

## **APPENDIX I. GRINDSTONE RIVER DAM REMOVAL ENVIRONMENTAL IMPACT STATEMENT**

Grindstone Environmental Impact Statement (EIS) – Response to comments

# Grindstone River Dam Removal Project Environmental Impact Statement

## Public Comments and Agency Responses to Public Comments Received During the Draft Environmental Impact Statement Public Comment Period

June 20 – July 26, 2023

### Public Comment Period

The Draft Environmental Impact Statement for the Grindstone River Dam Removal was released for public review on June 20, 2023. The public comment period closed on July 26, 2023. During the public comment period, a public informational meeting was held on July 12, 2023, hosted by the Minnesota Department of Natural Resources (DNR). This informational meeting was held at the Hinckley Community Room, located in Hinckley, Minnesota. The meeting included an informal open house to allow attendees to ask questions about the project; a formal presentation about the proposed project, the need for an EIS, and the environmental review process followed. The meeting ended with a public comment session. A court reporter was present to record the formal presentation and public comments. Attendees were informed of the opportunity to submit written comments via email or mail prior to the close of the comment period.

A total of 17 commenters submitted comments during the public notice period and public meeting. Comments were received from local government agencies, a state representative, and citizens. Individuals submitting comments are listed in the table below and were given a comment ID number. In the response to comments, the DNR grouped similar comments together by topic and provided a response. All comments submitted have responses and clarification of subject matter presented in the EIS has been provided where needed. No comments submitted indicated a need for updates to the EIS.

Name of Commenter	Comment ID Number
Stuart Knappmiller	1
G Kelzenberg	2
Kevin Hoeger	3
Phil St. Ores	4
Rick Lent	5
Larry Koch	6
Gordon Hommes	7
Owen Tesson	8
Tom Torborg	9
Donald Posterick	10
Eleanor Muzzy	11
<del>Tom Torborg</del>	12
Ronald Funes	13
Don Zeman, Mayor of City of Hinckley	14a – 14h
David J. Minke, Administrator, Pine County	15a – 15f
Don Zeman, Mayor of City of Hinckley (oral comments at public meeting)	16a – 16b
Nathan Nelson (oral comments at public meeting)	17

[Response to public comments](#)

This section includes response to public comments received during the Draft EIS public comment period. The comment ID number follows the comment submitted. In some cases, direct quotes from the comments was used. In other cases, the comment was edited for clarity, or succinctness.

[Comment Topic 1: Project support](#)

**Comment 1:** I grew up with Stumptown Creek a quarter mile run into our pasture, so I've seen the creek scour the valley from side to side many times. That explains why I didn't buy a home on a lakeshore, etc. and why I support the removal of dams on my local river, the Mississippi, and on the Grindstone.

As an outsider, I support your effort to remove a pond, just as I've worked for a decade to bring Phalen Creek aboveground and naturalize the land surrounding the watershed I spend hours caring for.

**Comment 2:** As an outdoorsman, I support the removal of the dam. It is important to restore habitat to original states wherever possible as it will enable the wildlife populations to use the area in a manner more aligned with historical patterns.

**Comment 5:** Removal of the Grindstone River dam is a great and overdue action. Natural species need to migrate, and river waters need to run cool.

**Comment 7:** I fully support the removal of the Grindstone River Dam and the re-establishment of the traditional connectivity of the Grindstone River. There is little or no reason to retain the current structure, and the benefits to fish, mussels and other wildlife—as well as the reduction off drowning risk to humans—fully justify the financial costs of removing it.

**Comment 8:** I am in full support of the dam removal.

**Comment 9:** I hope the Hinckley “deathtrap” dam gets removed. I live very near to the dam and I think it would be wonderful if the Grindstone river would be returned to a more natural state.

**Comment 10:** I support the removal of the dam for the improvement of the fish and aquatic life on the Grindstone River system, as well as the improved hydrologic function of the Grindstone River by restoring it back closer to its natural state.

**Comment 13:** I am totally in favor of doing this project.

**Response:**

Comments acknowledged. Commenters provide their personal and/or professional opinion of the project.

[Comment Topic 2: Opposition to the project](#)

---

**Comment 14f:** The city of Hinckley is opposed to the proposed removal of the Grindstone Dam.

**Comment 16a:** People have commented to us that they really want to see if we can come up with a way to keep it.

**Response:**

Comments acknowledged. Commenters provide opposition of the proposed project. The purpose of an EIS is not to approve or deny a project, but to describe potential environmental impacts of a proposed project along with describing mitigation methods to minimize those potential impacts. Approvals for projects come during the permitting process and are listed in the EIS in Table 1-1 (within EIS section 1.5).

