DEPARTMENT OF NATURAL RESOURCES

Record of Decision

In the Matter of the Determination of the Need for an Environmental Impact Statement for the Roseau Lake Rehabilitation & Sprague Creek Wetland Restoration in the Townships of Dieter and Unorganized Township T163N R40W, Roseau County, Minnesota

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

FINDINGS OF FACT

1. The proposed project, the Roseau Lake Rehabilitation and Sprague Creek Wetland Restoration Project (Project), is located in Dieter, Minnesota and Unorganized Township T163N R40W in Roseau County. The Roseau Lake Rehabilitation Project involves installing water control structures, embankments, and a drainageway to allow for water level management in the historic Roseau lakebed. Improved water level management capability would reduce peak flows and adjust timing of outflows of existing storage, which would reduce flooding damage and improve wildlife habitat. As a mitigation measure for the Project the hydrology at Sprague Creek would be restored. The Project was developed cooperatively by the Roseau River Watershed District and the Minnesota Department of Natural Resources (DNR) Section of Wildlife.
2. The proposed Project requires preparation of a State Environmental Assessment Worksheet (EAW) for a new permanent impoundment of water creating additional water surface of 160 or more acres or for an additional permanent impoundment of water creating additional water surface of 160 or more acres. *See* Minn. R. 4410.4300, subp. 24B.
3. The Environmental Review Unit, located within the Ecological and Water Resources Division of the DNR acted as the Responsible Governmental Unit (RGU), independent of the DNR Project proposer, for the preparation and review of environmental documents related to the Project, *See* Minn. R. 4410.4300, subp. 24B.
4. The DNR prepared an EAW for the Project in accordance with the requirements of Minn. R. 4410.1400.
5. The EAW was filed with the Environmental Quality Board (EQB) and a notice of its availability was published in the EQB Monitor on December 7, 2020. A copy of the EAW was sent to all persons on the EQB Distribution List, to those persons known by DNR to be interested in the proposed Project, and to those persons requesting a copy of the EAW. A press release announcing the availability of the EAW was sent to newspapers, and radio and television stations, statewide. Digital copies of the EAW were distributed to the DNR Library, the DNR Northwest Region Headquarters, Minneapolis Central Library, Crookston Regional Library, and Roseau City Library for public review and inspection. The EAW was also made available to the public by posting on the DNR's website. *See* Minn. R. 4410.1500.

Public Comment Period

6. The 30-day EAW public review and comment period began on December 14, 2020 and ended on January 13, 2021. Written comments on the EAW could be submitted to the DNR by U.S. mail or via email. *See* Minn. R. 4410.1600.
7. During the 30-day public review and comment period, the DNR received 245 comments within comment letters from 46 individuals and agencies listed in Attachment A: Comments Received. Significantly after the comment period, sixteen postcard comments were received in August 2021. Because these comments were received after the public comment period they will not receive specific responses. Additionally, because all sixteen of the comments did not provide complete contact information, none of these parties have been added to the interested parties list.

Project Changes

8. On January 6, 2021 the Roseau River Watershed District Board of Managers (Board) met to discuss the Project.
9. On January 6, 2021 the Board approved a resolution to modify the proposed Project design replacing Alternative 2A' designs with Alternative 1 designs. *See* Attachment B: Resolution of Board Position on the Roseau Lake Rehabilitation Project.

Record of Decision Preparation

10. Minnesota Rule 4410.1700, subp. 2b requires that a decision on the need for an EIS shall be made no later than 15 days after the close of the 30-day review period. This 15-day period shall be extended by the EQB chair by no more than 15 additional days upon request of the RGU. *See* Minn. R. 4410.1700, subp. 2b.
11. On February 1, 2021 DNR requested a 15-day extension for making a decision on the need for an EIS for the proposed Project. On February 2, 2021, DNR was granted the extension by EQB. *See* Minn. R. 4410.1700, subp. 2b.
12. On February 22, 2021, the DNR and the Project proposer agreed to a 150-day extension on the determination of the need for an EIS due to insufficient information. *See* Minn. R. 4410.1700 subp. 2a.
13. On March 2, 2021, the DNR received a request from the Board to consider Alternative 1 instead of Alternative 2A' as the proposed Project analyzed by the EAW.
14. On April 6, 2021, the DNR was informed that the Board was considering a draft operating plan for Alternative 1. DNR received the draft operating plan from the Roseau River Watershed District staff and the proposer on April 7.
15. On July 22, 2021, the DNR and the Project proposer agreed to an additional 30-day extension on the determination of the need for an EIS to fully obtain additional information and incorporate it into the Record of Decision.
16. Both Project Alternatives 1 and 2A' are described in the document, "2019 Engineer's Report: Roseau Lake Rehabilitation Project" (2019 Engineer's Report). This report was developed by HDR, Inc. on behalf of the Roseau River Watershed District, finalized in 2019, and made available as an EAW reference during public review of the EAW. *See* EAW reference at page 57. Project alternatives were not compared in the published EAW. DNR determined that a comparison of environmental effects was needed between Alternatives 1 and 2A' to determine the need for an EIS on the Project.
17. The 2019 Engineer's Report describes the modifications from Alternative 2A' to Alternative 1 as:

a. Embankments –No change to Northwest and North River embankments in place as described in EAW. Remove South embankment from proposed Project
b. Storage Volume – No change.
c. Main Pool Weir Elevation – No change.
d. Inlet Channel and Gated Inlet Structure – No change.
e. Cutoff Channel Structure – No change.
f. Outlet Structure – No change.
g. Exterior Gated Structures – No change.
h. Exterior Drainage Ditches – No change to depth, bottom width or side slopes of the Northwest embankment exterior drainage ditch. In place as described in the EAW. Removed exterior drainage along south embankment from Project proposal.
i. Drainage Culverts – no change.
j. Roadways, Field Entrances, and Embankment Access – no change.

18. The Project modifications (Alternative 1) described in ¶17 will be considered alongside the proposed Project (Alternative 2a') in the Responses to Comments section, Evaluation of Environmental Impacts section and Conclusions of this Record. Each of these sections will include a "Proposed Project (Alternative 2A')" and a "Modified Project (Alternative 1)" response, description or conclusion.

Responses to Comments

19. Minnesota Rules 4410.1700, subp. 4 requires that the Record of Decision (ROD) must include specific responses to all substantive and timely comments on the EAW. All comments and issues raised in comment submittals were reviewed to determine if they addressed the accuracy or completeness of the material contained in the EAW or environmental impacts that may warrant further investigation prior to the final ROD. Comment letters are available upon request.

20. Responses to all substantive comments are summarized below in ¶¶26 to 39. Each submittal was given an identification number. Many submittals contained more than one comment. In those cases, each comment was assigned a unique comment identification number (comment ID). *See* Attachment A. Similar comments were grouped together, each group was analyzed, and a single response to comment was developed for the category. *See* Minn. R. 4410.1700, subp. 4.

21. Thirty-one comments were considered non-substantive. Thirteen of these comments expressed opposition for the proposed Project, stating that they wanted the Project to stop, citing local opposition and landowner concerns. The other eighteen comments provided family history of settling, farming, and living on land in and around the Project area. Several of these commenters also expressed interest in continuing to live on or use their land in the future.

