



Disposition Study for Lower St. Anthony Falls Lock and Dam and Lock and Dam No. 1

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December 18, 2022

Scoping Technical Comments from:

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2 GENERAL COMMENTS

For the first time in over a century, we have an opportunity to reimagine the future of the Mississippi River and the Twin Cities' national park, the Mississippi National River and Recreation Area. The U.S. Army Corps of Engineers' (Corps) disposition study for the Lower St. Anthony Falls Lock and Dam (LSAF) and Lock and Dam 1 (LD1) is a critical step toward determining what the next century will bring. Will these structures remain in place or be removed and a free-flowing river restored?

To answer that question, it is imperative that we have all available information so that we can determine the best outcome for our communities, the river, and the national park. Our comments outline the many areas of concern that the Corps needs to address in the study. We are especially concerned about the structural integrity of LD1, which was categorized under the Dam Safety Action Classification as "2 – High Urgency of Action" due to an elevated risk of failure caused by erosion that would be virtually impossible to detect with sufficient notice for intervention. However, the dam was subsequently reclassified to "4 – Low Urgency of Action" not because the erosion and structural integrity issues were resolved, but because failure of LD1 would likely not cause loss of life and economic consequences are low to moderate.

The structural integrity of LD1 has profound implications for any future owner and suitability of the structure for alternative uses. Given this information, the Corps needs to provide additional details about the risk of dam failure within the 50-year planning period and explain how dam failure would impact recreational use of the reservoir.

The Conservation Organizations also recommend the Corps:

1. Fully account for all costs and benefits of the alternatives, including costs and benefits associated with ecosystem services;
2. Conduct an Environmental Impact Statement instead of an Environmental Assessment;
3. Comply with the Water Resources Development Act, Clean Water Act, Endangered Species Act, and National Historic Preservation Act; and
4. Conduct consultation with the National Park Service, U.S. Fish and Wildlife Service and Dakota and Ojibwe Tribal Nations.

We also urge the Corps to adhere to documented best practices for future public engagement on the disposition study. Dr. Roopali Phadke at Macalester College has documented community engagement needs and recommendations specific to this disposition study in the report "Engagement Matters: Public Understandings of River Infrastructure" (attached hereto as Appendix A).

The geographic scope of the Disposition Study includes a roughly 8-mile stretch of river below St. Anthony Falls to the confluence of the Minnesota River. This river stretch is formally known as "the Gorge" and is currently impounded by Lock and Dam 1 and Lower St. Anthony Falls Lock and Dam. Throughout these comments, the term "Gorge" refers to the area that encompasses both dams and their impoundments.

These technical comments are submitted on behalf of three organizations (collectively referred to hereafter as "the Conservation Organizations"):

National Parks Conservation Association (NPCA) is the independent, nonpartisan voice working to strengthen and protect America's national parks. Founded in 1919, NPCA works with its 1.6 million members and supporters nationwide, including over 27,000 in Minnesota, to protect and preserve our nation's natural, cultural, and historic heritage for present and future generations. NPCA is headquartered in Washington, D.C. and has 27 local and regional offices across the country, including a field office in Minnesota.

American Rivers protects wild rivers, restores damaged rivers, and conserves clean water for people and nature. Since 1973, American Rivers has protected and restored more than 150,000 miles of rivers through advocacy efforts, on-the-ground projects, and an annual America's Most Endangered Rivers® campaign. Headquartered in Washington, DC, American Rivers has offices across the country and more than 275,000 members, supporters, and volunteers. The Upper Mississippi River is one of 11 priority river basins where American Rivers concentrates the bulk of its activities. In the basin, we are working to reform the management of the Mississippi River and reconnect rivers to their floodplains.

Friends of the Mississippi River (FMR) was established in 1993 to be the citizen, community, and environmental voice for the river in the Twin Cities region. Over nearly 30 years, FMR has grown to 16 board members, a 12-member council of advisors, 23 staff, 2,500 members, and over 6,000 annual volunteers, event participants, members, and advocates. FMR's focus areas include policy and advocacy on issues affecting the health of the Mississippi River and riverfront communities, habitat preservation and restoration, and stewardship and education.

3 TECHNICAL COMMENTS

3.1 DISPOSITION STUDY IMPLEMENTATION GUIDANCE

Two guidance documents exist for the Corps' disposition study process:

1. 2016-08-22. Dalton, James C. Interim Guidance on the Conduct of Disposition Studies.
2. 2019-04-25. Dalton, James C. Revised Implementation Guidance for Section 1168 of the Water Resources Development Act (WRDA) of 2018, Disposition of Projects.

These two memos provide an extensive list of questions that the Corps must answer when considering disposition of completed projects. As such, the Conservation Organizations provide the following resources, questions, and recommendations in considering the requisite questions.

3.1.1 Benefits and Costs of Disposal/Retention

According to the 2016 Dalton Memo:

The study's focus is on whether federal interest exists to retain the project for its authorized purpose(s), based on an evaluation and comparison of the benefits, costs, and impacts (positive and negative) of continued operation, maintenance, repair, replacement, and rehabilitation, or the lack thereof, on the one hand and

of deauthorization and disposal of the associated real property and Government-owned improvements on the other.¹

As part of this assessment, the Corps must not only review monetary benefits and costs but conduct a “public interest review” that “reflects the national concerns for both the protection and utilization of important resources” as outlined in the Corps General Regulatory Policies.²

The Conservation Organizations suggest the Corps incorporate the following impacts, costs, and benefits into their considerations.

3.1.1.1 Retention of LSAF and LD1, Corps maintains ownership

3.1.1.1.1 Benefits/Positive Impacts

1. Recreation benefits.

There are many active recreational users who use the reservoirs behind Lock and Dam 1 and Lower St. Anthony Falls. These users include boaters, rowers, fishers, and other recreationalists. The Corps should make use of recent studies of visitor demand in their analysis, such as what was used in the Mississippi Gorge Regional Park Master Plan.³

2. Hydropower benefits.

The Corps should include an analysis of the carbon emission reductions generated by the hydrokinetic facilities operating at these sites. This analysis should be limited to the actual power produced, instead of the power generating capacity (see attached Appendices B and C). Actual production is significantly lower than capacity, as shown by recent filings with the Federal Energy Regulatory Commission. In addition, the Corps must also calculate the emissions in the context of the modified stream. Studies indicate that reservoirs release a substantial amount of methane due to the decomposition of organic matter and other factors, while free-flowing rivers capture carbon. Peer-reviewed models are available that the Corps should use to provide a clear analysis of hydropower benefits.⁴

3.1.1.1.2 Costs/Negative Impacts

1. Operation and maintenance of the lock and dams.

The Corps should provide an accurate accounting of operation, maintenance, rehabilitation, and deferred maintenance expenses of the locks and dams. This should include the following items:

- All operation, maintenance, and rehabilitation expenses for the past 50 years, broken out by fiscal year.

¹ 2016-08-22. Dalton, James C. Interim Guidance on the Conduct of Disposition Studies. https://planning.erc.dren.mil/toolbox/library/MemosandLetters/2016_Disposition_Memo.pdf

² 33 CFR 320

³ Minneapolis Park & Recreation Board. 2019. Mississippi Gorge Regional Park Master Plan. Available at https://www.minneapolisparcs.org/park-care-improvements/park-projects/current_projects/mississippi_gorge_regional_park_master_plan/

⁴ See Prairie YT, Alm J, Harby A, Mercier-Blais S, Nahas R. 2017. The GHG Reservoir Tool (G-res), UNESCO/IHA research project on the GHG status of freshwater reservoirs. Available at www.hydropower.org/gres

- Date of last major rehabilitation with an itemized list of work completed and costs of those separable elements.
- List of deferred maintenance and estimated costs.
- Anticipated major rehabilitation needs within the next 50 years.
- Additional costs associated with the structures, such as dredging, dam safety, inspections, gas and electric bills, security, fencing, building maintenance, etc.

2. Carbon emissions from the reservoirs due to impoundment.

As mentioned in above, to provide a clear understanding of the carbon emissions saved (or lost) due to impoundment and the generation of hydropower, the Corps must calculate the carbon emissions from the reservoir itself.

3. Mitigation of the persistent impacts of impoundment.

The Corps must incorporate into the costs of retaining the dams, the cost of mitigating the environmental impacts of the dams, as discussed in elsewhere herein.

4. Accounting of ecosystem services gains/lost since impoundment and 50 years into the future.

The Corps must calculate the ecosystem services lost and gained by converting the riffle-pool rapids habitat of the Gorge to flat-water reservoirs. This calculation must look back to when the dams were constructed and track how the ecosystem services have been impacted by impoundment, compared to the historic ecosystem-type that would have existed had the dams never been built and would be restored if the dams were removed. This accounting must be incorporated into the monetary costs and benefits and is discussed more elsewhere herein.

5. Costs to address scour issues at locks and dams.

The “Upper St. Anthony Falls Lock and Dam, Lower St. Anthony Falls Lock and Dam, and Lock and Dam No. 1, Section 216 Disposition Study, Decision Meeting Briefing Report,” (hereafter “Decision Meeting Briefing Report”), also noted a scour and stability issue at LD1 that lowered its Dam Safety Action Classification to DSAC 2 (High Urgency) but was reclassified after further analysis showed “low likelihood of life loss” if the dam failed.⁵ fully disclose any and all history associated with dam stability and scouring. The Corps must provide, in their history of costs, any work completed to address scour and stability issues. If there are projected costs associated with scour and stability at the dam, the Corps must include that in their cost analysis.

The scour and stability issue should raise *significant* concerns for taxpayers and potential future owners. How likely is it that the dam will fail within the next 50 years if the scour and stability issues go unresolved? The Corps needs to address this in the disposition study, especially in the context of climate change, which is increasing average discharges and timing of higher

⁵ USACE. 2017-08-16. Upper St. Anthony Falls Lock and Dam, Lower St. Anthony Falls Lock and Dam, and Lock and Dam No. 1, Minneapolis, MN, Section 216 Disposition Study, Decision Meeting Briefing Report at 8.

discharges (more water over longer periods of time) in the Mississippi River.⁶ Such increases in river discharge will put more pressure on the dam and could accelerate potential failure.

6. Potential reduction in quality of and public oversight over property maintenance and conditions.

The Conservation Organizations are extremely concerned about the potential for the property to deteriorate, creating unsightly or dangerous conditions. A 2013 report found that “[f]unding streams in the U.S. federal budget over the past 20 years consistently have been inadequate to maintain all of [the Corps] infrastructure at acceptable levels of performance and efficiency.”⁷ While recent federal investment packages (the Inflation Reduction Act and Infrastructure Investment and Jobs Act) have provided a temporary boost to the Corps budget, it will not be lasting. The fact remains that the nation’s water infrastructure is “built-out,” meaning there is more water infrastructure in the U.S. than the nation needs and has the capacity to maintain.⁸ And, inland waterway users – the primary beneficiaries of the inland navigation infrastructure – recently succeeded in reducing the private cost-share obligations for the inland waterways.⁹ Additionally, the Infrastructure Investment and Jobs Act provided new construction funding to add even more infrastructure to the Mississippi River inland navigation system,¹⁰ which will further strain the operations and maintenance budget of the Mississippi Valley Division.

