

# Future of the Rapidan Dam

## Frequently Asked Questions



From April to June 2022, Blue Earth County conducted a robust public engagement effort to gather community feedback on the future of the Rapidan Dam. The county is considering two futures for the dam: repairing it to working condition or removing it. The purpose of this engagement effort was to identify the community's needs and concerns and use their input to help the county make the best decision for all impacted by the Dam's future. Here are some answers to frequently asked questions we heard through the process.

### WHY CAN'T WE JUST DO NOTHING?

Doing nothing may be an appropriate short-term course of action until the county determines a course of action and funding is authorized. While this could be a short-term solution, this is not a feasible long-term solution. Because the dam is already over 110 years old, this large piece of infrastructure requires maintenance to the apron (which already shows significant signs of erosion/scour damage) and other components to prevent against a dam failure. Leaving the dam as-is would pose a public safety concern and a tremendous liability to the county, so it was therefore ruled out as an option.

### HOW MUCH GREEN ENERGY DOES THE DAM GENERATE?

When functioning at full capacity, the dam can produce up to 23 million kilowatt-hours (equivalent to 3.2 wind turbines) but has averaged 15.6 million kilowatt-hours of clean energy a year. However, high water events in 2019 and 2020 caused damage to the dam, and it has not produced any energy since 2019.

### HOW MUCH MONEY HAS THE DAM GENERATED?

From 1999-2022, the county lost a total of \$554,251.16 on the dam. Of the total revenue shown below, only \$666,203.33 was from the hydroelectric lease revenue. Other revenue came from a state of Minnesota energy incentive and grants from project partners when major repairs were required. You can see a breakdown of the revenue and expenses below.

Revenue	Expenses
Hydro Electric Lease Revenue..... \$666,203.33	2002 Repair and Study.....\$390,981.75
DNR Funding for Repairs..... \$2,756,142.35	2003 Apron Repair.....\$664,907.21
FEMA ..... \$1,021,199.08	2005-2007 Deck and Gate House Repairs.....\$1,085,742.58
Renewable Energy - State Incentive.....\$1,737,693.25	2008-2011 Apron and Abutment Repairs.....\$1,608,480.75
Misc.....\$31,213.64	2014-2018 Stabilization project.....\$2,213,172.16
	2019 Repairs.....\$556,000.00
	2021-2022 Feasibility study and public outreach.....\$247,418.36
<b>\$6,212,451.65</b>	<b>\$6,766,702.81</b>
<b>Loss of \$554,251.16</b>	



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## COULD THERE BE MORE FLOODING IF THE DAM IS REMOVED?

Historically during high flow events, the five steel tainter gates that control river flows have been left fully open for full river flow passage. Since the 2019 flood damages, the gates have remained in the fully open position to pass river flows through at the dam. Given this fact, it is not anticipated that there will be any significant downstream flooding impacts for typical seasonal flows if the dam were to be removed.

## HOW MUCH MONEY COULD THE DAM GENERATE IF REPAIRED?

When functioning at full capacity, the dam is anticipated to generate \$450,000 a year. Of this, the county would receive \$45,000 of that revenue beginning in year 16 under the current proposed lease terms with the potential operator. This revenue of \$45,000 a year would equate to about \$1.125 million over a 40-year period. When factoring in inspection costs and maintenance costs over a 40 year period, the county would actually lose about \$4.275 million on the dam.

### Repair option: Revenue over a 40-year period\*

Inspection costs.....	\$400,000
Revenue from energy.....	(\$1,125,000)
Maintenance cost.....	\$5,000,000

**Total Loss: \$4,275,000**

*\*All values are in 2021 dollars and do not include future inflation. This estimate is subject to permitting agency requirements and does not include additional potential inspection and maintenance/repair costs due to emergency damages or repairs.*

## HOW LONG WOULD CONSTRUCTION TAKE?

If the dam is **repaired**, there will be a four-year process to complete the project: three years to design and fund the project, and one year of construction. Construction for repairs would require a low-flow river condition, which could delay the construction. If the dam is **removed**, there will be a 10 year process to complete the project: 5 years of designing, permitting, and funding the project, and 5 years of removal and river restoration.

## HOW WOULD CONSTRUCTION IMPACT BUSINESSES AND RESIDENTS?

The county recognizes that construction will be impactful regardless of which option is selected. Once the county chooses and path forward, the engineers will begin working on more detailed timelines and plans for construction. Once they have these details, they will work with on-site residents and businesses to coordinate the best plan to ensure access to their property during work. It is also important to note that access must be maintained to these properties, even during construction.

## WHO MAKES THE FINAL DECISION, AND WHEN WILL THEY DECIDE?

The Blue Earth County Board will be responsible for choosing the future of the Rapidan Dam. While there is no set date for the decision, the county board is planning to analyze the public feedback in 2022 and then determine next steps. This could include choosing one of the previously presented options or exploring other options.



Learn more

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