jr., their neighbor to the north (FLR 8:241; *Vermont Vital Records 1720-1908*).

#### Lot 8 Range 15

The old house site on the west side of Towle Neighborhood Road appears to have been located on or very close to the boundary between Lot 8 Range 15 and Lot 9 Range 15 (see Figure 5). On November 6, 1798, Jonathan Hunt of Hinsdale (now Vernon), Vermont, 'gentleman,' sold Lot 8 Range 15 (140 acres) to Ephraim Joy (FLR 1:43). On January 12, 1799, Ephraim Joy sold the northern part of Lot 8 Range 15 to James Stevenson [aka. Stephenson] (ca. 1752-1822), a British soldier who had switched sides during the American Revolution (FLR 1:56; Hemenway 1871:231). In August of 1807, Joy sold 58 acres in the southern part of Lot 8 Range 15 to Samuel Hubbard for \$200 (FLR 1:2811). In October of that year, Hubbard sold the same 58 acres, then described as being bounded north by James Stevenson and south, east, and west by the lot lines, to Ezra Weed for \$232 (FLR 1:283). Ezra Weed sold the same land to Clark Eldridge of Franklin for \$300 (FLR 1:289). On May 27, 1813, Clark Eldridge, then of Clarendon, Vermont, sold the same land to William Wylie, also of Clarendon, for \$300 (FLR 2:108). On January 5, 1814, Wylie sold this parcel back to Clark Eldridge (FLR 2:140). On March 3, 1814, Clark Eldridge (still of Clarendon) sold the same property to Mosley Hull of Wallingford, Vermont (FLR 2:141). On April 17, 1819, Moseley Hull of Wallingford sold the 58 acres to James Stevenson (FLR 2:301). It appears that the James Stevenson farm was at some point sold to John Hammond. In January of 1836, Reuben Towle Jr. (1804-1857)<sup>10</sup> bought 68 acres in the south end of Lot 8 Range 15 from John Hammond for \$400, which was bounded south on Reuben Towle, east by Jonathan Towle, north by Peter Chase, and west by Lathrop Marsh (FLR 4:331).<sup>11</sup>

On September 6, 1852, Reuben Towle Jr. sold 65 acres mostly on Lot 8 Range 15 but also extending 10 rods (165 ft) onto Lot 9 Range 15 and all bounded on the east by the west side of the Towle Neighborhood Road to Reuben Towle III (Figure 8) (FLR 7:398). This parcel was more particularly described as beginning at the northwest corner of land "I own" on Lot 8 Range 15; on the line between me and Peter Chase; then running east to the road; then south on the west line of the road to the south line of the lot and then 10 rods further; then running west to the west

<sup>&</sup>lt;sup>10</sup> Reuben Towle III (1828-1903), son of Reuben and Narcissus Towle, was born on the old homestead (Child 1883:120-121). Reuben Towle III's first wife was Eliza Button and his second wife was Clara Bowman, the daughter of Henry Bowman (Child 1883:120-121). Reuben Towle III's children were Hiram B. (1851-1933); William Henry (1854-1931); Eliza (1859-1940); and Martha (1868-1951) (Child 1883:120-121; *Vermont Vital Records 1720-1908*). Reuben Towle III's son, Hiram B. Towle, settled on the farm previously owned by Hiram Bowman, which adjoined that of his father (see Figure 7) (*Burlington Free Press* October 21, 1933).

<sup>&</sup>lt;sup>11</sup>On January 30, 1836, Reuben Towle Jr., bought 17.5 acres on Lot 9 Range 16 from Theophilus Towle (measuring 2,202.75 ft north-south and 346.5 ft east-west) (FLR 4:332). This land lies to the east of the possible sawmill location.

line of the lot; then north on the west lines of Lot 9 Range 15 and Lot 8 Range 15 to the beginning (FLR 7:398). On September 12, 1857, Reuben Towle III purchased a 166 acres farm, being part of Lot 8 Range 15; part of Lot 7 Range 15, and part of Lot 7 Range 16 located just to the north on the Towle Neighborhood Road (but in School District #8) from Henry Bowman (FLR 9:6). This 166-acre farm is where Reuben Towle III "since resided" and which was later owned by his son, William H. Towle (see Figure 7) (Franklin Grand Lists 1856-1858; *St. Albans Daily Messenger* April 1, 1903). On the same day that he bought his new farm, Reuben Towle III and his wife, Clara, sold the 65 acres on the boundary between Lot 8 Range 15 and Lot 9 Range 15 to his brother, William J. Towle for \$2,000 (see Figure 7) (FLR 9:9). The house on or very close to the boundary between Lot 8 Range 15 and Lot 9 Range 15 was demolished between ca. 1941 and 1953 (Figures 9 to 14) (Woltz Studios Inc., 1941; United States Geological Survey 1953).

### **Historic Era Sites Location**

Reuben Towle Jr. (1804-1857) operated a sawmill on his farm in Franklin from ca. 1848/1849 to 1854/1855.<sup>12</sup> The LiDAR imagery suggests that the mill was probably located in the little incised valley feature in the forested area on the northwest section of the APE (see Figures 2 and 14). Surficial evidence of the mill was limited, but it was possible to identify features associated with a dam during the field inspection with a minimum 8 to 10 ft fall with a fairly level, high-sided area upstream that could create a reasonably sized impoundment. The dam consisted of a partial stone wall along the east and west abandoned banks of Marsh Brook within the forested area in the northwest section of the APE and was potentially associated with the mill (see Figures 2 and 14).

Based on the land record research conducted for this report, the house site on the west side of the road is more likely than not to be the original Theophilus / Reuben Towle Sr. homestead that was built ca. 1814 on land acquired by Reuben Towle Sr, in 1812. Reuben Towle Sr. did not own the land to the south where the standing residential structures now

<sup>&</sup>lt;sup>12</sup> The other sawmill indicated on Marsh Brook on the Walling map of 1857 is related to Yaw family (see Figure 6). Joseph Yaw (1783-1825) married Sarah Towle (1795-1875), daughter of Reuben Towle Sr., in 1816 and they had five children between 1816 and 1825 (Yaw-Yeaw Family Society 1962:117; St. Albans Daily Messenger November 3, 1945; Towle 1989:272). In 1806, Joseph Yaw (Sr.) purchased Lot 9 Range 14 from Ephraim Hendee (see Figure 5) (FLR 1:261). Through a complicated history including sales to relatives and buybacks, a seizure by the United States Government (a result of bail put up for Thomas Marsh on a charge of smuggling), the death of Joseph Sr. by a falling tree in 1825; the widow and two sons, Joseph and Charles, continued to reside primarily on the north 111 acres of the lot into the mid-1800s (e.g., see FLR 2:299-300; 2:347; 6:125; 6:126; 6:118; 6:229; 7:344; 7:345; 7:349; Vermont Death Records 1909-2008; Vermont Vital Records 1720-1908). The town Grand Lists indicate that Charles B. Yaw (1818-1878), son of Joseph Yaw Sr., who was described in a family history as a farmer turned mechanic, operated a sawmill in Franklin in at least ca. 1849-1851 (Franklin Grand Lists 1849, 18488, 1851; Yaw-Yeaw Family Society 1962:118). Charles B. Yaw sold out to his brother, Joseph Yaw, in ca. 1851-1852 and moved away before 1853 (St. Albans Daily Messenger November 3, 1945). Joseph Yaw and his mother the family homestead on Lot 9 Range 14 (except six acres land sold to Elvira (Yaw) Whitney, a daughter of Joseph and Sarah Yaw and the second wife of Edward Whitney, and the small cemetery now known as the Marsh Cemetery) as well as 105 acres on Lot 9 Range 13 to Lathrop Marsh on September 22, 1855 (see Figure 6) (FLR 8:315). The sawmill may have been continued by Marsh, but this was not checked for this report.

associated with the Towle/ Bourdreau farm are located until the 1850s.<sup>13</sup> The house site in/near the current project area appears to have been later owned by Ruben III and then William J. Towle before those individuals succeeded in the ownership of the land to the south. After William J Towle, the occupancy history of the house in the project area is not clear.<sup>14</sup> It may have been rented or sold or used to house farmhands. It was torn down between ca. 1941 and 1953. The LiDAR imagery and the field inspection suggest that the former house site may be located on the northwest limits of the APE (see Figures 4 and 14). Phase I subsurface testing may be able to confirm the date of construction for the structure in the current project area as well as the location of features associated with the mill.

<sup>&</sup>lt;sup>13</sup> The Vermont Historic Sites and Structures Survey (SR #0607-77) of ca. 1983 indicates that the house opposite the end of Little Pond Road (on the west side of Towle Neighborhood Road) could, based on an anecdotal account date to ca. 1815 but it was dated by the state on the basis of its architecture as ca. 1865. The house to the south, now known as the Bourdreau place, is a Gothic Revival structure that was built ca. 1850. Both houses appear to be located on the parcel acquired by Reuben Towle Jr. from Horace Currier in 850s. Therefore, the earliest Towle house could be in the present project area.

