



## Hands Mill Dam Removal Study and Preliminary Engineering Design Response to Engineer Design Proposal Questions

**Posted:** 6/19/2020

**Project Title:** Hands Mill Dam Removal in Washington - Phase 1 Preliminary Design

**Contact Information\*:** Gianna Petito, Winooski Natural Resources Conservation District (WNRCD), District Manager, [gianna@winooskinrcd.org](mailto:gianna@winooskinrcd.org) | 802-828-4493 x3178

\*Winooski NRCDD is acting as project manager on behalf of the dam owner, the Town of Washington, VT

1. Item 2d and 2f under "Scope of Services Requested" discuss performing survey and probing as part of initial field investigations. Item 4 under Scope of Services Requested requires approval for topographic and boundary survey and wetland delineation. -- For efficiency in performing the field work, would it be acceptable to present a proposed plan to delineate wetlands, perform a topographic/boundary survey and perform probing at the start of the project based on general field observations and reference to publicly-available elevation and GIS data?
  - a. It is acceptable to propose an alternate work timeline that maximizes efficiency and cost sensitivity. Winooski NRCDD and partners will defer to firm expertise if proposing a change to the proposed approach. As noted on Page 4 of the RFP, proposals should include "a description of the approach to be taken in addressing the scope of services detailed above. Specific tasks need to be thoroughly described and any proposed additions or changes from this request clearly highlighted." Proposals are welcome but not required to explain the *reason* for changes or additions.
2. Does any topographic survey or survey of structures (dam, bridge, culvert) exist for the site?
  - a. Any known and available surveying information related to the dam is available as part of Attachment G at [winooskinrcd.com/handsmilldam](http://winooskinrcd.com/handsmilldam). The website [vtculverts.org](http://vtculverts.org) provides limited information about the bridge structure which was last site assessed in 2006. The town clerk as well as the roads crew may have access to old site designs for the bridge and culvert and Winooski NRCDD staff can help the selected firm connect with these entities to access these if any exist. Wastewater and drinking water permits may be another source of public information to gather knowledge of surrounding infrastructure (<https://anrweb.vt.gov/DEC/WWDocs/Default.aspx>). For example there is a mound septic system at #16 Woodchuck Hollow Road immediately downstream of the dam to the east (WW-5-6401). The 30% design shall include measures for protecting this wastewater disposal system and other surrounding infrastructure. Specific guidance will be provided through stakeholder engagement with state wastewater professionals during the design process.
3. Are there specific AOP requirements / target species for the project?
  - a. Dam removal may be supported, in part, by both the United States Fish and Wildlife Service and the Vermont Fish and Wildlife Department. In order to be eligible for this funding, removal of the dam should result in increased habitat

**Connecting people to a sustainable and resilient landscape since 1940**

Winooskinrcd.org | 802-828-4493 X 3178 | 617 Comstock Road, Suite 1, Berlin VT 05602

connectivity for Eastern Native Brook Trout. Historically, new dams were often located in areas where exposed bedrock provided a solid foundation and as a cost savings measure to reduce materials and to gain a higher water surface elevation for increased hydraulic head to drive mill works. In the event that the 30% design effort identifies shallow depths to ledge that indicate that a natural waterfall exists under the dam remnants, then it may suggest that AOP targets would not be met even through removing the dam. Both the resulting channel morphology and flow regime may impact this connectivity goal. Importantly, the project implementation will not include ledge removal with a pneumatic hammer on an excavator nor the drilling and blasting of bedrock to improve aquatic organism passage.