22. Thirty-one commenters provided substantive comments out of scope of the EAW. Commenters expressed concerns about the Project partner organizations (Minnesota Department of Natural Resources and Roseau River Watershed District). These commenters noted outcomes of past projects (5), lack of communication and transparency (9), real or perceived conflicts of interest (2) and implications of the proposed Project on farm properties financial assets including easements, farm sales and potential application of eminent domain to acquire land (17). Thirteen commenters expressed concerns over the cost of the Project citing both the overall cost and or potential underestimate of actual cost. Twelve commenters also noted minimal downstream benefits and four asked that alternative projects be considered. These comments were noted but did not address the accuracy or completeness of the material contained in the EAW or environmental impacts and did not warrant further investigation prior to the ROD. These comments have been shared with the Project proposer

and partner organizations for their awareness. In accordance with Minn. R. 4410.1700, subp. 4, these comments did not receive individual responses.

23. Thirty-three comments requested an EIS be completed for the proposed Project. These comments did not address the accuracy or completeness of the material contained in the EAW or specific environmental impacts that may warrant further investigation prior to the ROD. Therefore, these comments have been considered in the development of this decision, but did not receive a specific response. *See* Minn. R. 4410.1700, subp. 4.

24. Comments that did address the accuracy and completeness of the EAW and/or potential impacts that may warrant further investigation prior to issuance of the final ROD were determined to be substantive, and have been categorized and detailed in ¶¶26 to 39. *See* Attachment A.

25. Substantive public comments on the EAW covered a wide range of topics listed below and discussed in detail in ¶¶26 to 39.
    - Blue-green algae
    - Cattails
    - Change during public comment
    - Construction stormwater permitting
    - Cultural resources
    - EAW accuracy
    - EAW inadequate
    - Concern about land use change
    - Flooding
    - Hunting and fishing
    - Mosquitos, ticks, and diseases
    - Organic farms
    - Ross gauge
    - Wildlife

26. Blue-green Algae. Two commenters expressed concerns that the Project would create an environment conducive for blue-green algae that can be lethal for pets. *See* Attachment A.

    Response:

    Proposed Project (Alternative 2A'):

    Blue-green algae can grow in warm nutrient rich water in Minnesota. DNR consulted with Minnesota Pollution Control Agency (MPCA) on this issue. The Project would result in more frequent inundation of the lake bed and could experience blue-green algae blooms. However, because the Project is not a source of nutrients, and because the MPCA reported that there have been no recent known incidences of blue-green algae in Roseau County in other standing waters, it is not anticipated that the proposed Project would contribute to or exacerbate blooms. The closest known reports of recent blue-green algae blooms are in Lake of the Woods, in Lake of the Woods County. If blue-green algae blooms develop, risk can be reduced by following MPCA recommendations published on their website, including avoiding or minimizing contact with waters that appear to have blue-green algae blooms during water recreation and washing with fresh water afterwards. Additional precautions include avoiding use of untreated water for drinking cooking, and brushing teeth. Toxins from algae can accumulate in the entrails of fish and occasionally in the muscle, although levels depend upon the severity of the bloom.

Generally fish that are caught in areas of a waterbody where major blue-green algae blooms are occurring may be safe to eat, as long as the entrails of the fish are discarded. However, anglers may want to wait a week or two after algae blooms are over before fishing and eating fish from waters where a bloom is occurring. To reduce animal exposure to blue-green algae, animals should not be allowed to swim in or drink where there is noticeable algae in the water or scum on the shore. If they swim in water that could have harmful algae, animals should be rinsed with fresh water immediately and should not be allowed to like their fur. Additional information can be found at: https://www.pca.state.mn.us/water/blue-green-algae-and-harmful-algal-blooms.

Modified Project (Alternative 1):
No change would be anticipated between Alternative 2a' and Alternative 1.

27. Cattails. Three commenters expressed concerns that the lake basin would be overtaken by cattails. One of these commenters also noted that dewatering during winter months would not manage cattails and retaining water in the lake basin would harm currently established plant communities.

Response:

Proposed Project (Alternative 2A'):
A common problem in marsh management in Minnesota is invasion of cattail into open water areas. In extreme situations, entire basins have been known to be taken over by cattail, including hybrid and narrow-leaved cattail. Initial invasion occurs in basins where soils have been exposed and/or water levels fluctuate widely.

In Roseau Lake, there is no plan to till or otherwise disturb the soils, and operations would manage the lake at stable water levels throughout the growing season. Thus, the existing marsh vegetation would persist and prevent cattails from becoming established in most of the basin. Cattail has the greatest potential for establishment around the fringes of the basin where inundation of soils would fluctuate the most. The Project proposal requires DNR Wildlife staff to annually monitor the basin for cattail invasion. Invasive cattail would be sprayed with an appropriate herbicide according to label specifications to prevent stands from becoming established.

As noted in Item 6b of the EAW, plans calls for dewatering of the basin in winter months. Drawing down water overwinter would moderately stress cattail, thus reducing plant vigor and affecting its ability to spread. Additionally, to deter cattail growth DNR Wildlife staff would use mowing followed by flooding to a significant (e.g., 3-4') depth, burning or herbicide treatment to manage cattail as needed. According to the Project plan, considerable effort would be expended to prevent small cattail invasions from becoming prominent.

Modified Project (Alternative 1):
No change would be anticipated between Alternative 2a' and Alternative 1.

28. Change during public comment. Four commenters noted that the preferred project alternative was changed during the public comment period. Commenters expressed concern that the preferred alternative was changed after years of planning and indicated this may mean the plans are not finalized for the Project. This change in project and further analysis is described in ¶¶8 – 18 above.

Response:

Proposed Project (Alternative 2A'):

The proposed Project was identified as the preferred design of the Project while the EAW was initially developed. As designs were more fully developed, during and in parallel with the EAW process, the Roseau Watershed District determined that Alternative 1 was preferable to Alternative 2a'.

Modified Project (Alternative 1):

Upon being notified of the Project change, the DNR Environmental Review Unit agreed to an extension of the EAW process to compare the project designs and determine the extent to which the proposal would change. The DNR Environmental Review Unit gathered additional information to compare the modified Project design (Alternative 1) to the originally proposed Project (Alternative 2a'). This comparison is described in ¶17 above. For those Project elements that were different between Alternative 2a' and Alternative 1, potential environmental effects were compared to determine if Alternative 1 would result in any greater environmental effects. Environmental effects of Alternatives and comparisons are discussed in ¶44 below. The outcome of this comparison and the analysis of Alternative 2a' and Alternative 1 is this Record of Decision.

If the proposal designs are further revised, need for further environmental review will be evaluated, possibly resulting in a new EAW. Additionally, any future design revisions could have implications for permit modifications or other required approvals.

29. Construction Stormwater Permitting. The MPCA provided comments regarding construction stormwater permitting requirements that would apply to the Roseau Lake Rehabilitation Project and Sprague Creek Wetland Restoration.

Response:

Proposed Project (Alternative 2A'):

The Project proposer is required to and will apply for and acquire all required permits and approvals and is required to comply with any required submittals and requirements for construction activities as a condition of obtaining the necessary DNR permits. EAW Item 8 identifies known permits and approvals required, including pending submittal of a National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater permit. EAW Item 11.iv.b acknowledges the required SWPPP and planned best management practices that would be used for reduction of water quality impacts due to stormwater. The Project proposer defers to the MPCA as the regulatory authority regarding required submittals.