<sup>&</sup>lt;sup>14</sup> Possibly: On March 29, 1879, W.J. Towle sold "one acre of land and the building thereon" being "the first house on the same side of the highway north of the one in which I live on the East Franklin Road" to Julius Mason for \$200 (FLR 11:172). On February 11, 1886, Julius Mason sold the same to Mary Ann Mayo (FLR 12:120) who sold the same to Haskell Mayo October 16, 1907 (FLR 13:591); who sold the same to William Mercy on September 28, 1914 (FLR 14:99). This land was mortgaged by Mercy to H.F. Bingham in 1916 and it is not clear if this was ever discharged (FLR 14:272).



Figure 5. Approximate location of the original lots in the Town of Franklin superimposed onto the 1922 USGS topographic quadrangle.



Figure 6. Detail of H.F. Walling's *Map of the Counties of Franklin and Grand Isle, Vermont* (1857). Note on this map, "R. Towle" is Reuben Towle Jr. in the text, and "R. Towle Jr." is Reuben III in the text.



Figure 7. Detail of the map of the Town of Bakersfield from F.W. Beers' *Atlas of Franklin and Grand Isle Counties, Vermont* (1871).



Figure 8. Reuben Towle III (1828-1903) - Find a Grave Memorial



Figure 9. Detail the 1924 *Enosburg Falls, VT.* 15-Minute Topographic Quadrangle, showing the project area (USGS 1924).



Figure 10. Detail of an aerial photograph taken in 1941, showing the project area (Woltz Studios Inc., 1941).



Figure 11. Detail of the 1944 *Enosburg Falls, VT.* 15-Minute Topographic Quadrangle, showing the project area (USGS 1944; Based on 1941 photography).



Figure 12. Detail the 1953 *Enosburg Falls, VT.* 15-Minute Topographic Quadrangle, showing the project area (USGS 1953).



Figure 13. Detail of an aerial photograph taken in 1962, showing the project area (Vermont Center for Geographic Information 1962).



Figure 14. LiDAR imagery, showing the general project area and areas of possible historic period archaeological interest.

#### **Desk Review**

As part of the desk review, the UVM CAP utilized the Vermont Division of Historic Preservation's (VDHP) predictive model for identifying pre-contact Native American archaeological sites. The Marsh Brook Project area scores 40 on the Predictive Model, due to its location and proximity to Marsh Brook (12), intermittent streams (16) and associated wetlands (12) above the threshold (32) to be considered archaeologically sensitive. In addition to the paper-based predictive model, the desk review uses a Geographical Information System (GIS) that operationalizes the paper-based model. It does this by applying the VDHP's sensitivity criteria to all lands within the State of Vermont. In these maps, archaeological sensitivity is depicted by the presence of one or more overlapping factors, or types of archaeological sensitivity (i.e. proximity to water, etc.). The Marsh Brook Project area contains overlapping sensitivity factors that include proximity to level terrain, proximity to the brook, wetlands, as well as closeness to streams (see Figure 4).

A LiDAR topographic map of the project area shows that all sections of the APE have been modified by historic and modern agricultural activities, the construction of canals, roads, and the modifications to the natural stream deviating from Marsh Brook (Figure 15). The LiDAR imagery also indicates the modification of terrain in the northwest of the APE that can potentially be associated with the foundations of the Theophilus / Reuben Towle Sr. homestead, and the dam in the forested area possibly associated with the historic mill that was identified along the brook (see Figure 15).

Based on the desk review and background research, there is a high potential for the presence of both precontact Native American and historic archaeological sites within the northern and central sectors of the APE despite modern superficial modifications of the terrain. After consideration of the historic background and the field visit, the archaeological sensitivity of these areas was confirmed, and significant intact features or other cultural resources could be present within the northern and central sections of the APE.



Figure 15. LiDAR topographic map showing the project area of the proposed Marsh Brook Project and identified archaeologically sensitive areas, Franklin, Franklin County, Vermont.

#### **Field Inspection**

The field inspection for the project area was conducted by UVM CAP archaeologist Jorge L. Garcia Ph.D. on July 27, 2022. At the time of the inspection, the weather conditions were warm, breezy, and sunny. All the APE and its immediate surroundings were visually inspected and recorded in digital camera color format during the field visit.

### **North APE Segment**

The north APE segment is comprised of a forested area with immature trees along Marsh Brook extending up to 200 m (656 ft.) east of Towle Neighborhood Road and at an elevation of 660 ft. a.m.s.l. (see Figure 15). The forested area has been consistently modified with the deviation of Marsh Brook and the construction of a power line oriented north to northwest that crosses the brook within the APE (Figure 16). The forested area's local soils have also been disturbed by historic and current activities particularly the deviation of Marsh Brook, the construction of canals, the use of a historic mill, and the construction of a powerline. Soil cores taken in the banks of Marsh Brook within the forested area indicate a soil sequence of wet areas consisting of Cabot silt loam including an organic layer 0 to 3 cm (1.2 in.) deep, followed by A layer 3 to 23 cm (1.2 in to 9 in.) very dark silt loam, and a Bg dark olive gray channery silt loam up to 43 cm (16.9 in) in depth (Figure 17).

Although there have been extensive modifications in this part of the APE the soil cores show preserved soils below the plow zone with the potential to contain archaeological sites. As a result of the field inspection within this forested area, it was also possible to identify lines of stones visible on both banks of Marsh Brook that are potentially associated with a sawmill dating to ca. 1848/1849-1854/1855 (see Figures 2 and 6). The lines of stones are oriented northwest in a narrow area within both banks of the Brook, on an ideal location for the construction of an embankment (Figures 18, 19, 20).

The northern APE section is also comprised of the cultivated fields that begin on the north APE boundary up to 200 m (656 ft.) south of the project limits, at the intersection with the modified channel deviating from Marsh Brook (see Figure 15). These more elevated areas reach up to 670 ft. a.m.s.l., which are dryer, have been extensively modified by agriculture and by other changes along the brook, and that during the time of the inspection was being used as hay field (Figure 21). Hand soil cores taken within these northern plowed fields are characterized by Tunbridge Woodstock fine sandy loams that are very rocky with a soil sequence comprised of an organic layer up to 13 cm. in depth (5 in.), followed by E soils up to 20 cm (8 in.) deep of a dark gray fine sandy loam, and a Bs dark reddish brown soil up to 40 cm (16 in.) deep of a fine sandy loam (Figure 22). The archaeological sensitivity of these areas was confirmed during the site visit given the preservation of intact local soils below the current plowzone with the potential to contain unidentified precontact Native American and/or historic archaeological sites (see Figure 2).

Within the northern segment of the APE, it was also possible to identify the potential location for the Theophilus / Reuben Towle Sr. homestead located on the northwest most corner of the project area, just west of Towle Neighborhood Road (see Figure 2). With an elevation of 660 ft. a.m.s.l., this plowed area was planted with hay during the survey (Figure 23). Hand soil cores of the northwest corner of the APE were similar to those taken on the forested area on the north segment, consisting of Cabot silt loam with a similar soil profile. The potential location for the foundation of the house was identified resulting in a very shallow organic layer up to 5 cm (2 in.) deep, followed by gravel fill (Figure 24). The field visit confirmed the archaeological sensitivity of this area, particularly concerning the high potential for containing a historic site.



Figure 16. View north of the powerline crossing Marsh Brook and modified terrain for the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 17. View of hand soil core taken east of the creek on the forested northern area of the APE for the proposed Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 18. View east of the line of stones and modified terrain for the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 19. View west of the line of stones and modified terrain for the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 20. View north of the line of stones and modified terrain for the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 21. View south of the northern plowed fields and modified areas within the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 22. View of hand soil core taken on the plowed fields in the northern APE segment for the proposed Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 23. View north of the cultivated fields in the northwest corner of the APE within the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 24. View of hand soil core taken on the cleared fields in the northwest corner of the APE of the proposed Marsh Brook Project, Franklin, Franklin County, Vermont.

### **Central APE Segment**

The central APE segment consists of the plowed fields located just south of the Marsh Brook channel, directly east of Towle Neighborhood Road, and north of Little Pound Road (see Figures 2 and 15). With an elevation of 656 ft. a.m.s.l., these elevated fields have been modified by past and current agricultural activities, the modifications to Marsh Brook, and the construction of Little Pound Road (Figure 25). The plowed fields of the central APE segment are characterized by Westbury stony fine sandy loam. Hand cores taken along these fields indicate a soil sequence of 0 to 10 cm (0-4 in.) organic layer, followed by a Bh black soil up to 22 cm (8.6 in) in-depth, and a Bs dark brown soil up to 40 cm (16 in.) below the surface (Figure 26). The archaeological sensitivity of the central APE segment was confirmed during the field visit, given the presence of undisturbed soils with the potential to contain unidentified archaeological sites below the current plowzone.

