DEPARTMENT OF NATURAL RESOURCES

RECORD OF DECISION

In the Matter of the Determination of the Need for an Environmental Impact Statement for the Weaver Bottoms Aquatic Habitat Restoration/Enhancement Project, Minneiska Township and Wabasha County, Minnesota

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

FINDINGS OF FACT

1. The Minnesota Department of Natural Resources (DNR) proposes an aquatic habitat restoration/enhancement project to restore and enhance aquatic habitat in a backwater area of the Mississippi River at Weaver Bottoms (Pool 5) in Wabasha County. The project is located approximately 5.2 miles southeast of Kellogg, Minnesota and 3.0 miles north, northwest of Minneiska, Minnesota. The area to be restored is known as Goose Lake (also referred to as Pritchard's Lake) within the Weaver Bottoms area of Pool 5 (River Mile 746.8). Goose Lake is a historic floodplain lake area that was inundated by the construction of Lock and Dam 5 in the 1930s. The project would restore depth to that of a natural floodplain lake, up to about 6.5 feet from its current average of 2.6 feet, by mechanically dredging fine sediments from 20 acres of shallow water. The dredged material would be trucked one third mile to be deposited at a ten-acre upland site on privately owned agricultural/pasture land. The project would restore and enhance bathymetric diversity in an area that previously provided deeper water, over-wintering habitat for fish, and high quality fishing opportunities. The project would increase available aquatic habitat needed to sustain both healthy and diverse fish populations, and fishing opportunities throughout the year.

2. Pursuant to *Minnesota Rules*, part 4410.4300, subpart 1, an environmental assessment worksheet (EAW) must be prepared for projects that meet or exceed the threshold defined in any of the subparts 2 to 37. The threshold for the mandatory completion of an EAW for stream diversion projects, as defined in *Minnesota Rules*, part 4410.4300, subpart 26, is "a diversion, realignment, or channelization of any designated trout stream, or affecting greater than 500 feet of natural watercourse with a total drainage area of ten or more square miles." The threshold for the mandatory completion of an EAW for wetlands and public waters, as defined in *Minnesota Rules*, part 4410.4300, subpart 27.A., is "projects that will change or diminish the course, current, or cross-section of one acre or more of any public water or public waters wetland." The Weaver Bottoms (Pool 5) Aquatic Habitat Restoration/Enhancement project, which would change the course, current, or cross-section or one acre or more of Weaver Bottoms of the Mississippi River and might also be considered a diversion, realignment, or channelization, requiring the completion of an EAW.

3. Pursuant to *Minnesota Rules*, part 4410.0500, subpart 1, for any project listed in part 4410.4300, the governmental unit identified in those rules shall be the responsible governmental unit (RGU) for the EAW unless the project would be carried out by a state agency, in which case that state agency shall be the RGU. The DNR proposes to undertake the Weaver Bottoms Aquatic Habitat Restoration/Enhancement Project and is the RGU for conducting the environmental review for this project.

4. The DNR prepared an EAW for the project, pursuant to *Minnesota Rules*, parts 4410.1400 and 4410.1500.

5. The EAW was filed with the Minnesota Environmental Quality Board (EQB) and a notice of its availability was published in the EQB Monitor on August 17, 2015. A copy of the EAW was sent to all persons on the EQB Distribution List, to those persons known by the Department to be interested in the proposed project, and to those persons requesting a copy. A press release announcing the availability of the EAW was sent to newspapers and radio and television stations statewide. Copies of the EAW were also made available for public review and inspection at Minneapolis Public Library; the Rochester Library; the Wabasha Library; the DNR Central Region Office (St. Paul); the DNR Area Office in Rochester; the DNR Area Office in Lake City; and the DNR Library (St. Paul). The EAW was also made available to the public via posting on the DNR website.

6. The 30-day EAW public review and comment period began August 17, 2015 and ended September 15, 2015, pursuant to *Minnesota Rules*, part 4410.1600. The comment period closed at 4:30 pm. The opportunity was provided to submit written comments on the EAW to the DNR by US Mail, by facsimile, or electronically by email.

7. The EAW is incorporated by reference into this Record of Decision on the determination of need for an environmental impact statement (EIS).

8. During the 30-day EAW public review and comment period, the DNR received written comments on the EAW from 14 parties, including private individuals, representatives of three government agencies, and one non-governmental organization (NGO). Copies of the comment letters are included with this Record of Decision as Attachment 1. Findings 9 through 22 include further discussion on comments received and responses from the DNR.

    a. Eric W. Korman (August 13, 2015)
    b. Mark Herwig (August 14, 2015)
    c. Scott Slocum (August 17, 2015)
    d. Dan and Cheryl Cutshall (August 17, 2015)
    e. Jack Beranek (August 26, 2015)
    f. Paul Bambenek (September 9, 2015)
    g. Matthew D. Graeve on behalf of The Nature Conservancy Central Minnesota Office (September 9, 2015)
    h. Chuck Mayhew (September 12, 2015)
    i. Larry Gates (September 16, 2015)
    j. Anne Yen (September 16, 2015)

k. Kevin Kain on behalf of the Minnesota Pollution Control Agency (September 16, 2015)
l. Mary Stefanski on behalf of the US Fish and Wildlife Service, Upper Mississippi River National Wildlife and Fish Refuge (September 16, 2015)
m. Jen Wahls (September 16, 2015)
n. Gregory Pates on behalf of the Minnesota Department of Transportation (September 16, 2015)

9. A number of comments were submitted expressing general opinions about the project, including support for (or lack thereof) the project and work to be undertaken. These comments have been isolated from other substantive comments (if present) that originated from letters submitted by: Eric Korman; Mark Herwig; Scott Slocum; Dan and Cheryl Cutshall; Jack Beranek; Paul Bambenek; Matthew Graeve (on behalf of The Nature Conservancy); Chuck Mayhew; Mary Stefanski (on behalf of the Upper Mississippi National Wildlife and Fish Refuge) ; and Jen Wahl.

   Response: The DNR acknowledges these comments. These comments did not address the accuracy and completeness of the EAW, specific impacts that require further investigation, the potential for significant environmental effects, or the need for an environmental impact statement (EIS). Individuals submitting comments in this category will generally find their comments regarding the merits of the proposed project are not addressed in this Record of Decision. Comments in this category will be provided to the project proposer and to permitting and/or approval entities and/or authorities for their consideration as part of further decisions about whether to permit, approve, and/or implement the project.

10. A number of comments suggested developing additional or modified projects of a similar nature: including projects at other locations in the vicinity, ones larger in size, or altering the proposed dredging/geographic project boundary. These comments were included in letters submitted by: Mark Herwig; Jack Beranek; Chuck Mayhew; and Jen Wahl.

    Response: The DNR acknowledges these comments. These comments did not address the accuracy and completeness of the EAW, specific impacts that require further investigation, the potential for significant environmental effects, or the need for an environmental impact statement (EIS). The project is an individual project and limited to the Weaver Bottoms Aquatic Habitat Restoration/Enhancement project as described in the EAW. Suggestions for other projects or proposals represent additional projects and are beyond the scope and nature of this EAW. These comments will be provided to the project proposers and to permitting and/or approval entities and/or authorities for their consideration as part of further decisions about whether to permit, approve, and/or implement the project. In addition, individuals interested in proposing additional pool drawdowns and other habitat restoration and enhancement projects have the option to contact DNR Fisheries about potential future projects.

11. The following comments were considered to be applicable to issues of accuracy, completeness, potential impacts that warrant further investigation and the need of an EIS on the proposed project, according to the standards defined in *Minnesota Rules*, part 4410.1600.

12. Scott Slocum submitted a number of comments about the EAW and the project. Summaries of each comment and the DNR's response are provided here:

    a. The comments suggest the EAW makes misleading references to historic Goose Lake (also known as Prichard's Lake), implying that the project would be a lake restoration rather than a temporary restoration of an area of deep water along the edge of Pool 5, and that the area would gradually refill with sediment from the Mississippi and Zumbro rivers.

       Response: The EAW accurately states that Goose Lake was a floodplain lake prior to impoundment and inundation by the construction of Lock and Dam No. 5. The EAW was completed for an aquatic habitat restoration and enhancement project and does not suggest this project to be a lake restoration project. It is true that the project would not restore the lake as an isolated floodplain lake basin that existed prior to impoundment. Removal of the system of locks and dams would be the only way the hydrology of the river could truly be restored. However, the site was chosen, and is accurately described in the EAW, as a historic area of bathymetric diversity (i.e., depth) that existed prior to inundation and subsequent sedimentation.

    b. The comments suggest the EAW should have considered leaving Goose Lake as it currently functions, to continue to fill with sediment and to be seasonally recharged with water from the Mississippi River, and presumably to develop into a shallow, flood-zone wetland.

       Response: An EAW is an assessment of a project and discussion or determinations of alternatives is not part of the EAW process. Leaving Goose Lake in its current status would not be a project as defined in the Environmental Quality Board (EQB) rules (*Minnesota Rules*, Chapter 4410). In some situations, a particular EAW may include a brief description of alternatives to a proposed project affecting for example water resources because information on alternatives is already available. Internal agency concepts for aquatic restoration/enhancements have been worked out during the project's planning stages through an iterative process.

       The proposed course of action for this project is to increase depth diversity in a small area of Weaver Bottoms to benefit fish and wildlife associated with deeper backwater habitats. It is also an attempt to compensate for excessive sedimentation rates that have occurred since construction of the UMR locks and dams. Other sites were considered for the same action, but the DNR determined the Goose Lake site provided the best opportunity for the desired outcome. The DNR concurs that the area could have been left to fill with additional sediment and become shallower. However, that is already the prevailing condition in many backwater areas of the impounded portion of the Upper Mississippi River (UMR).

       The impact of sedimentation in backwater areas has long been recognized as one of the significant ecosystem effects caused by impoundment of the river. Numerous habitat projects have been done over the last 30 years to restore bathymetric diversity. The DNR knows from these other projects that increasing depth diversity does result in improved habitat conditions for a variety of fish species and that, when done properly, this does provide lasting benefits.

c. The comments suggest that the EAW should have considered other conservation values including waterfowl habitat (separate from the area's level of accessibility to hunters in boats) and non-game wildlife habitat (separate from the area's levels of game production).