Modified Project (Alternative 1):

No change would be anticipated between Alternative 2a' and Alternative 1.

30. Cultural resources. One commenter expressed concerns that Project would disrupt burial grounds in the area. This topic was discussed in EAW Item 14 and in ¶44f.

Response:

Proposed Project (Alternative 2A'):

Because the Project would affect Wildlife Management Area (WMA) parcels owned by the DNR that were acquired as part of federal programs administered through the U.S. Fish and Wildlife Service (USFWS), the Project constitutes an "undertaking" and is therefore subject to the requirements of Section 106 of the National Historic Preservation Act of 1966 (NHPA). HDR

conducted a Phase I archaeological investigation to identify historic properties within the proposed Project Area of Potential Effect (APE) from August 14-23, 2017; May 30 to June 7, 2018; and September 9-18, 2019. During the survey, six new archaeological sites were identified. Two sites represent structural remains and artifacts common to abandoned twentieth-century structures. These two sites do not retain sufficient information potential to qualify for listing on the National Registry of Historic Places (NRHP). HDR recommends that as isolated finds, these sites are not eligible for listing on the NRHP. HDR believes these sites have been sufficiently documented. Three sites were precontact isolated finds. HDR recommends that as isolated finds, these sites are not eligible for listing on the NRHP. No further work is recommended for these five sites under the current Project design. One site is a precontact artifact scatter that remains unevaluated for listing on the NRHP. Avoidance of Project impacts to the site is recommended. If the site cannot be avoided, further investigation is required to determine NRHP eligibility. HDR also completed a file search and identified eight previously recorded archaeological sites within the Study Area. One site, precontact artifact scatter and cemetery, intersects with Project components. In 2019 shovel testing was completed at Shovel Test Area adjacent to previously identified precontact artifact scatter and cemetery site. A total of 15 shovel tests were excavated at 30-meter intervals along 1 transect. Two strata were generally encountered: a black (10YR 2/1) silt clay to an average depth of 23 cm over a gray (10YR 5/1) silt clay loam. All tests were negative.

Modified Project (Alternative 1):

No change would be anticipated between Alternative 2a' and Alternative 1.

31. EAW accuracy. Three commenters suggested text of the EAW is inaccurate. One commenter noted that the EAW states that Pine Creek was listed as impaired for aquatic life due to fish bioassessments during a 2017 assessment (AUIDs 09020314-501, 08020314-527, and 09020314-528) where there is only one impaired AUID on Pine Creek and its AUID number is 09020314-542. Commenters also noted that the EAW states water only flows in the Roseau River historic channel during high flows, but their observation is water is in the historic channel unless flows are low and blocking the cutoff channel will slow drainage.

    Response:

    Proposed Project (Alternative 2A'):

    Where EAW contents were incomplete, including the listed AUID, information has been updated accordingly in the paragraphs discussing environmental effects section below. Regarding flows into the Roseau River historic channel, while there may be differences between individual's observations, since the focal point of the Project is not the utilization of the historic channel for flood mitigation, this detail is not relevant to the assessment of the environmental effects of the proposed Project.

    Modified Project (Alternative 1):

    No change would be anticipated between Alternative 2a' and Alternative 1.

32. EAW inadequate. One commenter stated land use claims in EAW Item 9 inadequately describe effects to private property. This commenter noted project plans are not finalized, based on comments made in meetings and the change in preferred alternative, so it is too early to determine EIS need. One commenter suggested inclusion of an engineering report conducted on the Project by a separate firm, noted the report's primary findings, including minimal reduction of downstream flooding, a lack of justification of Project costs, an expectation that cost estimates are low and that improvements to ecology and wildlife are not justified while impacts to agricultural land are poorly defined. The report

was provided with the comment. An additional commenter noted the published EAW does not accurately reflect currently preferred alternative and states the uncertainty and inaccuracy of the EAW's Land Use analysis is sufficient to trigger an EIS determination pursuant to Minn. R. 4410.1700, subp. 2a. Additionally, one commenter questions whether the proposed Project actually exceeds the EIS category set forth in Minn. R. 4410.4400 subp. 20.

Response:

Proposed Project (Alternative 2A'):

The proposed Project design has been developed and extensively reviewed by ecologists, hydrologists and engineers with experience and expertise in current science of Minnesota systems. Minnesota Statute § 116D.04, subd. 1a(c) defines an EAW as a brief document that is designed to set out the basic facts necessary to determine whether the Project has the potential for significant environmental effects and therefore requires the preparation of an EIS. In undertaking this analysis the DNR is required to use the criteria set forth in Minn. R. 4410.1700. An EAW is not used to initiate or complete studies. In this instance, the DNR used information available at the time of the EAW preparation. After DNR staff review of comments received and the October 2019 OTISCO Engineers Report, it was determined that further inclusion of this report was not warranted because:

- Minimal downstream flooding reduction is fully acknowledged and a primary part of the proposed Project design. The design proposed is intended to improve habitat and provide flood reduction for smaller, more frequent, events rather than large catastrophic events.
- Because the purpose of the EAW is to determine whether a proposed Project has the potential for significant environmental effects, the cost of the Project is not an evaluation criteria, and therefore not a relevant consideration in the environmental review process.
- Proposed Project components that will improve wildlife habitat include improvement of waterfowl and fisheries habitat in currently degraded areas, as described in ¶39, and do not include elimination of downstream habitat. The proposed Project primarily manages Roseau Lake for waterfowl production, which is supported by shallow lake habitat and discussed in DNR's Shallow Lakes Plan (2010). Additionally it is not anticipated that the environmental effects to vernal pools mentioned by the report would impact wildlife in this location because the habitat provided the proposed Project would provide similar benefits to wildlife as the vernal pools mentioned. Given the prairie pothole characteristics and present hydrology of the area, the importance of vernal pools is more relevant in other parts of the United States. There is no anticipated loss of floodplain wetlands associated with any of the Project components. Additionally forested wetlands would be improved with restoration actions in Sprague Creek Scientific and Natural Area (SNA). Impacts of the proposed Project on wetlands is further discussed in EAW Item 11 iv a.
- Impacts to fertile agricultural land are discussed in EAW Items 6, 7, 9 and 13. Additionally responses to comments and environmental effects related to farming and agriculture are found in ¶22, ¶¶33-34, ¶37, and ¶¶44-45.

Finally, an assertion was made regarding whether the proposed Project met the mandatory EIS category set forth in Minn. R. 4410.4400, subp. 20 requiring an EIS for all projects that eliminate a public water or a public water wetlands. The proposed Project will not eliminate a public water or a public water wetlands and, therefore, this EIS threshold is not triggered.

Modified Project (Alternative 1):

Not applicable.

33. Concern about land use change. Nine commenters expressed concerns about lost farming opportunities from proposed Project construction. Of these commenters, three of the commenters raised concerns about the potential land use change's impact to wildlife, including possible elimination of an existing food sources for wildlife, and the possible prompting of wildlife to leave the WMA and newly use surrounding agricultural lands as a food source, resulting in crop damage.