### **South APE Segment**

The southern APE segment consists of the bog area directly south of Little Pond Road and east of Towle Neighborhood Road up to the southern limits of the project (see Figures 2 and 15). Intensive modifications of this area include the construction of a retention wall and culvert that have increased the saturation of water in the bog, flooding some areas or getting the soils extremely wet (Figures 27 and 28). The archaeological sensitivity of these areas was confirmed during the field inspection, but the high degree of disturbance caused by the changes to Marsh Brook, the retention wall and culvert on the southwest of the APE, as well as the modified canals, have caused an increase in water saturation in the bog at most of these sensitive areas that are now underwater or are extremely wet (Figures 29 and 30). The changes to the natural course of Marsh Brook increasing the water levels in these southern sensitive areas on the bog limits archaeological research, and it is unlikely that precontact Native American sites are identified in these flooded areas. The reduced sensitivity of areas of the APE in the central and southern sectors of the APE is also associated with the continuous use of the cultivated fields, the installation of a current power line in the forested areas along Marsh Brook, and where the construction of canals deviated the natural drainage of the Marsh causing a high degree of disturbance to the local soils (see Figure 2 and 15).



Figure 25. View south of the cultivated fields and modified areas of the central APE segment within the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 26. View of hand soil core taken on the plowed fields in the central APE segment of the proposed Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 27. View west of the culvert at the south APE segment and modified areas within the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 28. View west of modified areas at the south APE segment within the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 29. View north of the bog and flooded areas at the south APE segment within the Marsh Brook Project, Franklin, Franklin County, Vermont.



Figure 30. View of hand soil core taken on the southern APE segment of the proposed Marsh Brook Project, Franklin, Franklin County, Vermont.

#### **Conclusions and Recommendations**

The University of Vermont Consulting Archaeology Program conducted an Archaeological Resources Assessment of the proposed Marsh Brook Restoration Project located on a 389-acre farm extending on both sides of the Towle Neighborhood Road (see Figures 1 and 2). The project proposed by FCNRCD intends to restore a wetland and potentially alter the dimensions of a ditch network and a stream network associated with Marsh Brook. The ARA of the Marsh Brook Project resulted in the identification of archaeologically sensitive areas within the cultivated fields on the northern and central portions of the APE that potentially contain unidentified precontact Native American sites within and below the current plowzone (see Figures 2 and 15).

Based on the field inspection conducted on July 27<sup>th</sup>, 2022, there are also two possible historic period archaeological sites within the project area. These include a sawmill dating to ca. 1848/1849-1854/1855 on Marsh Brook east of the road and a residential site north of Marsh Brook on the west side of the road, which appears to have been built ca. 1814-1815, (but may date to 1852) and was demolished between ca. 1941 and 1953 (see Figures 2 and 15). The archaeological sensitivity of these areas is based upon a desk review, historic background research, and the site inspection including soil cores that indicate no ground disturbance beyond historic structures in the northern APE segment (see Figure 15). The south APE segment of the proposed project is also archaeologically sensitive, but it is unlikely that archaeological sites are identified in these areas, given the heavily disturbed and wet soils as a result of the modification to Marsh Brook and the associated bog.

Based on the results of the ARA, the UVM CAP recommends that a Phase I Site Identification Survey involving subsurface testing be conducted within the APE on the identified archaeologically sensitive areas (see Figures 2 and 15). Subsurface testing is recommended at the precontact sensitive zones on the north and central APE segments, given soil cores taken at these segments include a plowzone underlain by intact subsoils (see Figure 15). This work will be done to determine the presence/absence of precontact era Native American sites prior to the restoration project. In addition, is also recommended that subsurface testing is undertaken in the northwest APE limit and surrounding the dam areas identified during the field inspection to determine the presence/absence of historic sites or materials associated with the sawmill and at the residential structure's foundation identified on the consulted historic maps and through hand soil cores taken at these location (see Figure 15).

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Vermont Division for Historic Preservation *Project Review Form*  Emailed to ACCD.projectreview@vermont.gov on May 1, 2025

This form is to be used for both the Preliminary and Final Project Review for clean water projects funded by the Department of Environmental Conservation (DEC) Clean Water Initiative Program (CWIP). See applicable sections below.

# Preliminary Project Review Section

To start the VDHP review process for CWIP-funded Clean Water Projects, please complete this form and submit it to the Vermont Division for Historic Preservation (VDHP) at <u>ACCD.projectreview@vermont.gov</u> with the information requested below. This Preliminary Project Review form, once completed and signed by VDHP, should be submitted as a project deliverable.

This is for non-exempt CWIP project types or conditionally exempt that have failed to meet the project qualifications. Exempt project types should NOT submit this form. Please refer to the CWIP Funding Policy for a listing of exempt and conditionally exempt project types. The CWIP Funding Policy can be found here: <u>https://dec.vermont.gov/water-investment/cwi/grants#policy</u>

For questions on architectural resources, archaeology, and below-ground resources, please contact Scott Dillon at (802) 272-7358 or <u>scott.dillon@vermont.gov</u>.

# 1. Contact information:

- a. Contact name:
- b. Email address:
- c. Phone number:
- 2. WPD Project Title:
- 3. WPD ID:
- Project site map: Please attach a project site map. An annotated Google map or <u>ANR</u> <u>Atlas</u> map will suffice but professional design plans are also welcome. An example image is provided below. Site map should outline:
  - a. Project Area of Potential Effects<sup>1</sup> with clearly marked GPS coordinates for project boundaries.

<sup>&</sup>lt;sup>1</sup> The project APE or "area of potential effects" means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The

#### §106 Project Review Form

### For Clean Water Projects funded by the DEC Clean Water Initiative Program

b. Proposed ground disturbance locations. Note that stream bank regrading is considered ground disturbance.



# 5. **Project information**:

- a. Select CWIP project type from drop down (if not listed, it's categorically exempt)
   i.
- a. Please provide a short description of the project's proposed scope of work (CWIP Preliminary Design Report is acceptable instead)
- b. Are there other Agencies or funding partners involved?: Yes No i. **If yes**, who?
- c. Does the project involves ground disturbance?: Yes No
  - i. **If yes,** please describe type and extent of ground disturbance. Specifically,
    - 1. Whether disturbance will be performed by hand or heavy machinery,
    - 2. The estimated total acreage and maximum depth of disturbance, and

APE is influenced by the scale and nature of an undertaking and may be different from different kinds of effects caused by the undertaking [36 C.F.R. § 800.16(d)]. When determining a project's APE remember to consider/include extent of restoration footprint; new, upgraded or existing access or haul roads; staging, storage, and stockpile areas; disposal sites or waste areas; borrow areas and other source locations for fill material; and areas impacted by drainage diversions or mechanical tree clearing and similar landscape alterations.

### For Clean Water Projects funded by the DEC Clean Water Initiative Program

- 3. The history of prior naturally-caused or man-made ground disturbance to the site (if known):
- d. Will the project cause direct or indirect impact or disturbance to any man-made building or structure more than 50 years old (including dams, culverts, and bridges) or to any federally listed historic building or structure?
  - Yes No Unknown
    i. If yes or unknown, provide any known details on the buildings or structure(s) location/condition and extent of proposed impact or disturbance. Please include whether the structure is listed in the National Register of Historic Places if known:
- e. Is the project APE located within, intersect with, or adjacent to a state- or federally listed historic district, Designated Downtown or Village Center?

Yes No Unknown

*Email this form and supporting materials to* <u>ACCD.ProjectReview@vermont.gov</u> Please copy scott.dillon@vermont.gov

\_\_\_\_\_

# TO BE COMPLETED BY VDHP:

Historic Properties/Sites Affected

Potential for Architectural Historic Properties to be affected – A Qualified Architectural Historian or Historian Consultant\* is required (\**please see* <u>pre-approved list of consultants</u>)

Determination of Eligibility required

Comments:

Potential for Archaeological Historic Properties to be affected – a Qualified Archaeological Consultant\* is required (\**please see* <u>pre-approved list of consultants</u>)

Archaeological Resource Assessment (ARA) required Phase 1 archaeological investigation required

Comments:
Vermont Division for Historic Preservation Updated: 11/29 §106 Project Review Form For Clean Water Projects funded by the DEC Clean Water Initiative Program No Historic Properties/Sites Affected/No Effect No Historic Resource Present in Area of Potential Effect Work will have No Effect on Historic Resource

Comments:

Vermont State Historic Preservation Office Concurrence and Date:

X: \_\_\_\_\_

Vermont Division for Historic Preservation §106 Project Review Form For Clean Water Projects funded by the DEC Clean Water Initiative Program Final Project Review Section

To complete Final Project Review, re-submit this VDHP Project Review Form with the following additional elements included. Note that this should be added to the VDHP-signed version of the Preliminary Review Form so VDHP can reference their prior guidance on this project. This Final Project Review Form, once completed and signed by VDHP, should be submitted as a CWIP project deliverable.

