DEPARTMENT OF NATURAL RESOURCES

RECORD OF DECISION

In the Matter of the Determination of the Need for an Environmental Impact Statement for the Spider Creek Stream Restoration Project in Ness Township, St. Louis County, Minnesota

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

FINDINGS OF FACT

1. U. S. Steel proposes to restore the pattern, profile, and dimension of an approximately 2,660-foot channelized reach of Spider Creek. The proposed Project would reposition the existing straightened stream channel to restore approximately 4,050 feet of channel. The restoration aims to ensure sustainable stream characteristics and to improve riparian and floodplain vegetation. The proposed Project site is located in St. Louis County, Minnesota.

2. Pursuant to the requirements of Minn. R. 4410.4300, subp. 26, the proposed Project requires preparation of an Environmental Assessment Worksheet (EAW) for 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, unless exempted by part 4410.4600, subpart 14, item E, or 17. The local government unit shall be the Responsible Government Unit (RGU).

3. On July 29, 2016, Saint Louis County requested that the Environmental Quality Board (EQB) designate the MN Department of Natural Resources (DNR) as the RGU for preparation of the EAW. On August 17, 2016, DNR acknowledged the request and informed EQB that DNR was willing to serve as the RGU for the proposed Project. On September 21, 2016, EQB approved the DNR as RGU for the preparation and review of environmental documents related to the Spider Creek Restoration Project (Project). See Minn. R. 4410.0500, subp. 6.

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 Environmental Quality Board (EQB) and a notice of its availability was published in the EQB *Monitor* on July 17, 2017. 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. A press release announcing the availability of the EAW was sent to newspapers and radio and television stations statewide. As required by Minnesota Rule, copies of the

EAW were also available for public review and inspection at the DNR Central Office library, the DNR Northwest Region Headquarters, the Hennepin County – Minneapolis Central Public Library, the Mountain Iron Public Library, the Virginia Public Library, and the Duluth Public Library. The EAW was also made available to the public via posting on the DNR's website.

6. As required by Minn. R. 4410.1600, the 30-day EAW public review and comment period began July 17, 2017 and ended August 16, 2017. The opportunity was provided to submit written comments on the EAW to the DNR by U.S. Mail, by facsimile, or electronically via email.

7. During the 30-day EAW public review and comment period, the DNR received written comments on the EAW from the agencies and individuals listed below.

   A) Fond du Lac Reservation, Office of Water Protection, Kari Heiden (August 3, 2017)
   B) g3brady –email address (August 15, 2017)
   C) Minnesota Board of Water and Soil Resources, David Demmer (August 9, 2017)
   D) Minnesota Pollution Control Agency, Karen Kromar (August 16, 2017)
   E) Minnesota State Historic Preservation Office, Sarah Beimers (August 14, 2017)
   F) David Polster (July 31, 2017)
   G) Melissa Ramberg (August 15, 2017)
   H) Spider Creek Hunting Association, David Swanson (July 31, 2017)
   I) Spider Creek Hunting Association, Shane Swanson (August 16, 2017)
   J) Bonnie Swanson (August 15, 2017)
   K) John Swanson (August 16, 2017)
   L) Ronald Veiths (August 16, 2017)

   The comment letters are included in the Record of Decision in Attachment A. Discussion of comments received and DNR responses are provided in Finding of Facts ¶ 8 and 9.

8. Comments F, G, H, and J do not address the accuracy and completeness of the material contained in the EAW, potential impacts that may warrant further investigation before the proposed Project is commenced, or the need for an EIS for the Project as specified by Minn. R. 4410.1600. Therefore, these comments are not receiving a specific response. Copies of these comments will be provided to the Project proposer and to permitting and/or approval entities and/or authorities for their consideration as part of the permitting, approval, and/or implementation processes.

9. Comments submitted that did address the accuracy and completeness of the EAW and/or potential impacts that may warrant further investigation before the proposed Project is commenced are summarized below with the DNR's response following each comment. Any information included in the following comments that does not address the accuracy and completeness of the material contained in the EAW, potential impacts that may warrant further investigation before the Project is commenced, or the need for an EIS did not receive a response. Copies of these comments will be provided to the Project proposer and to permitting and/or approval entities and/or authorities for their consideration as part of the permitting, approval, and/or implementation processes.

Commenter A – Fond du Lac Reservation, Office of Water Protection, Kari Heiden

Comment A1: The commenter notes, that while hard to predict, it seems that as hydrology is restored and hydrophytic vegetation added, the restoration will eventually form more wetland areas.

Response A1: While the proposed course of action for this Project is not to increase the area of wetland, as mentioned in EAW item 11.iv.a, the DNR notes that some areas may experience an increase in surface water flooding and surface soil saturation, leading to an increase in the area of wetland.

Comment A2: The commenter requested dimensionless ratios, expressing an interest in the modeling of pool-to-pool spacing, linear wavelengths, and inner berm ratios in pools and riffles.

Response A2: The information requested has been supplied to the commenter. The DNR notes that in requesting this information, the commenter has not suggested this affects the accuracy and completeness of the material contained in the EAW, potential impacts that may warrant further investigation before the Project is commenced, or the need for an EIS for the Project. A copy of the comment will be provided to the Project proposer and to permitting and/or approval entities and/or authorities for their consideration as part of the permitting, approval, and/or implementation processes.

Comment A3: The comment suggests that the EAW should have considered other conservation values, including a discussion of beaver management. The comment also suggests that inspection for potential upstream headcuts in the main channel and upstream in two unnamed channels may benefit the Project during the monitoring period.