[Comment Topic 3: Invasive species](#)

---

**Comment 11:** I'm very excited for the removal of the Grindstone Dam and subsequent restoration to the area. This will enhance habitat and make it a safer place to recreate. My one thing to add is potential concern about invasive species. In the EIS Draft you mention how uncontrolled revegetation could allow the implementation of invasive plants like buckthorn but didn't elaborate on specific management steps to prevent this from happening. Immediate plantings of natives will help the native plant community gain a leg up against invasives, but it's also important to control potential sources of spread. The equipment used in this project must be properly decontaminated if it's coming from another site and the

surrounding area should be surveyed for potential nearby invasives if possible. I'm excited to see this plan come to fruition and hopefully see some more mudpuppy habitat!

**Response:**

Terrestrial invasive Species is a topic discussed in EIS section 3.4.5. Specifically, 3.4.5.3 includes proposed mitigation and monitoring for invasive species. Vegetation restoration and management is proposed for areas exposed by dewatering, and the restored areas and surrounding habitat would be managed as part of Hinckley Aquatic Management Area (AMA) operations in the future. Management would include control of invasive vegetation. In addition, EIS section 2.1.2 indicates that the site would be stabilized and revegetated immediately following drawdown and soil stabilization, which will help establish native species at the site.

During project construction, transport of invasive species via equipment or materials brought onto the site would be managed by incorporating standard specification language requiring the prevention of contaminated equipment spreading terrestrial or aquatic invasive species.

The presence of the dam has resulted in nonriverine and non-local fish species to become established (i.e. small bullheads and sunfish). The proposed project will allow native riverine species of fish and mussels to become reestablished and provide greater connectivity for aquatic species throughout the watershed.

[Comment Topic 4: Downstream sedimentation](#)

---

**Comment 4:** When the Wisconsin DNR removed the dam on the Willow River near Hudson WI, the Wisconsin DNR stated there would be no problem downstream with sediment. This was incorrect and significant sediment issues arose.

**Response:**

The Little Falls Dam, located on the Willow River in Wisconsin, was a larger dam than the Grindstone River Dam, with higher volumes of sediment behind the dam. The Minnesota DNR is aware of the potential issues with this type of legacy sediment. The proposed mitigation and monitoring includes several measures to allow for controlled release and sediment consolidation, such as a slow drawdown and seasonal timing of construction. The construction specifications will require the contractor to remove the dam and manage sediment discharge to avoid any downstream nuisance conditions. Sediment mitigation is addressed in sections 2.2.2, 3.3, 4.2.3, and 4.3.3 of the EIS. Permits related to sediment mitigation are listed in the EIS in Table 6-1.

[Comment Topic 5: Water storage](#)

---

**Comment 6:** In light of climate change, the dam should not be removed until there is a thorough evaluation of the benefits of the dam to aquifer recharge and the future water needs should summers continue to be drier than historical and winter snow melts greater than normal. I do not believe this is the time to be reducing water storage. Consideration needs to

be given to the impact downstream of rain events and snow melts without the dam. Not only will the ecology upstream be impacted but also downstream. This project seems to be driven by fish, and although I am a fisher person, I am a human first and the lack of the dam and the possible long term environmental impact of not having the dam in place needs to be considered more fully. Given the current climate, I see no hurry in deciding to permanently remove the dam.

**Response:**

The purpose of the Grindstone Reservoir is not to provide water storage for residents and the City of Hinckley. Rather, the reason the dam was built was to provide water supply to DNR fishponds on an adjacent unit of the AMA (See EIS section 1.1 and scoping EAW Item 14). Unlike some other dams, the discharge from the Grindstone River dam is not adjusted throughout the year based on flows. Storing water in reservoirs have ecological impacts beyond the storage of water such as blocking fish migration, causing the loss of native mussels upstream, altering nutrient processes and inundation of natural stream habitat. The reservoir maintained by the dam is not permanent water storage as every year sediment deposits and reduces that storage since dams disrupt the natural transport of sediment in a stream. Safety aspects are also a concern when leaving the current structure in place such as dangerous tailwater hydraulics and the possibility of dam failure as the structure ages and deteriorates.