With ever more limited resources for operating and maintaining infrastructure actually in use, it is fathomable that the Corps will allow these unused structures to fall into disrepair. The Corps needs to provide an analysis of the realistic funding constraints for operating and maintaining unused infrastructure as part of the Disposition Study.

This analysis should include the cost of securing and maintaining unstaffed or lightly-staffed properties (including the cost of ongoing security personnel) to ensure that unauthorized entry, vandalism, etc. do not lead to safety hazards, deterioration in the condition of Corps properties, deterioration in the condition and value of neighboring properties, unsightly conditions for visitors of neighboring tourist attractions and parks, etc.

3.1.1.2 Disposal of LSAF and LD1, keeping structures in place

It is difficult to understand what public interest benefits would accrue from this alternative without knowing how and for what purpose the dams and other associated infrastructure would be used. There is also a nearly infinite array of potential alternatives for partial disposal of the infrastructure. The Conservation Organizations provide the following general comments on the benefits and costs of a disposal alternative that would retain most or all of the infrastructure and look forward to responding in more depth when the Corps publishes the Draft Disposition Study.

⁶ Houser, J.N., ed. 2022 Ecological Status and Trends of the Upper Mississippi and Illinois Rivers: U.S. Geological Survey Open-File Report 2022-1039, 199 p., <https://doi.org/10.3133/ofr20221039>.

⁷ National Research Council. 2013. Corps of Engineers Water Resources Infrastructure: Deterioration, Investment, or Divestment? The National Academies Press. Washington, D.C.

⁸ Id.

⁹ Section 108 of the Water Resources Development Act of 2020.

¹⁰ In reference to the recent Congressional funding via the Infrastructure Investment and Jobs Act of a new lock at LD25 and funding for the Navigation and Ecosystem Sustainability Program.

3.1.1.2.1 Benefits/Positive Impacts

1. Reduction in Corps maintenance and operations costs.

Regardless of the fate of the infrastructure, the primary benefit of this alternative would be a cost-savings for the Corps as they would no longer be responsible for operations and maintenance expenses.

3.1.1.2.2 Costs/Negative Impacts

1. Liability and insurance costs for private ownership.

The Corps must make clear that if dams are transferred to another owner, jurisdiction over dam safety would be transferred to the Dam Safety Program within the Minnesota Department of Natural Resources, unless the dam owner and hydropower operator are the same entity, in which case dam safety jurisdiction would transfer to the Federal Energy Regulatory Commission. In either scenario, the dam owner is liable for public safety at the dams, including infrastructure maintenance, site security, dam failure risk, and risks of injury to people on the facilities. According to data from Stanford University's National Performance of Dams Program,¹¹ 24 dams have failed per year on average since 1980. In addition, dams can be attractive nuisances - Brigham Young University maintains a database¹² that currently includes 625 drownings in the hydraulics downstream of dams around the United States. Insurance costs for private dam ownership are high due to uncertainty around liability risk and costs of dam ownership.

2. Loss of public commercial and recreational motorized boat access in the reservoirs, should a new owner cease or reduce lockage at LD1 and/or LSAF.

A private owner would have the discretion to completely close public access through the locks, eliminating some types of recreational boating as well as routes commonly used by commercial tour operators (Padelford Riverboats, Magnolia Blossom, Minneapolis Queen, Paddle Bridge Guide Collective). Additionally, if the Corps easements and riverside property were transferred to a private owner, riverfront access points for fishing and boating could also be restricted.

3. Potential reduction in quality of and public oversight over property maintenance and conditions.

As mentioned above, the Conservation Organizations are concerned that the Corps lacks the resources to prevent deterioration of the infrastructure. Likewise, the Conservation Organizations are concerned that any other federal, state, local or private entity would not have the resources necessary to keep up the requisite maintenance. The Conservation Organizations remind the Corps that the structures are located within a major metropolitan area and is surrounded by public parkland with high visitor use. Any alternative that could lead to

¹¹ National Performance of Dams Program. 2018. *Dam Failures in the U.S.* Stanford University NPDP-01 V1.

¹² Brigham Young University; Locations of Fatalities at Submerged Hydraulic Jumps; <https://krcproject.groups.et.byu.net/browse.php>; accessed December 16, 2022.

abandonment of the structures and subsequent dereliction is unacceptable from a public interest perspective.

3.1.1.3 Disposal of LSAF and LD1, removing structures for environmental benefits

In 2018, Congress ordered the Corps to also consider removal of the project for environmental benefits.¹³ To meet this legislative requirement, the Corps must estimate the cost of removal and compare it to the cost of continued operations and maintenance over a 50-year planning period. In addition to considering anticipated operation and maintenance, to accurately estimate project costs, the Corps must consider the full range of benefits associated with dam removal, which can be substantial. The Conservation Organizations encourage the Corps to consider the multiple studies regarding the economic benefits of dam removal provided in Appendices D-G.

3.1.1.3.1 Benefits/Positive Impacts

1. Changes in recreational opportunities

At the moment, recreational opportunities on the impounded Mississippi River are limited. Recreational opportunities are primarily motor boating, paddling, rowing, and bank fishing. Dam removal would change recreational opportunities in the river and allow for more diverse uses, including increased paddling, whitewater kayaking, inter-tubing, wading, fly fishing, and bank fishing. The increase in the diversity of users and access to more types of recreation on the river can lead to tremendous economic benefits. A study of the Kennebec River in Maine found that removing the Edwards dam generated \$2.5-\$38.2 million for improved recreational fishing quality and \$297,000 - \$2.7 million for improved river recreation quality.¹⁴

2. Protection and restoration of a Special Aquatic Site, pursuant to the Clean Water Act.

The Mississippi River Gorge meets the definition of a “Special Aquatic Site,” and as such, the Corps must consider that the degradation of the Gorge’s riffle-pool ecosystem “may represent an irreversible loss of valuable aquatic resources.”¹⁵ As such, the Corps must consider their obligations to protect and restore the Gorge as required by the Clean Water Act. If the impacts of continuing to impound the Mississippi River Gorge cannot be mitigated, the Corps must find in favor of removing the dams to meet their Clean Water Act obligations.

3. Ecosystem services gained by converting the reservoirs to a riffle-pool complex.

The Corps must complete an examination of the ecosystem services tradeoffs between impoundment and dam removal and restoration. Numerous studies exist on how to calculate

¹³ 2019-04-25. Dalton, James C. Revised Implementation Guidance for Section 1168 of the Water Resources Development Act (WRDA) of 2018, Disposition of Projects. https://www.mvp.usace.army.mil/Portals/57/docs/Civil%20Works/Projects/MplsLocksDisposition/WRDA2018_Sec1168_Disposition_of_projects.pdf?ver=2019-08-20-110847-820

¹⁴ Boyle KJ, Teisel MF, Moring JR, Reiling SD. 1991. Economic benefits accruing to sport fisheries on the Lower Kennebec River from the provision of fish passage at Edwards Dam or from the removal of Edwards Dam. Chelsea (ME): Maine Department of Marine Resources.

¹⁵ 40 CFR 230.1(d)

the services nature provides. This is discussed in more detail under elsewhere herein and examples are provided in Appendix H.

4. End of ongoing structure maintenance, operation, rehabilitation, and associated costs.

As discussed elsewhere, any disposal scenario would greatly reduce and/or eliminate the Corps obligations to operate, maintain, and rehabilitate the infrastructure and other costs associated with the site. The Corps must provide a complete accounting of these expenses.

5. Potential expansion of public parkland on exposed shoreline.

Removal of the dams would lower water levels in the Gorge. This would expose more acres of shoreline, floodplain, and islands within the Mississippi Gorge Regional Park and Mississippi National River and Recreation Area. Critical questions about ownership, rights of way, easements, and other land/deed restrictions must be resolved should the dams be removed, but it is likely these new land formations and areas will increase the useable space for visitors and recreational users and should be considered a public benefit.

3.1.1.3.2 Costs/Negative Impacts

1. Cost of removal and ecosystem restoration.

Dam removal and ecosystem restoration of the Gorge will be expensive. The Corps should consult with the U.S. Fish and Wildlife Service National Fish Passage Program, the NOAA Restoration Center, academic institutions, and experienced dam removal consulting firms to estimate the cost of dam removal and associated restoration. American Rivers has competitively pre-qualified a list of experienced dam removal firms that can be furnished upon request.

2. Sediment management.

There is a substantial amount of sediment accumulated behind LD1 and LSAF. And, due to the industrial history of the Twin Cities riverfront, there is an elevated risk that the sediment is contaminated with heavy metals and other toxic substances. The Corps needs to conduct an analysis of the sediments and develop a sediment transport model to understand how and where the sediment will move downstream under the dam removal scenario. The Corps should also include a cost analysis of sediment removal should it prove unviable to release all impounded sediment downstream. The Conservation Organizations understand that the Corps has conducted some sediment analysis as part of their dredging operations. Those results should be published as soon as possible to inform the public debate about the future of the Mississippi River in the Twin Cities.

3. Changes in recreational opportunities (loss of rowing and power boats)

As discussed in elsewhere herein, changes in recreation may have positive impacts and economic benefits. However, those changes may come at a cost as the existing recreational opportunities for rowing, power boats, and commercial passenger river cruise operators will no longer be available. These changes need to be fully explained and balanced in the analysis. This analysis should include discussion of costs to relocate existing rowing club facilities in the Gorge

(Minneapolis Rowing Club, University of Minnesota), as well as an analysis of potential economically beneficial reuse opportunities for these facilities.

4. Potential need to mitigate conditions at Ford Area C hazardous waste dump site.

The Corps needs to analyze how dam removal may change water levels and discharge around the Ford Area C hazardous waste dump adjacent to Lock and Dam 1. If the hydraulic changes impact the stability of the dump, costs associated with cleanup need to be incorporated into the analysis. (At this time, Ford Motor Company owns this site and may be responsible for cleanup costs; the Corps should not assume that cleanup costs will be borne by the public.)

5. Changes in conditions to and accessibility of the Meeker Island Lock and Dam.

The Conservation Organizations have several questions about the future of the Meeker Island Lock and Dam that may impact the cost of the dam removal alternative. These questions include: Who owns the structures and are they included in the Disposition Study? How will the structures be impacted by dam removal and is there a need to also remove or modify the structures under the dam removal alternative? Like our concerns expressed elsewhere herein derelict navigation infrastructure (which would be more exposed under a dam removal alternative) poses serious public safety risks and reduces the quality and aesthetic of the Mississippi Gorge Regional Park.