Response:

Proposed Project (Alternative 2A'):

As noted in EAW Item 7, the proposed Roseau Lake Rehabilitation Project would result in a 1.7% reduction in cropland leaving 7,066 acres in the cropland cover type. Environmental effects on agricultural land are also discussed in ¶44a. As noted in EAW Item 6c, the private agricultural lands that fall within the Project footprint are historically and currently subjected to periodic flooding, which would not change with the proposed Project. Timing and duration of future flooding are likely to change; that is, modeling shows the proposed Project is expected to shorten floods in the project area. More detail is provided in ¶34. Current farming land use would change only where embankments and ditches are located on private lands, and would not change due to flooding. According to the DNR's 2010 Shallow Lakes Program Plan restoration of native vegetation and shallow lake invertebrate communities will provide new food sources for migrating waterfowl, so it is expected that the Project, by improving the ecology of Roseau Lake, the Project would act as an attractant to wildlife as a food source and therefore not produce any increase in crop damage from wildlife. Further discussion on any potential impacts to wildlife are discussed in ¶39 and 44e.

Modified Project (Alternative 1):

Proposed Project Alternative 1 has a smaller project footprint and would result in 30.4 fewer acres of cropland covertype conversion. Environmental effects on agricultural land are also discussed in ¶44a. No change is expected to the impacts of flooding on farmland. More detail is provided in ¶34.

34. Flooding. Thirty-seven commenters provided comments about impact of the proposed Project on the frequency, duration, and extent of flooding in the Project area. Commenters noted that currently, when empty, the basin provides flood storage in the spring and for large events (13) with one noting current flooding regimes provide natural fertilizer. Commenters also noted general concerns about flooding damaging farmland (22) with specific concerns about flooding preventing harvest and or planting (3), and damaging crops (2). Five commenters expressed concerns about flooding damaging homes, damaging cabins, or restricting acers to private land. Three commenters raised concerns about erosion from increased flows and two commenters noted that cattails growing in the proposed Project area could result in reduced storage and increased flooding of farmland over time.

Response:

Proposed Project (Alternative 2A'):

As described in EAW Item 6b, the proposed Project is not creating new or additional storage but rather modifying how the existing flood storage volume is used during spring runoff events to reduce flood damage for 10 year, 10-day or smaller events. No change is expected in flooding for events larger than 10 year 10-day. The water level management regime was designed to allow timely drawdown of the lake basin prior to spring runoff events to create water storage capacity. As described in EAW Item 6c, there are both private agricultural and non-agricultural lands in the Project footprint. These lands are already subject to periodic flooding. The extent

and frequency of that flooding would not change with the proposed Project. Timing and duration of future flooding are likely to change; that is, floods are modeled to start 1.1 to 1.4 days sooner following 2- to 10-year 10-day rain events and durations are modeled to be 2.8 to 3.1 days shorter than current conditions. Because flooding is modeled to be shorter in duration, the proposed Project would not further flood farmland, cause crop damage, prevent planting, prevent harvest or limit access to private land more than current conditions. Current land use would change only where embankments and ditches are located on private lands as these lands would need to be acquired in fee title for Project construction. Flowage easements will need to acquired from property owners whose property is in the storage area. The modeled channel velocities were less than 3 feet/second for all cross sections at the downstream end of the project area. Velocities less than 3 feet/second generally have a low risk of significant erosion.

In response to comments that flood storage capacity would be reduced by invasive cattails the data indicates that invasive cattails can grow in open water areas in Minnesota. However, as discussed in ¶27 because of the nature of soils, established vegetation, water level control and cattail management options it is unlikely that the proposed Project would cause cattails to overtake the storage area reducing storage capacity. More information is provided in EAW Item 6b regarding project design and storage capacity, which has been designed to be consistent with the DNR Shallow Lakes Plan (2010).

Modified Project (Alternative 1):

In response to comments related to the comparative flood risks associated with the two Project alternatives, Minnesota DNR's Floodplain Modeling and Mapping group reviewed hydraulic modeling for both alternatives to assess the change in flood risk to adjacent properties by changing the chosen alternative. DNR also used the model to assess change in erosion potential by changing the chosen alternative. The absence of the South Embankment in Alternative 1, compared to Alternative 2a' appears to result in a slightly higher peak water surface elevation in the South Spillover Storage Area and at the downstream end of the project area in the 2-year event (0.0510 ft difference). The impacts for the 5-year event and all events higher than the 5-year event appear to be negligible. No structures would be impacted by the change for the 2-year event. Additionally no change is expected in the frequency, timing or duration of flood events smaller than 10-year 10-day events. As with Alternative 2a', the model illustrates that the proposed Project will not have an impact on flooding from rain events larger than 10-year 10-day events. The net result is that there is not a significant change in the overall risk to properties by changing the proposed Project from Alternative 2a' to Alternative 1.

35. Hunting and fishing. Fifteen commenters noted concerns about the impact of the Project on outdoor recreation, specifically hunting and fishing. Commenters expressed the desire to continue observing and hunting upland game in and around the Project area on both public and private land. Commenters are concerned the Project would reduce habitat for upland game or limit access to hunting land due to flooding. Commenters noted a high demand for deer hunting and low demand for waterfowl hunting in the area as well as limited opportunities for boating or fishing in the shallow lake.

    Response:

    Proposed Project (Alternative 2A'):

The Project would be located in deer permit area 267 that encompasses 472 square miles. Roseau Lake WMA represents 2.5% of the permit area and the proposed Project area represents 1.3% of the permit area. As noted in EAW Item 6b, the Roseau Lake WMA currently provides shallow water, wetland, and associated upland habitats that are substantially degraded due to temporary and inconsistent presence of a pool combined with frequent water level fluctuations. This has led to generally undesirable plant communities dominated by invasive plants with relatively low wildlife habitat value. Because of the small area that would be impacted by the proposed Project and the currently degraded habitat, DNR Wildlife staff determined that the proposed water level management would not deter or impact upland game beyond that which is currently occurring.

No sharptail grouse leks were documented in the portions of Roseau Lake WMA that would be impacted by the Project. Leks have been documented adjacent to the lake basin but would be unlikely to be affected. The proposed Project footprint is in close proximity to 136,936 acres of public land that provides and will continue to provide outdoor recreation opportunities. Based on modeled impacts of the proposed Project, the proposed Project would not limit access to hunting land. More information is provided in ¶34.

It is acknowledged that shallow lakes often afford limited opportunities for boating and fishing. It should be noted that developing fish habitat to support recreational angling is not a goal or purpose of the Project. As indicated in Item 6b of the EAW current condition dewatering overwinter will allow for control of existing undesirable fish in the lake basin, like common carp (*Cyprinus carpio*) and fathead minnows (*Pimephales promelas*), which currently negatively impact wildlife. Additionally as discussed in EAW Item 6b, currently Pine Creek and the Roseau River provide degraded fish habitat. The proposed Project would reminder Pine Creek and connect the historic Roseau River channel improving fish habitat.

Modified Project (Alternative 1):

There would be no change from Alternative 2a' within the overall impacted area of the proposed Project. Based on the construction footprint, the impact would be less in the modified Project (Alternative 1) than for the original proposed Project (Alternative 2a').

36. Mosquitos, ticks and diseases. Eight commenters expressed concerns the Project would increase mosquito populations in the area. Commenters noted that mosquitos could vector West Nile virus to humans, livestock and pets. One commenter also noted concerns about ticks in the marsh vegetation.