Response: The DNR agrees that there are a wide range of uses and conservation values associated with the project area. The DNR is actively engaged in a range of conservation, restoration, and protection efforts that benefit the other uses and values of the aquatic and upland habitats as noted by the commenter. The EAW identified a variety of conservation values. This project emphasizes improvements to fish habitat, and fishing, and those improvements are consistent with goals identified in the application for project funding, which was granted through the State of Minnesota's Lessard-Sams Outdoor Heritage Council (LSOHC).

d. The comments suggest the EAW does not seem to consider the high costs of equipment, labor, and fossil fuels for the project in light of its benefits of providing a temporary fix in a small area for an unspecified number of years. The comments also claim there is a high cost/benefit ratio in the proposed project and suggest that the EAW did not include a fair accounting of the cost/benefit ratio. The comments suggest the cost/benefit ratio should have been estimated in this EAW so that it can be compared by policy makers to those of alternative projects in soil conservation, stormwater and wastewater runoff control, shoreline improvements, game and non-game wildlife conservation, game and non-game outdoor recreation, etc.

Response: The proposed funding committed at this time is $800,000. The DNR concurs that the EAW should have included the total costs of the proposed project; this information was inadvertently omitted from the information in the EAW. This omission is limited and minor and the lack of this information for all reviewers of the EAW does not affect the potential for significant environmental effects.

Restoring and managing habitat in a large floodplain river that has been affected by navigation, hydrologic alterations, poor watershed conditions, and other influences is inherently costly. This project is a relatively small effort directed at a specific area and habitat type. The DNR, along with other state and federal agencies, non-profit organizations, and the general public is engaged in a wide range of efforts to restore and enhance the river ecosystem.

The EAW process does not specifically require a cost/benefit analysis and the DNR does not include cost/benefit evaluations in EAWs. The EAW is designed as a brief document to identify environmental effects associated with a project. The Weaver Bottoms project is the only project being evaluated in the EAW and alternative projects suggested by the commenter are beyond the scope of the EAW.

e. The comments suggest that the EAW did not include a projection for the rate of the re-sedimentation, and thus the end date of the benefits of the proposed project, and the date on which the process would need to be repeated (along with the placement of dredged material on a new site each time). The comments also contend the EAW does not consider the potential impact of dredging the area perpetually into the future.

Response: The Weaver Bottoms project is an individual project and the only project being proposed at this time. There is no plan to repeat the project and no schedule to do so either periodically or perpetually. The beneficial effects of the work should last for several decades, if not longer.

The EAW does not identify a projection for how long it would take for this area to refill with sediment because sedimentation rates are variable across backwater and floodplain areas and over time. The location of the dredge cut has substantial flow at high river stages, thus there would be some scouring that might extend the life of the project. A condition of accepting money from the Outdoor Heritage Fund is that an accomplishment plan must be prepared and include an evaluation of results. The project results might include evaluations of quality of the habitat after project completion, the response of fisheries populations, creel surveys, and usage levels at the landing.

f. The comments contend the EAW downplays the fact that the project may leave a 30-acre dead zone, each time the project is repeated. The comments also suggest that dredging and placement operations would be highly destructive, and the results artificial.

Response: Typical natural river patterns and processes include the development of sinuosity, i.e., meanders, and oxbow lakes when channel segments are bypassed by the main channel. Historically, floodplain features of the Mississippi River were continually reshaped by high and low flow events in this way. The aquatic vegetation and benthic communities are resilient to the natural perturbation inherent in large river systems. To some degree, dredging mimics these natural processes, i.e. the creation of deeper channels by flood waters. The dredging activities are destructive of submersed aquatic vegetation and the benthic communities. Both communities are resilient to these changes and are capable of recolonizing the dredged area relatively quickly, within one or two years.

g. The comments question whether those constructing the project on-site would reliably and consistently clear the dredged and placement areas of submerged, subterranean, or otherwise concealed or inseparable wildlife before the dredged sediments were moved from the area being dredged to the upland placement site.

Response: The only species that would fit the "concealed and inseparable" wildlife potentially found in Goose Lake are macroinvertebrates, such as mussels, and the smaller benthic invertebrates. Recent surveys of Goose Lake indicated that the soft shallow sediments provide poor habitat for mussels and thus they were rarely encountered. The benthic invertebrates are small and readily able to recolonize the area from populations outside of the dredge zone. Most other species using the area can escape from the active dredging zone.

With regards to the placement site, reptiles, amphibians, snakes, insects, ground squirrels, and other small rodents might be considered "concealed and inseparable." The DNR and its contractors would implement mitigation strategies as included in the EAW's Turtle and Snake Avoidance plan to minimize effects to the area's rare Blanding's turtle and snakes (reptiles).

A silt fence (two to three feet in height) will be installed around the entire perimeter of the placement site to exclude turtles and snakes. To avoid any inadvertent takings of turtles or eggs, the silt fence would be installed in early spring prior to any Blanding's turtle nesting activities. Ground surveys for turtles and snakes would be conducted for one or two days prior to initiating site preparation, vegetation removal, and grading activity and at the start of each day of operations. Contractors would be able to contact DNR staff for advice and/or assistance on ways to avoid rare species and when animals are encountered. Minnesota Biological Survey (MBS) biologists can be called on (depending on staff workload and timing) to assist and assure the measures in the EAW are followed.

Losses of concealed and inseparable wildlife would occur, including rodents, such as the possibly, the plains pocket mouse (SC), insect fauna, such as possibly, jumping spiders, some of which are (SC), and others that likely inhabit the area. Nearly one-half of the placement site is located on disturbed old field having less importance to wildlife. Preparation of the placement site will be coordinated with DNR wildlife specialists to mitigate for these potential losses. The loss of dry prairie is an undesirable effect of the project but minor in context of the larger expanse of upland prairie in the Weaver Dunes area (more than 1000 acres) and other conservation lands being restored to prairie from old fields.

13. Paul Bambenek submitted comments regarding the rate of sedimentation in the project vicinity, and sedimentation affecting the Goose Lake Landing when the sediment moves from the south of the landing towards the north and plugs the landing.

    Response: The DNR notes and acknowledges these comments about the amount and rate of sedimentation in Weaver Bottoms. The DNR has knowledge of sediment moving up the shore near the Goose Lake Landing and the potential for plugging the landing. The purpose of this project is to enhance aquatic habitat and increase the water depth by removing accumulated sediment from Weaver Bottoms. The anticipated result is reduction in accumulated sediment.

    Removing sediment that may be plugging the Goose Lake Landing is beyond the scope of the project plans and has not been discussed in the EAW. While not directly part of the proposed project or part of the project reviewed and evaluated in the EAW, the DNR will endeavor as part of more detailed project design and project plans still being developed to remove as much sediment as practicable from the area south of the Goose Lake Landing, thereby limiting the potential for sediment to move north and plug or affect the landing.

14. Matthew Graeve submitted comments on behalf of The Nature Conservancy about the EAW and the project. A comment summary with the DNR response is provided below.

    a. The comments submitted primarily concern fish and wildlife effects associated with the site where the dredged material would be placed and in particular the potential for effects on rare species (threatened and endangered) and species of greatest conservation need (SGCN).

       Response: The DNR would implement mitigation strategies that were included in

the EAW to minimize effects to the area's rare Blanding's turtle and snakes (reptiles), as described in Finding 23j. Contractors would be required to comply with and follow all established requirements identified in the Turtle and Snake Avoidance plan. Among the requirements in the plan, construction would be timed to reduce and limit effects to rare species. Construction would not be permitted during certain sensitive periods when species are more vulnerable to project activities. Silt fencing would be placed along the perimeters of the placement sites to serve as a barrier to reptile movement. Truck drivers would be instructed to be observant of the possibility of animals crossing the haul route. Ground surveys for turtles and snakes would be conducted for one or two days prior to the preparation placement site for receiving dredge materials and daily during construction. Contractors would be able to contact DNR staff for assistance in protecting rare species when they are encountered. Minnesota Biological Survey (MBS) biologists can be called on (depending on staff workload and timing) to assist and assure the measures in the EAW are followed.

b. The comments suggest that increased activity and traffic can increase the potential for the spread of invasive species. This is of particular concern to the commenter because the placement site is adjacent to TNC's Weaver Dunes preserve. The comments emphasize the importance of taking steps to prevent the spread of invasive species, and recommend that the DNR conduct monitoring to determine any new occurrences of invasive species and be available to assist in developing response control efforts.

   Response: The DNR acknowledges the comments related to the short-term increase in activity and traffic during construction and the resulting potential for the spread of invasive species. The DNR staff and its contractors would be required to follow the mitigation steps identified in the EAW and those described in DNR Operational Order 113 (which was included as an Appendix in the EAW). Any follow-up monitoring at the placement site would be limited to the period of time when the placement occurs and immediately following placement until site activities regarding the placement of the dredge material have been completed. The DNR would monitor, as practicable, during dredge placement periods, for occurrences of invasive species and would assist with or recommend control efforts to prevent their spread onto adjacent conservation lands.

c. The comments also recommend restoration of the placement site to a high diversity sand prairie community to increase the connected relationship between the project area and adjacent areas, to provide additional habitat to turtle and snake species, and for pollinator populations.

   Response: The EAW included information about the proposed and likely mix of restoration materials to be used at the placement site as the cover for the dredged material. However it is important to understand that the DNR's responsibilities would conclude once placement of the dredged material has occurred and site preparation has concluded. The DNR can recommend the type of restoration of the placement site to the private landowner; however the exact planting and maintenance of the placement site would be at the discretion of the landowner.

15. The comments submitted by Chuck Mayhew suggested altering the boundary of the project dredging, contending that vegetation drift would fill in the areas dredged and that

dead vegetation drifts in from the south, and southwest building up the bottom and building out the shoreline. The comments suggest the DNR should stop and prevent the vegetation drift.

Response: As noted throughout in this and other responses, the Weaver Bottoms project is an individual project as described in the EAW. The project does not include specific measures to prevent the possibility of vegetation drift. The project is limited to dredging the area of Goose Lake in the Weaver Bottoms as discussed in the EAW and is not planned to expand the project boundary solely for the issue of vegetation drift and build up. The DNR may evaluate the boundaries of the dredging operations as part of specific plans and specifications for project construction are developed.

16. Comments submitted by Larry Gates have been summarized with a DNR response following.

    a. This comment acknowledge the project will probably enhance overwinter habitat for fish species commonly found in the Mississippi River backwaters, but requests additional evidence that this area will provide critical habitat that is not already currently available in the Weaver Bottoms area.