6. Costs associated with the potential need to modify critical infrastructure.

There is a substantial amount of critical infrastructure in and around the Gorge. This includes, but is not limited to:

- Stormwater infrastructure, including all outfalls
- Bridges:
 - Ford Parkway
 - Lake Street/Marshall Avenue
 - Canadian Pacific Railway Short Line Bridge
 - East Franklin Avenue
 - Interstate Highway 94
 - Washington Avenue
 - Northern Pacific Railway Bridge #9
 - 10th Avenue
 - Interstate Highway 35W
 - Stone Arch Bridge
- Other infrastructure:
 - Retaining walls (Bohemian Flats and other locations)
 - Upper Saint Anthony Falls Raceways
 - Southeast Steam Plant
 - Hennepin Island slopes
 - Upper St. Anthony Falls Lock and Dam
 - Mill Ruins Park

- University of Minnesota structures
- Utilities

The Corps needs to work with the municipalities, Hennepin and Ramsey counties, the Minnesota Department of Transportation, the University of Minnesota, and other property owners to understand the potential need to modify these structures and estimate those costs under the dam removal scenario. Impacts to boat access for infrastructure inspection and maintenance should also be considered.

7. Loss of hydropower generation.

This cost should be balanced with the cost of replacing hydropower with other renewable energy. This assessment should be based on the average amount of power currently produced, which is substantially lower than the maximum amount of power production authorized.

The replacement cost should also incorporate anticipated changes in the cost of renewable energy sources, such as wind and solar, in the coming 5-15 years. Because any study alternative that includes the end of hydropower production would take many years to implement, replacement power would not be needed immediately. The cost of renewable energy development is likely to drop during this time due to advances in technology as well as subsidies and legislation (including the Inflation Reduction Act) that reduce the cost to renewable energy producers.

According to a 2022 peer-reviewed analysis from the U.S. Department of Energy: “By 2035, solar could cost as little as \$22 per megawatt-hour on average. That’s down from a 2020 average of \$34 per MWh. Wind, for its part, could hit \$24 per MWh, down from \$32 per MWh two years ago.”¹⁶ This anticipated 25-35 percent drop in wind and solar costs is a substantial factor in considering hydropower replacement. The Corps should incorporate this and other federal research into its analysis.

In 2021, the hydropower plants at Lower St. Anthony Falls Lock and Dam and Lock and Dam 1 produced a combined total of 121,978 MWh of power. Using the 2020 average price of solar power, replacing the hydropower produced with solar would cost \$4.1 million. Based on Department of Energy projections, that same solar replacement cost would drop to \$2.7 million by 2035.

As mentioned above, analysis of hydropower generation costs should also incorporate the impacts of methane emissions caused by the dams, and the benefits of restoring a free-flowing river.

3.1.2 Request for Release of Additional Information Regarding the Federal Interest Determination

According to the 2016 Dalton Memo:

The district will hold a vertical team decision meeting as soon as possible after, but in all cases within 60 days of the initial receipt of funding or issuances of this guidance, whichever is later. [...] The purpose of the Decision Meeting is to

¹⁶ <https://www.eenews.net/articles/doe-heres-where-renewable-costs-are-heading/>

establish that Federal interest in the project no longer exists, the project remains a candidate for a disposition study; document and gain vertical concurrence on the scope proceeding to the Tentatively Selected Plan.

Several documents were produced as part of these planning meetings, including the 2017 Decision Meeting Briefing Report. The Conservation Organizations note disappointment that these critically important decision documents have not been released publicly and were only provided when requested under the Freedom of Information Act.¹⁷ To ensure this important document is on the record and available for public review, the Conservation Organizations attached it here as Appendix I. Notably, the 2017 Decision Meeting Briefing Report found that a “Federal interest in the project no longer exists,” and the Corps should proceed with the Disposition Study.¹⁸ The Conservation Organizations request the Corps promptly post for the public to review all reports and documents prepared as part of the Decision Meeting about whether a federal interest in LSAF and LD1 still exists.

3.1.3 Comments on Federal Interest Determination “Focused Questions”

As part of the Decision Meeting Briefing Report, the Corps included “1st Iteration” answers to a series of questions required by the 2016 Disposition Study Guidance.¹⁹ In response, the Conservation Organizations share our additional thoughts and comments for the Corps’ consideration.

3.1.3.1 An explanation of how the project became a candidate for a disposition study

In the Decision Meeting Briefing Report, the Corps explains that “Section 2010 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), dated 10 June 2014, directed the Upper St. Anthony Falls (USAF) lock and dam, located at Upper Mississippi River mile 853.9 in Minneapolis, Minnesota, be closed within one year of the date of enactment of the Act.” (Executive Summary). Consequently, the upper lock closed to navigation on June 9, 2015.²⁰

In the Problem Statement of the “Decision Meeting Briefing Report,” the Corps states that:

USAF, LSAF, and L/D 1 operate as a system providing commercial navigation to the city of Minneapolis. Since the 2015 closure of USAF, commercial navigation has not been able to access the port of Minneapolis. USAF is no longer used for navigation in any capacity; LSAF and L/D 1 have very limited use and the

¹⁷ On July 27, 2018, NPCA submitted a Freedom of Information Act request to the Corps that requested “any and all documents related to the ‘Decision Meeting’ conducted by the Corps pursuant to the ‘Interim Guidance on the Conduct of Disposition Studies’ (CECW-P, 22 August 2016)” specifically as it related to “determinations about whether a federal interest in [USAF, LSAF and LD1] still exists and if it should proceed with a disposition study.”

¹⁸ USACE. August 16, 2017. Upper St. Anthony Falls Lock and Dam, Lower St. Anthony Falls Lock and Dam, and Lock and Dam No. 1, Section 216 Disposition Study, Decision Meeting Briefing Report.

¹⁹ 2016-08-22. Dalton, James C. Interim Guidance on the Conduct of Disposition Studies.

https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/2016_Disposition_Memo.pdf. See Paragraph 8a, which outlines that the Corps must demonstrate the federal interest (or lack thereof) “in continuing to retain the project for its currently authorized purposes based upon existing and anticipated future conditions.”

²⁰ Decision Meeting Briefing Report at 11.

primary users are recreational boaters and commercial passenger river cruise boats.

Further justifying the need to pursue a disposition study, the Corps adds two additional reasons:

Since the closure of USAF, the city of Minneapolis and other stakeholders have begun planning and designing a new vision for the port area and the USAF areas; as the local vision for the area changes, there is no demand to restart commercial navigation in this waterway. Furthermore, due to the limited lock size of USAF and LSAF, allowing only two barges to lock through at a time, the demand for commercial use and tonnage of cargo has historically been low in this area.²¹

The Corps should more clearly state the problem. Based on the above text, it seems that the problem is that “limited lock size, shifting transportation needs, and declining public interest in commercial navigation have caused a precipitous drop in use of the federal infrastructure.” As a response to this problem, “the Corps is conducting a Disposition Study to determine the best future use of the site.”

The Conservation Organizations draw the Corps attention to deterioration, scour and stability issues at the locks and dams, as they have been outlined in the Decision Meeting Briefing Report.²² These issues raise the risk of dam failure within the 50-year planning timeframe and should be incorporated into the problem statement to frame the issue more accurately.

If other conditions have changed since the 2017 report was published, the Corps should provide a clear explanation in the disposition study.

3.1.3.2 The project’s performance history

The Decision Meeting Briefing Report details the recent use of the three locks and dams being considered for disposition and disposal, noting the decline in commercial and low recreational vessel traffic.²³ The Conservation Organizations agree that this information supports the Corps’ decision to proceed with a disposition study.

The Conservation Organizations recommend the Corps also compare recreational traffic and tour boats to the far greater use of downstream locks and dams. Such a comparison will help the public understand the under-utilization of the infrastructure.

3.1.3.3 As summary of trends that indicate the extent, or limit of, the national economic development benefits

The Corps did not provide a summary of trends in its “Decision Meeting Briefing Report,” but recommended that:

the next iteration of planning this Section 216 study include a full economic analysis, including examination of all National Economic Development (NED) benefits and costs. The analysis should quantify the cost of operations,

²¹ Ibid. at 35.

²² Ibid. at 7-8.

²³ Ibid. at 38-39.

maintenance, repair, replacement and rehabilitation; and an assessment of social, environmental, economic and recreational costs and benefits.²⁴

The Conservation Organizations look forward to reviewing the Corps NED analysis and recommend the Corps incorporate the additional costs and benefits identified in this comment letter.

3.1.3.4 A forecast of future conditions and analysis of whether there may be a future need for the project or if the project “could be modified to meet future needs other than the one(s) for which the project was authorized.”

The Corps’ answers to this question in its four-page Focused Questions from 1st Iteration²⁵ (attached as Appendix J), indicates the agency does not see a future navigation need for any one of the three locks and dams, and the current navigation needs are minimal.

However, the Conservation Organizations draw the Corps’ attention to an incorrect assertion that there is “significant recreational use of the project.” In a presentation given by Mike Davis of the MN DNR in 2017, he cited a Corps study of recreational boating traffic in 2000 and noted that recreational boating in the reservoirs behind LD1 and LSAF was lower than anywhere else on the Mississippi River – despite the river’s location within a major metropolitan area (attached as Appendix K).

As part of the Corps’ analysis of future conditions, the Corps must evaluate how the lack of dredging will impact recreation boating. Given the low use of the reservoirs, what is the cost for continuing to operate and maintain each lock and dam and the navigation channel for the current users? This information is critical to weighing the value of the Corps staying or leaving and of keeping or removing the structures.

In its “Decision Meeting Briefing Report,” the Corps reveals that:

Dredging in pool 1 will be a lower priority, as few, if any commercial towboats have reason to transit Lock 1 or Lower St. Anthony Falls lock. The channel is expected to silt in, over time. The current channel markers, which are set by the U.S. Coast Guard after the Corps dredges the channel, will become unreliable for 9-foot navigation. For this analysis, it is assumed that future dredging will only be performed in Pool 1, as no commercial navigation is possible above Upper St. Anthony Falls.²⁶

How is the lack of dredging already impacting recreational boating? What would justify or require dredging Pool 1 absent commercial navigation?

The Conservation Groups also request the Corps clarify how disposal of the infrastructure connects to deauthorization of related projects and how this might impact the near infinite array

²⁴ Ibid. at 43.

²⁵ USACE. 2017-08-16. Upper St. Anthony Falls Lock and Dam, Lower St. Anthony Falls Lock and Dam, and Lock and Dam No. 1 Disposition Study, Focused Questions from 1st iteration, Decision Meeting.

