



Friends of the Winooski River

PO Box 777
Montpelier VT 05601

info@winooskiriver.org

REQUEST FOR PROPOSALS

Dam Removal Feasibility Study & Preliminary Design

Three dams on the Stevens Branch of the Winooski River in Barre, Vermont

I. PROJECT

Friends of the Winooski River (FWR) is requesting that engineers licensed to practice in the State of Vermont submit proposals for the development of a comprehensive geomorphological assessment and preliminary (30%) design plan of the Stevens Branch of the Winooski River in Barre, Vermont, as it relates to the potential removal of the Jockey Hollow, Habbep, and Brooklyn Street dams.

FWR is acting as Project Manager on behalf of Barre City, which owns the Jockey Hollow and Habbep dams and has a public safety interest in the Brooklyn Street dam. The purpose of the study is to investigate the impact of the removal of each of the three dams, as well as the three dams together, on water quality, habitat, and flooding. FWR has funding in hand from the Vermont Agency of Natural Resources. The consultant will work under the direction of FWR.

Safety and Site Conditions: The dam sites have not been evaluated for safety. FWR is not responsible for the safety of the Contractor. The Contractor assumes the risks of working in an outdoor environment.

Proposals must be sent in PDF format via email to michele@winooskiriver.org no later than the response deadline of August 27, 2021 at 4:00 pm. Proposals submitted by other means or past the deadline will not be considered.

Qualified disadvantaged (DBE) and women-owned (WBE) businesses are encouraged to submit proposals. Proposers are required to document whether the individual is a DBE or WBE. FWR, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C §§ 2000b to 200b-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, will afford disadvantaged business enterprises full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

II. SCHEDULE

Date	Item
July 23, 2021	Request for Proposals issued
August 6, 2021	Site visit
August 12, 2021	Deadline for submission of questions in writing
August 19, 2021	Response to questions issued at winooskiriver.org
August 27, 2021	Proposals Due by email
Sept 3, 2021	Contractor Notification
September 8, 2021	Contract Start

III. BACKGROUND

FWR would like to bring about the complete removal of all three dams and associated structures, restoration of a free-flowing natural stream channel, and restoration of adjacent wetlands in order to improve in-stream and riparian habitat, water quality, flood resilience, and public access to river-based education and recreation opportunities.

Staff from US Fish and Wildlife Service and Vermont Fish & Wildlife Department have visited the three dams, along with FWR staff, to assess the potential to improve aquatic organism passage by removing the dams. It was concluded that the passage benefit to removal of the Jockey Hollow dam is likely limited by the upstream cascades, and the passage benefit to removal of the Habbep dam may be limited by the downstream cascades. There may be passage on the eastern side of the Habbep dam, but we were not able to access that channel during the site visit. Although it is breached, the Brooklyn Street dam remains a barrier to passage.

Additionally, the large volume of sediment impounded behind the dams and its possible release to receiving water bodies is of concern. Determining the volume of this sediment, and identifying any potential contaminants is a critical aspect of this project.

The goals and objectives of the dam removal are to:

1. Restore dynamic stream equilibrium (i.e., stream's **least erosive state**) in the former impoundment and proximity of the former dam;
2. Improve the water quality of the stream or river in the project area and in downstream receiving waters such as ponds and lakes in the watershed; and
3. Restore wetlands in the former impoundment if present in the landscape.
4. Restore floodplain connectivity to lower flood water elevations to alleviate potential community flood hazards and risks of bank erosion and inundation;
5. Restore aquatic organism passage (AOP) for fish and aquatic organisms and wildlife; and
6. Restore connectivity of habitat blocks for bird life and terrestrial wildlife.

This proposal is to study the feasibility and outcomes of removal of three dams on the Stevens Branch. From upstream to downstream, they are A. Jockey Hollow, B. Habbep, and C. Brooklyn Street.

