

REQUEST FOR PROPOSALS

for Engineering Services

Engineering Four Winooski River Dams for Removal

Release Date: July 10, 2023 Proposal Due Date: <u>August 7, 2023</u> Revised Proposal Due Date: <u>11:59 pm August 18, 2023</u> Notification of Selection: September 5, 2023

PROJECT OVERVIEW

Vermont River Conservancy is seeking to contract with a qualified engineering firm to design the removal of four obsolete dams. This project seeks to conduct engineering studies, assessments, and permitting to remove four dams on the Winooski River and North Branch. The City of Montpelier actively supports individual and city-wide initiatives that will result in cleaner water, healthier ecosystems, and a thriving downtown. These dam removal projects were born directly from 3-4 years of extensive outreach and education in Montpelier and surrounding communities. As a result of this community engagement, the community has identified dam removal as a priority.

Engineering studies will help assess the feasibility and requirements to remove four dams. All four risk failure. Due to well-established high levels of industrial and agricultural uses upstream, uncontrolled collapse would likely result in a significant phosphorus and toxic sediment release into the broader Winooski watershed. Collectively, removal of all four dams would open-up 14.1 miles of free-flowing river through the towns of Middlesex, Montpelier, and Barre. This will offer additional riparian habitat due to the narrower river channel, improve aquatic habitat via connected waterways, and allow for sustainable recreational opportunities.

DAM OVERVIEW

Trestle Dam ("North Branch Dam"):

This dam is located on the North Branch of the Winooski River just upstream of the confluence of the North Branch and main stem of the Winooski. This dam is located in the heart of downtown Montpelier with urban land uses predominating. Lat. 44.259417, Long. -72.577782.

This 3 to 5-foot high dam on the North Branch of the Winooski in downtown Montpelier, nearly at its confluence with the main Winooski River, is functionally obsolete, and contributes to damaging flood hydraulics. Known as the "rat dam," its rudimentary construction was built to maintain high water levels when sewer systems routed directly to the river, preventing rats from entering sewage pipes. Removal would allow for a re-established riparian area, improve recreational access to the river, and – according to The Nature Conservancy's Vermont Dam Screening Tool, would reconnect 5.4 km (3.4



miles) of aquatic habitat. This includes approximately 1 km upstream to the Lane Shops Dam, and 4.4 km downstream.

Bailey Dam:

This dam is located on the main stem of the Winooski River, just upstream of the confluence of the main stem and the North Branch. This dam is located in the heart of downtown Montpelier with urban land uses predominating. Lat. 44.258211, Long. -72.577782.

The most visible dam in Vermont's capital city, this non-functional dam on the main stem of the Winooski River was initially constructed in 1933 (with a likely earlier structure as well, though date unknown) and then rebuilt in 1975. The approximately 8-foot wide and 10-foot tall concrete barrier spans the 142-foot width of the river, impeding aquatic organism passage, impounding nutrients and sediments (that are likely contaminant laden) for nearly a mile upstream, and contributes to flood risk to downtown Montpelier. According to The Nature Conservancy's Vermont Dam Screening Tool, removal of the Bailey Dam would reconnect 9.3 km (5.8 miles) of habitat. This includes approximately 4.4 km downstream (same as Trestle Dam) and 4.9 km upstream.

Pioneer Street Dam ("Montpelier No.3 Dam"):

This dam is located on the main stem of the Winooski River, in a rural section of Montpelier approximately 1.3 miles upstream of the Bailey Dam. The land use on the north side of the river is rural, open land, on the south side of the dam/river are commercial buildings, parking lots, and a major city street. Lat. 44.250879, Long. -72.556952.

The Pioneer Street Dam is the oldest and most decrepit of the four dams and is likely impounding hazardous sediments. The first dam on site was likely built in the late 19th or early 20th century, and with modifications the 8-foot high blockade is currently 168-feet long and 16-feet wide. It's built of old crib and stone and capped with a trapezoidal concrete face, and is partially breached. There is clear public access to assess the dam via Old Country Road, a low-traffic public dirt road immediately adjacent to the dam, providing easy access for data gathering and sediment sampling, both at the dam and up and downriver.

For decades, the lot immediately upstream (260 River Street) was home to a manufactured gas plant on the banks of the Winooski River. As a result of a 2017 Brownfield Assessment conducted by Stone Environmental, the Vermont Department of Environmental Conservation (DEC) and U.S. Environmental Protection Agency (EPA) led an extensive hazardous terrestrial remediation in order to make way for new business on-site (now home to a port-o-potty storage and cleaning facility). Remediation included excavating approximately 700 tons of coal tar and sediment from the banks of the Winooski River, as well as carcinogenic polycyclic aromatic hydrocarbons (PAHs) managed on-site. While remediation did not fully extend into the river, high-levels of these same industrial contaminants are likely accumulated in sediment behind the Pioneer Street Dam.