²⁶ Decision Meeting Briefing Report at 40.

of potential alternatives under a partial disposal scenario. Additionally, the Corps needs to clarify their obligations to maintain dredging operations prior to deauthorization.

In the Disposition Study of the Upper St. Anthony Falls Lock, the Corps states:

The Rivers and Harbors Act of July 3, 1930 (Public Law 71–520) established the Upper Mississippi River nine-foot navigation channel project. The project purpose was expanded to include recreation under the Flood Control Act of 1944 (Public Law 78–534). The Rivers and Harbors Act of 1937 (Public Law 75–392) authorized the Upper and Lower St. Anthony Falls locks and dams and the Minneapolis Upper Harbor Project, which extended the 9-foot navigation channel upstream to river mile 857.6.

During the study scoping, it was determined that this study will not evaluate changes to the 9-foot navigation channel. The project study team made this determination because regular maintenance dredging of the navigation channel upstream of USAF Lock and Dam no longer occurs; as such, the disposition of the authorized 9-foot navigation channel will be addressed in the follow-on disposition study of LSAF Lock and Dam and LD1.²⁷

Therefore, we assume the Corps will be considering deauthorization of the 9-foot channel for all three pools in this study. The lock and dam removal alternative would require such deauthorization. In its public meetings for this scoping process, the Corps said that it will study deauthorizing the navigation mission, and that deauthorizing the navigation mission would mean the Corps will no longer maintain and dredge the channel.

Deauthorizing the navigation mission enables the full or partial disposal of LSAF and LD1, new purposes, modifications to those structures and removal. And it would allow the Corps to discontinue dredging and other channel maintenance. If deauthorized and disposed of, but not removed, what would become of the channel above each site physically and ecologically? The Corps already says it will start silting in due to reduced dredging. What will it mean for tour boats and recreational craft?

3.1.3.5 Does the project currently meet its authorized purposes? Why or why not?

In the “Decision Meeting Briefing Report,” the Corps points out that the three locks and dams operated as a system, and with the closure of the USAF Lock, the ability of the other sites to meet their authorized navigation purpose was compromised. While LSAF and LD1 remain open for commercial navigation, use is restricted because the USAF Lock is closed. As the Corps has stated, the system is only partially able to meet its purpose.

The Corps makes an important point here: the three locks and dams functioned as a system to meet their authorized navigation purpose. Closing USAF broke that system. The Corps needs to clearly document whether what remains – partial commercial navigation and recreation – rises to the level of a justifiable federal need.

²⁷ USACE. 2021. Upper St. Anthony Falls Lock and Dam, Section 216 Disposition Study, Draft Integrated Disposition Report and Environmental Assessment,” at p. 14.

Recreation is a secondary purpose, and it cannot act as a primary reason for the Corps staying at either site unless Congress acts. The Disposition Study should address, if the dams are retained in federal ownership, how the Corps will continue to conduct lockages at LSAF and LD1 for recreational users and commercial tour operators; what the costs and benefits of doing so are; and what level of service the Corps will institute and why.

3.1.3.6 *Is there reason to believe that the future condition or needs will be different from those present under the current condition? How so?*

The Corps does not answer what is included in future conditions or needs in its 1st Iteration Report (2017). Without specifying which of the three locks and dams it is referring to, the Corps says, “There is currently significant recreational use of the project which is expected to continue. The current conditions are expected to continue into the future.”

From this statement, it appears that Corps is saying there will not be a meaningful change in recreational use at either LSAF or LD1.

The Corps refers to recreation and an amorphous connection between residential development and a greater interest in the Gorge in its 1st Iteration Report. Here the Corps seems to be hinting that there will or could be a change. What is the direct connection between residential development and future recreational conditions or needs at either site?

If the Corps is referring to recreational use of LSAF and LD1 with regard to recreational lockages, this raises the issue of what constitutes “significant recreational use.” If the Corps is counting lock visitation, then only USAF would count for significant recreational use, as LSAF sees no site visitation, and LD1 is mostly closed to onsite visitors.

The Corps needs to be specific about what site or sites it is referring to and about what defines “significant recreational use.”

3.1.3.7 *Are there opportunities to modify the project to serve a water resources development purpose other than the one for which it was originally authorized?*

In its 1st Iteration Report (August 2017), the Corps stated the LSAF has no other water resources development purpose and said that at LD1 “Additional recreational opportunities could be added to the site.” The “Decision Meeting Briefing Report” provides some clarity on what the Corps means by additional recreational opportunities by saying:

If the recommendation is continued Corps ownership of the projects, the addition of facilities for recreation and fish and wildlife may be able to be undertaken under the authority of Section 4 of the Flood Control Act of 1944, as amended, provided there is a cost-sharing sponsor and the sponsor is willing to fund the cost of operation and maintenance of those facilities. Under this authority, preference is given to Federal, State, or local governmental agencies and is intended for suitable public park and recreational purposes.²⁸

If the recommendation is to proceed with deauthorization and disposal, then recreational additions will not be possible, or at least not possible through a Corps process. The Corps has

²⁸ Decision Meeting Briefing Report at 51.

repeatedly stated that recreational use is not a stand-alone water resources mission. Unlike USAF, the lower two do not serve a water supply mission or a flood mitigation purpose.

3.1.3.8 Does the project pose a risk to public safety? What is the project's Dam Safety Action Classification (DSAC), if applicable? Describe the risk, including key risk drivers and uncertainties.

In its 1st Iteration Report (August 2017), the Corps stated: “With low usage, the priority for maintenance funding will be low, compared to other navigation projects, eventually leading to deterioration of the projects and decreasing the safety condition and value of the property. The current management approach is ‘fix as fails.’”

It appears that if the locks and dams remain with minimal Corps staffing and funding, the sites will continue to deteriorate and become attractive nuisances and safety hazards. The Conservation Organizations noted in the Decision Meeting Briefing Report that should LD1 fail, the likelihood that the Corps would catch the failure in time to fix it is “highly unlikely.”²⁹ The Conservation Organizations discuss these issues elsewhere herein.

For these reasons, a viable alternative use is needed, with a guarantee from any new users to adequately staff and maintain the site(s). The Disposition Study must address how the Corps will secure and maintain any elements other users do not take to ensure that the two locks and dams do not deteriorate and become safety hazards or eyesores to substantial number of visitors at surrounding parks and tourist attractions. It must also address how the Corps will vet prospective new users.

3.1.3.9 Are there environmental concerns or other controversies surrounding the project that will influence the scope and outcome of the study?

Retention or removal of locks and dams are dramatically different alternatives physically, ecologically, and socially. Therefore, the Corps needs to examine and report on the difference between these alternatives for both sites with enough detail so that the public can make an informed decision between them. The breadth and depth required by such an analysis must be done through an Environmental Impact Statement, as discussed elsewhere herein.

For LD1, the Corps stated in the 1st Iteration Report that “there would be no environmental concerns unless disposition involves removing the dam as part of a negotiated disposition agreement.” Given dam removal is an alternative now under consideration in this disposition study, by the Corps’ own admission there will be environmental concerns that must be addressed. And as noted above, if dredging has ended or is much more intermittent, there will be substantial physical and ecological changes in Pool 1 that need to be evaluated.

3.1.3.10 Are the real property and improvements associated with the project suitable for public uses other than water resources development? Do the real property and improvements have commercial value?

In its 1st Iteration Report, the Corps provided these answers:

²⁹ Id. at 8.

LSAF – Not suitable for public use, except pathway through. The city of Minneapolis has expressed interest in adding a bikeway or other path through this area; this would not include public access to the lock and dam.

L/D 1 – Yes. The space can be repurposed.

All sites - The real property and improvements do have commercial value.

Why can spaces at LD1 be repurposed but not at LSAF? Why couldn't the LSAF Lock Central Control Station and the shop and storage buildings be adaptively reused for a public purpose? The Corps needs to thoroughly consider what the other suitable public uses might be possible.

In the "Decision Meeting Briefing Report," the Corps calls out the commercial value of the hydroelectric power operations at each site. And the Corps asserts that "[I]t is likely, after going through the procedure for priority of ownership, that the outcome of the study will be a negotiated sale to Brookfield Renewable Energy, the hydropower operator at the site."³⁰ What did the Corps base this assertion upon and is it still true? Has Brookfield indicated any interest in ownership?

In the "Decision Meeting Briefing Report," the Corps also writes that for LD1, "A negotiated sale to Brookfield Renewable Power could be discussed when the hydropower license renewal comes due in 2034." And for LSAF, the report uses the same language, recognizing the different license termination date: "A negotiated sale to Brookfield Renewable Power could be discussed when the hydropower license renewal comes due in 2056."³¹ If the Corps successfully moves forward to deauthorization and disposal without dam removal, does a sale to Brookfield need to occur before the licenses expire?

If Brookfield does not want to buy one or both sites, does a new owner or owners at one or both sites have to honor these licenses or could they negotiate new terms with Brookfield at some point?

A negotiated sale of the infrastructure would also be considered a major federal action subject to a host of environmental laws, including mitigation for degradation of the Gorge, which is a "Special Aquatic Area" and subject to additional restrictions, as discussed elsewhere herein.

3.1.3.11 Are alterations to improvements likely to be necessary in order to safely dispose of the project?

In its 1st Iteration Report (August 2017), the Corps answered this question saying: "For all sites, this will depend upon whether or not disposal involves a negotiated sale, or public sale by sealed bid or auction. A negotiated sale may involve rendering the projects safe for public use, or in the case of LSAF, possibly automating the dam gates."

Beyond and, we assume, including safety concerns, the "Decision Meeting Briefing Report," notes that "[a]s with other Corps projects disposal of the project under a negotiated sale may

³⁰ Ibid at 31-32, 44.

³¹ Ibid. at 48.

involve completion, by the Corps, of rehabilitation, maintenance work, or other modifications as may be specified in the agreement.”³²

The Corps needs to clarify if an entity willing to take part or all of one of the sites can negotiate whether it will address alterations for safety or whether the Corps will do that before a transfer.

In its answer to this question, the Corps also made an important point with regard to LSAF Dam: some new entity will have to take responsibility for operating and maintaining the Tainter gates, which leads to some critical questions:

- If the gates are automated, who oversees and is responsible for the automation equipment?
- How closely do the gates have to be monitored and adjusted?
- What qualifications and capacity must the new owner demonstrate prior to assuming Tainter gate management?
- We assume a new owner will be responsible for Pier house concrete, metal and mechanical repairs. Is this correct?
- Are there scour issues below LSAF that require monitoring or maintenance?

While LD1 does not have gates, some new entity would be responsible for concrete repair, scour repair and overall dam stability to ensure its safety. Given the history of dam stability issues and scour holes below the dam, what qualifications and capacity must the new owner demonstrate prior to assuming ownership of the dam?