- 1. Please provide a short description of any changes to the project's proposed scope of work since the Preliminary Project Review:
- 2. Please attach:
  - a. Final (100%) Design Plans
  - b. Project narrative description of scope of work (CWIP Final Design Report will suffice)
  - c. Any historical resource assessments, or determination of eligibility forms
  - d. Any archaeological resource assessments, other archaeological reports, or end-offield documents
  - e. Any Treatment Plans

*Email this form and supporting materials to* <u>ACCD.ProjectReview@vermont.gov</u> Please copy <u>scott.dillon@vermont.gov</u>

TO BE COMPLETED BY VDHP:

\_\_\_\_\_

No Historic Properties/Sites Affected/No Effect No Historic Resource Present in Area of Potential Effect Work will have No Effect on Historic Resource Comments:

No Adverse Effect Adverse Effect Project Treatment Plan or other agreement documents executed

Other:

## Vermont State Historic Preservation Office Concurrence and Date:

X: \_\_\_\_\_

Alternative 2 + Floodplain reconnection in wooded area and new bankfull structure at Towle Neighborhood Road

- 1.8 acres of floodplain restoration from low to high
- 2 acres of riparian buffer plantings
- Excludes easements
- 0.9 acres of floodplain reconnection (low to high) with BDAs/PALs in wooded section downstream
- Culvert replacement with bankfull structure at Towle Neighborhood Road

#### Estimated Phosphorus Credit for Stream Stability and Storage

SubUnit(s) IDs: 53\_M4T2.3S8.05\_PLG\_C00, 53\_M4T2.3S8.05

Town: FRANKLIN

Projects Included: Plant 50-Foot Riparian Area, Lower Floodplain, Restore Channel Roughness and Wood, Replace Culvert (Wbkf<50%), shallow channel (< 2%)

Stream Names: Marsh Brook

Project Area (acres): 2.7

#### Stream Stability and Storage Credit Summary

	Year 1 Credit (kg)	Year 2+ Credit (kg/yr)	Estimated 15 Yr Lifespan Credit (kg)
Floodplain Connectivity (I	Lateral - Vertical)		
Stream Stability	1.6	1.6	24.0
Storage	24.5	12.3	196.1
Stream Connectivity (Lon	gitudinal - Temporal)		
Stream Stability	3.2	3.2	48.0
TOTAL	29.3	17.1	268.1
		-	5.3 kg/yr riparian buffer (see attached spreadsheet) = 22.4 kg/yr





March 27, 2025

Franklin County Natural Resources Conservation District (FCNRCD) Attn: Lauren Weston 50 South Main Street, Suite B20 St. Albans, VT 05478

Dear Lauren Weston,

This letter affirms our commitment to working with FCNRCD on a final design step for a stream restoration project on a portion of Marsh Brook and its tributary on the land along Little Pond Road in Franklin, VT of which we are the owners. This project does not include wetland restoration or wetland easements which were previously discussed during the alternatives analysis phase. We have reviewed the 30% design and proposed alternatives for the stream restoration project area that were generated during an earlier phase, and we are ready to move forward with a final design step for the stream restoration project.

We would like FCNRCD to apply for funds to begin work on this final design project through the Missisquoi Bay Basin Clean Water Service Provider.

We understand that there is no cost to the landowner for projects like this and that some meetings would be required to review materials and provide information for the site. We understand that FCNRCD and selected engineers and partners may need access to the land which we are willing to provide given communications occur prior to anyone visiting the land and our permission being granted. We are very interested in being active partners during this design process to ensure that the design aligns with our needs and future goals for this land.

We understand that having the work of the final design step move forward does not necessarily guarantee future implementation work. We understand that our permission and commitment to any future stages of this project will be sought separately, for activities such as implementation and monitoring & maintenance.

Thank you,

tmy Adams

. Travis & Amy Adams

M

#### Primary

## **CWSP** funding



Dean Pierce (NRPC) to me 3 days ago Details

Hi Amy,

Here is the relevant language.

#### **CWSP Conflicts**

Staff of either the CWSP or of the CWSP host entity shall not respond to a CWSP RFP in an individual capacity (i.e. proposing a project that the staff member would manage outside of their employment working for the CWSP/CWSP host entity). Projects funded by the CWSP shall not be located on property owned by individuals employed by the CWSP or CWSP host entity, unless the BWQC is expressly notified of this fact in writing, the BWQC expressly acknowledges this notification, and the BWQC explicitly votes to approve the project at this location.

Step/Phase	Final Design
Basic Eligibility	Yes
Applicant Name	Lauren Weston
Applicant Organization	Franklin County Natural Resources Conservation District
Applicant Email	lauren@franklincountynrcd.org
Applicant telephone	+1 (802) 582-3133
Project ID from WPD	12561
Description of Project	This project will extend an existing two tier channel along 2100 feet of a tributary of the Rock River. This site is located on a dairy farm in Franklin. The two-tiered channel will be paired with 50 foot wide riparian buffer plantings on either side of the stream.
Project Latitude	45.00316
Project Longitude	-72.98727
Project Phase	Final Design
Annual P Reduction KC	16.3
Any one time P reduction	32.1
KG	
Total Cost of Proposed Phase	87359.50
Amount of Funding	\$87,359.50
Requested (Proposed	
Phase)	
Non DEC Funding as part	\$0.00
of Total Project Costs (a	
Total Project Costs (All	230000-250000
Phases)	
Design Life	10
Adjusted Design Life	
Estimated Annual O&M	\$3,000.00
cost total	
Conformance with	10
Tactical Basin Plan TBP	
Number of Co-benefit	2
Areas	
DEC Screening Form	Yes
Uploaded	
Map of Project Area	Yes
Uploaded	
Project Budget	Yes
Project Schedule	Yes
Uploaded	
Landowner Support	Yes
uploaded	
Phosphorus Calculator	Yes
Tool uploaded	
Created	05/16/25 2:06 PM
Using As Match	No
Cultural Resource	Yes

#### **CWSP Project Budget**

#### Franklin County Natural Resources Conservation District

Rock River Tributary Two Tier Channel - Final Design **WPD ID: 12561** 

Personnel (Name, Title)	Tasks/Responsibilities	Hours	Hourly Rate	Salary Expense
Lauren Weston, District Manager	Grant management, staff oversight, design review and oversight	20.00	\$75.00	\$1,500.00
Mel Auffredou, Senior Natural Resources Planner	Procurement process, coordination with contractor and landowners, field visits, review contractor's produced materials	35.00	\$70.00	\$2,450.00
Dorothy Kinney-Landis, Natural Resources Planner	Procurement process, coordination with contractor and landowners, field visits, review contractor's produced materials	55.00	\$70.00	\$3,850.00
Personnel Subtotal			\$7,800.00	

Anticipated Travel	Purpose	Miles	Mileage Rate	Travel Expense
Travel to Franklin	3 field visits with contractors, landowners, and regulators	85.00	\$0.70	\$59.50
Travel Subtotal				\$59.50

Contractual	Description/Use	# of Units	Unit Cost	Contract. Expense
Engineering Design Contractor	Site visits, Alternatives Analysis, Final Design Draft, permitting, Final Design Report, and Cost Opinions	1.00	\$71,500.00	\$71,500.00
Historic and Cultural Review	Background research, field work, report writing, mapping, and production of Archaeological Resources Assessment and additional phases as needed	1.00	\$8,000.00	\$8,000.00
Contractual Subtotal				\$79,500.00

Total Project Cost: \$87,359.50

## **Rock River Tributary Two Tier Channel - Final Design Schedule**

Task #	Title	Description	Schedule
1	Hire Consultants	It is expected that two consultants will be needed for this project, including an engineering firm and an archaeological consultant. FCNRCD will prepare requests for proposals for each scope of work, solicit proposals following CWSP guidelines, select consultants, and execute contracts with the consultants.	June - July 2025
2	Initial Project Site Visit	FCNRCD will hold a project kickoff site visit with consultants and landowners to discuss data collection needs and adjust any timelines as needed.	July 2025
3	3-5 Alternatives Analysis	The engineering consultant will perform an Alternatives Analysis (AA) to evaluate costs/benefits of 3-5 alternatives. To inform alternatives, the engineering consultant will refer to the Existing Conditions Analysis conducted in 2016, gathering updated data as needed, The AA will include a summary with an Alternatives Analysis matrix, evaluation of potential permits for each alternative, and associated phosphorus (P) reduction estimates for each alternative; alternatives may include the combination of multiple practices to achieve stacked benefits. The archaeological consultant will complete the Archaeological Resources Assessment to determine whether a Phase I Investigation will be needed.	July- September 2025
	Stakeholder Meeting	FCNRCD, the landowner, and other relevant stakeholders and regulators will review and select the preferred alternative.	September 2025
4	60% Design	The engineering consultant will draft a 60% design with a summary of existing conditions, drawings, and specifications. Based upon the findings of the Archaeological Resources Assessment, a Phase I Investigation may be needed. FCNRCD will coordinate with both consultants to ensure that the final design is updated based on cultural resources recommendations.	September 2025

## Franklin County Natural Resources Conservation District

6	Stakeholder Meeting	FCNRCD will hold a site visit with regulators, consultants, and landowners to finalize the design draft and permitting requirements.	October 2025
7	Final Design Report & Cost Opinions	The engineering consultant will create a Final Design Report, including: a summary of existing site conditions; updated 100% Conceptual design sheets showing typical cross-section(s) and longitudinal profile; and feasibility summary, including stakeholder and regulator feedback and site-specific constraints. The engineering consultant will also create a 10-year access license or easement plan and 10-year operation and maintenance plan in coordination with FCNRCD. They will also complete an initial engineer's opinion of probable cost for permitting, construction, construction oversight, and long-term maintenance and operation	October 2025 - March 2026
8	Permitting	The Engineering consultant will complete any relevant permit-required assessments or plans and submit required permit applications.	February– June 2026
9	Bid-Phase Services	The engineering consultant will work alongside FCNRCD to draft request for bid documents, assist with bid process including site visit and bid review, and contractor selection processes	March – June 2026
10	Reporting	FCNRCD will complete reporting for CWSP funding requirements. Deliverables will include DEC Programmatic staff comments on design, signed VDHP Project Review Form, Final Design Report, 10-year O&M Plan, 10-year access licenses or easement documentation, relevant permit materials, Media Announcement, Final Performance Report or ANR Online Clean Water Project – Project Closeout Form (once available) and/or Batch Import File or ANR Online Clean Water Project – New Project Form	June – July 2026

## APPENDIX A. CLEAN WATER INITIATIVE PROGRAM - PROJECT ELIGIBILITY SCREENING FORM

This fillable PDF form is designed to assist with project review by systematically walking through all eligibility criteria. It should be completed for all projects seeking funding for 30% + design or implementation work. It may be applied to projects seeking funding for assessment or development if helpful for determining their alignment with eligibility criteria 2, 3, 6, and 8.