       Response: The EAW does not contend there are no other sites in Weaver Bottoms that provide an overwintering habitat. The DNR agrees that overwintering sites are found in many places in the river floodplain; however, the number and size of these areas continues to decline over time. The effect of sedimentation in backwater areas has long been recognized as one of the primary ecosystem effects caused by impoundment of the river since the 1930s.

    b. The comment questioned whether the potential exists for the dredged area to be a fish sink by concentrating fish from the Weaver Bottoms aquatic area into the project area during the winter. If so, the comment questions if ice fishing pressure might remove more fish than if they were more dispersed. The comments asked about the potential for the project to create a small area that may increase winterkill due to low dissolved oxygen concentrations and also asked whether oxygen levels will remain higher in this area for a longer period of time than in surrounding areas.

       Response: From DNR's experiences with similar projects, following project completion, this area would be expected to concentrate overwintering fish and there would likely be increases in fishing pressure and harvest. Increases in fishing pressure and harvest were identified and described in the EAW. There are few overwintering areas along the river that are not known to anglers and most of those areas also have intensive fishing pressure and harvest. DNR Section of Fisheries has done extensive monitoring of overwintering areas and has measured angler exploitation in numerous locations. These studies have shown that the population of fish in a given wintering area is variable over time, as river flow conditions, ice/snow conditions, and other factors determine which areas are most suitable in a given winter. This is also the case with angling pressure and harvest. The DNR expects that this area will function similarly to other overwintering areas and will be variable in both the number of fish and anglers using it during a given winter.

The DNR acknowledges that occurrences of winterkill are a possibility; however, winterkill occurrences are a common possibility in backwater areas during winters with thick ice/snow cover and/or extremely low flows. The DNR does not anticipate any greater likelihood of winterkill in this area than would be the case in other locations with similar size, depth, and flow characteristics.

c. The comments noted that the private property where the dredged spoil is proposed to be deposited and spread is a portion of the Weaver Dunes, which is a rare dry prairie habitat. Large tracts of land adjacent to this private property have been acquired and planted to prairie with locally harvested seed. The comments suggested that, if the landowner is amenable to prairie restoration, local source (collected from The Nature Conservancy or Department of Natural Resources administered properties in Weaver Dunes) should be used. The comments also expressed the opinion that Standard Mix 35-221-Dry Prairie should not be used on the placement site.

The comments also suggest the desired ecological outcome for the private property on which the spoil is proposed to be placed is to restore it to dry prairie. The comments contend and express the opinion that the addition of spoil and increased organic content is not necessary and is counter to the goals for the Weaver Dunes.

Response: Regarding the opinions and the comments that the addition of spoil and increased organic content is not necessary, the DNR concurs that Weaver Dunes is an important natural area, but there are many varying land uses in the area. The disposal and placement site is on private property, with numerous human disturbances already present, including a borrow pit that will be filled. The placement of dredge material such as that proposed by the project has also been done on a large scale in the vicinity of the project by the USACE on USFWS property.

The planting to be done on the placement site was completely described and identified in the EAW. The DNR's response to comments about the type of planting and soil mixture to be used is also addressed in Findings 12, 14, and 23h. The DNR's responsibilities at the placement site will conclude once the placement of the dredged material has occurred, the site has been graded and stabilized, and an annual cover crop has been planted. The seed mix to be used is at the discretion of the private landowner. While ultimately the choice of cover is a decision of the individual landowner, the DNR concurs that establishing native prairie would be a desirable outcome. Seed collected from the surrounding dry prairie might not be suitable for revegetating the new soil medium, which would have higher moisture holding capacity and fertility and would be suitable for growing crops.

d. The comments submitted contend that hauling of dredge spoil from the landing to the placement site will result in a significant increase in traffic. The comments contend there are current concerns by residents that traffic is increasing and dust from traffic is a problem. The comments contend there has been discussion about having all or some portion of the road from the landing to the placement site replaced with asphalt. The comments suggest that an asphalt road would increase mortality of herpetofauna. The comments suggest that dust control, grading, gravel placement, etc., should be done to minimize concerns about increased road traffic due to the project. The

comments also express the opinion that activities (such as access improvements) should not be undertaken which might result in the hard surfacing of this road.

Response: Transportation and other issues and effects were completely addressed in the EAW and are also addressed in other Findings 12, 14, 17, 23c, 23j and 23l. The Minnesota Department of Transportation submitted comments that there will not be effects to state transportation systems. The project contractors will be required to follow the Turtle and Snake Avoidance Plan described in the EAW to reduce effects to turtles, snakes, and other sensitive species. The EAW provided the best estimate known to the DNR of temporary increases in traffic during construction of the project. The contractor will be required to follow all regulations, including weight restrictions that would apply to any other user of the roadway.

e. The comments submitted suggest the ecological values of the Weaver Dunes are vastly understated although the comments do not include any information about which values and how those may be understated.

Response: The ecological values of the project were completely and accurately addressed in the EAW. This issue is also addressed in Finding 12.

f. The comments posed a question about whether dunes, active sand blowouts, and other features of the Weaver Dunes are considered to be geological features.

Response: Guidance documents provided by the Minnesota Environmental Quality Board about geologic information to be identified by an EAW include a description of features, including any geologic or landform features of special concern and information about bedrock geology, surficial geology, or Karst features. Geological features that are identified in the Natural Heritage Information System (NHIS) database are considered sensitive geologic features in the development of EAWs on a project-specific basis. Geological features of reference were included as "Other Ecological" features in Attachment B of the EAW and were considered in the evaluation of environmental effects.

17. Anne Yen submitted comments concerning the potential negative environmental effects that increased traffic during and after project completion might increase mortality on local populations of snakes, turtles, and amphibians, some of which are species of special concern.

Response: The DNR is committed to partnering with other agencies and the public in conserving the reptile and amphibian populations in the Weaver Bottoms area and considers it appropriate to identify potential conflicts caused by traffic due to residents and recreationists after project completion. The DNR acknowledges the increase in traffic during project construction, stating that 60-70 truckloads a day would be delivered to the placement site, a distance of 0.3 miles. The EAW stated that there is also a beneficial effect of the project relative to improved aquatic habitat for the Blanding's turtle.

The EAW stated that the project would increase available aquatic habitat needed to sustain both healthy and diverse fish populations. Also the EAW stated that the Weaver Bottoms has a rich history of waterfowl hunting and fishing opportunities during all

seasons of the year, which relates to past usage levels of Weaver Bottoms and the Goose Lake Landing, established in 1981, being higher that they have been in recent years. The DNR also identified the potential increase in use of the Goose Lake Landing after project completion. The increase in public recreation opportunities on the Mississippi River is considered a beneficial effect.

The degree to which the traffic might increase after project completion due to proposed improvements is not known. Incidental mortality due to traffic from existing usage levels already occurs. With the potential for increased traffic, mortality could incrementally increase.

Mitigation efforts that would be carried out during project construction are included in the project's Turtle and Snake Avoidance Plan. The Blanding's Turtle Priority Area stretches for 6-7 miles along the river. The lengthy zone of upland – aquatic transition available to migrating turtles indicates that the Goose Lake Landing is likely one of many routes used by Blanding's turtles to access foraging and nesting areas on conservation lands. After project completion low traffic speeds, public awareness, and signage to alert drivers will reduce mortality. It would be beneficial for conservationists and residents to encourage and/or maintain signage that alerts motorists of the potential for turtle and snake crossings. The DNR has the responsibility to demonstrate exemplary development and management practices for providing access to public waters. If evidence shows that future traffic speed and volume causes unacceptable mortality to the populations of turtles and snakes traversing the Goose Lake Landing access road, management of the landing could be changed, if warranted.

18. The Minnesota Pollution Control Agency (MPCA) reviewed the EAW and submitted comments identifying that the project dredging operation for sediment removal would not change or alter the Type 5 wetland located within the project boundary. The MPCA also noted that to reduce or eliminate sediment from entering the Mississippi River, dredging techniques identified in the EAW need to be followed. The agency also recommended that in-water Best Management Practices, such as a silt curtain around the dredging area, need to be installed.

    Response: The DNR appreciates MPCA's project review and comment on the EAW. The DNR would be following and complying with the dredging techniques and installing in-water Best Management Practices identified in the EAW, as these are necessary to reduce sediment from entering the Mississippi River. Depending on the water level and flow encountered during construction, among other factors to be considered, a silt curtain would be installed if warranted. Experience from past projects in the UMR will help to determine if its installation would be beneficial.

    Regarding the MPCA's comments about permits, approvals, regulatory requirements, and pending or future permit conditions, a number of MPCA required permits and approvals were identified in the EAW. The DNR project proposers would be applying for required permits as more formal design and engineering plans are determined. The DNR would follow all requirements or conditions established in permits and approvals. As the final project configuration is established, the DNR would further coordinate with the MPCA regarding its applicable regulations and requirements.

19. Mary Stefanski submitted comments on behalf of the US Fish and Wildlife Service, Upper Mississippi River National Wildlife and Fish Refuge (the Refuge) about the EAW and the project. A summary of the comments and the DNR's responses follow.

    a. The comments submitted suggested that the description of the project location in the EAW should have indicated that the project is taking place on US Fish and Wildlife Service fee-title lands that are managed as part of the Upper Mississippi River (UMR) National Wildlife and Fish Refuge. The Refuge also clarified the length of the Refuge as 261 miles.

    Response: The DNR acknowledges this comment and the USFWS's clarifying information. However, the DNR understands that the dredging component of the project occurs within the bed of public waters of the state. These lands under the water were conveyed to Minnesota at the time Minnesota entered the Union under the equal footings doctrine. These lands are managed by the state under the public trust doctrine and are subject only to the limited riparian rights of adjacent landowners and the servitude imposed on the state's ownership interest by the commerce clause. The figures included with the EAW, as listed in Item No. 5, and referred to in the project location and description and discussion of the project in the EAW, clearly indicated the project and its relationship to the federal lands of the UMR.

    b. The Refuge submitted comments and questions about a number of aspects of project design and planned project construction. These included comments about barging operations, tree clearing that might affect roost and brood trees used by northern long-eared bats, a federally threatened species, and timing and duration of project construction. Regarding the use of a backhoe on a barge and an additional storage barge on-site during project operation, the Refuge asked how the two barges would be moved, whether a pusher boat would be used, whether the Goose Lake Landing would be dredged to allow this type of equipment to float to the dredge cut or whether the backhoe would be used to pull the barge into position.