Response:

Proposed Project (Alternative 2A'):

DNR Environmental Review staff consulted with Minnesota Department of Agriculture, Minnesota Board of Animal Health, and Minnesota Department of Health Vector Borne Disease Unit experts for data relative to vector borne disease cases reported recently. These experts advised DNR that this area of the state has not been identified as a high-occurrence area for vector borne disease. However, waves of these diseases are dependent on weather patterns and bird migration routes each year. Wet years increase the incident rates of all vector borne diseases, primarily along known bird migratory routes. This remains true regardless of whether the Project is constructed, that is the construction of the Project is not a significant factor in the presence of these insect borne diseases.

Modified Project (Alternative 1):

No change would be anticipated between Alternative 2a' and Alternative 1.

37. Organic farms. The Minnesota Department of Agriculture (MDA) noted potential impacts to organic farms in the Project area alleging that flooding can put certification at risk. They also noted that acquisitions of organic farmland should consider the unique requirement for organic certification.

    Response:

    Proposed Project (Alternative 2A'):

    On January 27, 2021, the DNR Environmental Review Unit reviewed current organic certifications as reported by the U.S. Department of Agriculture. Three certified growers were identified in Roseau County. The physical street addresses for the certifications are on or outside the 100-year FEMA floodplain line and are therefore not within the floodplain footprint for smaller events that the proposed Project would affect. As stated in EAW Item 6d, the Project would have no effect on flooding in the immediate area for larger events (> 10-year interval), and therefore is not expected to reach properties on or outside the 100-year FEMA floodplain, such as the three growers identified. The MDA is also not aware of any new or recent organic certification in the area, and no organic farms are subject to land acquisition within the Project, so it is unlikely other organic growers would be affected.

    Modified Project (Alternative 1):

    No change would be anticipated between Alternative 2a' and Alternative 1.

38. Ross gauge. One commenter questioned the accuracy for the Ross Gage data used to design the Project and model impacts. The commenter noted that recorded data did not align with personal observations.

    Response:

    Proposed Project (Alternative 2A'):

    DNR has confirmed with U.S. Geological Survey staff that the Ross Gage is visited at intervals of once every 6-8 weeks throughout the year. While on-site, staff verify that the data logger is accurately recording gage-height data by making one or more independent readings of gage-height. Staff also take a discharge measurement and compare the measurement to the gage-height/discharge relation (rating) that is in effect at the time. The Ross Gage has a stable rating during mid and upper flow regimes and a slightly-less stable rating at low flows. The lack of stability at low flow is caused by farm equipment using the low flow crossing. Formation of ice in the channel can result in backwater invalidating the gage-height/discharge relationships so staff do make discharge measurements beneath the ice to estimate winter flows. Data from the Ross Gage (USGS Gage 05107500) were used by HDR to model existing and post-Project conditions including peak flow rate and peak water surface elevations. Additionally and according to the draft operating plan provided to the DNR by the Roseau River Watershed District, data from the Ross Gage would be used to guide Project operations. DNR has reviewed the models and concluded that the Ross Gage data is accurate and it is appropriate to use the data in determining potential environmental effects.

    Modified Project (Alternative 1):

    No change would be anticipated between Alternative 2a' and Alternative 1.

39. Wildlife. Twenty commenters provided comments on the impact of the proposed Project on wildlife. Fourteen commenters expressed concerns that holding water in the lake basin would drive out upland game and five noted that adjacent cropland provides food for some of those animals. Three commenters noted their preference for and the need for upland habitat in the area over waterfowl

habitat. One commenter noted concerns about nest predation on the proposed embankments and one commenter stated that the north embankment would prevent fish passage. Additionally, one commenter expressed concerns about the impact of the proposed Project on bees and hives in the area.

Response:

As described in EAW Item 13, one of the stated goals of the proposed Project is wildlife habitat improvement. Additionally, ¶35 and EAW Item 6b discuss that the proposed Project area currently provides shallow water, wetland, and associated upland habitats that are substantially degraded compared to historic conditions. The temporary and inconsistent presence of a pool combined with frequent water level fluctuations (bounce) has led to generally undesirable plant communities dominated by invasive plants with relatively low wildlife habitat value. Given the currently degraded nature of the habitat, frequent water level fluctuations, as well as the substantial amount of public land that serves as habitat in the area, DNR Wildlife staff determined that the proposed water level management would not deter or impact upland game beyond that which is currently occurring. As described in ¶33 current farming land use would only change where embankments and ditches are located. Because of this, the proposed Project would not impact the opportunity for crops to attract wildlife and serve as a food source. DNR Wildlife staff confirm that nest predation would be possible if nests are built along proposed Project embankments, however at a landscape scale this predation would not have a negative impact at the population level. As described in EAW Item 13c fish passage would be maintained post construction of the proposed Project. Potential impacts to fish passage would be limited to the proposed Project construction window. As noted in EAW Item 13a, currently the lake basin is not providing a floral resource for honeybees as it consists of native shallow marsh vegetation, including various sedges (*Carex* spp.) and bulrushes (*Schoenoplectus* spp.). Much of the lake basin is dominated by invasive reed canary grass (*Phalaris arundinacea*) with patches of hybrid or narrow-leaved cattails (*Typha* spp.). Because of this, DNR staff have determined that the proposed Project would not impact resources for honeybees.

Modified Project (Alternative 1):

There would be no change from Alternative 2a' within the overall impacted area of the proposed Project. Based on the construction footprint, the impact would be lessened in the modified Project (Alternative 1) than the original proposed Project (Alternative 2a').

Environmental Effects

40. Based on the analysis set forth in EAW Item 10.a, the DNR concludes that neither alternative of the proposed Project would affect geology, nor does geology affect the Project proposal, as the proposal would not involve excavation into the surrounding geology.
41. Based on the analysis set forth in EAW Item 11.a.ii, the DNR concludes that neither alternative of the proposed project has the potential to effect groundwater within or near the Project area.
42. Based on the analysis set forth in EAW Item 11.b.i, the DNR concludes that neither alternative of the proposed Project will generate wastewater either during construction or operation.
43. Based on the analysis set forth in EAW Item 12, the DNR concludes that neither alternative of the proposed Project will generate or effect existing hazardous materials or wastes.

44. Based upon the information contained in the EAW and received as public comments, the DNR has identified the following potential environmental effects associated with the both the proposed Project (Alternative 2A') and the modified Project (Alternative 1) :
    a. Land Use/Impact to Agricultural Lands
    b. Water Quality/Stormwater
    c. Physical Impacts to Wetlands and Surface Waters
    d. Impacts to Rare Resources
    e. Wildlife Resources and Habitat, including fish passage
    f. Historic and Cultural Properties
    g. Visual Impacts During Construction
    h. Vehicle Emissions, Dust and Noise

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

a. Land Use/Impact to Agricultural Lands: This topic was addressed in EAW Items 5, 6, 7, 9, 10b, 19 and responses to comments in ¶¶33 and 34.

Proposed Project (Alternative 2A'):

While land use within the Roseau River Watershed has remained relatively unchanged in recent years at about 46% cropland; 7% roads, ditches and towns; and 47% woodlands, wetlands, and grasslands, the amount of runoff per year has increased at a faster rate than precipitation. This increase in runoff is likely due to increased tile placement on croplands.