## Step 1: Conduct Eligibility Criteria #1 Screening: Project Purpose

Table 1A: Project Purpose	
From the drop-down list to the right, please select which of the four objectives of Vermont's Surface Water Management Strategy this project addresses. If multiple, please list below:	Minimize anthropogenic nutrient and organic pollution

# **Step 2:** Conduct Eligibility Criteria #2 Screening: Project Types and Standards

Table 26. The second state of the second state	T
to the right. <sup>1,2</sup> If multiple BMPs are included in the project, please list below:	Roodplain/Stream Restoration - Final Engineering D
Is the project type an eligible project type for the funding program you are applying to as listed in column B of the <u>CWIP Project Types Table</u> ?	Yes No
(Answer must be YES to proceed)	0
Does the project meet the project type definitions and minimum standards as provided in column C of the <u>CWIP Project Types Table</u> ?	Yes No
(Answer must be YES to proceed)	
Will the project result in the standard performance measures, milestones, and deliverables as defined by project type in columns D-F of the <u>CWIP</u> <u>Project Types Table</u> ?	Yes No
(Answer must be YES to proceed)	
Is the project listed as an ineligible project or activity in the <u>CWIP Funding</u> <u>Policy</u> ? If Yes, please explain below how project meets the allowable exceptions within the CWIP Funding Policy.	Yes No
(Answer must be NO to proceed, unless reasonable justification is provided above)	

# **Step 3:** Conduct Eligibility Criteria #3 Screening: Watershed Projects Database

Verify project has been recorded in the <u>Watershed Project Database</u> (WPD). Each project must have a Watershed Project Database number specific to the proposed project phase (for example,

<sup>&</sup>lt;sup>1</sup> Note that Road/Stormwater Gully project-types must not otherwise be considered intermittent or perennial streams by the DEC Rivers Program and therefore project proponent must show documentation of this determination in order to select this project type.

<sup>&</sup>lt;sup>2</sup> One project may include multiple best management practices (BMPs) that cross "project types." For example, a single project may include both stormwater and lake shoreland BMPs. Proponents should use their best judgement in selecting the most representative project type for the purposes of eligibility screening and reporting.

a final design will have a different WPD-ID from a preliminary design even if for the same project). If the project, or the specific phase, is not yet in the Watershed Project Database, follow directions provided in the CWIP Funding Policy to secure a WPD-ID. Please see <u>CWIP</u> Funding Policy for more information on the WPD-ID.

Table 3A. WPD-ID	
Watershed Project Database ID number assigned	12561
Watershed Project Database Project Name	Rock River Tributary Two Tier Channel - Final Design - Franklin

## Step 4: Conduct Eligibility Criteria #4 Screening: Natural Resource Impacts<sup>3</sup>

Agency of Natural Resources (ANR) permit screening for natural resource impacts includes 1) an initial desktop review to identify which ANR permitting programs should be contacted, 2) a review by the relevant ANR permitting staff, and 3) a response summary from the project proponent addressing any permitting staff concerns. <sup>4</sup>

- Table 4. Natural Resource Impacts facilitates a high-level desktop review of the most likely ANR permits to apply to clean water projects. Project proponents should answer all the questions to identify likely permit needs.<sup>5</sup> Please note that "project site" may include both the active restoration location as well as any additional impact footprint related to staging, site access, or storage of waste or disposed materials.
- 2) If responses to the Table 4. Natural Resource Impacts desktop review trigger a permitting staff consultation, Table 4 provides appropriate contact information.
  - a. Proponents should send the identified permitting staff the following:
    - i. The watersheds project database identification number (WPD-ID) (if available),
    - ii. Project location (GPS coordinates)
    - iii. Summary of proposed scope of work, and
    - iv. Any other relevant information they request that will be utilized in their review.
  - b. <u>Proponents should clarify they are seeking permitting staff input on potential</u> permitting needs, permit-ability of proposed scope of work, and other design considerations but they are NOT seeking a formal permit determination.
  - c. Project proponents must attempt to communicate with the permitting staff and provide them with at least thirty days to review the project and provide a

<sup>&</sup>lt;sup>3</sup> Easements and Riparian Buffer Plantings are excluded from this eligibility requirement/step.

<sup>&</sup>lt;sup>4</sup> In cases where this screening may have already occurred in a prior project phase, project proponents may supply attachments or links to relevant permit needs assessment documents in place of completing Table 4.

<sup>&</sup>lt;sup>5</sup> Entities selected for funding are expected to perform due diligence to ensure all applicable permits (including non-ANR state, local, and federal permits) are discovered and secured prior to implementation. The <u>ANR Permit</u>

<sup>&</sup>lt;u>Navigator</u> and an Environmental Compliance Division Community Assistance Specialist can help confirm ANR permitting needs for any projects once selected for funding.

response. Project proponents are encouraged to perform this screening during a project development phase as opposed to during a project solicitation round to allow for more time for feedback. Permitting feedback may be up to one year old.

- 3) Proponents should summarize permitting staff feedback and how the proposed scope of work will address this at the bottom of Table 4. Specifically, please include:
  - a. Which permits or permit amendment are needed or might be needed?<sup>6</sup>
  - b. What type might be needed? (e.g., a general or individual permit<sup>7</sup>)?
  - c. What concerns were voiced by permitting staff?
  - d. How will the proposed scope of work address these concerns?8

Table 4A: Natural Resource Impacts		
I. Act 250 Permits		
1. Have any Act 250 (Vermont's Land Use and Development Control Law) Permits been issued in the project site's parcel location? <sup>9</sup>	Yes	No
lf <b>y<i>es</i></b> , please provide the permit number and list any water resourc <b>PermitNumber</b> :	e issues or natural re	source issues found <sup>10</sup>
Resourcelssues:		
the second state and the second state and the	appropriate regulator	Constant for an Ant
If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the a 250 consultation.	· · · · · · · · · · · · · · · · · · ·	Contact for an Act
If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the a 250 consultation. Regulatory Point of Contact Name/Position:		Contact for an Act
If <i>yes</i> , use the <u>Water Quality Project Screening Tool</u> to identify the a 250 consultation. Regulatory Point of Contact Name/Position: II. Lake and Shoreland		

<sup>9</sup> An Act 250 Permit is required for certain categories of development, such as subdivisions of 10 lots or more, commercial projects on more than one acre or ten acres (depending on whether the town has permanent zoning and subdivision regulations), and any development above the elevation of 2,500 feet. The <u>ANR Atlas Clean Water</u> <u>Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located on an Act 250 parcel. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>&</sup>lt;sup>6</sup> Occasionally permit staff may indicate they need a field visit or to see more completed designs prior to making a permit need determination.

 <sup>&</sup>lt;sup>7</sup> Design phase projects that require an individual wetlands permit must have the permit in hand at the close of the final design phase. Implementation phase projects must have the individual permit in hand to be eligible for funding.
 <sup>8</sup> Examples could include planned design changes or inviting permitting staff to stakeholder meetings.

<sup>\*</sup> Examples could include planned design changes of inviting permitting start to stakeholder meetings.