4. Has any consideration been given to buy out the downstream landowner that lives in an RV in a hazardous location?
  - a. A FEMA buy-out has not yet been discussed or proposed and should not be considered as part of this project. Applicants should assume that any buildings or infrastructure not owned by the town will remain. Winooski NRC staff has spoken directly with all adjacent landowners including the individual who lives immediately downstream in the RV regarding the hazards posed by the dam. We are still working with the town to determine that specific property ownership and tenancy.
5. Does parcel data exist for the properties in the impoundment?
  - a. Vermont has statewide parcel data publicly available on the ANR Atlas that has been prepared from town tax maps: <https://anrmaps.vermont.gov/websites/anra5/> These tax map parcel boundaries are conceptual for design purposes and are not to be relied upon in lieu of a legal property boundary survey plat. Parcel and contact information is also available through VCGI (<https://maps.vcqi.vermont.gov/ParcelViewer/>)
6. Will Winooski NRC coordinate with landowners?
  - a. Yes. Winooski NRC has already connected with nearby landowners and holds their contact information on file. Winooski NRC will be actively updating both the town and landowners about project progress and opportunities for public input.
7. What is planned for the upstream retaining wall?
  - a. There is nothing specific planned for any upstream or downstream infrastructure on adjoining properties at this point. Infrastructure ownership and impacts of the dam removal project on this infrastructure will need to be part of the 30% design phase and explored in the various alternatives to be evaluated and through stakeholder dialogue.
8. What is planned for the stone masonry wall between the house and bridge?
  - a. See answer to question 7 above.
9. What's driving the request for a photo-simulation? Are you looking for photo-simulation of just the spillway area, or of the wetland post-removal, or both? (It's a task/expense typically reserved for dam removals that are controversial, and that doesn't appear to be the case here.)
  - a. Currently the Washington Select Board is in full support of the project. Adjacent landowners are tentatively open to the project but a few expressed concern about losing the aesthetic qualities of the dam. Allowing for the

possibility of project delays, a change in property ownership as well as Select Board representation, a photo simulation of the restored stream channel (both spillway area and upper impoundment) is very desirable as a tool for ongoing public education and engagement. It can be itemized within any proposed budget and if the selection committee determines this is beyond the budget of the 30% design project it may be removed from the final work contract. However to date this remains a valuable and desirable deliverable.

10. What's driving the request for hydraulic modeling to predict changes in floodplain inundation? (It's not necessary for permitting, and adjacent stream reaches provide sufficient information on which to base channel design.)
  - a. Hydraulic modeling is required for 3 reasons: confirming AOP objectives will be met, to address a "no rise" analysis for Town Flood Hazard Regulations, and to confirm no adverse impact to the functioning of neighbor's mound septic system ability to treat wastewater effluent above the groundwater table (i.e. not raising but lowering the surface water elevation proximal to the groundwater table under the mound system). See answer to questions 2 and 3 above.
11. Can you confirm that \$39k is available for the requested scope of work, and from where did that number come?
  - a. Bids exceeding \$39,000 will not be considered. Budget allows bids up to this value for the full scope of work listed. Number came from the highest of proposed estimates submitted to Winooski NRCD in support of our initial funding application. The selection committee welcomes and strongly encourages cost-competitive proposals but please be sure to thoroughly review the RFP and supporting documentation in preparation. The scope of work is much larger than a typical 30% design and includes components that often happen outside of or after a 30% design phase.
12. Will Vermont Dam Safety perform a breach analysis (from which damages can be derived for use in the BCA)?
  - a. Vermont Dam Safety has offered to run DSS-Wise Lite, a simplified dam breach model to help determine possibly impacted properties in the event of a full pool dam failure in support of any BCA work.
13. Please confirm that the BCA is being requested because it is a requirement of some potential funding sources, and please confirm which sources (because BCA requirements vary).
  - a. A BCA is a requirement for FEMA funding. Page 4 of the RFP provides a link to the FEMA website that provides more details on this requirement. Winooski NRCD is in communication with Vermont Emergency Management to align project deliverables of 30% design phase in preparation for an application for FEMA funding.

Please email Winooski NRCD at contact information listed above if we mistakenly omitted any question you or your firm submitted by the 6/12/2020 deadline. Thank you!