    Response: The barge operations were described throughout the EAW in addition to the information in EAW Item No. 6b. The method or methods for moving the two barges, the number of barges, and whether a pusher boat would be used, have not been determined and would be part of detailed plans and specifications to be written in concert with recommendations made by the project contractors. The landing would be dredged to allow this type of equipment to float to the dredge cut. In addition, if a fuel tank becomes a necessity on a barge for fueling of the backhoe or a pusher boat, the DNR would develop and include a plan for overwater containment. The DNR would coordinate this with and provide this to the MPCA as part of the requirements for spill and containment plans already identified in the EAW.

    The EAW contained sufficient information regarding the site preparation to occur on the private land that is the placement site for the dredged material. Some limited number of tree and shrubs would need to be removed from the placement site. The DNR would coordinate a visit on-site to identify the presence of roost or brood trees. If any are identified, tree removal would be limited and/or not removed during nesting periods. The DNR would also comply with Northern long-eared bat interim 4(d) rule for nonfederal projects. If it is determined that the project is not exempted

by the 4(d) rule, the USFWS's Twin Cities Field Office would be contacted for clearance to remove trees from the placement site.

Regarding comments from the Refuge about the timing and duration of activities, the timeframe for establishment of cover crop vegetation on the dredge placement site (the work to be done by the DNR) would be as soon as practicable and according to requirements of the site erosion control permit. This would likely occur once soil moisture is suitable for planting. The silt fence would be in place for as long as necessary, as determined by the permits and conditions established by the DNR and the MPCA. A period of six to 12 months is estimated to be sufficient for vegetation to recover. Following stabilization of the cover crop, land use practices on the placement site, as described in the EAW, would be at the discretion of the landowner.

Given the hunting pressure on Weaver Bottoms, the DNR agrees with the Refuge that that all in-water and haul work would be completed prior to the opening of the Minnesota Regular Waterfowl season in September of a particular year. The DNR also agrees that all in-water work would not occur during the Minnesota or Wisconsin early teal season, also generally in September of a particular year. The DNR notes that both states do not always schedule an early teal season each year. This completion date also avoids construction conflicts with the movement of Blanding's turtles from uplands to backwater aquatic areas of the river.

Unless delayed by unforeseen circumstances, project construction would likely be completed in 2016. The EAW did not specify a year for the project to occur because that will ultimately depend on further project development, detailed and specific design plans and specifications, and compliance with requirements of permits and approvals to be applied for and issued for the project.

c. The Refuge submitted comments and clarifying information about users of the Pritchard Lake (Goose Lake) landing and project area, noting that this is also a heavily used landing by waterfowl hunters.

Response: The DNR concurs with the Refuge that the Goose Lake Landing is a heavily used landing by waterfowl hunters gaining access to Goose Lake and Weaver Bottoms. The Refuge comments indicate that for the last ten years, 30 hunters per weekend day use the landing for waterfowl hunting. The DNR concurs that both the habitat and access improvements would likely result in hunters, who currently use the Weaver and Halfmoon landings, to prefer using the Goose Lake Landing after project completion. The additional use of Goose Lake Landing resulting from improvements to habitat and the landing would be a benefit to users in the area and is not regarded as a negative effect of the project.

d. The Refuge submitted comments and clarifying information about the potential for a Special Use Permit from the Refuge to conduct work on Refuge lands.

Response: During development of the project proposals and development of the Weaver Bottoms project, including regular communication with Refuge staff, information was not provided that a Special Use Permit may be required. If a Special Use Permit is required from the Refuge, at the appropriate time in the permit and

approval process, the DNR would apply for such a permit. The DNR would also add to the permits and approvals section of this Record of Decision information regarding this Special Use Permit.

e. The Refuge also had a question about whether the Minnesota State Historic Office review, as shown in Attachment E in the EAW, included the placement site. The Refuge stated that the in-water site will require review by the U.S. Fish and Wildlife Service, Regional Historic Preservation Officer for concurrence/clearance before the project can proceed.

Response: Yes, the Attachment E SHPO correspondence referred to both the dredging area and placement site. The SHPO indicated that no properties listed in the National or State Registers of Historic Places, and no known or suspected archaeological properties in the area would be affected by the project. Since the public review period, the DNR made an additional request to verify the earlier SHPO review. Between the two requests, the area of potential effect (APE) did not change. The SHPO confirmed the earlier findings. The SHPO response also instructed the DNR to include the review requirements of Section 106 of the National Historic Preservation Act of 1966 because the project would include federal involvement during the permitting process. The DNR would coordinate with the federal agencies and SHPO to assist in the Section 106 compliance process.

20. Jen Wahls provide a series of comments and questions relating to proposed project developments, as described below.

a. What is the meaning of light agriculture?

Response: The statement refers to how the land is used presently. Some cropping, old fields, and potential grazing land are some of the current land uses.

b. Provide a list of agencies that were contacted.

Response: See Finding 23c.

c. Need to review the most current local water plan.

Response: The current local water plan was approved after the EAW was completed. Information about the recent update and adoption of the water plan would be passed along to the project proposer for their consideration.

d. Reptiles would be impacted by project construction and there is a potential increase in traffic with better boat access from the Goose Lake Landing once the project is complete.

Response: See Findings 17, 18 and 23j.

e. There would be an increase in pressure on fish and wildlife in a concentrated area.

Response: Fish and wildlife are mobile throughout the aquatic area of Pool 5. Potential isolation of fish in the dredging area could occur during severe winters, but generally fish and wildlife would have the opportunity to move between preferred habitats. Also see Finding 16b.

f. Along with the potential increase in recreational use of Weaver Bottoms, there would be an increase in pollutants from vehicles, boats, and personal watercraft.

Response: With or without the project, in 2010, the EPA set stricter standards for the manufacturers of outboard and personal watercraft marine engines. Once fully implemented, the standards would yield a 75% reduction in emissions from emission levels identified in 1996. By 2020, the EPA anticipates a 50% reduction in hydrocarbon emissions.

g. Would prolonged drawdowns have similar effects with less cost than the proposed project?

Response: Pool drawdowns have the purpose of increasing submerged aquatic vegetation; the proposed project has the purpose of increasing bathymetric diversity in Pool 5.

h. The landowner should not be allowed to plant corn or soybeans on the sediment placement site as part of the agreement.

Response: The DNR does not control the land once the material has been placed onsite as explained elsewhere, including Findings 20i and 23h. The soils are expected to have a Land Capability Classification of Class 1, which refers to soils that have slight limitations to agriculture that would restrict their use, though soil performance would be more evident once leveled and planted.

i. Agricultural crop production often includes chemical applications that we do not know the total impact?

Response: After the project is completed and a cover crop has been planted, the land use, including choice of crop to plant, is at the discretion of the landowner.

j. Aquatic invasive species could increase because of project developments.

Response: As noted in the EAW, there is a minor risk of additional spread of aquatic species within the boundaries of the project.

k. What is the science behind the increase in diversity by increasing the depth by 4 feet?

Response: As noted in the EAW, the UMR Pool plans provide a broad overview of alternatives that would improve fish and wildlife habitat, under the constraint of maintaining the navigation channel using a series of locks and dams. Fish monitoring studies have identified increases in fish diversity in deepened areas.

21. A number of comment letters indicated that the EAW did not include certain species of turtles and snakes apparently known to be present in the area (i.e., North American racer and Northern map turtle). The comments also suggested that the North American racer is found in the vicinity of the dredge material placement area and is classified as a special concern species.

Response: The North American racer is a state-listed species of special concern, not threatened or endangered. The Northern map turtle is not a state-listed species. The EAW included complete information on rare species as stored in the DNR's Natural

Heritage Information System (NHIS) database (accessed July, 2015). Subsequent to publishing and issuing the EAW and subsequent to the review and comment period, the DNR has received one record of the North American racer in the vicinity of the project area. Although information about potential presence of the North American racer and the Northern map turtle were not included in the EAW, the Turtle and Snake Avoidance Plan, as referenced in the EAW and included as an Attachment in the EAW, does incorporate mitigation requirements that are applicable to the North American racer and the Northern map turtle.

22. The Minnesota Department of Transportation (MnDOT) reviewed the EAW and with regards to the state transportation systems determined the EAW to be accurate and complete and recommended that an Environmental Impact Statement (EIS) not be completed. The MnDOT also stated there are no potential state transportation system impacts that may warrant further investigation before the project may commence.

    Response: The DNR appreciates MnDOT's project review and recommendations that there are no potential state transportation system impacts that may warrant further investigation.

23. Based upon the information contained in the EAW, the DNR has identified the following topics of potential environmental effects associated with the project:

    Each of these environmental effects is discussed in more detail below.

    a. Project Magnitude, Scheduling, and Construction
    b. Project Funding and Costs
    c. Compatibility with Plans, Ordinances, and Land Use
    d. Public Waters and Wetlands
    e. Water Quality
    f. Solid Wastes and Potential Contamination of Groundwater
    g. Public Use of Goose Lake Landing and Recreational Benefits
    h. Erosion on Uplands and Sedimentation
    i. Wildlife and Fisheries Habitat
    j. Rare Species
    k. Invasive Species Management and Control
    l. Vehicle Emissions, Noise, Dust, and Odors
    m. Cumulative Potential Effects

a. Project Magnitude, Scheduling, and Construction

The project would mechanically remove up to 50,000 cubic yards of sediments from about 20 acres of Goose Lake, Minneiska Township, Wabasha County, Minnesota. A backhoe working from a platform would be used to dredge and load sediments onto barges, which would be floated to the Goose Lake Landing for offloading. At the landing, materials would be loaded onto trucks and transported to the placement site for disposal, where they would be levelled and put to beneficial use. Equipment includes backhoes, barges, front end loaders, bulldozers, and trucks. Preparation of the placement site would begin in April and dredging would start after July 15 and finish by September

15. Final grading and seeding would be completed no later than November 1. Hours of operation would extend from 6:00 AM to 8:00 PM.

The construction plan identifies excavation in public waters and full use of the Goose Lake Landing for barge offloading. Heavy truck traffic would occur along Prichard Road (Minneiska Township Road 155) for a short distance from the landing (0.3 miles). Preparation of the ten acre placement site would involve removing trees and other vegetation and installing berms and erosion control measures. The sediments would be unloaded and leveled with a bulldozer in sequence at three locations and, after stabilization, the areas would be seeded with a cover crop.