The majority of the land affected by the Project is within the Roseau Lake Wildlife Management Area and habitat management would be enhanced by the Project. The private agricultural lands that fall within the Project footprint are already subjected to periodic flooding. This would not change with the Project. Timing and duration of future flooding would change in that modeling indicates that within the Project footprint, flood durations would be shorter than current conditions. Current land use would change only where private lands were purchased for the Project's embankments and ditches. No land use changes would occur due to flooding.

A number of soil types within the Project footprint are listed as Prime Farmlands. Of these, only two soil types are listed as Farmlands of Statewide Importance: Percy loam and Foxhome fine sandy-loam.

Land use would not change in the area of the Sprague Creek fen restoration. Nearly all the land in this area is state-owned, and the majority of that is in State Forest. Since the area would be used as wetland mitigation for impacts within Roseau Lake, timber harvest activities may be restricted, but poor quality timber reserves and the wet soils already restrict timber harvest operations. One parcel of private land (160 ac) might be affected by the Project, in that drainage capacity from this parcel might be decreased as a result of the restoration.

One additional parcel was inadvertently missing from the EAW and should have been listed for inclusion in the proposed Project, which is located at PLS location T1621, R40, S4.

Modified Project (Alternative 1):

The Modified Project changes in land use would have the same environmental effects as the Proposed Project (Alternative 2A'), although the Project would include 50 fewer acres due to the removal of the southern embankment from the proposal.

The Modified Project no longer includes acres that include the Foxhome fine sandy-loam soil type. The Modified Project also no longer includes the parcel that was inadvertently excluded from the published EAW, (PLS location T1621, R40, S4).

b. Water Quality/Stormwater: This topic was addressed in EAW Item 11 and response to comment ¶29.

Proposed Project (Alternative 2a')

The Roseau River, which has been altered and is now part of State Ditch 51, enters the Project area from the southeast. Sprague Creek enters the Project area from the northeast and enters the Roseau River just west of State Highway 310. Pine Creek enters the Project area from the northwest. The Roseau River (PWI 04001a), Sprague Creek (PWI 68040a), and Pine Creek (PWI 68041a) are all designated public waters. The 2018 Federal 303(d) list of impaired waters in the Roseau River Watershed identifies the Roseau River as impaired for Aquatic Consumption due to mercury in fish tissue, and Sprague Creek as impaired for Aquatic Life due to turbidity. The Sprague Creek impairment has been approved for delisting by MPCA, which was expected during the 2020 cycle. Pine Creek is listed as impaired for aquatic life due to fish bioassessments.

Construction stormwater discharges could result in temporary increased siltation and turbidity in the Roseau River and Pine Creek (an impaired water), which would negatively affect stream biota, decrease oxygen levels, and perhaps even affect river flows at the confluence of the river with the project outlet. Any effects are anticipated to be temporary in nature and would be mitigated by following construction best management practices, in accordance with the MPCA administered NPDES/SDS Construction Stormwater permit.

Pollution prevention planning for this Project has identified multiple measures to reduce and mitigate temporary water quality environmental effects from construction stormwater that are listed in EAW Item 11. Since Pine Creek is listed as an impaired water, special regulations apply. A separate SWPPP may be required since the area of disturbance is greater than 50 acres and has a discharge point within 1 mile of the impaired water. Any plan would need to ensure that the restoration activities would not further harm the impaired water. This SWPPP would also be subject to review and approval by the Minnesota Pollution Control Agency.

Post-construction runoff may temporarily increase in quantity and decrease water quality near construction sites (structures, embankments, etc.). In particular, slopes on embankments and structures locations where soil has been exposed may produce more runoff, sediment, and nutrients than current conditions. Implementing standard erosion control measures would minimize changes to stormwater runoff near construction sites. Long- term water quality post-construction should improve since the lake should act as a settling basin, with high flows routed down the cutoff channel and normal flows going through the historic oxbow channel.

Modified Project (Alternative 1)

No change.

c. Impacts to Wetlands and Surface Waters: This topic was addressed in EAW Item 11.b.iv.1.

Proposed Project (Alternative 2A')

The Project includes 102.0 acres of wetlands regulated under the Minnesota Wetlands Conservation Act (WCA) that would be filled or otherwise disturbed, such as a change in type. The new inlet channel to the Project would have minimal grade and thus would be filled with at least

some water during most of the year. Wetland type might change in other areas, especially in areas where ditches are excavated. The wetland type within the main basin is expected to remain unchanged.

To enhance wetlands within the lake basin and to provide habitat for migratory waterfowl, project managers intend to remove an area of sediments that have accumulated over time within the basin, near the outlet of the historic channel of Pine Creek. Though the entire basin has silted in to some degree over time, this area has deeper sediment because of the proximity of the river, the waters of which slow in velocity as they spill out of the banks. Sediment excavation may be between 6" and 12" in depth. Sediments removed would then be placed in nearby upland areas or used as fill to flatten slopes on embankments.

The Sprague Creek restoration area would contribute the majority of the wetland mitigation acres. A review by the local Technical Evaluation Panel (TEP) would be conducted prior to final engineering to avoid, minimize, and mitigate wetland impacts. Furthermore, pre-project coordination with the U.S. Army Corps of Engineers has been ongoing to address wetland impacts with regards to Section 404 of the Clean Water Act.

An additional area of wetland restoration within the Roseau Lake basin is proposed. This area may total 100-150 acres of sediment removal, potentially up to 12" deep, and is near the historic outlet of Pine Creek within the lake basin.

Modified Project (Alternative 1)
With the reduced construction footprint the modified Project includes 89.1 acres of wetlands regulated under the Minnesota Wetlands Conservation Act (WCA) that would be filled or otherwise disturbed, such as a change in type. No other changes from proposed Project are expected.

d. Impacts to Rare Resources: This topic was addressed in EAW Item 13.

Proposed Project (Alternative 2a')
Minnesota Biological Survey (MBS) has identified much of the Project area surrounding the historic lake basin as "Below" biodiversity. Areas to the north of the Roseau Lake rehabilitation area, including the Sprague Creek restoration area, have been identified as having "Moderate" to "Outstanding" biodiversity. Roseau Lake is listed by DNR as a lake of "Moderate" biological significance because of existing bird diversity, mostly during times when the lake is flooded.

No rare native plant communities have been documented within the Roseau Lake Project area. However, within the Sprague Creek restoration area, several rare occurrences have been documented, including Spring Fens. Additional occurrences are located within the Lost River State Forest and Pine Creek Peatland Scientific and Natural Area (SNA). Hydrology is proposed to be restored to portions of Sprague Creek Peatland SNA and the Lost River State Forest as a result of this Project, thereby resulting in improved habitats. Initial vegetation surveys were completed in late summer 2020 with additional surveys planned for 2021.

Construction of the Project could cause temporary disruption of some bird species, but none are expected to be harmed from long-term operation. Ground nesting birds, including Nelson's sparrow and Upland sandpiper, should benefit from the Project through reduced flooding in adjacent lands during the nesting season. Over water nesters, including many waterfowl,

American bitterns, marbled godwits, and yellow rails should benefit from reduced frequency, duration, and depth of inundations during the nesting season and from a more diverse vegetative community that results from the post-Project water regime. No species are expected to be harmed by normal operation of the Project.

Bald eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The NHIS shows one bald eagle nest located near the project site, and construction of the project could be disruptive to this nest. Based on United States Fish and Wildlife Service (USFWS) guidance, the project is unlikely to result in a non- purposeful take since the construction would take place more than 660 feet from the nest location. Conversely, bald eagles are likely to benefit from the management of a wildlife pool during fall and spring migration periods as this should attract many different prey species.