In addition to these direct-source pollutants, less than 1-mile upstream from the Pioneer Street Dam, the Stevens Branch flows into the Winooski, carrying with it contaminants from Barre and Graniteville's centuries-old industrial corridor. Today this stretch of the Stevens Branch parallels Highway 302 and is lined with box stores and parking lots, car repair and oil change establishments. While the exact nature of these contaminants will be revealed via the feasibility study proposed here, the hazardous effects of historic industries and current land use persist in sediment behind the Pioneer Street Dam.



Hidden Dam ("E. Montpelier No.5 Dam"):

This dam is located on the main stem of the Winooski River in a rural area of East Montpelier, approximately 2.75 miles upstream of the Pioneer Street Dam. The dam/river is bordered on river right by forested hillside and on river left by US Route 2. Lat. 44.242667, Long. -72.516455.

Located approximately three miles upstream of the Pioneer Street Dam, the 10-foot high and 90-foot long structure was constructed 1905-1906 as a diversion hydro dam. Its penstock and power house was destroyed in the 1927 flood, and operations were never restored. It's now functionally obsolete, deteriorating, blocking aquatic organism passage, and retaining significant agricultural sediments. In contrast to the highly-industrial pollutants of the Pioneer Street Dam and Bailey Dam, Hidden Dam is in more rural East Montpelier, immediately below a series of farms and forests that contribute agriculture related phosphorus runoff and nutrient pollution, again likely trapped in sediment behind the near-failing dam. Careful removal of the dam and impounded sediments will prevent uncontrolled sediment release and re-establish natural river channel evolution.

SCOPE OF WORK

Task 1. Dams: Engineering Site Evaluation

- > Field survey, utility location, property survey as needed
- Sediment probing, sampling, testing, CAP review (Pioneer)
- ➤ Geomorphic assessment (full corridor)
- ➤ Habitat assessment (full corridor)
- Structural, geotechnical, and utilities evaluation; specifically identification of impacts to bridges/bridge abutments, utility crossings, and vulnerability for ice jams associated with dam removal at each site.
- > Project base map
- Evaluation of in-stream recreation opportunities post-dam removal including a feasibility study and safety evaluation of creating a whitewater park at the confluence of the Winooski and North Branch rivers which will include:
 - Evaluating the feasibility of the project with the City's current combined sewer overflow (CSO) system and the potential impacts of a whitewater park on fish and wildlife in the area.
 - Create conceptual design layouts to show how the Whitewater Park will look and function.
 - Define the project costs and outline steps to completion, including what it will take to design, permit, and construct the selected design solution.

Task 2. Dams: Hydrology Calculations and Hydraulic Modeling

- \succ Flow estimates
- > RAS model setup
- ➤ RAS model validation
- > Hydraulic Model for Trestle, Bailey, Pioneer Street, Hidden



Task 3. Dams: Concept (30%) Design, and Photographic Simulation

Concept (30%) design (Trestle, Bailey, Pioneer Street, Hidden) including cost estimate, initial design plans including recommendations to accommodate recreation opportunities post-dam removal. Photographic simulation at Bailey and Pioneer only.

Task 4. Dams: Semi-Final (60%) Design

- Semi-Final Design will include: deconstruction timeline, sediment management plan, preliminary engineering report for four dams (Trestle, Bailey, Pioneer Street, Hidden).
- > Provide refined cost estimates and construction timelines.

Task 5. Bailey Dam: Permitting and Final Design (100%)

- > Provide permitting data for ACOE, State of Vermont, City of Montpelier land use permits
- ➤ USACE and site visit
- Stream alteration/Chapter 43
- ➤ Construction general permit
- Based on feedback from permitting agencies, prepare final (100%) Design drawings and specifications

Task 6. Trestle Dam: Permitting and Final Design (100%)

- > Provide permitting data for ACOE, State of Vermont, City of Montpelier land use permits
- ➤ USACE and site visit
- ➤ Stream alteration/Chapter 43
- ➤ Construction general permit
- Based on feedback from permitting agencies, prepare final (100%) Design drawings and specifications

Task 7. Pioneer St. Dam: Permitting and Final Design (100%)

- > Provide permitting data for ACOE, State of Vermont, City of Montpelier land use permits
- ➤ USACE and site visit
- Stream alteration/Chapter 43
- ➤ Construction general permit
- Based on feedback from permitting agencies, prepare final (100%) Design drawings and specifications

Task 8. Hidden Dam: Permitting and Final Design (100%)

- > Provide permitting data for ACOE, State of Vermont, City of Montpelier land use permits
- ➤ USACE and site visit
- ➤ Stream alteration/Chapter 43
- ➤ Construction general permit
- Based on feedback from permitting agencies, prepare final (100%) Design drawings and specifications

TIMELINE

Please outline the timeline which work and task are expected to be complete.