A. Jockey Hollow Dam

Owner: City of Barre

Location 44.18021, -72.50426

State ID: 14.04

Access to the site is from a City-owned lot on west side of Route 14 (44.18033, -72.50295). At south end of lot there is an abandoned road along that ends on a hill above the dam. Deer trails lead to dam and to cascade upstream of dam.





B. Habbep Dam

Owner: City of Barre

Location: 44.18599, -72.50005

State ID: 13.02

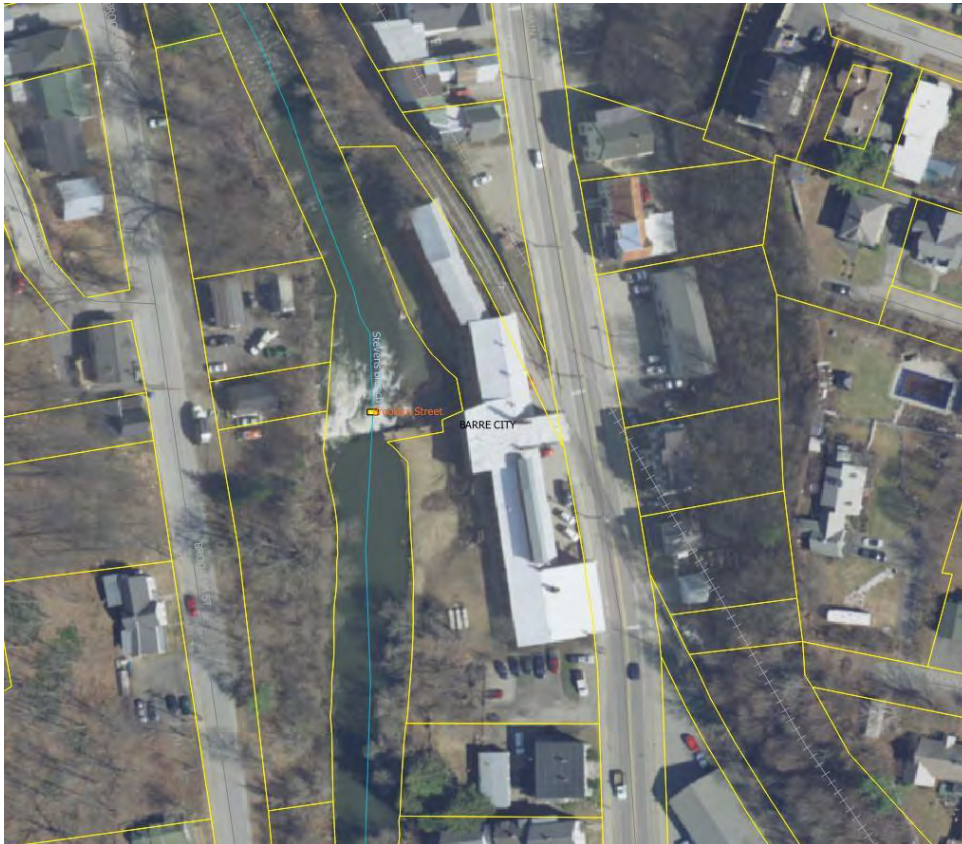
Access to west side of dam from Mill Street across land adjacent to an apartment building; permission must be requested.

Habbep dam sits at the top of a large bedrock cascade. The channel is split, with most of the stream flowing over a tall drop on river left, while a smaller channel runs to the east of a large, vegetated island. Anecdotally, local anglers believe there is good fish passage through the smaller channel at river right, and abundant wild trout in the reach above this dam and below the Jockey Hollow dam.



C. Brooklyn Street Dam
Owner: Trow and Holden
Location: 44.19417, -72.50158
State ID: 13.01

Access from Trow and Holden with permission, or from Brooklyn Street with permission





IV. Scope of Work

A. Feasibility Study and Preliminary Design

Review all existing information and complete required fieldwork and initial analysis for preliminary dam removal design, which is defined broadly as: *Preliminary determination of feasibility and design of a dam removal project to restore hydrologic connectivity of surface waters. Work includes determining landowner interest, site/design considerations, permitting needs, and overall suitability for implementing project. May involve feasibility or alternatives analysis.* This phase should include the following tasks.

