

*Fact Sheet*  
*Waterbury Dam Repair Project (Dec 2020)*

***Introduction***

The Civilian Conservation Corps constructed Waterbury Dam between 1935 and 1938 under the supervision and technical guidance of the U.S. Army Corps of Engineers (USACE). It is one of three flood control dams built in the Winooski River Basin as a result of the 1927 flood. Built for approximately \$3.5M in 1938, the dam has been improved in the 1950s, 1980s, and 2000s, or every 20 to 30 years. Today, the State of Vermont owns the dam, and Green Mountain Power (GMP) uses the dam to generate hydroelectricity.

***Protecting Public Safety and Improving Environmental Quality***

In consideration of the multiple benefits of flood protection, hydropower generation, and recreation, the state for several years pursued financing to repair Waterbury Dam to make sure it remains structurally sound. These repairs are critical. If Waterbury Dam failed, 10,000 people could become injured, up to 800 people may perish (largely in Waterbury), and 1,200 buildings would be impacted. Flooding would impact properties from Burlington to Middlesex. Further, Waterbury Dam is an important recreational facility generating economic activity in surrounding areas, especially Stowe and Waterbury. The present net worth of the facility is difficult to pin with certainty. While \$3.5M dollars equates to nearly \$700M today, the true cost to construct the facility would be vastly more. The repairs, once made, will also restore degraded shoreland habitat in the reservoir, and degraded habitat and fisheries in the Little River below the Dam, which will serve to improve recreational opportunities as well.



In the early 2000s, and in conjunction with prior work to improve the safety of Waterbury Dam, USACE did a nationwide study of Tainter Gates. Tainter Gates are the large flood control gates located on the dam (see picture). They determined that the existing Tainter Gates were not designed to withstand extreme weather events. To protect local residents living near the dam, USACE recommends replacing the Tainter Gates, at a cost of up to \$45,000,000. In addition, USACE noted swelling along the old concrete

spillway. This swelling made the existing gate openings smaller, which makes the replacement project even more pressing.

In 2015, DEC began working with Vermont's congressional delegation and USACE to secure Federal funding to support the spillway and gate repairs using a three-phase project to reduce the risk associated with the flood gates, restore the dam to its full flood control capacity, and restore water quality. These efforts have now borne fruit.

***\$40M in New Federal Funding for Waterbury Dam***

Vermont recently received two appropriations totaling \$40M, allowing this important infrastructure project to become a reality. Vermont also received what is known as "New Start," which is an authorization from the USACE to conduct the work. The award of a New Start is necessary for USACE to direct the \$40M to Waterbury Dam.

The project is described below. There are three project phases, which fall within two agreements with ACOE. Estimates of matching funds necessary to draw down the Federal funds are provided.

Agreement I: Phase I – Risk Assessment

- Task: USACE will examine the current condition of the Dam and conducted a feasibility evaluation of all dam safety related aspects of the facility.
- Timeline: March 2020 - March 2021.
- Cost: estimated at \$700,000
- Source of federal funds: Section 542 of the Water Resources Development Act.
- State share: 35% or \$248,500. Vermont’s share has been fulfilled with Capital funds authorized by the General Assembly.

Agreement II: New Start Provisions

Federal law indicates that an agreement to implement phases II and III must be executed by Dec. 31, 2020. If the agreement is not authorized within this timeframe, Vermont will lose its position on USACE’s workplan and forfeit the \$20M of New Start funding, setting the project back many years. The agreement was executed on 12/11/2020, locking down the Federal allocation.

Phase II – Dam Safety Modification Report

- Task: USACE will provide specific recommendations from the risk assessment and complete the preliminary engineering review necessary to prepare for design and construction.
- Timeline: 2021-2023.
- Cost: \$3.0M.
- State share: 50%, which can be allocated annually over the duration of Phase II. Phase II can be halted if state funds are not available. However, once initiated, a project halt will result in additional cost to restart this phase due to costs associated with demobilization and re-mobilization of the project team.

Phase III – Design and Construction

- Task: Design, contract, and construct the project.
- Cost: The total project cost may range from \$35-\$55M . Phase II will provide more precise estimates.
- Funding Sources: \$40M in Federal funds are presently available within two appropriations (\$20M each). Future Federal appropriations may supplement these funds, along with a State share.
- State Share: The maximum State share is currently unclear. Under current law, the share is 35%. However, as of this writing, Vermont’s congressional delegation is seeking legislative adjustments to these match rates that would create much more affordable terms. Phase III can be halted if matching funds are not available.



*Project phases and timeline of associated sessions of the VT General Assembly*