To help inform potential impacts of the proposed project, a groundwater analysis was conducted as part of the EIS and is discussed in EIS section 3.6 (See also Draft EIS Appendix G). The purpose of the study was not to look at aquifer recharge, however, the study indicated in section 3.6.2, that even the most vulnerable private wells are not likely to experience problems due to the removal of the dam and the lowering of the surface water elevation, indicating removal of the dam should not have an impact on local private wells.

In addition to the groundwater study, a hydrology and hydraulic analysis was conducted of both the existing conditions in the Grindstone River and the proposed condition if the dam is removed. The purpose of the study was to examine how the existing floodplain and the Grindstone River levels in the area may be affected by the proposed project. This analysis is discussed in EIS section 3.2 (See also Draft EIS Appendix C). Upstream of the dam removal location with the dam removed, water surface elevations at all flow events are decreased or equal to existing conditions. Also, with the dam removed, modeling indicates there would be no change in water surface elevations downstream at bridges and other public infrastructure. Overall flood reduction due to the reservoir is minimal, as the fixed crest prevents drawdown for storage.

[Comment Topic 6: Fish passage upstream of the dam](#)

---

**Comment 12:** It appears there is another dam on the Grindstone River just north of Friesland Road. Would this dam need be removed to allow fish to swim up the river all the way to

Grindstone Lake? If so, are there any plans to remove that dam also? Would anything else need to be done to the river to open the channel all the way to Grindstone Lake?

**Response:**

There is a carp barrier structure on Friesland Road DNR (located approximately one rive mile downstream of Grindstone Lake and eight miles upstream of the Grindstone River dam) and a dam located on Grindstone Lake. The division of Fish and Wildlife (FAW) does not currently have plans to remove either the barrier structure, or the dam on Grindstone Lake. The barrier was installed many years ago to prevent carp from moving up the Grindstone River and entering Grindstone Lake, which would negatively impact the water quality and cold water fishery present within the lake. Grindstone Lake is one of the more pristine lakes within the Hinckley area. It is a designated trout lake and has lake trout and stream trout (cold water species) stocked annually. It also has cool water gamefish such as northern pike and smallmouth bass that are targeted by anglers.

[Comment Topic 7: City of Hinckley Comprehensive Plan](#)

---

**Comments 14a and 15b:** Removal of the Grindstone River Dam directly contradicts the City's Comprehensive Plan, which states, "A fundamental goal of the City is to preserve and protect the environmental features of the community, including sensitive habits or ecosystems of the natural environment. To the extent possible, natural features should be enhanced and treated as an amenity".

**Response:**

The purpose and need of the proposed project are discussed in the EIS in section 1.2 (see also response to comment topic 14, below) and include restoring the reservoir to a naturally functioning stream, restoring fish and aquatic life connectivity, and improving natural hydrologic function. The project area lies within the Hinckley AMA. As described in the EIS definitions, AMA's are established in part to protect, develop, and manage lakes, rivers, streams, and adjacent wetlands and lands that are critical for fish and other aquatic life, for water quality, and for their intrinsic biological value. Potential impacts to the natural environment are discussed throughout the EIS, but notably in sections 3.1 (Wetlands) and 3.4 (plant communities, wildlife, fish, and sensitive ecological resources). A comparison of alternatives is discussed in EIS section 5. While changes to the landscape would occur from the proposed project, from presence of a reservoir to a riverine system, the environmental features of the AMA and its wetlands and forests would remain; the proposed project would allow native riverine fish and mussel species to migrate freely throughout an additional 27 miles of river.

[Comment Topic 8: Flood control](#)

---

**Comments 14b and 15c:** The Dam provides flood control for the City. The Grindstone River runs through the north side of the City of Hinckley. While heavy rains will always swell the river over

its banks, the dam adds a level of flood control that aids downstream properties and infrastructure. One of the City's primary sewer lift stations is within 200 feet of the river, and while the lift station is elevated and capable of handling current expected flood levels, removing the dam would put the lift station at a greater risk of flooding. Should the lift station fail due to flooding, untreated sewage would be released into the environment.

**Response:**

To help inform the EIS, a hydrology and hydraulic analysis was conducted. The results of this study is discussed in EIS section 3.2 (see also Draft EIS Appendix C). The hydraulic modeling indicates there would be no change in water surface elevation at downstream bridges and public infrastructure; no additional flood risk is expected if the dam is removed. Therefore, no impacts to the sewer lift station would be expected. Modeling demonstrates that the dam does not serve to provide flood control. The purpose of the dam is to provide water supply for the fish-rearing ponds located on the adjacent unit of the Hinckley Aquatic Management Area (AMA). Under the no action alternative of leaving the dam in place, there would be risk of dam failure (see EIS section 2.2.1). A consequence of dam failure would be abrupt changes in hydrological and hydraulic conditions potentially causing short-term flooding.