<sup>&</sup>lt;sup>10</sup>Note that Act 250 permit amendments may require more extensive review of project impacts to natural resources including wildlife habitat, significant natural communities, and riparian zones. Please consult with the Act 250 District Coordinator regarding the nature and scope of that review and what bearing it may have on your project design.

level (shoreline) of a lake or pond? <sup>11</sup>		
If <b>yes</b> , you might need either a Shoreland Protection Act Permit or a Lake Encroa <u>Quality Project Screening Tool</u> to find the Lakes and Ponds Program contact for y	chment Permit. Use our project's region	the <u>Water</u>
Regulatory Point of Contact Name/Position:		
III. Rivers, River Corridors, and Flood Hazard Areas		
1. Is there any portion of the project site located within 100' of a river corridor an mapped Federal Emergency Management Agency (FEMA) flood hazard area <sup>12</sup> ? (stormwater pond's pipe draining into a river corridor area)? Any permanent excavation/filling or construction within a flood hazard area or river corridor may regulatory requirements through municipal bylaws or through state authorities.	nd/or e.g. a Yes trigger	No
If <b>yes</b> , you will need to speak with a <u>Floodplain Manager</u> . Use the <u>Water Quality F</u> the Floodplain Manager for your project's region.	Project Screening To	<u>ol</u> to find
Regulatory Point of Contact Name/Position:		
Rebecca Pfeiffer		
2. Is any portion of the project site within a perennial river or stream channel? $^{\mbox{13}}$	Yes 💿	NoO
If <b>yes</b> , you will need to speak with a <u>Stream Alteration Engineer.</u> Use the <u>Water Q</u> find the Stream Alteration Engineer for your project's region.	uality Project Scree	<u>ning Tool</u> to
Regulatory Point of Contact Name/Position:		
Staci Pomeroy		
IV. Wetland		

<sup>&</sup>lt;sup>11</sup> The <u>ANR Atlas Clean Water Initiative Program Grant Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Lakeshore permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

<sup>&</sup>lt;sup>12</sup> FEMA mapped Flood Hazard Areas are not available statewide on the ANR Natural Resources Atlas. For projects located in Grand Isle, Franklin, Lamoille, Addison, Essex, Orleans, Caledonia, and Orange Counties, maps are available via the FEMA Flood Map Service Center: <u>https://msc.fema.gov/portal/home</u>. ANR Floodplain Managers are available to provide technical assistance if needed.

<sup>&</sup>lt;sup>13</sup> Stream Alteration Permits regulate all activities that take place within perennial river and stream channels. Examples of regulated activities include streambank stabilization, dam removal, road improvements that encroach on streams, and bridge/culvert construction or repair. The <u>ANR Atlas Clean Water Initiative Program Grant</u> <u>Screening tool</u> can help answer this yes/no question. Follow the instructions on the link above to identify whether your project is located in the jurisdictional zone to trigger a Stream Alteration permit. Note that the layer to activate in ANR Atlas is now named "Clean Water Initiative Program Grant Screening."

1. Does the <u>Wetland Screening Tool<sup>14</sup> provide a result of wetlands likely, very</u> likely, or present at the project site?	Yes	No
2. Does your project site involve land that is in or near an area that has <u>any</u> of the following characteristics: o Water is present – ponds, streams, springs, seeps, water filled depressions, soggy ground under foot, trees with shallow roots or water marks? o Wetland plants, such as cattails, ferns, sphagnum moss, willows, red maple, trees with roots growing along the ground surface, swollen trunk bases, or flat root bases when tipped over? o Wetland Soils – soil is dark over gray, gray/blue/green? Is there presence of rusty/red/dark streaks? Soil smells like rotten eggs, feels greasy, mushy or wet? Water fills holes within a few minutes of digging? (See Landowners Guide to Wetlands for additional information on identifying wetlands onsite.)	Yes No Not Sure	<ul> <li>O</li> <li>O</li> </ul>
If you answered <i>yes</i> or <i>not sure</i> to <u>either</u> of the above questions, you will need to co <u>Ecologist</u> using the <u>Wetland Inquiry Form</u> . The District Wetlands Ecologist can help locations of wetlands and whether you need to hire a Wetland Consultant to condu Alternatively, if you answered <i>yes</i> or <i>not sure</i> to <u>either</u> of the above questions, you of Wetland Consultant in the proposed scope of work. Any activity within a Class I or II zone (minimum of 100 feet and 50 feet respectively) which is not exempt or consid- under the <u>Vermont Wetland Rules</u> requires a permit. All permits must go through re- process, which takes at minimum 6 weeks for a General Permit and 5 months for a <b>Regulatory Point of Contact Name/Position:</b> Krystal Sewell	ontact your determine t ct a wetland can simply l wetland or lered an "al eview and p an Individua	District Wetlands he approximate d delineation. Dudget for a wetland buffer lowed use" ublic notice I Permit.
1. Is your project a Wetland Restoration project type?	Yes	No
If you answered yes, under the <u>Vermont Wetland Rules</u> you will need an "allowed under DEC Wetlands Program. Contact your <u>District Wetlands Ecologist</u> using the <u>Wetlands</u> <b>Regulatory Point of Contact Name/Position</b> :	ise" determ Inquiry For	ination from the <u>m</u> .
V. Fish and Wildlife		

<sup>&</sup>lt;sup>14</sup> To view the Wetland Screening Tool introduction video, see <u>https://youtu.be/6lv5en0AB10</u>

<ol> <li>Is the project site within 1 mile of a mapped<sup>15</sup> Significant Natural Community or Rare, Threatened, or Endangered Species?</li> </ol>	Yes 💽	No 🔿
f <i>yes</i> to either of the above questions, connect with the VT Fish and Wildlife depart (everett.marshall@vermont.gov 802-371-7333) to discuss your project and any ne Regulatory Point of Contact Name/Position: Everett Marshall	ment cessary permit	tting.
VI. Stormwater		
L. Will the project disturb more than an acre of land during construction, add or redevelop impervious surface, create new development or <u>otherwise require a</u> <u>Stormwater permit?</u>	Yes 🔿	No 💿
f <i>yes</i> , forward to the appropriate <u>Stormwater specialist</u> to ensure necessary permi <sup>-</sup> Project Screening Tool to find the Stormwater specialist for your project's region. Regulatory Point of Contact Name/Position:	tting. Use the	Water Quality
VII. Solid Waste		
2. Will you be creating any debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry, and mortar) with your project that you intend to bury on site? <sup>16</sup>	Yes	No
f yes, connect with the Waste Management & Prevention Division (dennis.fekert@v to discuss your project and any necessary permitting. <b>Regulatory Point of Contact Name/Position:</b>	vermont.gov 8	02-522-0195
Provide below or attach a narrative summary of Table 4 findings. Please include: a. Which permits or permit amendment are needed or might be needed b. What type might be needed? (e.g. a general or individual permit)? c. What concerns were voiced by permitting staff? d. How will the proposed scope of work address these concerns?	ed?	
A. VT DEC Stream Alteration Permit, VT DEC Flood Hazard Area & River Corridor Pe	rmit, US Army	Corps of
Engineers General Permit B. Individual C. Wetland delineation will be needed D. Consultant scope of work will include wetland delineation.		

<sup>15</sup> Find both of these layers on the ANR Atlas under Atlas Layers/Fish and Wildlife. Use the Measurement tool to 1) Plot Coordinates for your project 2) select the coordinates from the left panel 3) select the Radius Tool 4) click on your project location 5) Indicate 1 mile distance 6) look for overlap with either of these mapped layers.

<sup>16</sup> If your project will result in the transfer and disposal of debris (including construction and demolition waste, stumps, brush, untreated wood, concrete, masonry and mortar), you do not need a permit from this office as long as you hire a <u>licensed solid waste hauler</u> and bring the material to a certified facility.

ANR permitting programs?	
(Answer must be Yes to continue)	

## **Step 5:** Conduct Eligibility Criteria #5-8 Screenings

Table 5A. Eligibility Criteria 5-8	
Landowner and Operation and Maintenance Responsible Party Support. Project identifies and demonstrates commitment from a qualified and willing operation and maintenance responsible party. Project demonstrates landowner support for the proposed project phase.	Yes No
(Answer must be YES to proceed)	
Budget. Project budget includes ineligible expenses. (Answer must be NO to proceed)	Yes 🔿 No 💽
<b>Leveraging</b> . Proposed leveraging meets required leveraging levels (if applicable), meets the definition of leveraging, and comes from eligible sources (Answer must be YES or N/A to proceed)	Yes No N/A
Funding Program Specific Eligibility. Project meets additional funding	10.00 A
program eligibility requirements *. Please list applicable funding program below:	Yes No
(Answer must be YES to proceed) *If Water Quality Restoration Formula Grant, complete Step 6 below	

# Step 6: Screening Projects on Agricultural Lands (Water Quality Restoration Formula Grants Only)

For Water Quality Restoration Formula Grant projects, please complete the following information as part of your Funding Program Specific Eligibility Screening (Criteria 8). Please note this must be completed for all projects located on agricultural lands regardless of project type. See <u>CWIP Project Types Table</u> for eligible project types.