Creating bathymetric diversity is an effort to mimic the natural river pattern by creating areas of deepened pools typical of oxbow lakes. The Goose Lake dredging operation would be similar to dredging operations employed for maintaining the navigation channel to achieve a 9-foot depth. The project goal of deepening the lake is to enhance aquatic features for wildlife and fisheries by providing a range of water depths, which helps to sustain fish communities by increasing their resilience during the winter and periods of low flows.

The area of cumulative effect from navigation operations in St. Paul District of the Upper Mississippi River includes Pools 1 through 10 from Minneapolis, Minnesota, to just south of Guttenberg, Iowa [River Mile (RM) 866 to RM 615] and the lower Minnesota and St. Croix Rivers. Prior to the construction of the locks and dams, the Mississippi River was a mosaic of braided channels, islands, and wetlands.

The construction of locks and dams has dramatically altered the seasonal and long-term hydrologic cycles. In today's river, water levels are held artificially high and stable. The dams effectively create a series slack water pools that cause sediments and nutrients to be retained in backwaters and lower ends of navigation pools. This has dramatically reduced the diversity of aquatic and terrestrial habitats. This project, on a very small scale, is an attempt to cause perturbation and variability in aquatic habitat that used to happen on a large scale in the unimpounded river.

Pool 5 is an impoundment of the Mississippi River extending generally from RM 738 to RM 753. Weaver Bottoms is a 5,000 acre backwater area that encompasses the middle third of Pool 5 within Minnesota. To the detriment of the habitat features it once supported, Weaver Bottoms receives a higher rate of sedimentation than areas in the upper part of Pool 5. Since the late 1960s, much of Weaver Bottoms has degraded to a large, windswept lake. The upper extension of the lake is referred to as Goose Lake (Prichard Lake), an historic floodplain lake that existed prior to impoundment. Goose Lake Landing is the closest public access available to the upper reaches of Weaver Bottoms.

The Upper Mississippi River Environmental Pool Plans (Pools 1-10 and 5a) prepared by the Fish and Wildlife Work Group identified the desired future habitat conditions that resource agencies and other river interests are working on to create and manage. The Pool 5 plans call for focusing on restoring aquatic vegetation, backwater fishery habitat, and terrestrial habitat. Island construction to prevent wind fetch and improving bathymetric diversity were identified as strategies to employ in the middle and lower pool

areas, such as Weaver Bottoms. The plans serve as the DNR's guide to define strategies that promote environmental sustainability and provide an overview of the types and locations of projects that would provide the most benefit to fish and wildlife resources, within the constraints of the current pool system. As shown in a variety of monitoring studies, the bathymetric diversity developments, among others that have been implemented in the past, have yielded improvements in wildlife and fisheries population and recreational use levels.

The Weaver Bottoms project incorporates measures for improving operation efficiency. Sediments dredged with a backhoe have much lower water content, are easier to transport by conventional trucking systems, and require limited dewatering. Sediment hauling distance has been kept to a minimum. The project also has been designed to reduce negative environmental impacts associated with construction. The project employs a well-tested backhoe dredging technique that limits the amount of turbidity and sediment mixing created during excavation. The operation would avoid the use of a hydraulic dredge and piping system, which is less suitable for working compacted sediments; generates higher amounts of suspended sediment and more turbidity; and, by producing a liquefied sediment stream, creates an additional problem of the need for managing dewatering.

The excavation and dredge materials placement work would be scheduled, sequenced, and phased to minimize environmental effects to surface waters and wildlife resources by reducing turbidity and other environmental effects on natural resources. Use of heavy machinery and hauling trucks would create noise and dusty conditions along the access road. These environmental effects and others are addressed under Findings 23b through 23m. Project disturbances would be limited to the dredging area, barge off-loading area at the landing, haul road, and disposal area, with noise and dust affecting nearby properties.

Construction would be monitored and the DNR would be available to discuss public concerns during project operations. The rate of recovery of the submerged aquatic vegetation would also be monitored. The DNR Fisheries Habitat Program would monitor fisheries population responses over time.

The design, construction, and scheduling of the project would have temporary and local, environmental effects in the vicinity of the project area.

b. Project Funding and Costs

During FY 2012 and 2013, the Lessard-Sams Outdoor Heritage Council (LSOHC) recommended this project to the legislature for funding through the State of Minnesota's Lessard-Sams Outdoor Heritage Fund. Recommendations are based upon the conclusion of the council that this project is consistent with state law and takes into consideration the outcomes of existing natural resource plans, including the Minnesota Conservation and Preservation Plan, that directly relate to the restoration, protection, and enhancement of wetlands, prairies, forests, and habitat for fish, game, and wildlife, and that prevent forest fragmentation, encourage forest consolidation, and expand restored native prairie. This project emphasizes restoration/enhancement of aquatic habitats important to fish and recreational fishing.

The Weaver Bottoms project is one part of a larger Statewide Aquatic Habitat package proposed by the DNR (DNR Aquatic Habitat - Phase V). It is the first UMR project of this type to be funded by state appropriation rather than by the federal government. Project funding committed at this time is $800,000, including two appropriations, one of $300,000 for Fiscal Year 2012, and another of $500,000 for FY 2013. This funding remains available for expenditure.

All restoration projects go through a vetting process, as defined in the 2015 *Minnesota Statutes*, section 97A.056, including subds., 3, 6, 7, 10, 11, 12, 13c, 13f, 13h, and 13i, among others. The subdivisions identify legislative oversight, LSOHC duties, audits, restoration evaluations, fund recipient requirements, accomplishment plans and reports, and other requirements specific to restoration projects.

Achieving the project's habitat restoration/enhancement goals is conditional on avoidinig, minimizing, or mitigating potential environmental effects, as identified in the EAW and in the future development of permits and approvals.

c. Compatibility with Plans, Ordinances, and Land Use

The proposed project is part of and identified in an inter-jurisdictional environmental operating plan for the Upper Mississippi River as described in Finding 22a. The environmental operating plan identifies restoration of backwater depth as a desired method of habitat restoration in Pool 5. The Wabasha County 2008 to 2012 Local Water Management Plan acknowledges the importance of the Mississippi River to the county and the extensive recreation opportunities the river provides but does not directly assess the value of aquatic habitat restoration/enhancement projects.

The immediate setting near the landing and haul route is a residential area that would be exposed to dust, noise, and fumes during project operations. These effects will be discussed in Finding 23l.

Lands in the project vicinity are largely dedicated to conservation of both aquatic and upland habitats for wildlife and fisheries. The aquatic area of the project lies within the UMR National Wildlife and Fish Refuge. The US Fish and Wildlife Refuge staff fully support this project, as the project is compatible with Refuge goals and priorities for habitat improvement and will benefit fish and wildlife. Uplands extending from near the boat landing toward the west are largely under the ownership of The Nature Conservancy and are managed to conserve rare sand prairie habitat and associated wildlife, including nesting habitat for the Blanding's turtle.

The Minneiska Township officers have been notified of the intent to use a 0.3 mile section of Prichard Road (Road 155) as a haul route for moving dredge materials from the landing to the placement site. The Township's plans for future management of the road are to continue current maintenance schedules, which would include grading and applying aggregate on places where the road bed has deteriorated. There are no plans to improve the road with asphalt pavement.

The DNR acknowledges the potential for accidental spills of dredge materials and road deterioration due to heavy use. Signage would be provided to alert the public of potential road hazards along the haul route. The contractor would be required to clean trucks

leaving the site to prevent tracking onto public streets, spilling dredge materials, and spreading invasive species. Larger accidental spills and incidental road damages would be promptly corrected. After project completion, the roadway along the haul route would be restored at the least to its baseline condition prior to project construction.

Project actions were evaluated for compatibility with plans, ordinances, and nearby land uses through document reviews and coordination with local, state, and federal agencies including: Wabasha County (shoreland and floodplain ordinances), the US Army Corps of Engineers (USACE) (Section 404 CWA), MPCA (Dredge Materials Management permit), Minnesota Department of Transportation (MnDOT) (project evaluation), Minneiska Township (Prichard Road use), and various DNR resource specialists and administrative staffs.

The project is compatible with plans, ordinances, and land uses in the project locale and Wabasha County in general.

d. Public Waters and Wetlands

The DNR proposes to restore depth in an approximately 20 acre-portion of a natural floodplain lake that has filled with sediments over the past 80 years since navigation dams were built on the UMR. Mechanical dredging would be performed with a backhoe operating on a platform and materials would be transported with a barge to the transfer station at the Goose Lake Landing. The physical effects on public waters include the increase in depth of the water column, from 2.5 feet to six feet on average; the destruction of submerged aquatic vegetation; and the loss of the benthic invertebrate community.

The wetland type in the dredging area, classified as Type 5 wetland, would not be changed by dredging. A Type 5 wetland is defined as open, fresh water, shallow ponds or reservoirs, in which water is usually less than ten feet deep and fringed by a border of emergent vegetation. The submerged aquatic vegetation and the benthic community would be diminished for a period of time, up to several years, due to dredging activities. Other in-water effects including water quality and rare species are addressed under those specific findings.

After the EAW was completed, areas on the dredge materials placement site that were identified as potential wetlands on the USFWS National Wetlands Inventory maps (1980), were field surveyed for the presence of wetlands by a certified wetlands scientist. No jurisdictional wetlands were found on the placement site, as hydric soils and wetland hydrologic features were absent from the survey area.

A public waters work permit is required because the project would affect more than one acre of river bed. The permit conditions for excavation and/or habitat improvement projects are defined by *Minnesota Rules*, Chapter 6115. The rules state that the project must be reasonable and practical based upon geologic and hydrologic conditions, including the life expectancy of the excavation with respect to bedload, longshore drift, and siltation. The project is subject to the qualification that a project's life expectancy is reasonable with respect to potential siltation patterns in the project vicinity.

Sedimentation in Pool 5 is largely due to erosion occurring in uplands, along banks of tributary streams, and in urban development zones that contain a larger portion of

impervious surfaces. Some sedimentation is also due to the resuspension of sediments that occurs in the open waters of the lower Weaver Bottoms area. An increased effort to reduce sedimentation rates within the Mississippi River watershed would increase the longevity of the proposed dredging project. Furthermore, the rate of sedimentation might not be as high as other backwater areas because an arm of upland/swamp/marshland above the lake extends obliquely toward the river to restrict flow volume through the backwater lake. Opposing currents that flows through Goose Lake also protect the lake from sedimentation caused by the resuspension of sediments in the lower Weaver Bottoms area. The currents might deter the movement of turbid waters toward the lake. Without the capacity to control non-point sources of sedimentation in the river's expansive watershed and flooding patterns of the river itself, Goose Lake shows a lower risk of sedimentation as compared to many other backwater areas in Pool 5.

