Pomme de Terre Lake Dam Replacement: Frequently Asked Questions

1. Who owns the dam?

The State of Minnesota, through the DNR Ecological and Water Resources Division, operates and maintains the Pomme de Terre Lake dam and is therefore considered the owner according to MN Rule 6115.0320 Subp.10.

2. Why are we replacing the dam?

We are trying to proactively address aging infrastructure, mitigate safety risks, and improve ecological connectivity:

- The existing dam was constructed in 1936 and is nearing the end of its design life.
- There is a safety risk with low head dams when water flows over, it crashes down and rolls back toward the dam, creating a powerful spinning current. Known as a "Hydraulic Roller" or "Drowning Machines," this current can trap people and wildlife.

- The Pomme de Terre Lake dam blocks aquatic animals from moving through the area. Replacing it with rock arch rapids will let fish and mussels pass more easily and create spawning areas for fish that lay eggs in gravel.

3. Have other projects been done like this?

Converting dams to rock arch rapids has been done in 90+ locations in Minnesota. Examples of similar completed projects in Minnesota are the modification of the dam on the Pelican River in Pelican Rapids, and the Little Pine Lake dam modification in Perham. Both were successfully converted into rock arch rapids in 2023.

4. Who is funding the project?

The project is fully funded by the DNR through the Get Out MORE initiative. This was a one-time initiative enacted by the 2023 Minnesota Legislature. Included in the initiative is $10 million targeted to projects that are barriers to fish and aquatic organism passage on streams. This includes 10 dam removal/modification projects and five culvert replacements. Three of these dam modifications are on the Pomme de Terre River. The other two dams that were funded are the Perkins Lake dam and Crissy Lake dam.

5. Can rock arch rapids withstand floods and ice?

Yes. Before construction, engineers use detailed flood modeling (including hydrological data obtained from the FEMA Flood Insurance Study for Stevens County) and calculations from the US Army Corp of Engineers to understand the river's power during extreme events. This modeling helps determine the correct rock size, so the structure stays in place even during the highest floods. The large boulders used in the main parts of a rock arch rapids—usually three to four feet wide or more—are too heavy for floodwaters to move. They are also designed to safely handle ice and reduce the kinds of problems often seen with traditional dams. Unlike dams, rock arch rapids don't have

above-water structures—like pilings or catwalks—that can trap ice and cause blockages. Their sloped design helps ice move through more easily, and rising water levels are handled better because the banks give extra space for water and ice to flow.

6. Will the public access site by the current dam structure be affected by the project or construction?

The current construction and design plans ensure that the public access and parking lot will remain open and unaffected.

7. When will construction begin and how long will it take?

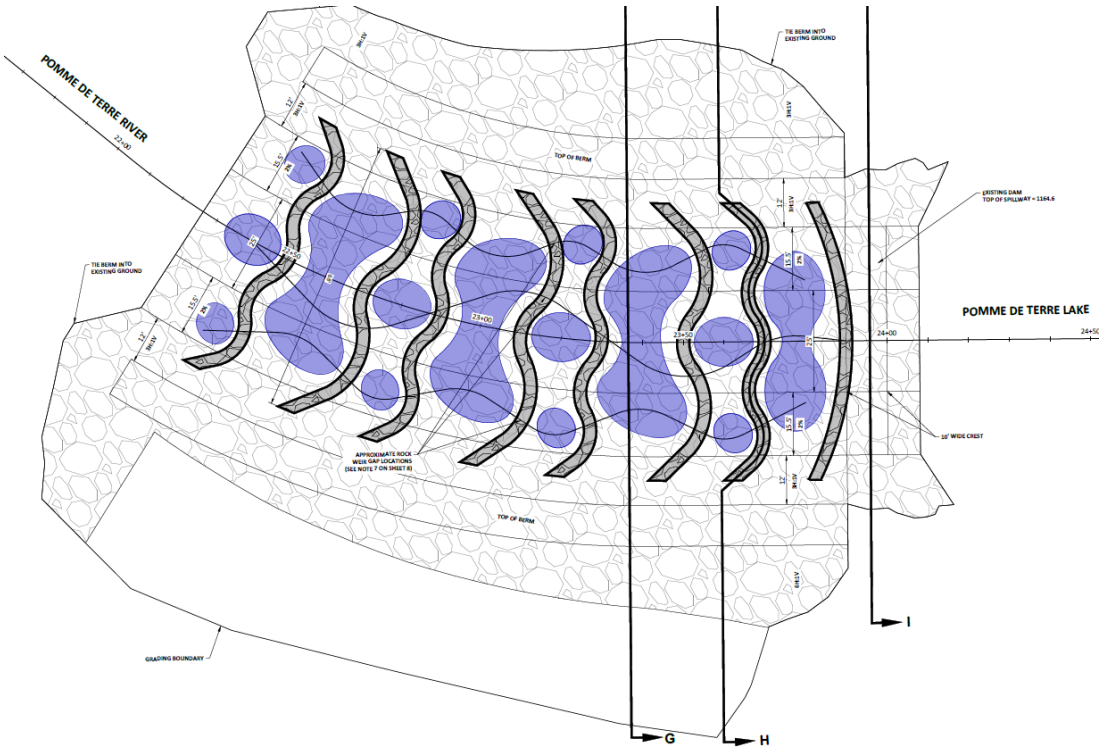
Construction schedule is anticipated to begin in the Fall of 2025 and be completed in 2026. Vegetation reestablishment is expected to occur in 2026. Ultimately the construction schedule will be dictated by how quickly permits can be obtained and contractor availability.

8. How will the lake level be affected?

The project will not change the runout elevation of the lake. The water levels observed will be within a few hundredths of a foot of the current levels for the typical range of flows observed on the lake.

9. What are the next steps for the project?

Next steps include obtaining the necessary permits from the MN DNR and US Army Corp of Engineers. Once permits are secured, final construction plans and specifications can be completed, and the project can be put out for bid. Given the nature of the work, construction is best scheduled for late fall or winter when river flows are low and the risk of heavy rainfall is minimal.



POMME DE TERRE LAKE ROCK ARCH RAPIDS LAYOUT