1. Perform the surveying and probing necessary to determine if removing each dam structure will likely improve passage for brook trout (i.e. presence of natural bedrock barrier).
2. **Determine the channel's natural bankfull width at the site of each dam.**
3. Prepare a memorandum summarizing results and conclusions regarding the potential of removal to improve passage.
4. *Optional for this phase, dependent on cost:* Survey and characterize the longitudinal profile **of the channel's thalweg and cross sections for the** affected upstream and downstream reaches. The longitudinal profile should extend upstream past the end of the impoundment and downstream to a distance of 20-30x the bankfull width.
5. Delineate wetlands adjacent to the channel throughout project limits.
6. Identify potential natural resource conflicts.
7. Document the extent and approximate dimensions of the wedges of deposited sediment upstream of each dam. Include an estimate of sediment volume for each dam, and outline sediment management alternatives for the dam removal. Recommend sediment sampling protocol for final design phase to characterize sediment and identify potential contaminants.

8. Model changes in floodplain inundation, channel patterns, and stream velocities that are likely to occur following dam removal.
9. Determine, using existing information, additional field investigations, and modeling results, the effect dam removal will have on the stability of any upstream or downstream infrastructure.
10. Prepare a conceptual (30%) design for the removal. The design would include items such as project boundary definition; adjoining landowner information; location of relevant utilities; extent of excavation; extent of mature woody vegetation in project area; estimate of each **dam's concrete removal** volume; estimate of sediment removal volume(s); location of likely access points and potential access stabilization measures.
11. Prepare a final study report, including preliminary design drawings and design memorandum (30% completion level)

B. Opinion of probable costs for final design and implementation phases

C. Stakeholder meetings

Meetings with landowners, regulators, funders, and other interested parties may be required as part of the process; please include your cost for preparation, travel to and attendance at four such meetings.

D. Permit Consultation

The contractor will identify all local, state, and federal permits that would be required for implementation.

V. PROPOSAL

1. Type of Contract

It is proposed that, if a contract is entered into as a result of this RFP, it would be a fixed price contract for the Scope of Work, above. Negotiations may be undertaken with those engineers whose proposals, as cost and other factors show them to be qualified, responsive, responsible and capable of performing the work.

2. Selection

Selection will be based on qualifications, timing (schedule), cost, and references. The preferred consultant will have prior river restoration experience in Vermont and have successfully designed and implemented dam removal projects. Proposals will be reviewed by a Selection Committee, and will not be read by **FWR's Executive Director**.

FWR reserves the right to amend, modify or withdraw this RFP, require supplemental information from candidates, reject any or all proposals received, and negotiate separately with competing candidates.

3. Proposal Content

The proposal shall contain the following sections:

- a. Scope of Services: Describe the approach to be taken in addressing the scope of work. Each task should be described in detail.
- b. Schedule: Provide a schedule including major project milestones.
- c. Qualifications: **Briefly describe the firm's related experience with dam removal projects**, including three references with contact information.
- d. Budget: Please provide a sub-total for each identified task in Section IV, to help reviewers determine how to revise the Scope if the budget is inadequate.

4. Miscellaneous Requirements

- a. Proposals must address all tasks associated with the project for which work is proposed.
- b. Email bid proposals to Michele Braun, Friends of the Winooski River michele@winooskiriver.org
- c. Proposals shall not be returned to the respondent (s) once submitted and FWR may dispose of them in any way it sees fit.
- d. Expenses incurred in the preparation of proposals shall be borne by the respondent(s) with the express understanding that the respondent(s) may not apply for reimbursement for these expenses.
- e. Each proposal shall be accompanied by a cover letter signed by an officer empowered by the respondent to sign such material and thereby commit the respondent to the obligations contained in the proposal.
- f. This solicitation in no way obligates FWR to award a contract. A contract will only be awarded as deemed in the best interest of FWR.