The rules also state that excavation projects that are designed for improving fish and wildlife habitat must show the nature and degree of habitat to be benefited and must demonstrate that the project would not create other adverse effects such as flooding, erosion, sedimentation, or navigational obstructions. These adverse effects were discussed in the EAW, as summarized in Findings 23a through 23m.

The rules state that the proposed project must achieve one or more of the following public purposes: improve navigation, swimming, and other recreational uses; reduce winter fish-kill potential; or eliminate a source of nutrients and/or contaminants through sediment removal. The first two conditions of this rule would be met by the project. The project is consistent with the goals and objectives of recreational management of Weaver Bottoms, increasing its suitability for hunting and fishing and other forms of aquatic recreation. The project would show a benefit by increasing bathymetric diversity that would reduce winter fish kill in this part of the river.

The rules also state that the project must represent the "minimal impact" solution to a specific need with respect to reasonable alternatives and potential damage to the environment, particularly the ecosystem of the waters. The EAW evaluated the potential environmental effects on the ecology of the Weaver Bottoms aquatic areas. As reported in the EAW, the detrimental effects of removing submerged aquatic vegetation and the benthic community would be temporary. Dynamic riverine systems help to disperse vegetative propagules and plant fragments that can settle and establish submerged vegetation in the dredged area. Likewise, the benthic invertebrates have the capacity to reestablish rather quickly, anticipated within a year or two, in this dynamic riverine system.

The EAW indicated that the Weaver Bottom aquatic areas and shoreline would be affected to a minimum degree. The size of the dredging area is small compared to the needs identified in Pool 5 in the UMR Environmental Pool Plans. The environmental effects on the aquatic areas would be largely confined to the dredging area itself, with the exception of a temporary increase in sedimentation rate downstream due to the migration sediment plume with the current, as discussed in Finding 23e. The size of the proposed dredging area in Goose Lake is minor with respect to other past and future excavations conceptualized for the pool.

The environmental effects on surface waters from in-water construction of equipment access and dredging operation would be local, minor, and temporary.

e. Waters Quality

The 20-acre dredging area is within Goose Lake, located at the northern end of an expansive shallow floodplain lake/marshland referred to as Weaver Bottoms. The project area is located in the middle portion of UMR Pool 5, over one mile from the navigation channel. Latent contamination in the Mississippi River along this reach has led to its listing as impaired due to the exceedance of MPCA water quality standards for high levels of PCB and/or mercury in fish tissue.

The dredging and materials transfer operations would disturb bottom sediments and cause the resuspension of sediments. Sediment spills could occur while transferring materials between from backhoe to barge and from barge to truck. Project activities would cause an increase in suspended sediments and turbidity. The quality of the sediments proposed for removal has been evaluated and found to contain minor levels of contaminants, including PCBs and mercury, as described in Finding 23f. Some of the contaminants found in the sediments could become dispersed in the water column.

Petroleum fuels, lubricants, and fluids would be used to operate equipment. Petroleum leakage and spillage could occur while equipment is in operation or being refueled.

Avoidance, minimization, and mitigation are responsibilities incorporated in the provisions of the U.S. Army Corps of Engineers Section 404 Clean Water Act (CWA) permit and the MDNR Work in Public Waters permit. Each of these permits identifies authorized activities and standard conditions. BMPs to reduce the amount of resuspention would be applied.

Numerous dredging projects occur on an annual basis along the UMR pool system. Techniques to reduce sediment resuspension and turbidity during dredging have been improved over a period of decades. The proposed project would employ mechanical dredging with a backhoe. The contractor would use best management practices (BMPs) necessary to prevent excessive sediment resuspension. The backhoe bucket would be fully opened and lowered into the water until contacting the bottom. The inverted bucket would be activated to gradually cut through the sediment until closed, upon which it would be slowly lifted up until free and maneuvered towards the barge. The process would limit spillage as compared to alternative types of dredging, such as hydraulic dredging. Some incidental fallback of wastes into Goose Lake would occur when lifting and transferring materials to/from the barge and during the drainage of water from the barge. A silt curtain enclosure might be used during dredging operations if warranted.

During construction, dredging activities would cause a minor increase of suspended sediments and turbidity levels. The increase in suspended sediments is expected to cause a minor change in the concentration of contaminants in the water column. Mechanical dredging is the most reliable means of limiting the release of sediments to the water. The potential for sediment-associated contaminants to affect water quality is low and the size of the sediment plume would be limited. The project would have a minor effect on the existing PCB and mercury in fish tissue water quality impairments.

Prior to project startup, the selected contractor would be required to develop a Spill Prevention and Response Plan to address accidental spillage or leakage. Measures to avoid or minimize spills during construction would include refueling away from surface waters, maintaining trained personnel and a spill containment kit onsite, and understanding and following procedures for reporting spills.

The increased depth of the lake would create a larger reservoir of water that is more likely to remain oxygenated and retain a viable environment for fish during the winter.

The environmental effects on surface waters from in-water construction and other soil disturbances would be local, temporary, and minor.

f. Solid Wastes and Potential Contamination of Groundwater

Less than 50,000 cubic yards of dredge materials would be deposited over a seven acre area. The sediments in the proposed dredging area have been tested for contaminants by Braun Intertec. Results were provided in the Pre-Project Dredge Material Sediment Core & Baseline Contaminant Analysis report.

To reduce the risk of pollution and human exposure to pollutants, Management Levels have been established by MPCA that set limits on how waste materials can be handled, whether they can be used for beneficial purposes or require disposal in a licensed landfill. The Management Levels are based on acceptable Soil Reference Value thresholds, which classify pollutant levels in the waste materials. Management Levels 1 and 2 define the pollutant levels of solid waste materials acceptable for dispersing in residential areas and industrial areas, respectively.

Based on this report, chromium IV and selenium were not detected. The laboratory method used could not detect below the MPCA Level 1 management category threshold for these elements. Arsenic, cadmium, chromium III, copper, lead, mercury, nickel, selenium, and zinc were detected in each sample. Concentrations were below the MPCA Level 1 management category, with the exception of arsenic samples from three locations. The three samples were determined to meet the Level 2 management category. The eight PCB compounds sampled were not detected above the MPCA Level 1 management category. Based on analytical results, excavated sediments from the proposed dredge area are suitable for industrial re-use.

Land application for agricultural re-use might be considered as a beneficial use for the solid wastes depending on the conclusions drawn by MPCA as determined during the Dredge Materials Management permit and approval review. In the event that the MPCA determines the dredge material is not suitable for placement as proposed, the habitat enhancement project may not be able to be completed.

The environmental effects of the increase in contamination due to the disposal of waste material would be low risk, local, and minor in extent.

g. Public Use of Goose Lake Landing and Recreational Benefits

The Weaver Bottoms has a rich history of fishing and waterfowl hunting experiences. However, the effects of sedimentation and altered hydrology have reduced opportunities to experience the historic potential of this area. Goose Lake has silted to an average

depth of 2.5 feet, creating limited habitat for fisheries production and a greater potential for winter fish kills. The Goose Lake Access is poor for launching boats due to siltation and heavy growth of submerged aquatic vegetation, including invasive species. The project is planned to restore enough depth to the area to allow the use of small boats and canoes. During construction, the Goose Lake access and parking lot would be closed to the public. Facilities might need to be removed to allow sufficient clearance to maneuver equipment.

The proposed Goose Lake dredging would increase the average water depth from 2.5 to six feet, increasing the availability of open water for fishing and casting, unencumbered by heavy aquatic vegetation. The increased depth would likely increase the suitability of Goose Lake for ice fishing.

After project completion, the landing would be repaired, improved, or replaced with new structures and reopened to the public. Anticipated usage would increase from the present usage rate of five boats per week to possibly ten to fifteen boats per week. In addition, ice fishing pressure is estimated to increase substantially, from less than ten hours/acre to 100 or more hours/acre.

The DNR agrees that all in-water work would be completed prior to the opening of the Minnesota Regular Waterfowl season in September. The DNR also agrees that all in-water work would not occur during the Minnesota or Wisconsin early teal season also generally in September. Both states do not always schedule an early teal season each year.

The proposed project is likely to benefit water recreation, such as boaters, anglers, and hunters using the public water access opportunities in Goose Lake as there would be improved access to the deepened lake and to the Mississippi River. The U.S. Fish and Wildlife Service comments indicate that, for the last ten years, an average of 30 hunters use the Goose Lake Landing for access to waterfowl hunting per weekend day. Improvements in the habitat and access would likely draw additional hunters, including some of those who currently use the Weaver and Halfmoon Landings. The additional use of Goose Lake Landing is a benefit to waterfowl hunters and is not considered a negative effect.

During construction, the project would have potential negative effects on outdoor recreational opportunities in the Goose Lake area. After project completion, the project would improve recreational opportunities and yield long term beneficial effects.

h. Erosion on Uplands and Sedimentation

The sandy soils and vegetation on the placement site would be disturbed during the construction of berms, grading in preparation to sediment placement, developing haul routes, and leveling of sediments. The project would develop sediments into a productive soil medium and would include seeding a cover crop after construction is completed. The materials would fill the natural landform depressions to the level of the surrounding berms, with a gentle slope applied to avoid ponding and manage runoff to be contained on the same parcel.

The soil medium resulting from the sediment placement is anticipated to have silty loam texture, high organic matter content (four to six percent) and water holding capacity, moderate infiltration rate, and generally high fertility, all of which would be beneficial for crop production. The land use of the parcel after material placement, grading, and establishing a cover crop is at the discretion of the property owner. If the landowner chooses to seed all, or part, of the area to a mixture of native grasses and forbs, the DNR will provide recommendations for which seed mix to use.

The NPDES/SDS Construction Stormwater General Permit regulates discharges associated with stormwater affected by construction activity to waters of the state of Minnesota. MPCA's SDS Dredge Materials Disposal permit regulates dredge material disposal according to *Minnesota Statutes*, Chapter 115. If materials are below a specified threshold level set by MPCA, the rules state that the most acceptable means of disposing the materials is their complete removal from the waters and disposal or reuse for other purposes outside of the floodplain. As discussed under Finding 23f, this is what is proposed under this project.