[Comment Topic 9: Dunn Avenue North](#)

---

**Comments 14c and 15d:** In December 2010, the DNR awarded the City of Hinckley a \$232,500 State Park Road Account Grant. In the summer of 2017, the City and Pine County completed improvements to Dunn Ave North for improved access to Grindstone River Dam and the reservoir. The grant covered the construction cost of the road improvement; the City paid for the engineering cost, which was over \$50,000.00. The City questions why the DNR would spend money improving a road to a recreational area and then remove the feature that makes it a recreational area. Furthermore, the City believes that the removal of the Grindstone River Dam is not consistent with Minnesota State Statute 162.06, Subdivision 5, which authorizes funds for “ ... the reconstruction, improvement, repair, and maintenance of county roads, city streets, and town roads that provide access to public lakes, rivers, state parks, and state campgrounds ... ”.

**Response:**

The awarded grant monies are for enhancement of public access to public lands and waterways. Dunn Avenue North will continue to provide access to the Hinckley AMA and the AMA will continue to exist along with associated recreational opportunities; fishing opportunities will continue to exist and it is expected that the fishing will be improved. Public access to the AMA and recreation opportunities are discussed in sections 1.4.2.1.6 and section 2.1 of the EIS. See also the Final Environmental Impact Statement Summary in Appendix H.



#### Comment Topic 10: Wildlife species in and near the reservoir

---

**Comments 14d and 15e:** The Draft Environmental Impact Statement acknowledges that numerous wildlife species are adapted to the current Aquatic Management Area (AMA), with shallow lakes being an important part of the breeding habitat for these species. Removing the dam will decrease these habitats while exposing arsenic, found naturally in higher concentrations in aquatic sediments.

**Response:**

Although shallow lake habitat would shift to an alternative complex of wetland and riparian ecosystems, the resulting habitat would provide shallow water habitat, moist soils, and seasonally flooded backwaters which are also important habitat components in the life history of waterfowl, shorebirds, and marsh birds. The restored river channel created by dewatering the shallow lake community would improve habitat and provide connectivity, with beneficial impacts for many aquatic organisms such as fish, amphibians, reptiles, mussels, and other invertebrates. Impacts to habitat and wildlife are discussed in EIS sections 3.1 and 3.4.

Arsenic presence within the soils of the reservoir are most likely derived from natural sources; wildlife using the area have likely been exposed to existing arsenic levels within the area. Arsenic issues are addressed in section 3.3 of the EIS. Also, see response to comment topic 10 below.

#### Comment Topic 11: Arsenic

---

**Comments 14e and 15f:** While the increased levels of now-exposed arsenic may only be a modest risk for aquatic life, the local residents, including children, will continue to use this resource, exposing themselves to levels considered unsuitable for humans.

**Response:**

Arsenic issues are addressed in section 3.3 of the EIS. Arsenic exceeded Soil Reference Values (SRVs) in the uppermost sediment in four of the seven cores. The arsenic present is most likely from natural sources. The dam removal plan, discussed in EIS section 2.1, includes measures that limit the sediment mobilization, promote vegetative cover, and will not add additional arsenic than what already is moving in naturally from upstream sources.

Upstream of the dam location, arsenic in stabilized banks composed of former reservoir sediment may be immobilized upon exposure to oxygen. Sediment mobilization downstream would be mitigated by slow drawdown of the reservoir allowing sediment consolidation and vegetation establishment. These measures would limit exposure by securing sediment in place and promoting vegetation as referenced in Table 6-1 of the EIS. The partially engineered alternative would use the sediment locally and, as able, bury the excavated fine-grained sediments beneath coarser grained sediments likely to have lower arsenic concentrations. A National Pollution Discharge Elimination System/State Disposal System (NPDES/SDS)

construction stormwater (CSW) permit from the Minnesota Pollution Control Agency would be required to complete work related to sediment and contaminants. Specific requirements for mitigation and monitoring would be further identified and developed during the permitting process.

#### [Comment Topic 12: Historic status](#)

---

**Comment 14f:** The Dam across the Grindstone River has stood in various forms for 147 years. The dam has been an integral part of Hinckley’s past, helping it grow as a logging town, providing the first electrical power to Hinckley in 1908.