Eastern spotted skunks were last identified in the Project area in 1933. Recent statewide surveys have revealed a greatly diminished population in Minnesota. Since eastern spotted skunks have typically been found around small farms in Minnesota, and have not been identified in this area for more than 80 years, the construction and operation of this project is not expected to have any adverse effects on eastern spotted skunks.

Northern long-eared bats (Myotis septentrionalis) should not be affected by the Project. Any impacts to woodlands (i.e., potential habitat for northern long-eared bats) adjacent to the Project components would occur during winter. Furthermore, there are no known hibernacula or maternal roost trees in the area of the Project and this Project would not result in either "incidental" or "purposeful take" as per USFWS rule (ESA Section 4(d)).

Black sandshells (Ligumia recta) (mussels) have been documented downstream of the project in the Roseau River. This species is usually found in the riffle and run areas of medium to large rivers in areas dominated by sand or gravel. Degradation of mussel habitat in streams throughout the black sandshell's known range is a continuing threat to this species. Dams, channelization, and dredging increase siltation, physically alter habitat conditions, and block the movement of fish hosts. Project operation should not directly impact black sandshells. There is potential for siltation to occur during project construction; however, measures would be taken to minimize erosion and siltation during construction. Wildlife-friendly erosion and sediment control practices would be implemented and maintained throughout the duration of this project in order to minimize impacts.

A subspecies of a butterfly, purple lesser fritillary (Boloria chariclea), on the state watch list has been identified in the Sprague Creek Peatland SNA restoration area. The purple lesser fritillary inhabits solely bogs (Butterflies and Moths of North America 2019). These types of habitats are more common upstream from and north of the project area, respectively, and should not be affected by either construction or operation of the project. Two listed dragonflies, zigzag darner (*Aeshna sitchensis*) and subarctic darner (*A. subarctica*) are listed within Sprague Creek Peatland SNA within the restoration project area. Each of these species occurs in northern poor fens, northern open bogs and acidic peatland systems (Minnesota's Wildlife Action Plan 2016). Since the hydrology is expected to be improved south of Lateral 7, Branch 1 of Judicial Ditch 61, we expect habitat conditions to be improved, or at least not harmed, for these species.

Modified Project (Alternative 1)

No change.

e. Wildlife Resources and Habitat, including fish passage: This topic was addressed in EAW Item 13.

Proposed Project (Alternative 2A')

River aquatic habitats contain a variety of warm water fish species in a relatively wide stable channel of the Roseau River downstream of the Project area. Thirty-eight fish species have been reported within the Roseau River. The Index of Biotic Integrity (IBI) scores for nearby sampling stations were rated as "very poor" to "poor", whereas the sampling site farther downstream was rated as "fair" (MPCA 2018). The cutoff channel south of the historic channel was channelized as part of a U.S. Army Corps of Engineers project in the 1910s. This has resulted in the loss and degradation of stream habitat. The altered hydrology of the watershed has also contributed to degraded habitat conditions in the Roseau River. Increases in the frequency and duration of peak runoff and increases in annual water yield tend to increase erosion in stream channels, increasing turbidity, and decreasing habitat quality.

Pine Creek was also channelized within the historic Roseau Lake basin. Pine Creek is listed by the Minnesota Pollution Control Agency (MPCA) as impaired for aquatic life, specifically for low fish IBI scores. Possible causes for the low IBI score include loss of longitudinal connectivity, flow regime instability, insufficient physical habitat, high suspended sediment, and low dissolved oxygen. This Project may address the problem of insufficient physical habitat by re-meandering the historic channel. Fish and other aquatic wildlife should benefit from refugia created by current breaks within a more natural, meandered channel. No habitats found within the Pine Creek Peatland SNA are expected to be affected by construction or operation of this project.

Vegetation within the Sprague Creek Restoration Area is dominated by hydrophitic communities with diverse species composition. The northern extent of the site's wetlands are dominated by tamarack (Larix laricina), black spruce (Picea mariana), sphagnum moss (Sphagnum spp.), small cranberry (Vaccinium oxycoccos), and pitcher plant (Sarracenia purpurea). In the southern extent, Canada bluejoint (Calamagrostis canadensis) and meadow willow (Salix petiolaris) are dominant in undrained wetlands while reed canary grass and hybrid cattail are dominant in corridors of disturbance. Between the north and south extents exists a mosaic of emergent and shrub dominated wetland communities exhibiting varying degrees of alteration because of drainage and previous attempts at agricultural production, most likely haying and grazing.

As a result of the Roseau Lake Rehabilitation Project, overwater nesting waterfowl and grassland ground nesting birds are expected to benefit from reduced bounce and more stable water regimes. Migrating waterfowl and other water birds should also benefit from water retained within the Main Pool Storage area during fall months. Wildlife species dependent upon spring fen and boreal woodland habitats should benefit from the Sprague Creek Restoration portion of the Project.

Modified Project (Alternative 1)

No change.

f. Historic and Cultural Properties: This topic was addressed in EAW Item 14 and response to comment ¶30.

Proposed Project (Alternative 2A')

The Project Area of Potential Effects (APE) entails a 1-mile buffer around all proposed embankments and ditches. The Project APE does not, however, encompass indirect effects, and as such, potential properties were not evaluated. HDR conducted a Phase I archaeological investigation to identify historic properties within the proposed Project APE in August 2017; May and June 2018; and September 2019. Over the course of those investigations, six archaeological sites were identified by HDR, and another two were included for consideration by the State Historic Preservation Office (SHPO). In addition, a literature review conducted by HDR, Inc. revealed eight previously identified archaeological sites and two previously inventoried architectural surveys within the study area, but only one of which intersected the APE.

In a letter from SHPO, the Environmental Review Unit contact noted that because the APE did not consider indirect effects, additional surveys were needed. Additionally, project reviewers noted numerous farmsteads/historic structures/diversion ditches are apparent in the aerial imagery of the Project area. If any history/architecture properties are over 50 years old and lie within the final Project APE, they would need further surveys and evaluation.

DNR Project managers are in close contact with state archaeological experts and are required to following the process laid out in Section 106 of the National Historic Preservation Act. Additional research is needed to determine whether there would be any indirect impacts to cultural resources. Known historic properties and resources would be avoided during construction and would be flagged to exclude construction personnel. Flooding historic features is not a concern since the footprint of flooding would not be changed. Also, an additional 30-day comment period on findings in the archaeological report is necessary before a permit would be issued.

Modified Project (Alternative 1)
No change.

g. Visual Impacts During Construction: This topic was addressed in EAW Item 15.

Proposed Project (Alternative 2a')
Construction would produce exhaust and dust plumes from equipment, but these are not expected to persist. Most construction would be completed during daylight hours, so lighting would be minimal. Most visual impacts would occur during construction, and only the proposed embankments, which were minimized to the extent possible, would alter the landscape in a significant way. There would be no permanent lighting or tall structures associated with the project. Water control structures would be located out of sight from major roads.

Modified Project (Alternative 1)
No change.

h. Vehicle Emissions, Dust and Noise: This topic was addressed in EAW Items 16, 17 and 18.