Silt fencing would be placed around the perimeter of the placement sites; grading would create a nearly level field that is less prone to erosion; size of the grading zone would be limited by sequencing; and a cover crop would be established as soon as sediment placement is completed. The runoff would be minimal and remain on the property. No runoff on adjacent properties should occur.

Only minor incidences of erosion are anticipated and minor amounts of sedimentation would affect the area's surface waters.

i. Wildlife and Fisheries Habitat

State and federal agencies and the public developed the UMR pool plans for Pools 1 through 10, establishing a systematic effort to conserve and manage aquatic resources within the constraints of maintaining and operating the navigation channel. The system of dams has transformed the river into a series of pools that function differently than this stretch of the UMR did when it was free flowing. The pool system maintains higher water levels for navigation during the summer and fall, when the river level would normally be much lower. The system of pools prevents the UMR from transporting sediments as efficiently as it did pre-impoundment. In addition, formerly isolated floodplain lakes are now connected to the main channel for much of each year, thereby increasing sediment loading to the backwaters. In combination with increased sediment loading from the watershed these effects of impoundment result in a loss of bathymetric diversity, as the backwater lakes fill with sediment. The shallow backwater lake has silted in over the past 80 years.

This project would deepen a 20-acre area of Goose Lake on average from 2.5 feet to six feet. Sediments would be removed by backhoe, placed on a barge and transported to the Goose Lake Landing where they would be off-loaded to trucks and hauled to the nearby placement site.

Weaver Bottoms provides aquatic and semi-aquatic habitats for a great diversity of fish and wildlife species. A variety of fish and birds frequent these backwater areas but

mussels are uncommon. Continuous beds of submerged aquatic vegetation and benthic invertebrates currently occupy the lakebed of the proposed dredging area. The habitat is classified as Type 5 wetlands (open water marsh).

The submerged aquatic vegetation and the benthic community would be removed along with the sediments in order to achieve a deeper backwater pool.

The loss of aquatic vegetation and benthic invertebrates would be temporary. There are few barriers for movement of plant parts and animals between aquatic habitats along the vegetated areas of the river. It is anticipated that the rapid influx of propagules, viable plant fragments, and organisms would enable the sediments to be recolonized quickly. The project area would recover within a year or two and maintain a similar vegetative component as before, but the density of the vegetation might not be as great with the deeper water.

The conversion of the open water marsh to a deeper marsh is considered beneficial for maintaining a productive fisheries resource in Pool 5. The temporary loss of the aquatic vegetation and benthic organisms is a necessary compromise to achieve the desirable aquatic habitat enhancements gained by restoring and enhancing bathymetric diversity. The project would increase available aquatic habitat needed to sustain both healthy and diverse fish populations, and would improve fishing opportunities during all seasons of the year. The loss of upland habitat due to the placement of sediments over seven acres is discussed in Finding 23j.

Overall, the loss of wildlife and fish habitat would be temporary and local. The project would result in long term benefits by increasing bathymetric diversity. Wildlife impacts would be local, minor, and temporary, i.e. limited to construction and the estimated two-year reestablishment period after project completion. Substantial long-term beneficial effects on fisheries, birds, and other species are anticipated.

j. Rare Species

The project's 20-ac dredging area includes Goose Lake wetlands and open water habitat that support several listed aquatic species, including Blanding's turtles [State Threatened (ST)] and paddlefish (ST). The Blanding's turtle uses floodplain lakes for seasonal foraging and aestivation during the fall and winter, when turtles settle on or burrow into the lake bottom. During recent surveys, no listed mussels have been identified within the dredge area boundary. Very few other mussels exist due to the poor habitat conditions for mussels (shallow soft sediments). Surveys of fish and submerged aquatic vegetation conducted in 2014 near the restoration site recorded no rare species or habitats.

The dredge material placement site is located on a parcel of privately owned land that has habitat features similar to the xeric conditions and low soil fertility found on much of the surrounding conservation lands. The current condition of the vegetation is poor, more typical of disturbed/pastureland with tree/shrub encroachment and a variety of associated ruderal herbs. A small borrow pit is found on the placement site. Of the ten acres allocated for dredge material placement, seven acres would actually be dedicated to material placement while the other acreage would be used as access routes and to establish perimeter berms. Trees that are found on the placement site would be cleared

during site preparation. The dredging materials would be placed as fill within natural landform depressions to the level of the surrounding berms, with a gentle slope applied to manage runoff to be contained on the same parcel. The landowner is in the process of removing debris that might attract snakes to the proposed placement site.

The Natural Heritage Information System (NHIS) review of areas within one-mile of the placement site identified species likely to be affected by the project: the Blanding's turtle and three snakes--gopher snake, a species of special concern (SC), plains hog-nose snake (SC), and the eastern hognose snake (not listed). All species are recognized as SGCN (species of greatest conservation need). During the public review period, the North American racer (SC) and the northern map turtle (not listed) were identified to be potentially affected because they occur in the vicinity of the placement site. Losses of concealed and inseparable wildlife would occur, including rodents, such as possibly, the plains pocket mouse (SC), insect fauna, such as possibly, jumping spiders (some SC), and others inhabiting the area.

The northern long-eared bat was listed as federally threatened by the USFWS on May 4 of this year for locations in Minnesota wherever it is found. An active site is known to occur in Wabasha County, approximately 15 miles from the project area. If the project is within the vicinity of the bat's known presence, guidelines for mitigating project effects on the bat must be followed. Precautions must be taken for projects that would clear trees where northern long-eared bats could be living. Trees proposed for removal would be examined to determine if the tree serves as a maternity roost tree.

The project is within a Known Concentration/Priority Area for the Blanding's turtle. Pedestrian and radio tracking surveys and verified reports by interested parties have indicated the gravel road corridor, ditches, and private lands, including the proposed placement site, are actively used by snakes and turtles for foraging/hunting, migration between riverine wetlands and uplands, and likely, nesting habitat. Because the road occupies a corridor with few barriers between uplands and wetlands, the Blanding's turtle and hatchlings, might use the road corridor as an accessible annual migratory pathway.

Deepening about 20 acres of Goose Lake would be beneficial to the Blanding's turtle and paddlefish, increasing the diversity of available habitat and reducing the risk of winter kill.

The 0.3 mile access route to the placement site along Minneiska Township Road 155 (Prichard Road) would be very active during construction, with 60-70 truckloads of sediment moved per business day. The active work zone would be hazardous to turtles and snakes using the area. The seven acres receiving sediments might be less suitable for the Blanding's turtle and snakes, but this is dependent on how the lands are managed after the project--i.e., whether for growing crops, as pasture, or for other uses. Female Blanding's turtles often nest in agricultural fields, which present more hazards to both adult females and their nests. It is unknown whether the characteristics of the silty loam soil would be unfavorable to reptile usage. The site preparation and material placement would temporarily disrupt movement patterns and interrupt nesting for the Blanding's turtle and other animals that would have used the disturbed area.

The DNR would implement the mitigation strategies that were included in the EAW to minimize effects to the area's rare Blanding's turtle and snakes (reptiles). State law and rules prohibit the destruction of threatened or endangered species, except under certain prescribed conditions. Contractors would be required to comply with provisions of the Turtle and Snake Avoidance Plan. Among the requirements in the plan, construction would be timed to reduce and limit effects to rare species. Construction would not be permitted during certain sensitive periods when species are more vulnerable to project activities. Silt fencing would be placed along the perimeters of the placement site in early spring, prior to the Blanding's turtle nesting period to serve as a barrier to reptile movement. Dredge material placement would begin after July 15, after the period when gravid female Blanding's turtles are moving to nesting areas. Only wildlife friendly erosion control materials constructed with natural fibers would be used. Truck drivers would be instructed to be observant of animals crossing the haul route. Ground surveys for turtles and snakes would be conducted for one or two days prior to initiating site preparation, vegetation removal, and grading activity and at the start of each day of operations. Contractors would be able to contact DNR staff for advice and/or assistance on ways to avoid rare species and when animals are encountered. Minnesota Biological Survey (MBS) biologists can be called on (depending on staff workload and timing) to assist and assure the measures in the EAW are followed.

Nearly one-half of the placement area is located on disturbed old fields that are less important to concealed and inseparable wildlife (some SC). Preparation of the placement site will be coordinated with DNR wildlife specialists to mitigate for potential losses of wildlife. The loss of dry prairie is an undesirable effect of the project but minor in context of the larger expanse of upland prairie in the Weaver Dunes area (more than 1000 acres) and other conservation lands being restored to prairie from old fields.

As trees are proposed for removal, the DNR would comply with northern long-eared bat interim 4(d) rule for nonfederal projects. If exempt, no further action is necessary to comply with the Endangered Species Act prohibitions to protect northern long-eared bats. If not exempted by the 4(d) rule, the USFWS's Twin Cities Field Office would be contacted for further information. The DNR would remove trees from the placement site before the pup season of the northern long-eared bat (June 1 - July 31). If this was not possible, the DNR would coordinate a survey of trees proposed for removal on the placement site to determine their use as maternity roosting sites. If any are identified, tree removal would be limited and/or not removed during the pup season.

The environmental effects on rare species in the project area and vicinity would be temporary, local, and minor.

k. Invasive Species Management and Control

Aquatic invasive species are present in the UMR Pool 5 area, including zebra mussels, silver and bighead carp, and Eurasian water milfoil. Soil disturbances caused by the increase in activity and traffic during the transport and placement of sediments would increase the potential for the spread of terrestrial invasive species. An excessive amount of submersed vegetation growth that includes invasive species occurs along the boat pathway to/from the landing, often snagging on props and paddles.

The construction contractors would be required to follow the BMPs described in the EAW and DNR Operational Order 113 (Appendix D of the EAW). To prevent the spread of aquatic invasive species, construction equipment would receive pre- and post-construction decontamination treatment.

All invasive aquatic animals and plants moved to the placement site would be destroyed by their exposure. Post-project, the incidence of transporting invasive aquatic vegetation would be reduced by providing better boat clearance along the pathway to Goose Lake Landing.

The placement site would be monitored for terrestrial invasive species during construction, until the site has been seeded with a cover crop. New occurrences associated to soil disturbance would be treated as recommended by DNR staff and outlined in the Operational Orders, and if necessary, coordination with Wabasha County. The landowner would be responsible for managing invasive plants after project completion.