**Response:**

Comment acknowledged. The DNR acknowledges that a dam has been present at this location for various uses (logging, hydropower, water storage) since the 1800s. The history of the dam was discussed in the EIS in section 1.1. The history of the dam was also discussed within the scoping Environmental Assessment Worksheet (EAW) in Item 14. The Grindstone River Dam is not eligible for listing in the National Register of Historic Places (NRHP) and no properties listed, or eligible for listing, in the NRHP would be affected by the proposed project (see scoping EAW Attachment 3 and Final Environmental Impact Statement Summary, located in Appendix H).

#### [Comment topic 13: Recreation](#)

---

**Comment 14g:** The dam has provided outdoor recreational opportunities to Hinckley residents and visitors.

**Comment 16a:** The dam and reservoir are a place for kids to fish.

**Comment 17a:** A lot of people enjoy the reservoir as a recreational place. They come here to fish off the pier and things like that. There will be opportunities for stream fishing and things, but I think there are other areas for that as well nearby.

**Response:**

Comments acknowledged. Socioeconomic topic was also discussed in the EIS in section 1.4.2.1.6, which discusses recreation. Recreation opportunities such as swimming and fishing would continue to exist at the site with the proposed project. See also Final Environmental Impact Statement Summary, located in Appendix H.

#### [Comment Topic 14: Project alternatives](#)

---

**Comment 14h:** The Draft EIS has identified many issues that could be addressed with the continued maintenance or replacement of the dam while maintaining a reservoir suitable for recreational use and wildlife habitat. And with the cost being about the same for replacement or removal, why would the DNR not go with the plan that the public wants and replace it?

**Comment 15a:** Pine County is in support of the City of Hinckley’s position to repair/replace the dam or create a rock ladder to maintain the reservoir.

**Comment 16b:** A temporary solution would be to fill the area below the dam with rock, which would stabilize it and take away the safety concerns for drowning.

**Response:** The purpose and need of the proposed project was discussed in EIS section 1.2 and are listed below:

- Address public safety concerns around dam instability, inability to pass floods, and the threat of dam failure.
- Address public safety concerns by eliminating the hydraulic roller and reducing the threat of drowning.
- Minimize impacts from flooding by providing a larger floodplain (i.e. restore the reservoir to a naturally functioning stream with a connected floodplain).
- Restore fish and aquatic life connectivity to the Grindstone River system.
- Increase pool and riffle habitat.
- Improve hydrologic function of the Grindstone River by restoring more natural sediment and nutrient transport.

As described in EIS section 1.4.2.1.4, reconstruction of the dam was not analyzed as a project alternative as reconstruction would satisfy only one portion of the project purpose (to address dam instability and inability to pass floods). However, over the long-term the infrastructure and safety concerns would remain. The continuous need for maintenance and repairs would still exist and the risk of dam failure would continue.

As described in in EIS sections 1.2.2 and 1.4.2.1.3.1 and in the Final Scoping Decision Document, installation of a rock ladder/rock arch rapids would not suit the full purpose and need of the proposed project and therefore was not analyzed as an alternative in the EIS. Construction of a rock arch rapids would maintain the current full pool reservoir, remove the drowning hazards associated with the current dam, and allow for fish and wildlife passage; however, instability issues would remain near the earthen berm, normal sediment transport would still be disrupted, and natural stream features and habitat diversity would not be allowed to establish with this design. Further, the topography of the river channel downstream of the dam is not suitable for a rock arch rapids design. In order to construct a stable, sustainable configuration that allows for aquatic passage, significant property acquisition and earthwork would be required.

Regarding the suggested temporary solution to add rock below the dam, adding rock could reduce the hydraulic roller, but may have negative impacts on stability or the ability to pass floods, and would not accomplish the additional purposes of the proposed project as discussed above and in the EIS.

Proposed project alternatives, including the no action alternative which includes leaving the dam in place with ongoing maintenance and repair needs, were discussed in EIS section 2.

Environmental consequences of each of the proposed alternatives was discussed throughout section 3 of the EIS, within the environmental consequences section for each topic.

Regarding costs, the long-term cost of the no action alternative would be greater than the cost to construct and maintain the proposed project. The dam is in poor condition and a safety hazard, with numerous maintenance needs present. In addition, as noted above, maintaining or reconstructing the dam does not accomplish all of the purposes of the proposed project.