In the “Decision Meeting Briefing Report,” the Corps says, “More information concerning the capability of the entity to assume ownership will be presented at the tentatively selected plan (TSP) level of the analysis, provided the recommended action is to continue with the disposition study.”³³

The Corps needs to fully document all that any new entities would be responsible for and their capacity and capability in doing so. The reality of a new owner having the capability and capacity to take on such important public safety and publicly visible properties must be clear before choosing an alternative that involves retaining one or both locks and dams without Corps ownership.

Some project elements, like the locks, dams, and retaining walls, carry a high degree of risk and liability that a private owner or another agency may not be able to properly manage. For example, the large retaining wall at LD1 supports significant infrastructure, including Wabun Park and the Minnesota Veterans Home. Given the significant size of the structure and public infrastructure it supports, it is unlikely any private entity would be capable or willing to provide the same level of maintenance and oversight as the Corps.

Therefore, it is imperative that the Corps provide the actual operations, maintenance, rehabilitation, and major rehabilitation costs annually, going back as far as the Corps has owned and operated the infrastructure, as well as all identified repairs or improvements that can be

³² Ibid. at 51.

³³ Id.

projected. This information is necessary to determine recurring maintenance problems that would require special expertise for any entity that might be interested in future ownership. These potential costs, liabilities, and safety concerns may lead to a determination that some components of the infrastructure cannot be safely conveyed to another entity and therefore must continue to be managed by the Corps. This provides further rationale for including partial disposition as an option in this study.

3.1.3.12 What is the annual holding cost and anticipated transaction cost, including rehabilitation required?

In its 1st Iteration Report (August 2017), the Corps provided the figures below for the annual holding costs.

USAF: \$ 590,000

LSAF: \$ 2,629,000

L/D 1: \$ 1,621,000

Total for all three: \$ 4,840,000

(Including operations, major maintenance, dredging and electrical usage).

Total LSAF L&D and L&D 1 = \$4,250,000

But, in the “Decision Meeting Briefing Report,” the Corps provides the following figures:³⁴

Table 17 - Total Average Annual Costs

Location	Total Assumed Future Annual Costs
Upper St. Anthony Falls	\$ 412,000
Lower St. Anthony Falls	\$1,906,000
<u>Lock and Dam 1</u>	<u>\$1,055,000</u>
Total	\$3,373,000

The public needs a clear and consistent presentation of the costs of retaining the two locks and dams. This includes how the costs are calculated and what key terms like “holding costs” mean.

3.1.3.13 What other special considerations or potential liabilities exist due to retaining ownership of the project?

In its 1st Iteration Report (August 2017), the Corps stated: “With low usage, the priority for maintenance funding will be low, compared to other navigation projects, eventually leading to deterioration of the projects and decreasing the safety condition and value of the property. The current management approach is ‘fix as fails.’”

The Corps made an important admission here: they will not spend enough money on the LSAF or LD1 to stave off some deterioration. If the choice is between spending Operations and

³⁴ Ibid. at 40-42.

Maintenance dollars on active locks and dams versus the two being studied, the Corps will choose the active lock and dams. The Corps should address the impacts to the river, national park and surrounding community that will result from allowing these projects to deteriorate where they stand.

3.1.3.14 What is the level of Congressional Interest in the project and disposition study, if any?

We know there is a high level of interest in the Mississippi River, national park site, and disposition study from Senators Amy Klobuchar and Tina Smith, as well Representatives Betty McCollum and Ilhan Omar, the latter two who represent the districts where the lock and dam structures are located.

We do not know where any Member of the Minnesota Congressional Delegation stands in terms of the outcome of the disposition study, including potential removal of either the LSAF or LD1. At an NPCA event October 5, 2022, during which representatives from the Corps were in attendance, Rep. Omar indicated interest in hearing from her constituents and having an open process for determining the disposition study's outcome.

3.1.3.15 What uncertainties need reduction in order to make a recommendation?

In its 1st Iteration Report (August 2017), the Corps stated: "A recommendation to continue with the disposition study with the intent to ultimately recommend deauthorization and disposal of the project can be made with the current data."

The Corps should outline what "current data" they are relying on to inform their recommendation to deauthorize and dispose of the project. We understand that the Corps can make a recommendation to move to disposal and deauthorization without having all the details of the consequences of doing so. However, the Corps should provide in the study details about factors it considered for its recommendation, the weight it gives to each of the factors it considered and details about any factors it excluded from consideration.

3.1.3.16 Are there any issues of interest for the vertical team to monitor and review, which would help inform the deauthorization and disposal process?

Is there any potential that the loss of the LSAF reservoir due to dam removal could affect the cutoff wall under St. Anthony Falls?

3.1.4 Other questions for Corps analysis

We also ask that the Corps examine and respond to the following questions in the study:

3.1.4.1.1 Meeker Island Lock and Dam

1. Who currently owns the Meeker Island lock and dam, remnants, including the bear trap gate structures on the west side? Was a disposition study ever completed for the structure or the structures officially transferred to another entity? If so, which entity and are the real estate documents still available?
2. What would be the impacts of the presence of the Meeker Island structure should dam removal or other alternatives change river flow and water levels? Evaluate hydrology, recreation, potential for unauthorized access and vandalism, etc.

3. What would be the cost of modifying or removing the structure to mitigate the above impacts?
4. How does the historic significance of the structure affect future removal or modification options, should they be necessary as part of some considered alternatives?

3.1.4.1.2 National Park impacts

1. The Corps should evaluate the potential impacts each alternative will have on the seven resource types identified in the Mississippi National River and Recreation Area (MNRRA) enabling legislation: historical, recreational, scenic, cultural, natural, economic, and scientific.³⁵ Although not specifically called out in the legislation, water resources play an extremely important role in the health of the river and park, and impacts to water resources should also be evaluated.
2. The possibility of disposal of any of the Corps' infrastructure could have enormous impacts on the national park. MNRRA must be consulted in the Corps' decision-making process pursuant to its enabling legislation.³⁶

3.1.4.1.3 Ecosystem and environment

1. How would each alternative impact the movement of invasive species, including but not limited to invasive carp species (silver carp, grass carp, bighead carp)?
2. How would each alternative impact habitat in the river and along its banks in the affected area?
3. How would each alternative impact water quality?
4. What species (fish, mussel, plant, mammal) are found in Pool 1 and on its banks presently? How would each alternative impact which species are found in Pool 1 and on its banks, and in what numbers?
5. What would be the impacts to endangered species, threatened species, and species of Greatest Conservation Need, both those currently present and those that may find the area more suitable habitat under each alternative?
6. What species (fish, mussel, plant, mammal) would be likely to repopulate the area or could be introduced as part of the restoration and environmental mitigation under each alternative?
7. If dam removal were conducted, restoration of riverine habitat would need to be completed. What restoration would be needed and how much would that cost?
8. Where and how would river levels change as a result of the different alternatives? How would changed river levels under removal alternatives affect navigation (including downstream in the Minnesota River confluence and St. Paul port areas), recreation, frequency of cost of flood response and mitigation, shoreline areas, etc.?
9. How is climate change anticipated to impact river levels and flow in the next 20 years? How will the different alternatives affect management of river levels and flow in increasingly extreme flood and drought situations?

3.1.4.1.4 Sediment

1. How much sediment is impounded behind LSAF and LD1?

³⁵ Public Law 100-696, Section 701(a), 102 Stat. 4599, Nov. 18, 1988.

³⁶ Id. at 704(b).

2. Is the sediment behind the structures polluted? What substances are in it and at what concentrations and locations? The Conservation Organizations are aware that the Corps has sampled sediment as part of their dredging program; what were the results of those studies?
3. What would be the impacts of sediment flow (navigation, recreation, ecology, etc.) in Pools 1 and 2 should sediment be released from behind LSAF or LD1? How would impacts be mitigated and at what cost?
4. How would the alternatives impact channel depth and sedimentation throughout the year at Watergate Marina in Crosby Farm Regional Park (proposed future home of the national park headquarters and the River Learning Center) and other existing marinas?
5. How much sediment is in Pool 1 versus how much the Minnesota River brings in at its confluence annually? How does the level of pollution in Pool 1 sediment compare to that from the Minnesota River?
6. The Corps dredged Pool 1 for decades. What do studies of the sediment it dredged reveal?

3.1.4.1.5 Recreation

1. How would the alternatives impact parkland along the riverbank?
2. If islands and/or additional shoreline were to form due to dam removal or other alternatives, who would own and manage that land? Do any easements exist that would apply to these newly-exposed areas?
3. How would the alternatives impact existing recreational facilities in the affected area, including the University of Minnesota and Minneapolis rowing clubs, Mississippi Gorge Regional Park, Hidden Falls-Crosby Regional Park, Minnehaha Regional Park, and other facilities?
4. At its public meetings, a display board said the Corps holds easements on 234.48 acres. What kind of easements are these and who owns the land or property in fee title? What happens to these easements if one or both of the locks and dams are removed? Also, if the 9-foot channel project and one or both of the locks and dam are deauthorized and disposed of, what happens with the easements? See Public Meeting Poster Board attached hereto as Appendix L.
5. The same display board also states that the Corps has three outgrants, where the Corps is the landowner but “has authorized the use of the property by others.” What happens with these outgrants under the various scenarios described in number four immediately above?

3.1.4.1.6 Application of other rules and standards

1. The Corps should examine compatibility with the State of Minnesota Mississippi River Corridor Critical Area rules (6106.0010 – 6106.0180) for each alternative.

3.2 COMPLIANCE WITH ADMINISTRATIVE PROCEDURE ACT (APA) AND NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The initiation of a disposition study should result in the issuance of a final decision and recommendation, regardless of the outcome. Conservation Organizations are concerned about a

national trend whereby the Corps initiates a disposition study on a major piece of infrastructure, such as a federal dam, but then discontinues the study without giving the public an opportunity to weigh in on the decision.³⁷ This trend is concerning to Conservation Organizations because the decision to retain a piece of infrastructure and continue operations and maintenance of the infrastructure is “the consummation of the decision-making process” ... “from which legal consequences will flow.” *Bennett v. Spear*, 520 U.S. 154, 177–178 (1997). This includes “an activity or decision subject to Federal control and responsibility...” and “may include new and *continuing activities*.” 40 CFR 1508.1(q) (emphasis added).

Examples of legal consequences that would flow from deciding to maintain the infrastructure and “continuing activities” may include hydroelectric generating licenses, dam safety plans, recovery outlooks for protected and/or at-risk species, internal and external costs to mitigate environmental impacts, and other legal consequences. The Corps must disclose disposition study findings in order to comply with all relevant obligations under the Administrative Procedure Act, the National Environmental Policy Act, and other federal environmental laws like the Clean Water Act and Endangered Species Act. The Corps’ infrastructure has and continues to have tremendous impacts on the environment that deserve to be properly analyzed and mitigated in the context of disposition, even if the Corps determines that it is in the federal interest to retain the structures.