1. Is the proposed project located on a jurisdictional farm operation 17?	Yes - Proceed to next question below.

<sup>&</sup>lt;sup>17</sup> Jurisdictional farm operations are required to meet Vermont's Required Agricultural Practices (RAPs).

deter <u>opera</u> consu the <u>fa</u> Pleas subm opera deter	mine if it is a <u>jurisdictional farm</u> <u>ition</u> , and any case that requires iltation with AAFM will occur via <u>arm determination</u> process. e note this form must be itted by the farm tion/landowner seeking the mination.	<b>No</b> <sup>18</sup> - There is no additional requirements related to agricultural review for these projects.
2. Is the project project Examples but a	oroposed project an agricultural ? of agricultural projects include re not limited to Production Area	• Yes - Agricultural Projects on jurisdictional farms are not an eligible project type. You can provide a referral to an applicable state or federal agricultural <u>assistance</u> <u>program</u> , or a local organization.
Pract Facili Fence Cover Inject note agricu	ices – (e.g. Waste Storage ties, Heavy Use Area, Diversion) e, Livestock Exclusion, Filter Strip, <sup>•</sup> Crop, Reduced Tillage, Manure ion, Rotational Grazing. Please this is not an exhaustive list of all ultural practices.	<ul> <li>No- The natural resource, innovative, or other project type will require an agricultural project review and approval from the Vermont Agency of Agriculture, Food and Markets         (VAAFM) to ensure a consistent approach on farms statewide that follows rules, regulations, and laws in place. Please follow Steps 1 &amp; 2 below.</li> <li>Step1- Please submit a detailed description of the project, project site, project details, landowner, farm operation, and any other relevant information to VAAFM at AGR.WaterQuality@Vermont.gov.</li> <li>Step2- Once you complete this Agricultural Project Review, please allow 30 days for a response. Once that response has been received, please include a summary of the response in the next section.</li> </ul>
Agricultural P	oject Review Status & Summary:	1
Check as	Status	
Applicable	Submitted / Pending	
Z	Approved	
	Denied	-

<sup>&</sup>lt;sup>18</sup> Note CWIP's Agricultural Pollution Prevention project type eligibility is limited to land where owner or operator is <u>not</u> a jurisdictional farm (i.e., <u>not</u> required to meet the Required Agricultural Practices (RAPs)). As such, projects that meet the definition of the Agricultural Pollution Prevention project type in the Appendix B. Project Types Table are <u>not</u> subject to review by VAAFM.

#### Please include a summary of the response here:

"Though this project is located on a jurisdictional farm, based on our review your project is determined to be eligible in accordance with section § 39-403 of the Clean Water Service Provider Rule for funding through the Formula Grant Program as a natural resource project.

Please be aware that in a two-tier system top of bank is considered the very top where you would stand. Top of bench is within the channel. Please ensure buffer regulations are taken into account in the planning and design of the project, and that there is no possibility that the installed project would cause a violation of section 6.07 or 6.10 of the Required Agricultural Practices. "

Please note that it is expected that all projects with the status "submitted/pending" will be "approved" prior to a project approval for funding.

#### Estimated Phosphorus Credit for Stream Stability and Storage

SubUnit(s) IDs: 54\_M3S2.03\_PLG\_C00, 54\_M3S2.03

Town: HIGHGATE

Projects Included: Plant River Corridor, Plant 50-Foot Riparian Area, Lower Floodplain

Stream Names: -

Project Area (acres): 3.5

#### Stream Stability and Storage Credit Summary

	Year 1 Credit (kg)	Year 2+ Credit (kg/yr)	Estimated 15 Yr Lifespan Credit (kg)
Floodplain Connectivity (L	ateral - Vertical)		
Stream Stability	0.4	0.4	6.0
Storage	31.7	15.9	254.2
Stream Connectivity (Long	itudinal - Temporal)		
Stream Stability	0.0	0.0	0.0
TOTAL	32.1	16.3	260.2
	Phase 2 only: 3.5 floodplain lowerin acres riparian pla river corridor ease	acres ng + 3.9 unting. No ement.	

### Vermont Division for Historic Preservation *Project Review Form*

This form is to be used for both the Preliminary and Final Project Review for clean water projects funded by the Department of Environmental Conservation (DEC) Clean Water Initiative Program (CWIP). See applicable sections below.

### Preliminary Project Review Section

To start the VDHP review process for CWIP-funded Clean Water Projects, please complete this form and submit it to the Vermont Division for Historic Preservation (VDHP) at <u>ACCD.projectreview@vermont.gov</u> with the information requested below. This Preliminary Project Review form, once completed and signed by VDHP, should be submitted as a project deliverable.

This is for non-exempt CWIP project types or conditionally exempt that have failed to meet the project qualifications. Exempt project types should NOT submit this form. Please refer to the CWIP Funding Policy for a listing of exempt and conditionally exempt project types. The CWIP Funding Policy can be found here: <u>https://dec.vermont.gov/water-investment/cwi/grants#policy</u>

For questions on architectural resources, archaeology, and below-ground resources, please contact Scott Dillon at (802) 272-7358 or <u>scott.dillon@vermont.gov</u>.

#### 1. Contact information:

- a. Contact name:
- b. Email address:
- c. Phone number:
- 2. WPD Project Title:
- 3. WPD ID:
- Project site map: Please attach a project site map. An annotated Google map or <u>ANR</u> <u>Atlas</u> map will suffice but professional design plans are also welcome. An example image is provided below. Site map should outline:
  - a. Project Area of Potential Effects<sup>1</sup> with clearly marked GPS coordinates for project boundaries.

<sup>&</sup>lt;sup>1</sup> The project APE or "area of potential effects" means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The

#### §106 Project Review Form

#### For Clean Water Projects funded by the DEC Clean Water Initiative Program

b. Proposed ground disturbance locations. Note that stream bank regrading is considered ground disturbance.



#### 5. **Project information**:

- a. Select CWIP project type from drop down (if not listed, it's categorically exempt)
   i.
- a. Please provide a short description of the project's proposed scope of work (CWIP Preliminary Design Report is acceptable instead)
- b. Are there other Agencies or funding partners involved?: Yes No i. **If yes**, who?
- c. Does the project involves ground disturbance?: Yes No
  - i. **If yes,** please describe type and extent of ground disturbance. Specifically,
    - 1. Whether disturbance will be performed by hand or heavy machinery,
    - 2. The estimated total acreage and maximum depth of disturbance, and

APE is influenced by the scale and nature of an undertaking and may be different from different kinds of effects caused by the undertaking [36 C.F.R. § 800.16(d)]. When determining a project's APE remember to consider/include extent of restoration footprint; new, upgraded or existing access or haul roads; staging, storage, and stockpile areas; disposal sites or waste areas; borrow areas and other source locations for fill material; and areas impacted by drainage diversions or mechanical tree clearing and similar landscape alterations.

#### For Clean Water Projects funded by the DEC Clean Water Initiative Program

- 3. The history of prior naturally-caused or man-made ground disturbance to the site (if known):
- d. Will the project cause direct or indirect impact or disturbance to any man-made building or structure more than 50 years old (including dams, culverts, and bridges) or to any federally listed historic building or structure?
  - Yes No Unknown
    i. If yes or unknown, provide any known details on the buildings or structure(s) location/condition and extent of proposed impact or disturbance. Please include whether the structure is listed in the National Register of Historic Places if known:
- e. Is the project APE located within, intersect with, or adjacent to a state- or federally listed historic district, Designated Downtown or Village Center?

Yes No Unknown

*Email this form and supporting materials to* <u>ACCD.ProjectReview@vermont.gov</u> Please copy scott.dillon@vermont.gov

\_\_\_\_\_

#### TO BE COMPLETED BY VDHP:

Historic Properties/Sites Affected

Potential for Architectural Historic Properties to be affected – A Qualified Architectural Historian or Historian Consultant\* is required (\**please see* <u>pre-approved list of consultants</u>)

Determination of Eligibility required

Comments:

Potential for Archaeological Historic Properties to be affected – a Qualified Archaeological Consultant\* is required (\**please see* <u>pre-approved list of consultants</u>)

Archaeological Resource Assessment (ARA) required Phase 1 archaeological investigation required

Comments:

Vermont Division for Historic Preservation Updated: 11/29 §106 Project Review Form For Clean Water Projects funded by the DEC Clean Water Initiative Program No Historic Properties/Sites Affected/No Effect No Historic Resource Present in Area of Potential Effect Work will have No Effect on Historic Resource

Comments:

Vermont State Historic Preservation Office Concurrence and Date:

X: \_\_\_\_\_

Vermont Division for Historic Preservation §106 Project Review Form For Clean Water Projects funded by the DEC Clean Water Initiative Program Final Project Review Section

To complete Final Project Review, re-submit this VDHP Project Review Form with the following additional elements included. Note that this should be added to the VDHP-signed version of the Preliminary Review Form so VDHP can reference their prior guidance on this project. This Final Project Review Form, once completed and signed by VDHP, should be submitted as a CWIP project deliverable.

- 1. Please provide a short description of any changes to the project's proposed scope of work since the Preliminary Project Review:
- 2. Please attach:
  - a. Final (100%) Design Plans
  - b. Project narrative description of scope of work (CWIP Final Design Report will suffice)
  - c. Any historical resource assessments, or determination of eligibility forms
  - d. Any archaeological resource assessments, other archaeological reports, or end-offield documents
  - e. Any Treatment Plans

*Email this form and supporting materials to* <u>ACCD.ProjectReview@vermont.gov</u> Please copy <u>scott.dillon@vermont.gov</u>

TO BE COMPLETED BY VDHP:

\_\_\_\_\_

No Historic Properties/Sites Affected/No Effect No Historic Resource Present in Area of Potential Effect Work will have No Effect on Historic Resource Comments:

No Adverse Effect Adverse Effect Project Treatment Plan or other agreement documents executed

Other:

## Vermont State Historic Preservation Office Concurrence and Date:

X: \_\_\_\_\_





WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

© Vermont Agency of Natural Resources

## Natural Resources Atlas

833 Ft.

1cm =

THIS MAP IS NOT TO BE USED FOR NAVIGATION

100

Meters

1" =

Vermont Agency of Natural Resources

vermont.gov

VERM ONT

Lake



this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.







preferred - keep Same width willing to have the conversation

Supp. Bouchard 4/16/2025 SD Kast I A-25-

Expedited Project Development Program

## MEMO

TO:MISSISQUOI BASIN WATER QUALITY COUNCIL (BWQC)FR:MISSISQUOI BASIN CLEAN WATER SERVICE PROVIDER (CWSP) STAFFRE:EXPEDITED PROJECT DEVELOPMENT PROGRAMDA:MAY 28, 2025

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In August of 2024, the BWQC considered and approved a proposal for a program to expedite project development funds. The program sets aside significant funding for project development activities, which prequalified partners can access by requesting an annual grant of up to \$10,000 to use for project development purposes. The BWQC vote endorsed creation of the program and authorized parameters that essentially preapprove certain individual requests.