Proposed Project (Alternative 2A')
Diesel emissions would be the primary source of air emissions created by the Project. The Project construction duration is expected to last approximately two seasons. Some of the construction duration may include winter months as well as summer construction. All of this equipment is diesel-powered. Heavy equipment (excavator, bulldozer, front-end loader, skid steer, road grader, agricultural tractor, cement trucks, semitractor/trailers, dump trucks, and fueling trucks) would be employed by contractors to install the embankments, excavate the new

exterior ditches, install and subsequently remove coffer dams, install water control structures, excavate the inlet from the Roseau River, and install the rock riffle/weir at the confluence of the historic channelized portion of the Roseau River.

Odors from diesel-powered equipment emissions would occur during construction. These emissions would be temporary and short in duration. Heavy equipment would create dust during extremely dry periods of construction. Borrow material areas and stockpiling areas may also generate dust. Dust control measures may be used in areas where the Project footprint is affecting residences nearby. Given that the area is in a rural landscape, few residences would be affected by emissions or dust generated by construction.

No additional dust or odors are expected after construction is completed or during the operation of the Project.

The heavy equipment listed above would emit diesel exhaust on days when project work is occurring. No emissions are anticipated to linger beyond workdays; all emissions would cease upon Project construction completion. Depending on season of work, additional emissions may occur when warming equipment during cold weather. No significant vehicle emissions would occur after construction and during the operation of the Project.

Noise was addressed in EAW Item 17. The area where the Project is proposed is generally rural in nature, and little to no human-based noise is currently produced. Noise generated from the Project would occur during construction. The MPCA recommends that the equipment used for construction, during each phase of the Project build-out, be appropriately muffled, and that construction activities take place during daytime hours, which are defined as 7:00 a.m. to 10:00 p.m. Minn. R. 7030.0020, subp. 3. Noise is not expected to exceed State of Minnesota Noise standards. For construction near the Project (i.e., within 1-mile of a residential receptor, including areas of the south embankment and the Pine Creek control structure), construction would be limited to 8:00 a.m. to 8:00 p.m. to further protect those areas. Operation of the Project would not involve electric or diesel motors, and thus would not contribute to local noise pollution.

Modified Project (Alternative 1)
No change.

45. The following permits and approvals are, or may be needed, for the Project:

Unit of Government	Type of Application	Status
BWSR	Wetland Conservation Act	To be submitted
MN DNR	Public Waters Work Permits	To be submitted
MN DNR	Water Appropriation	To be submitted
MN DNR	Dam Safety	To be submitted
MN DNR	SNA Permit	To be submitted
MN DNR	Permit for Take of Endangered Species	To be submitted
MN DNR	Calcareous Fen Management Plan	To be determined
MPCA	401 Certification	To be submitted
MPCA	NPDES Stormwater Construction	To be submitted
SHPO	Section 106 Review	Request submitted
Roseau County	Floodplain Permit	Not yet requested
Roseau County	Work within ROW of legal ditch system and ditch abandonment	Not yet requested
US Army Corps of Engineers	Section 404	To be submitted
USFWS	ESA Rule 4(d) review	Completed

CONCLUSIONS

1. Minnesota Rule 4410.1700, subps. 6 and 7, set forth the following standards and criteria to compare the impacts that may be reasonably expected to occur from the project in order to determine whether it has the potential for significant environmental effects. The rule provides:

   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. The RGU shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the Proposer to minimize the contributions from the project;

C. the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project; and

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

2. *Type, extent, and reversibility of environmental effects*.

   Based on Findings of Fact ¶¶25 through 43 and 44a-44h, the DNR concludes that the following types of potential environmental effects, as described in the Findings of Fact, would be limited in extent, temporary, or reversible:

   - Land Use/Impact to Agricultural Lands
   - Water Quality/Stormwater
   - Physical Impacts to Wetlands and Surface Waters
   - Impacts to Rare Resources
   - Wildlife Resources and Habitat, including fish passage
   - Historic and Cultural Properties
   - Visual Impacts During Construction
   - Vehicle Emissions, Dust and Noise

3. *Cumulative potential effects.* In determining whether a project has the potential for cumulative potential effect the RGU shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the Proposer to minimize the contributions from the project. Minn. R. 4410.0200, subp. 11a.

   DNR concludes that the cumulative potential environmental effects, as described above and in EAW Item 19, **are not** significant because there are limited past, present, and future projects identified within the geographic scale of the proposed Project that would have overlapping environmental effects. The Project would contribute minimal environmental effects and would not materially contribute to the cumulative potential effect.

4. *Extent to which environmental effects are subject to mitigation by ongoing public regulatory authority*. Based on the Findings of Fact set forth in ¶¶44a-44h above and the information contained in the EAW, DNR concludes that there is sufficient ongoing public regulatory authority and specific measures identified that can be expected to effectively address the following environmental impacts:

   - Physical Impacts to Wetlands and Surface Waters
   - Impacts to Water Quality/Stormwater
   - Impacts to Rare Resources
   - Wildlife Resources and Habitat, including fish passage
   - Historic and Cultural Properties

Permits and Approvals: Prior to initiation of this Project, the permits and approvals identified in Finding 45 would be required. When applying the standards and criteria used in the determination of the need for an EIS, DNR finds that the Project is subject to these regulatory authorities to an extent sufficient to mitigate potential environmental effects through measures identified in the EAW and ROD.

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 following documents were examined and set forth anticipated impacts and controls:

    - Minnesota Department of Natural Resources. 2010. MANAGING MINNESOTA'S SHALLOW LAKES FOR WATERFOWL AND WILDLIFE: Shallow Lakes Program Plan. https://files.dnr.state.mn.us/recreation/hunting/waterfowl/shallowlakesplan.pdf
    - Minnesota Pollution Control Agency. 2018. Roseau River Watershed Monitoring and Assessment Report. July 2018. https://www.pca.state.mn.us/sites/default/files/wq-ws3-09020314b.pdf. Accessed November 2020.
    - Roseau County. 2010. Roseau County Local Water Management Plan 2010-2019. https://2b849565-bf8c-4458-bf63-01f58312fd47.filesusr.com/ugd/d82f3b_461297d133f34c8bb107fabea6549d86.pdf.
    - Roseau River Watershed District, MNDNR Roseau River Wildlife Management Area Office. 2020. Sprague Creek Fen, Wetland Complex Restoration, Compensatory Mitigation Strategy for the Roseau Lake Restoration Project. http://www.roseauriverwd.com/pdf/Complete_red_draft.pdf.

6. As set forth in ¶¶1 - 45 DNR has fulfilled all the procedural requirements of law and rule applicable to determining the need for an EIS on the proposed Roseau Lake Rehabilitation and Sprague Creek Wetland Restoration in the Townships of Dieter and Unorganized Township T163N R40W, Roseau County, Minnesota.

7. Based on consideration of the criteria and factors specified in Minn. R. 4410.1700, subps. 6 and 7 to determine whether a project has the potential for significant environmental effects, and on the Findings of Fact and Record in this matter, the DNR determines the proposed Roseau Lake Rehabilitation and Sprague Creek Wetland Restoration 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 Roseau Lake Rehabilitation and Sprague Creek Wetland Restoration in the Townships of Dieter and Unorganized Township T163N R40W, Roseau County, Minnesota.

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

Dated this 17TH day of August, 2021.

DEPARTMENT OF NATURAL RESOURCES

Jess Richards
Assistant Commissioner