The project would have temporary, local, and minor environmental effects on the potential of increasing the presence of invasive species in the project area. Some beneficial effects on the prevention of the spread of aquatic invasive species are indicated.

l. Vehicle Emissions, Noise, Dust, and Odors

Gasoline and diesel powered vehicles would generate air emissions during the construction and operation of the excavation project. The exhaust emissions contain pollutants such as carbon monoxide, nitrogen oxides, reactive organic gasses, sulfur dioxide and suspended particulate matter, all of which may carry associated health risks. Project construction activities would temporarily increase these airborne pollutant levels.

The backhoe would operate off a platform about 0.3 miles from the Goose Lake Landing. Large trucks and loading machinery would be employed to move sediments along Prichard Road from the barge off-load point through a rural residential area to the placement site (0.3 miles). The estimate for the daily number of loads delivered to the placement site is 60 – 70 per day.

Construction activities would create noise, dust, and odors during daytime operations. During periods of heavy traffic and windy conditions, elevated noise episodes would be frequent and brief. Dust would be raised by truck traffic, creating a potential annoyance to nearby residents. If equipment or spillage of organic wastes occurs when unloading the transport barge, odors could be an issue on the landing and parking lot area.

To minimize impacts, the contractor would work a maximum ten hour day and limit traffic before 8 AM and after 6 PM. Vehicles would be equipped with standard noise arrestor devices in good working condition. The DNR would monitor noise generation if complaints arise. All construction work would conform to state noise standards. Dust suppressor techniques would be used to limit dust from truck traffic. The landing area would be rinsed periodically if odors become annoying. If excessive odors arise from hauling trucks, the waste loads would be covered to avoid air contact.

With or without the project, in 2010, the EPA set stricter standards for the manufacturers of outboard and personal watercraft marine engines. Once fully implemented, the standards would yield a 75% reduction in emissions from emission levels identified in 1996. By 2020, the EPA anticipates a 50% reduction in hydrocarbon emissions.

The increases in air emissions from construction would be temporary, local, and minor. The increases in noise, odors, and dust generated during construction would be temporary, limited to normal daily work periods, and manageable.

m. Cumulative Potential Effects

The UMR Pool Plans provide a conceptual framework for restoring habitats and mitigating impacts caused by the system of pool impoundments and the operation of the river navigation system. The effects of sedimentation and altered hydrology have degraded aquatic habitat in Weaver Bottoms and many other areas of the UMR. Previous projects in Pool 5 include island construction in open water expanses to reduce wind fetch and sediment re-suspension; adjustments of flow patterns along selected side channels to change rate of flow and sedimentation to wetlands; periodic pool-wide water level management for ecological benefits to mimic natural low water conditions during the summer, typical of pre-impoundment conditions; and dredging to maintain the navigation channel and to improve bathymetric diversity, such as proposed in this project.

The potential environmental effects related to the proposed project could combine with environmental effects from other past, present, or reasonably foreseeable future projects for which a basis of expectation has been laid. The potential cumulative effect of this project could include the physical effects on water resources and effects on water quality in the form of sedimentation. The potential cumulative effects of the increase in recreational use of the landing are also considered.

Reasonably foreseeable future projects were not identified within the geographic scale and timeframe of the proposed project. Therefore, no cumulative potential effects on water quality and turbidity have been identified. Potential beneficial effects from the strategies identified in the pool plans include improved water quality, stream stability; enhanced diversity of aquatic habitat; and better opportunities for outdoor recreations, especially hunting and fishing.

Potential increases in recreational uses could result from project improvements that include rehabilitating the boat launch and dock and dredging a deeper boat access channel to the landing. Future improvements to the access road to Goose Lake Landing were considered as potential cumulative effects to the proposed project. If the access road is improved in the future by paving, traffic speed and volume to Goose Lake Landing is also likely to increase.

Minneiska Township has no plans for paving Prichard Road. Minneiska Township plans to apply gravel where needed and occasionally grade the road bed during the growing season.

The DNR acknowledges the potential increase in use of the landing and opportunities for fishing and hunting in the deeper pool. The improvements meet the mission of the DNR and its federal partners to prevent further deterioration or enhance aquatic resources and

promote recreational opportunities. If evidence shows that traffic speed and volume increase and causes unacceptable mortality to the populations of turtles and snakes traversing the Goose Lake Landing road corridor, management of the landing could be changed, if warranted.

Cumulative potential effects on the river and water quality would be minor or incidental. The potential increased level of use of the Goose Lake Landing would cause a minor increased risk to reptiles in the vicinity of the road corridor.

24. The EQB granted a 15-day extension for completion of Record of Decision.

25. The following permits and approvals are needed for the project:

Unit of government	**Type of application**	**Status**
Wabasha County Wabasha County	Shoreland and Floodplain Compliance Grading and Fill Permit	Pending Pending
Minnesota Pollution Control (MPCA)	NPDES/SDS Construction Stormwater General Permit & SWPPP	Pending
MPCA	Dredge Materials Management	Pending
MPCA	Section 401 Water Quality Cert.	Pending
Department of Natural Resources	Public Waters Work Permit	Pending
US Army Corps of Engineers USACE	RHA, Section 10, CWA Section 404 SHPO/Section 106 NHPA review	Pending Pending
US Fish and Wildlife Service	Clearance requirement for NLEB	Pending
USFWS	Special Use Permit	Pending
USFWS	Historic Preservation Review	Pending

CONCLUSIONS

1. The Minnesota Environmental Review Program Rules, *Minnesota Rules*, chapter 4410.1700, subparts 6 and 7 set forth the following standards and criteria, to which the effects of a project are to be compared, to determine whether it has the potential for significant environmental effects.

   In deciding whether a project has the potential for significant environmental effects, the following factors shall be considered:

   a. type, extent, and reversibility of environmental effects;
   b. cumulative potential effects of related or anticipated future projects;
   c. extent to which the environmental effects are subject to mitigation by on-going regulatory authority; and

d. the extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by agencies or the project proposer, including other EISs.

2. Based on the Findings of Fact above, the DNR concludes that the following potential environmental effects, as described in Findings 23a through 23m, would be limited in extent, temporary, or reversible:

    a. Project Magnitude, Scheduling, and Construction
    b. Project Funding and Costs
    c. Compatibility with Plans, Ordinances, and Land Use
    d. Public Waters and Wetlands
    e. Water Quality
    f. Solid Wastes and Potential Contamination of Groundwater
    g. Public Use of Goose Lake Landing and Recreational Benefits
    h. Erosion on Uplands and Sedimentation
    i. Wildlife and Fisheries Habitat
    j. Rare Species
    k. Invasive Species Management and Control
    l. Vehicle Emissions, Noise, Dust, and Odors
    m. Cumulative Potential Effects

3. *Cumulative potential effects of related or anticipated future projects.*

    The effects of all past projects comprise the existing conditions of the project area. Cumulative environmental effects add to the existing condition, the proposed project, and future projects.

    Cumulative environmental effects for future projects are assessed by evaluating the effect on the environment resulting from the incremental effects of the project under review plus similar effects from certain future projects that overlap spatially or temporally with the proposed project.

    Based on the Findings of Fact above, the DNR concludes that cumulative potential effects on resources including physical effects on water resources and effects on water quality in the form of sedimentation, as described in Findings 23a through 23m, are minor and not significant.

4. *Extent to which environmental effects are subject to mitigation by on-going public regulatory authority.*

    Based on the information in the EAW and Findings of Fact above, the DNR has determined that the following environmental effects, as described in Findings 23a through 23m, are subject to mitigation by ongoing public regulatory authority.

    When applying standards and criteria used in the determination of the need for an environmental impact statement, the DNR finds that the project environmental effects on surface waters are subject to regulatory authority through floodplain and shoreland ordinances (Wabasha County) and permits for 1) construction stormwater management (MPCA), 2) work in public water (DNR), 3) Section 10 of Rivers and Harbors Act (control

over obstructions to navigable waters) (USACE), and 4) Section 404 of the Clean Water Act (regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters) (USACE) to sufficiently mitigate potential environmental effects on surface waters through measures identified in the EAW that are specific and reasonably expected to occur.

When applying standards and criteria used in the determination of the need for an environmental impact statement, the DNR finds that the project environmental effects due to solid waste and groundwater contamination are subject to oversight of the MPCA Dredge Materials Management permit through compliance with public regulatory authorities as follows: solid wastes containing contaminants are regulated according to their degree of contamination, with allowances for beneficial use, if contaminant levels are below applicable thresholds. The Dredge Materials Management permit is applied in concert with the Section 401 Water Quality Certification and the NPDES/SDS Construction Stormwater General permit.

5. *Extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by public agencies or the project proposer, or other EISs.*

   The US Army Corps of Engineers conducts numerous dredging operations annually that are completed under cooperative agreements and permitting authorities of the States of Minnesota and Wisconsin. The Weaver Bottoms (Pool 5) Aquatic Habitat Restoration/Enhancement Project builds from previous projects that created bathymetric diversity within the UMR pool system. Both the Minnesota and Wisconsin DNRs, along with the USACE and USFWS, have designed and constructed numerous habitat projects that utilize various dredging techniques to increase bathymetric diversity. Recently planned and completed projects in public waters include: Pool 8 Islands Phase III, Big Lake Bay backwater dredging project, Clear Lake small-scale dredging project and Sommerfield Island small-scale dredging project.

6. The DNR has fulfilled all the procedural requirements of law and rule applicable to determining the need for an environmental impact statement on the proposed Weaver Bottom (Pool 5) Aquatic Habitat Restoration/Enhancement project.

7. Based on considerations of the criteria and factors specified in the Minnesota Environmental Review Program Rules (Minnesota Rules, chapter 4410.1700, subpart 6 and 7) to determine whether a project has the potential for significant environmental effects, and on the Findings and Record in this matter, the DNR determines that the proposed Weaver Bottom Aquatic Habitat Restoration/Enhancement project does not have the potential for significant environmental effects.

ORDER

Based on the above Findings of Fact and Conclusions:

The Minnesota Department of Natural Resources determines that an Environmental Impact Statement is not required for the Weaver Bottom Aquatic Habitat Restoration/Enhancement Project in Wabasha County, Minnesota.

Any Findings that might properly be termed Conclusions and any Conclusions that might properly be termed Findings are hereby adopted as such.

Dated this 21st day of December, 2015.

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Barb Naramore
Assistant Commissioner