The vote also signaled the BWQC's support for having CWSP staff request a 'generic' Watershed Project ID number that could be used by project partners when seeking project development funds through the program. Initial attempts to obtain such a Watershed Project ID number were not successful. However, we are pleased to report that as of today, we have a number for the Missisquoi Basin, which may be used effective immediately. The number is 12697 (note: a separate number exists for the Lamoille Basin), and it is described in the following page.

To request funding through the program, please see the announcement labeled "CALL FOR APPLICATIONS - PROJECT DEVELOPMENT FUNDING" on the <u>Request for Proposals/Request for Qualifications/Request for Bids</u> page on NRPC's website.

Please note that as soon as June 4, CWSP staff may also ask that the BWQC consider approving additional program parameters for the coming years of the program.

This WPD ID will enable the Clean Water Service Provider serving Basin 6 to provide project partners--including watershed groups, conservation districts, towns, land conservation organizations, other non-profit groups, and the Regional Planning Commission--with appropriately-scaled financial support for project development in the form of subgrants available through June 1, 2027. The goal is to support partners when they have identified promising project concepts but the following are not yet known: magnitude of water quality issues; phosphorus remediation potential; land owner support; and permit requirements. Partners receiving funds will generate deliverables required of Project Development projects and submit them to the CWSP to be eligible for reimbursement. The CWSP will assemble all deliverables associated with this project and submit them to the DEC Tracking & Accounting Supervisor. The target date for filing the deliverables is July 1, 2027

**.** 

1 of 1		Fine	d   Next 🛛 🖂 🕶	٢	
P	Project Details				
	WPD ID	12697			
	Proposed				
Project Name 'Block Grant Lite' fo			for Project Deve	elopment in the	e Missisquoi Basin
Project Type Project Development			ient		
Sector Other					
Lat/Long,					
Str	eam Segment				
Technical Pro	oject Manager				
	Desciption	This WPD ID will including watersh profit groups, and project developme partners when the magnitude of water requirements. Pa projects and subm deliverables asso The target date for	enable the Clean V ed groups, conserv the Regional Plan ent in the form of si y have identified p er quality issues; p intners receiving fur nit them to the CW ciated with this pro or filing the delivera	Vater Service Provation districts, to ning Commissior ubgrants availabl romising project hosphorus remeen nds will generate SP to be eligible ject and submit t bles is July 1, 20	ovider serving Basin 6 to provide project partners owns, land conservation organizations, other non- nwith appropriately-scaled financial support for le through June 1, 2027. The goal is to support concepts but the following are not yet known: diation potential; land owner support; and permit e deliverables required of Project Development for reimbursement. The CWSP will assemble all them to the DEC Tracking & Accounting Supervisor. 027.
Develo	opment Notes				
Submis	ssion Number	HQC-8YNC-6G31	Γ5		
Town/County/Region	Basin/Su	ub Basin	Potential Pa	artners	Potential Funding Source
Alburg	Rock Riv	ver (Basin 5)	Alburg Town	I	Clean Water Fund
Bakersfield	Lake Car	rmi Watershed	Bakersfield	Town	
Belvidere	Pike Rive	ər	Belvidere To	wn	
Berkshire	Missisqu	oi River Basin	Berkshire To	wn	
Cambridge	Tributarie	es to Lower	Cambridge 7	Town	
Eden	Missisqu	Oİ	Eden Town		
Enosburgh	Missisqu	es to ivila oi	Enosburg Fa	alls Village	
Fairfax	Black Cre	eek	Enosburgh T	ſown	
Fairfield	Tyler Bra	inch	Fairfax Towr	ו	
Fletcher	Trout Riv	ver	Fairfield Tow	/n	
Franklin	Upper Mi	issisquoi River	Fletcher Tow	/n	
Highgate			Franklin Tow	/n	
Irasburg			Franklin Wat	tershed	
Jay			Committee		
Lowell			Champlain	orthern Lake	
Montgomery			Highgate To	wn	
Newport Town			Irasburg Tow	vn	
Richford			Jay Town		
Sheldon			Landowners		
St. Albans Town			Lowell Town		
Swanton			Montgomery	/ Town	
Troy			Newport Tov	vn	
Waterville			Northwest R	egional mmission	
Westfield			Richford Tov	vn	
			Sheldon Tov	vn	
			St. Albans To	own	
			Swanton To	wn	

Swanton Village Troy Town

Waterville Town

Vermont Land Trust Vermont River Conservancy

			Westfield	l Town			
			Franklin Resource District	County Natur es Conservati	al on		
			Orleans ( Resource District	County Natur es Conservati	al ion		
			Missisqu Associati	oi River Basir on	١		
			Cold Holl	low to Canad	а		
			The Natu	ire Conservai	псу		
			Town Con Commiss	nservation sion			
			Upper Mi Rivers W Committe	issisquoi and 'ild and Sceni ee	Trout c		
Event Date	Event Type	State Amount	Match	Grant Total	Funding Source	Grant Num	Funded Partner

Performance Measure	Value	Status

5/2/2025 Project Created in Database

<b>Related P</b>	rojects			
	Relationship	WPD ID	Project Name	Status
View	Parent	11298	Clean Water Service Provider Formula Grant - Basin 6 (Missisquoi)	Funded

Records		T	
	Date	Record Type	Record Title
O&M program

## ΜΕΜΟ

TO:MISSISQUOI BASIN WATER QUALITY COUNCIL (BWQC)FR:MISSISQUOI BASIN CLEAN WATER SERVICE PROVIDER (CWSP) STAFFRE:O&M PROGRAM EVOLUTIONDA:MAY 28, 2025

Should time allow at the meeting on May 22, CWSP staff intend to deliver a brief presentation on several O&M Program developments. These include steps the CWSP could take to contract with partner organizations interested in providing O&M services. (Efforts to gauge partner organization interest in providing O&M services are briefly described in a separate memo.)

Related topics addressed in the presentation are expected to include the following:

- The CWSP's plans to seek approval from DEC to perform project verification for at least some projects.
- The procedure used by the CWSP to offer an initial round of contracts for O&M activities.
- Possible approaches for compensation of contractors for O&M services.
- Importance of O&M cost tracking.
- Protocol for addressing project deficiencies and failures.

## MEMO

TO:	MISSISQUOI BASIN WATER QUALITY COUNCIL (BWQC)
FR:	MISSISQUOI BASIN CLEAN WATER SERVICE PROVIDER (CWSP) STAFF
RE:	RESPONSES TO PARTNER SURVEY ON CAPACITY FOR OPERATIONS & MAINTENANCE WORK
DA:	MAY 28, 2025

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On April 8, CWSP staff contacted various partner organizations to gauge interest and capacity for performing operations and maintenance (O&M) work in the Lamoille and Missisquoi basins. Interested organizations would likely work as subcontractors to oversee and carry out activities outlined in implemented projects' O&M plans, including, when applicable, maintaining their own projects.

A total of 12 responses were received as of May 28, 8 of which showed interest in this work. An additional 2 organizations responded "maybe" to becoming project maintainers.

The following organizations were interested in becoming maintainers and have service areas intersecting the Missisquoi River basin:

Org	Riparian Buffer Plantings	Stormwater BMPS	Private Road BMPs	Public Road BMPs	Forest Road BMPs	Floodplain/ Stream Restoration	Gully Restoration	Wetland Restoration	Lake Shoreland Restoration	Dam Removal Projects	Wetland/ River Easements
Franklin NRCD	V		V								
Redstart		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	V			<b>V</b>		
North Woods	V					V		V	V		
MRBA					$\checkmark$	V					
Vermont Youth Conservation Corps (VYCC)	V	V	V	V		V	V	V	V		
Caledonia NRCD (maybe)	V	V	V	V	V	V	V	V	V		V
Orleans NRCD (only for own projects)	V					V		V	V	V	

Vermont River Conservancy answered "maybe" and didn't specify areas of interest.

Updates, including public participation

Conclusion

## MEMO

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TO:	MISSISQUOI BASIN WATER QUALITY COUNCIL (BWQC)
FR:	MISSISQUOI BASIN CLEAN WATER SERVICE PROVIDER (CWSP) STAFF
RE:	UPDATES FOR MEETING ON JUNE 4
DA:	MAY 28, 2025

As part of the Updates portion of the agenda, and as time allows, CWSP staff will address: a) status of policy on cost effectiveness threshold, b) public communications work supporting Clean Water Fund activities, and c) forest roads assessment and water quality practices.

If you have any questions about these topics before the meeting, please contact Dean.