SUBMISSION REQUIREMENTS

29 Main Street, Suite 11 – Montpelier, VT 05602 – 802.229.0820 – vrc@vermontriverconservancy.org www.vermontriverconservancy.org



- > Name and contact information of the primary contact person.
- A list of staff who will be part of the project team, brief summary of their qualification, and resumes of key staff members.
- Timeline for completion of each task and description of consultant or firms capacity to complete the project within this timeframe.
- The fee requested by the consultant with a cost breakdown by task and split across labor, supplies, and other categories as appropriate. Labor line items should clearly identify hourly rates across proposed staff. All costs associated with developing or submitting documents in response to this solicitation and/or in providing oral or written clarification of its content shall be borne by the Bidder.
- A description of any tasks that will be subcontracted, including the names and qualifications of possible subcontractors and costs.
- A description of the consultant's relevant experience demonstrating familiarity and experience with similar projects. Please keep this section under 2 pages. Photos or diagrams of the consultant's work may be added as a supplement to this section.
- > A proposal narrative that includes an understanding and approach to the project.
- > A narrative of experience with the environmental permits expected on this project.
- Proof of professional liability insurance coverage of \$1 million per occurrence and \$2 million in aggregate to cover the work to be performed
- Three references which include the following for each project: one sentence description, name of project manager, phone number and address.

Please email proposal submissions in PDF or Word format to <u>vrc@vermontriverconservancy.org</u>. Paper copies will not be considered. Proposals will be accepted up until the due date, 11:59 pm on <u>August</u> 18, 2023. Proposals will be reviewed, a selection will be made, and applicants will be notified by September 5th, 2023.

Please use the subject line: "Winooski River Dam Removal – RFP Submission – Firm Name". Brevity is appreciated.

RFP QUESTIONS

Questions concerning this RFP must be submitted via email to <u>vrc@vermontriverconservancy.org</u>. Questions must be submitted by July 24, 2023, at 12 noon. Please use the Subject Line: "Winooski River Dam Removal – RFP Question – Firm Name". A digest version of all questions and answers will be posted to Vermont River Conservancy's website by July 28, 2023. Please email as detailed above to be included.

SELECTION CRITERIA

Proposals will be evaluated in the following areas:

1. <u>Firm's Qualifications and Capabilities</u> : This refers to the qualifications of the firm or firms assigned, including area of expertise, technical capabilities, and work experience relevant to dam removal.

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- 2. <u>Project Team</u> : Qualifications of the professionals (including but not limited to the Project Manager) assigned to this project including technical attributes and relevant staff experience that make them uniquely qualified to undertake this work.
- 3. <u>Past Performance</u> : The quality and relevance of recent projects of similar nature completed by the Consultant.
- 4. Knowledge of Project Area : Experience working in southeast Vermont and/or Vermont.
- 5. <u>Overall Quality of Submittal</u> : This refers to the clarity and organization of the submittal as well as the completeness of the information.

A Selection Committee will review qualifications submitted in response to this RFP. The Committee may choose to interview candidates before making its final decision. The most qualified respondent will be selected, subject to negotiation of fair and reasonable compensation.

The selection of a consultant shall be made without regard to race, color, sex, age, religion, national origin, or political affiliation. The Vermont River Conservancy is an Equal Opportunity Employer and encourages proposals from qualified minority and women-owned businesses.

DISCLAIMER

- 1. Those submitting proposals do so entirely at their own expense. There is no express or implied obligation by the Vermont River Conservancy to reimburse any entity or individual for any costs incurred in preparing or submitting proposals, preparing, or submitting additional information requested by the Selection Committee, or participating in any selection interviews.
- 2. The Vermont River Conservancy reserves the right to withdraw this Request for Proposals, to accept or reject any or all statement of qualifications, to advertise for new statement of qualification if it is in the best interest of the Vermont River Conservancy to do so, and to award a contract as deemed to be in the best interest of the Vermont River Conservancy.

PROJECT FUNDING

This project is funded through the Lake Champlain Basin Program. All payments will be made after satisfactory completion of each deliverable. Note that contract payments are contingent upon review, approval and acceptance of contract deliverables by the project manager.

TYPE OF CONTRACT

If a contract is entered into as a result of this RFP, it will be a fixed price contract for the tasks identified in the Scope of Work.

CONTRACTOR PROVISIONS

All contractors must comply with any and all applicable laws, statutes, ordinances, rules, regulations, and/or requirements of federal, state, and local governments and agencies thereof which relate to, or in any manner affect the performance of this agreement. Those requirements imposed upon Vermont River Conservancy, as recipients of funds are thereby passed along to the contractor. All contractors must comply with all pertinent federal, state, and local laws and must carry adequate insurance coverage. The selected firm will be expected to meet state minimum standards for worker's comp insurance and liability



coverage and to comply with all Standard State Contracting Provisions. Firms will need to provide Vermont River Conservancy with a Certificate of Insurance and a W-9 prior to contract execution.

Contractors must submit proof of adequate insurance coverage on an annual basis for the duration of the project. The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following kinds and amounts of insurance:

- Workers' Compensation Insurance. The policy shall cover the obligations of the Contractor in accordance with the Workers' Compensations Law and Disability Benefits Law covering all operations under the Contract, whether performed by it, or by its subcontractor.
- Liability and Property Damage Insurance. Unless otherwise specified, each policy shall have limits not less than: \$2,000,000 combined (Bodily Injury & Property Damage); \$3,000,000 aggregate, single limit per occurrence.