To fully comply with NEPA, APA, and other environmental laws, the Corps must:

1. Comply with NEPA by initiating an Environmental Impact Statement for the disposition study;
2. Comply with the Water Resources Development Act by selecting the alternative that protects and restores the environment;
3. Comply with the Clean Water Act by incorporating mitigating damages to aquatic resources under relevant alternatives;
4. Comply with the Endangered Species Act through consultation with the U.S. Fish and Wildlife Service; and
5. Comply with the relevant guidance and executive orders related to Tribal Coordination.

3.2.1 The Corps must initiate an Environmental Impact Statement to comply with NEPA.

The Corps must initiate an Environmental Impact Statement (EIS). The Corps’ procedures for implementing NEPA state that an EIS is required when the Corps considers “[p]roposed major changes in the operation and/or maintenance of completed projects.” The very nature and purpose of the Disposition Study is to consider a “major change in the operation and/or maintenance of a completed project.” As such, the Corps must automatically initiate the Environmental Impact Statement process. According to the Corps NEPA implementation guidance, an EIS must be the default action when considering “major changes in the operation and/or maintenance of completed projects” until and unless “early studies and coordination show that a particular action is not likely to have significant impact on the quality of the human

³⁷ Phadke, R, M Adamson, and Bruce Braun. June 30, 2022. Mississippi Disposition. Viewed on December 16, 2022. Available at <https://sites.google.com/macalester.edu/disposition/other-studies?pli=1>

environment.”³⁸ To date, the Corps has only initiated the less-rigorous Environmental Assessment process, in violation of the Corps procedures for implementing NEPA.

In addition to the Corps’ obligation to initiate an EIS by default, *all* alternatives the Corps is considering will have significant environmental impacts. Continuing to impound the Mississippi River has significant environmental impacts, impacts that have never been mitigated. These impacts are profoundly detrimental to the environment of the Mississippi River and the hundreds of species that use the river. As such, any decision to continue to impound the Mississippi River will perpetuate those same impacts.

The Council on Environmental Quality (CEQ) has made clear, in situations like those in the Mississippi River where the environment has already been greatly modified by human activities, it is not sufficient to compare the impacts of the proposed alternative against the current conditions. Instead, the baseline must include a clear description of how the health of the resource has changed over time to determine whether additional stresses will push it over the edge.³⁹ As such, the Corps must evaluate all project alternatives in terms of the historic health of the Mississippi River and how the additional stress of continuing to operate the dams will influence ecosystem health.

There is a large body of scientific evidence that indicates the dams are a primary cause of ecological decline on the Mississippi River. This has been widely accepted for over half a century. Following litigation bought by the Izaak Walton League in the 1970s, Congress ordered a more thorough review of the impacts of the navigation system on the Upper Mississippi River. In 1982, the Congressionally established Upper Mississippi River Basin Commission found that “[t]he navigation project and navigation traffic significantly affect the ecosystem of the [Upper Mississippi River System].” Impacts included “operation and maintenance of the [navigation] project,” including the dams.⁴⁰ In response to these findings, Congress established the Upper Mississippi River Restoration Program in 1986, which includes habitat rehabilitation and enhancement projects and long-term resource monitoring.

Since 1986, only 5-percent of lost habitat on the Upper Mississippi River has been “rehabilitated” and a plethora of studies from the long-term resource monitoring program (LTRMP) indicate that the Mississippi River ecosystem continues to be at risk. The LTRMP’s data have been examined in several hundred technical reports, peer-reviewed publications, and publicly available management tools and models.⁴¹

Relying on the LTRMP’s data, the Corps has admitted that “conditions at even the most healthy sites within the [UMRS] are at least partially artificial, non-sustainable, and in a recognized

³⁸ 33 C.F.R. 230.6.

³⁹ Council on Environmental Quality, Considering Cumulative Effects Under the National Environmental Policy Act at 41 (January 1997).

⁴⁰ Upper Mississippi River Basin Commission. 1982. Comprehensive Master Plan for the Upper Mississippi River System.

⁴¹ Upper Mississippi River Restoration Program Long Term Resources Monitoring. Reports and Publications. Last Updated November 18, 2022. Viewed November 22, 2022. Available at https://www.umesc.usgs.gov/reports_publications/ltrmp_rep_list.html

state of degradation.”⁴² In 2016, the Corps advised Congress that “habitat within the Upper Mississippi River is degrading at a rate of one to three percent annually. At these rates, the ecosystem is declining one to four times faster than currently [sic] restoration efforts.”⁴³

The LTRMP’s 2022 Report found that none of the ecological indicators “meets desired condition” in the Upper Impounded Reach (which represents the area that includes Lower St Anthony Falls Lock and Dam and Lock and Dam 1). Additionally, the two “most important” ecological indicators (lentic area and lotic structure) both “deviate from desired conditions” and “may merit actions to improve.” Impoundment is among the primary drivers of decline for these ecological indicators.⁴⁴

Given the well-documented, severe, and persistent impacts of impounding the Mississippi River, the Corps must conduct an EIS to evaluate the ecosystem consequences of a decision to retain the Lower St. Anthony Falls Lock and Dam and Lock and Dam 1.

3.2.1.1 Considerations for Direct, Indirect, and Cumulative Impacts

In comparing and analyzing potential alternatives, the EIS must examine, among other things, the direct, indirect, and cumulative environmental impacts of alternatives, the conservation potential of those alternatives, and the means to mitigate adverse environmental impacts that cannot be avoided.⁴⁵ This assessment is essential for determining whether less environmentally damaging alternatives are available. Direct impacts are caused by the action and occur at the same time and place as the action. Indirect impacts are also caused by the action, but are later in time or farther removed from the location of the action.⁴⁶ Cumulative impacts are “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”⁴⁷ The cumulative impacts analysis ensures that the agency will not “treat the identified environmental concern in a vacuum.”⁴⁸

The cumulative impacts analysis must examine the cumulative effects of federal, state, and private projects and actions.⁴⁹ The cumulative impacts analysis must also evaluate the cumulative impacts of climate change.⁵⁰ This evaluation is extremely important as: “Climate

⁴² USACE. 1997. Report to Congress: An Evaluation of the Upper Mississippi River System Environmental Management Program. Available at

https://www.mvr.usace.army.mil/Portals/48/docs/Environmental/UMRR/EMP_RTC_1997.pdf

⁴³ USACE. 2016. Report to Congress: Upper Mississippi River Restoration Program.

⁴⁴ USGS. 2022. Ecological Status and Trends of the Upper Mississippi and Illinois Rivers.

⁴⁵ 40 C.F.R. § 1502.16.

⁴⁶ 40 C.F.R. § 1508.8.

⁴⁷ 40 C.F.R. § 1508.7.

⁴⁸ Grand Canyon Trust v. FAA, 290 F.3d 339, 346 (D.C. Cir. 2002).

⁴⁹ The requirement to assess non-Federal actions is not “impossible to implement, unreasonable or oppressive: one does not need control over private land to be able to assess the impact that activities on private land may have” on the project area. Resources Ltd., Inc. v. Robertson, 35 F.3d 1300, 1306 (9th Cir. 1993).

⁵⁰ See Center for Biological Diversity v. Nat’l Hwy Traffic Safety Administration, 538 F.3d 1172, 1217 (9th Cir. 2008) (holding that analyzing the impacts of climate change is “precisely the kind of cumulative

change can increase the vulnerability of a resource, ecosystem, or human community, causing a proposed action to result in consequences that are more damaging than prior experience with environmental impacts analysis might indicate... [and] climate change can magnify the damaging strength of certain effects of a proposed action.” ... “Agencies should consider the specific effects of the proposed action (including the proposed action’s effect on the vulnerability of affected ecosystems), the nexus of those effects with projected climate change effects on the same aspects of our environment, and the implications for the environment to adapt to the projected effects of climate change.”⁵¹

The EIS must provide “quantified or detailed information” on the impacts, including the cumulative impacts, so that the courts and the public can be assured that the Corps has taken the mandated hard look at the environmental consequences of the Project.⁵² If information that is essential for making a reasoned choice among alternatives is not available, the Corps must obtain that information unless the costs of doing so would be “exorbitant.”⁵³

Importantly, as CEQ has made clear, in situations like those in the Mississippi River where the environment has already been greatly modified by human activities, it is not sufficient to compare the impacts of the proposed alternative against the current conditions. Instead, the baseline must include a clear description of how the health of the resource has changed over time to determine whether additional stresses will push it over the edge.⁵⁴

The EIS should examine the direct, indirect, and cumulative impacts of all reasonable alternatives on at least the impacts discussed below.

- Impacts on fish and wildlife. The EIS must examine the impacts of the alternatives on the species that utilize the Mississippi River, including the impacts to fish, waterfowl, birds, mammals, reptiles, amphibians, and mussels. The Mississippi River is used by an astounding array of wildlife, including 360 species of birds, 260 species of fish, 145 species of amphibians and reptiles, 98 species of mussels, and 50 species of mammals. Forty percent of North America’s waterfowl migrate through the Mississippi River flyway. The impacts on the critical array of migratory species that utilize the Mississippi River and Mississippi River flyway must also be analyzed, including the cumulative

impacts analysis that NEPA requires agencies to conduct” and that NEPA requires analysis of the cumulative impact of greenhouse gas emissions when deciding not to set certain CAFE standards); *Center for Biological Diversity v. Kempthorne*, 588 F.3d 701, 711 (9th Cir. 2009) (NEPA analysis properly included analysis of the effects of climate change on polar bears, including “increased use of coastal environments, increased bear/human encounters, changes in polar bear body condition, decline in cub survival, and increased potential for stress and mortality, and energetic needs in hunting for seals, as well as traveling and swimming to denning sites and feeding areas.”).

⁵¹ Council on Environmental Quality, Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (February 18, 2010). The CEQ guidance makes it clear that analyzing the impacts of climate change is not restricted to evaluating whether a project could itself exacerbate global warming. The magnifying and additive effects of global warming also must be evaluated.

⁵² *Neighbors of Cuddy Mountain v. U. S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998); *Natural Resources Defense Council v. Callaway*, 524 F.2d 79, 87 (2d Cir. 1975).

⁵³ 40 C.F.R. § 1502.22

⁵⁴ Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act* at 41 (January 1997).

impacts of climate change on these species. Migratory wildlife is particularly vulnerable to the impacts of climate change. An accurate assessment of fish and wildlife impacts will require an accurate assessment of impacts to the full range of habitats that these species rely on. A meaningful assessment would also include an evaluation of the impacts of each alternative on the ability of the fish and wildlife that utilize the river and flyway to withstand the adverse impacts of climate change (i.e., the species' resiliency to climate change).

- Impacts on endangered species. The EIS should pay particular attention to the impacts on threatened and endangered species and any critical habitat. This should include an analysis of impacts to recently listed species (for which there currently is no biological opinion) and to species covered by the "Tier 1 Biological Opinion for the Operation and Maintenance of the 9-Foot Navigation Channel in the Upper Mississippi River System." The Conservation Organizations urge the Corps to initiate formal consultation under the Endangered Species Act and demonstrate full compliance with all conditions established in the Tier I biological opinion.
- The Department of Natural Resources (DNR) conducted fish surveys in Pool 1 and the LSAF Pool in 1982, 1995 and 2009, and conducted telemetry studies of Pool 2 beginning in 2013.⁵⁵ All these studies demonstrate how negatively the reservoirs of the Gorge have affected the native fish populations. The DNR also undertook fish surveys of the Gorge in 2022 but has not released the results. The Corps needs to work with the DNR, using all their fisheries studies, to clearly convey to the public the differences between the fishery with and without the locks and dams. In addition, Luther Aadland, while with the DNR, conducted a number of studies looking at the impact of dams in Minnesota on native fish populations and the response of those fish populations to dam removal. The Corps needs to incorporate Aadland's studies into its NEPA studies.⁵⁶
- Impacts on key habitats – including riffle-pool complexes, mid-channel bars, braided river habitat, riverine wetlands, and floodplain wetlands. The Mississippi River and its floodplain have also suffered astounding wetland losses. The loss of these vital habitats has cascading negative impacts on fish and wildlife, public safety, recreation, and economies that rely on healthy river and floodplain systems. The EIS must carefully evaluate and quantify the potential for additional losses – or gains – of backwater areas, natural side channels, crossover habitat, mid-channel bars, riverine wetlands and

⁵⁵ Minnesota Department of Natural Resources. Fisheries Management. Standard Lake Survey Report, US Lock & Dam #1 Pool (8/10/2009); Minnesota Department of Natural Resources. Fisheries Management Standard Lake Survey Report, US Lock & Dam #1 Pool (9/22/2011); Polomis, Taylor. Population Assessment, Lock & Dam No. 1 to Coon Rapids Dam. Minnesota Department of Natural Resources (August 8-30, 1995); Stiras, Joel K. Minnesota Department of Natural Resources. Division of Fish and Wildlife, Section on Fisheries. Major Rivers Survey Report. East Metro Area Rivers Telemetry Project (2017).

⁵⁶ Aadland, Luther. "Barrier Effects on Native Fishes of Minnesota." Minnesota Department of Natural Resources, Division of Ecological and Water Resources (March 2015); Aadland, Luther. "Reconnecting Rivers: Natural Channel Design in Dam Removal and Fish Passage." First Edition. Minnesota Department of Natural Resources, Division of Ecological Resources Stream Habitat Program (January 2010).

floodplain wetlands. The cumulative impacts of historical losses to these key habitats must also be fully evaluated and accounted for in any final recommended alternative.

- Impacts from sedimentation. Sedimentation is one of the most significant problems caused by impoundment of the Mississippi River. The EIS must carefully evaluate and quantify the impacts of each alternative on: increasing sedimentation in vital habitats; relocating sedimentation problems (i.e., shifting the loci of sedimentation which could eventually lead to even more river training structure construction and dredging); and altering sediment transport downstream.
- Impacts on water quality, including nutrient composition. The Mississippi River remains plagued by water quality problems, including excess nutrients that have both local and ecosystem wide impacts (including, for example, yearly development of the Gulf of Mexico dead zone). The EIS must carefully evaluate and quantify the impacts of each alternative on water quality in the river, including the potential water quality impacts caused by loss of backwater habitats and wetlands and increased sedimentation.
- Cumulative impacts of climate change. As discussed above, the EIS must assess the cumulative impacts of climate change, including climate-change induced increases in precipitation and extreme weather events, on the direct and indirect impacts of each alternative. Of critical concern are the additive and magnifying effect of climate change on increased flood risks and on harm to migratory species.
- Additionally, the Corps needs to provide information on the public safety risk should Lock and Dam 1 and/or Lower St. Anthony Falls Lock and Dam fail. Climate change induced extreme precipitation events threaten dam and levee infrastructure, which can have catastrophic consequences.
- Impacts on ecosystem services provided by a healthy Mississippi River and floodplain. “Ecosystem services” are the goods and services produced by ecosystems that benefit humankind. These services include (but are by no means limited to) such things as carbon sequestration, wildlife habitat, nutrient retention, and erosion reduction. While these services have traditionally been undervalued because they often fall outside of conventional markets and pricing, society is increasingly recognizing the essential link between healthy ecosystems and human welfare and significant progress has been made in the science of ecosystem services evaluation. The EIS should carefully assess the impacts of each alternative on ecosystem services. The Conservation Organizations refer the Corps to the three ecosystem services valuations attached at Appendix H of these comments for information on preparing a meaningful ecosystem services valuation and for examples of ecosystem services valuations carried out in the Mississippi River Valley.
- Impacts on recreational fishing and tourism industries that rely on a healthy Mississippi River and floodplain. Mississippi River tourism generates approximately \$2 billion annually. Recreational opportunities, including recreational fishing, are vitally important to the public. The EIS should fully evaluate the impacts of each alternative on these important activities.
- Impacts on bridges, stormwater water, drinking water and other public infrastructure. Bridges in the project area are owned by various entities, and except for the 35W Bridge, all have one or more piers in the river. These include: The Stone Arch Bridge owned by the Minnesota Department of Transportation (MnDOT); 35W owned by MnDOT; 10th

Avenue, owned by Minneapolis; a large-diameter drinking water transmission main that runs under the river just downstream of this bridge; Bridge Number 9 owned by Minneapolis; Washington Avenue bridge owned by Hennepin County; I-94 owned by MnDOT; Franklin Avenue, owned by Hennepin County (this bridge has a large-diameter Minneapolis drinking water transmission main suspended underneath the bridge); Short Line owned by Canadian Pacific Railway; Lake Street owned by Hennepin County; Ford Parkway owned by Hennepin County.

3.2.2 The Corps must comply with the Water Resources Development Act (WRDA) by selecting the alternative that protects and restores the environment.

WRDA 1990 changed the Corps' fundamental mission to "include environmental protection as one of the primary missions of the Corps of Engineers in planning, designing, constructing, operating, and maintaining water resources projects."⁵⁷ The National Water Policy established by Congress in 2007 requires the Corps to operate and maintain the UMR-IWW navigation system to protect the Mississippi River and its floodplain. That policy states that "all water resources projects" shall "protect[] and restor[e] the functions of natural systems and mitigat[e] any unavoidable damage to natural systems."⁵⁸

Executive Orders issued in 1977 direct agencies to protect wetlands and floodplains. Executive Order 11990 (Protection of Wetlands) directs each federal agency to provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values in carrying out agency policy. Executive Order 11988 (Floodplain Management) directs each federal agency to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains; to avoid direct and indirect support of floodplain development wherever there is a practicable alternative; and "to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities."

As a result, the Disposition Study must also evaluate alternatives that would protect and restore the natural functions of the Mississippi River, including wetlands and floodplains. The Corps must ultimately select an alternative that achieves these objectives.

⁵⁷ 33 U.S.C. § 2316.

⁵⁸ 33 U.S.C 1962-3. Established by § 2031(a) of the Water Resources Development Act of 2007, and immediately applicable to all water resources projects. Enhancement of the environment has been an important federal objective for water resources programs for decades. Corps regulations in place since 1980 state that: "Laws, executive orders, and national policies promulgated in the past decade *require* that the quality of the environment be protected and, where possible, enhanced as the nation grows. . . . *Enhancement of the environment is an objective of Federal water resource programs* to be considered in the planning, design, construction, and operation and maintenance of projects. Opportunities for enhancement of the environment are sought through each of the above phases of project development. Specific considerations may include, but are not limited to, actions to preserve or enhance critical habitat for fish and wildlife; maintain or enhance water quality; improve streamflow; preservation and restoration of certain cultural resources, and the preservation or creation of wetlands." 33 C.F.R. § 236.4. (emphasis added).

3.2.3 Comply with the Clean Water Act by incorporating mitigating damages to aquatic resources under relevant alternatives.

WRDA 2007 created a new federal water policy that requires all Corps projects to protect and restore the environment and imposes new and important mitigation requirements for Corps projects, including existing projects that are re-evaluated through an EIS or supplemental EIS.⁵⁹ Under these new laws, should the Corps decide to retain Lock and Dam 1 and/or Lower St. Anthony Falls Lock and Dam, the impacts of impoundment must be mitigated.

In 2007, Congress enacted strict mitigation requirements for Corps civil works projects applicable to all proposals submitted to Congress or re-evaluated under NEPA.⁶⁰ These include enhanced mitigation requirements established for the Clean Water Act's section 404 regulatory program, which were substantially modified in 2008.⁶¹ Congress also established a new federal water policy requiring all Corps projects to protect and restore the environment and avoid harming floodplains.⁶²

Section 2283(d) of WRDA requires mitigation plans “for damages to ecological resources, including terrestrial and aquatic resources, and fish and wildlife losses,” resulting from federal water resources projects.⁶³ Between 1986 and 2007, this requirement applied only when the Corps submitted a “proposal for the authorization of any water resources project to the Congress in any report” in which the proposal – absent mitigation – would result in a greater than “negligible adverse impact” on ecological resources and wildlife.⁶⁴ In 2007, Congress amended section 2283(d)(1) to also require mitigation plans in “any report” that “select[s] a project alternative,” without limiting that requirement to reports to Congress.⁶⁵ Congress did so by adding this bolded language:

After November 17, 1986, the Secretary shall not submit any proposal for the authorization of any water resources project to Congress in any report, **and shall not select a project alternative in any report**, unless such report contains [either a mitigation plan or a determination that any adverse ecological effects would be negligible].⁶⁶

Once triggered, Section 2283 requires the Corps to provide a detailed mitigation plan with many specified components.⁶⁷

As such, the Corps must develop a detailed mitigation plan for those alternatives with significant impacts to the environment. Notably, the Corps must develop a detailed mitigation plan for the alternatives that retain the dam(s) as those alternatives will have significant impacts to a “special aquatic site,” as outlined below.

⁵⁹ 33 U.S.C. § 2283(d).

⁶⁰ WRDA of 2007 (P.L. 110-114), § 2036, 33 U.S.C. § 2283(d).

⁶¹ 33 C.F.R. Parts 325 and 332, 40 C.F.R. Part 230

⁶² WRDA of 2007 § 2031, 42 U.S.C. § 1962-3.

⁶³ 33 U.S.C. § 2283(d)(1).

⁶⁴ *Id.* (1986).

⁶⁵ See Pub. L. No. 110-114, 2036(a)(1).

⁶⁶ *Id.*

⁶⁷ 33 U.S.C. § 2283(d)(3)(B)(i)-(vi).

3.2.3.1 Impacts of impoundment on aquatic resources

Where the Corps considers retention of one or both dams, the Corps must evaluate those impacts and develop a detailed maintenance plan as part of the EIS.

A 2008 Report⁶⁸ explains the impacts of impoundment on the Mississippi River:

The overall effect on the impounded reaches has been to effectively remove the lower water elevations experienced during the pre-dam period. This has two primary effects, permanently inundating the area immediately behind each dam and reducing current velocities behind the dams. Reduced current velocities promote increased sedimentation rates and filling of impounded areas and backwaters. The permanently inundated areas no longer experience the annual cycle of wetting and drying that existed before dam construction, which has resulted in substantial losses of aquatic vegetation along shorelines and in shallow wetland areas. In addition, the open expanses of water above dams are now subjected to the erosive force of wind-induced waves, which has resulted in loss of islands and filling of deeper areas by sediment in these zones. The physical changes in hydrology produced by the dams were essentially immediate. The resulting geomorphic changes (loss of islands and reduced depth diversity) were probably rapid immediately after the dams were built, but are now occurring at slower rates.

All these impacts are seen in the reservoirs behind Lock and Dam 1 and Lower St. Anthony Falls. Prior to impoundment, the river between St. Anthony Falls and the Minnesota River confluence was a stretch of broken limestone known as the Mississippi River Gorge for its narrow floodplain and steep valley, dropping over 100-feet in just 10 miles.

The Gorge was once one of four big river rapids on the Upper Mississippi River, the others historically located in Rock Island, IL, Keokuk, IA and St. Louis, MO. Of the four, only a remnant of the St. Louis “Chain of Rocks” rapids remains today. These rapids were “a critical spawning area for many fish species including species that are now rare in the region...”⁶⁹ (See also Appendix M). Such Mississippi River rapids ecosystems clearly meet the criteria to be considered a “riffle and pool complex” subject to additional protection and mitigation requirements as “Special Aquatic Sites” under the Clean Water Act.⁷⁰ The impoundment of the Mississippi River Gorge creates an ongoing discharge of fill material (i.e. sedimentation) that has eliminated portions of and threatens to eliminate all the riffle and pool areas in the Gorge. Elimination of riffle and pool complexes may cause a cascading impact on aquatic resources:

Possible loss of values: Discharge of dredged or fill material can eliminate riffle and pool areas by displacement, hydrologic modification, or sedimentation.

Activities which affect riffle and pool areas and especially riffle/pool ratios, may reduce the aeration and filtration capabilities at the discharge site and

⁶⁸ USGS. 2008. Status and Trends of the Selected Resources of the Upper Mississippi River System: A Synthesis Report of the Long Term Resources Monitoring Program.

⁶⁹ Lenhart, Christian. 2012. Restoration of the Mississippi River Gorge: Issues and Research Needs. *Restoration Ecology*. 30:3.

⁷⁰ See 40 CFR 230.45(a)-(b).

downstream, may reduce stream habitat diversity, and may retard repopulation of the disposal site and downstream waters through sedimentation and the creation of unsuitable habitat. The discharge of dredged or fill material which alters stream hydrology may cause scouring or sedimentation of riffles and pools. Sedimentation induced through hydrological modification or as a direct result of the deposition of unconsolidated dredged or fill material may clog riffle and pool areas, destroy habitats, and create anaerobic conditions. Eliminating pools and meanders by the discharge of dredged or fill material can reduce water holding capacity of streams and cause rapid runoff from a watershed. Rapid runoff can deliver large quantities of flood water in a short time to downstream areas resulting in the destruction of natural habitat, high property loss, and the need for further hydraulic modification.⁷¹

Indeed, working with biologists at the Minnesota DNR, Conservation Organizations identified over 50 species of rare, threatened, and endangered plants and animals whose habitat historically overlapped with the Gorge. Based on available information, the construction and ongoing maintenance of the reservoirs behind Lower St. Anthony Falls Lock and Dam and Lock and Dam 1 may be a factor in the status of these species. Of those 50+ species, at least a dozen rare, threatened, and endangered species recovery outlooks would likely be significantly improved if the dams were removed (see attached hereto as Appendix N). According to biologist, Mike Davis, of the Minnesota Department of Natural Resources Center for Aquatic Mollusk Programs, removal of the dams could restore “unique riverine habitat” that “could once again support the federally Endangered Winged Mapleleaf, Spectaclecase, Snuffbox, Higgins’ Eye and Sheepnose mussels” and “could increase the likelihood of recovering and delisting these species” (see attached hereto as Appendix O).

Should the Corps decide that retaining the dams are in the national interest, the 404(b)(1) Guidelines require the Corps to take *all* appropriate and practicable steps to minimize and compensate for the project’s adverse impacts on the aquatic ecosystem.⁷² The Corps is also required to calculate the appropriate compensatory mitigation amount by taking into consideration such relevant factors as the method of compensation, the likelihood of success, differences between lost functions at the impact site and mitigation site, and the difficulty of restoring aquatic resources, to name a few.⁷³

Each alternative must include mitigation for any unavoidable adverse impacts as required by 33 U.S.C. § 2283(d) and the Clean Water Act. These mitigation actions and costs must be included in the disposition study as part of the project alternative evaluation under those options that retain both or one of the dams. The costs of mitigation must be incorporated into operation and maintenance expenses and a detailed mitigation plan must be included as part of the EIS.

⁷¹ 40 CFR 230.45(b).

⁷² 40 C.F.R. § 230.10(d).

⁷³ See 40 C.F.R. § 230.93(f)(2).

3.2.4 The Corps must initiate formal consultation with the U.S. Fish and Wildlife Service to comply with the Endangered Species Act.

In May 2000, the U.S. Fish and Wildlife Service issued a Final Biological Opinion on the Corps' O&M activities which concludes that the "continued operation and maintenance of the 9-foot Navigation project will jeopardize the continued existence of the Higgins eye pearly mussel (*Lampsilis higginsii*)..."⁷⁴ The Higgins eye pearly mussel was found in the Gorge prior to impoundment, is still present around the St. Croix and Mississippi River confluence, and would likely thrive at the site if the dams were removed to allow restoration of the Mississippi River Gorge.

As mentioned above, Conservation Organizations identified over 50 species of rare, threatened, and endangered plants and animals whose habitat historically overlapped with the reservoirs behind Lower St. Anthony Falls Lock and Dam and Lock and Dam 1. Of those 50+ species, there are six federally listed species that would likely be impacted by the outcome of the Disposition Study. Those species include the northern long-eared bat, winged mapleleaf mussel, spectaclecase mussel, snuffbox mussel, sheepnose mussel, and Higgin's eye pearly mussel.

Due to the likely presence of and impacts to multiple federal threatened and endangered species, the Corps must immediately initiate consultation with the U.S. Fish and Wildlife Service to comply with the Endangered Species Act.

3.2.5 The Corps must initiate formal consultation with the Dakota and Ojibwe Tribal Nations to comply with Executive Order 13175.

Any study outcome must fully incorporate the needs of the Dakota and Ojibwe communities and their relationship with the sacred sites that will be impacted by the Disposition Study. There are at least two sites that may be impacted by the outcome of the Disposition Study that are sacred to the Dakota and Ojibwe nations — Spirit Island and Bdote Mnisota. Also there is evidence that the entire stretch of the Mississippi River between the Falls and the confluence of the Mississippi and Minnesota River was sacred to the ancestors of the modern Dakota and Ojibwe.⁷⁵ Many Dakota and Ojibwe community members today still consider this area sacred.

Lock and Dam No. 1 is just 3.5 miles upstream from the confluence, and access and use of the Bdote sacred site may be impacted by the outcome of the Disposition Study. While the site is technically outside the footprint of the proposed project, the use of the site could be impacted in ways that should be considered in the study. Spirit Island is located below St. Anthony Falls. This sacred site may be significantly impacted by the outcome of study. Spirit Island, which was made of rare Platteville limestone, was quarried by colonists and the stone jetty that runs along the channel of the Upper Lock sits on top of the footprint of Spirit Island. If the two dams below the falls are removed, some remaining portion of Spirit Island (or its footprint) might be exposed. The potential significance that action may have on the Dakota and Ojibwe communities needs to be taken into consideration by the Corps.

⁷⁴ U.S. Fish and Wildlife Service, Biological Opinion for the Operation and Maintenance of the 9-Foot Navigation Channel on the Upper Mississippi River System at 1.

⁷⁵ Pennefeather, S.M. 2003. Mill city: a visual history of the Minneapolis mill district. St. Paul MN: Minnesota State Historical Society.

Executive Order 13175 mandates federal agencies “have an accountable process to ensure meaningful and timely input by tribal officials...” This process includes transferring funds to the impacted tribes to cover the direct costs of coordination, consulting with tribes early in the process, and post a tribal summary impact statement in the Federal Register, among other requirements.⁷⁶

St. Anthony Falls has migrated upstream from the Minnesota River confluence over thousands of years. Consequently, the Dakota and other tribes likely visited it at many different places; therefore, the whole Gorge should be evaluated under the National Historic Preservation Act and all appropriate studies completed, including a Traditional Cultural Property (TCP) review. This review should include the TCP study being done for USAF.

Pursuant to the special relationship between the Federal government and Federally recognized Native American tribes, and Section 101(d)(6)(B) of the NHPA and 36 CFR § 800.2(c)(2)(ii), the Corps is responsible for government-to-government consultation with Federally recognized Native American tribes, and the Corps should consult with all tribes that may have connections to the Gorge.

Because the outcome of the Disposition Study may include proposing legislation (such as deauthorizing the dams) that will impact these sites, the Corps must comply with Executive Order 13175.

3.2.6 The Corps must comply with the National Historic Preservation Act.

The National Historic Preservation Act (NHPA)⁷⁷ directs federal agencies to take a leadership role in the nation’s preservation efforts, and to make informed decisions about the administration of federally owned or controlled historic properties. The NHPA includes a number of directives to federal agencies, the primary of which are subsumed under section 106 (16 U.S.C. 470f) and section 110 (16 U.S.C. 470h). Section 106 (16 U.S.C. 470f) of the NHPA states:

The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation...a reasonable opportunity to comment with regard to such undertaking.

In short, section 106 (16 U.S.C. 470f), and its implementing regulations (36 C.F.R. part 800) requires federal agencies to consider the effects of their undertakings on historic properties prior to implementation.

⁷⁶ Executive Order 13175 Section 5.

⁷⁷ Pub. L. No. 102-575, 16 U.S.C. 470.

3.3 SUMMARY

We thank you for the opportunity to submit these comments. We request that the Corps release the final scope for the disposition study as soon as possible and *prior* to completion and public review of the draft study.

4 SIGNATURES



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