Response A3: The DNR agrees that there are a range of uses and conservation values associated with the Project area. While the potential for environmental effects specifically due to the presence of beaver was not addressed in the EAW, the potential for beaver to build dams is inevitable and the location of such building sites is unpredictable. The proposed channel would have a lower slope with slower flows, a shallower channel and a connected floodplain. This condition would require beaver dams to be much more extensive (across the channel and floodplain) than those built in an incised channel, such as currently exists. Also, the presence of beaver dams would likely be less apparent due to the reconnecting of Spider Creek with the floodplain, allowing for more regular flooding of the floodplain.

Item 6b of the EAW addresses monitoring of the entire site to manage potential erosion.

Commenter B – g3brady@yahoo.com

Comment B: The comment suggests that, without the berms that exist in the channelized stream, the Project may cause more flooding than has been seen in the past, potentially flooding nearby property.

Response B: EAW Item 6b and 10b address the benefits of restoring the natural characteristics of the stream as appropriate for this landscape and watershed. Due to the channelization and

creation of spoil berms, the hydrology within the Project area has been altered. The proposed restoration would elevate the new stream bed and reconnect Spider Creek with the adjacent floodplain. Properly functioning floodplains help reduce flood flows, capture sediment and debris, and reduce the risk of extensive flood damage. The new channel banks, floodplain, and all other disturbed soils would be seeded with native species, thereby helping to stabilize the new bank channels further.

Commenter C – Minnesota Board of Water and Soil Resources, David Demmer

Comment C: The Minnesota Board of Water and Soil Resources (BWSR) recommended that the wetland delineation of the site conducted in 2016 be reviewed by the Technical Evaluation Panel (TEP) prior to approval by the Local Government Unit (LGU). BWSR also suggests that it may be more efficient to determine the wetland boundaries before moving further along in the wetland review process

Response C: Comment noted. The DNR appreciates BWSR's review of the EAW and response. A copy of the comment will be provided to the Project proposer and to permitting and/or approval entities and/or authorities for their consideration as part of the permitting, approval, and/or implementation processes.

Commenter D – Minnesota Pollution Control Agency, Karen Kromer

Comment D1: The Minnesota Pollution Control Agency (MPCA) recommends the Project proposer submit the Notification to Dredge without a Permit form and follow the Best Management Practices (BMPs) for the Management of Dredged Materials guidance.

Response D1: Comment noted. The MPCA's recommendation regarding Notification to Dredge Permit has been provided to the proposer.

Comment D2: The agency also commented on noise mitigation with a reminder that all construction equipment be fitted with appropriate mufflers throughout the entire Project, noting that vegetation has not been shown as an effective method of noise mitigation.

Response D2: EAW Item 17 addresses noise impacts. The MPCA's guidance regarding mufflers as a noise mitigation measure and comment that employing vegetative buffers is an ineffective noise mitigation measure have been provided to the proposer.

Commenter E – Minnesota Historical Society State Historic Preservation Office, Sarah Beimers

Comment E: The Minnesota Historical Society State Historic Preservation Office (SHPO) identified one archaeological site 21SL1244, Spider Creek Farmstead. The agency concluded that, provided 21SL1244 is avoided by all construction activities, there are no known or suspected archaeological properties that wouldbe affected by the Project as currently proposed. SHPO also commented that they do not address requirements of Section 106 of the National Historic Preservation Act of 1966 and 36 CFR § 800.

Response E: The DNR appreciates SHPO's review of the Project and comments on the EAW.

Commenter I – Spider Creek Hunting Association, Shane Swanson

Comment I1: The comment indicates that the statement "Coordination with the landowner has indicated support for the restoration Project." in EAW Item 17.2 is not accurate and that the Spider Creek Hunting Association does not indicate support of the Project on their property.

Response I1: EAW Items 9c and 17.2 of the EAW address coordination with Spider Creek Hunting Association.

Comment I2: The comment suggests that without the berms that exist in the channelized stream and with an elevated creek channel, the Project may cause more flooding than has been seen in the past. The comment also suggests that relocating the creek to a lower area could cause a problem with beaver damming and flooding.

Response I2: See responses A3 & B.

Comment I3: The comment suggests that the Project could impact the fall hunting season and the fishery, specifically the trout population.

Response I3: Item 11 of the EAW indicates that Spider Creek is not a designated trout stream. As described in EAW Item 19, the DNR expects any impacts on wildlife to be temporary, and effects would be mitigated by the long-term result of an improved stream and riparian area. The proposed restoration would increase habit for fish, waterfowl, and reptiles/amphibians in the floodplain community where the natural hydrology would be restored.

Commenter K – John Swanson

Comment K: The comment suggests that the re-meander and changes in the creek banks could potentially intensify a beaver problem of damming the creek leading to flooding that could encroach on the Spider Creek Hunting Association property.

Response K: See responses A3 and B.

Commenter L –Ronald Veiths

Comment L: The comment suggests, as his main concern, that wildlife will be diminished in the area, thereby impacting hunting.

Response L: As described in EAW Item 19, the proposed restoration would increase waterfowl in the floodplain community where the natural hydrology would be restored. The DNR expects any impacts on wildlife to be temporary and effects would be mitigated by the long-term result of an improved stream and riparian area.

10. Based upon the information contained in the EAW and received as public comments, the DNR has identified the following types of potential environmental effects associated with the proposed Project.
    a. Project Construction

b. Cover Types
c. Land Use
d. Soils
e. Water Resources
f. Hazardous Materials
g. Fish, Wildlife, and Plant Communities
h. Visual
i. Air/Dust
j. Noise
k. Cumulative potential effects

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

a. Project Construction

This topic was addressed in EAW Items 6, 10, 11, and 13.

The proposed Project consists of an approximately 2,660 foot channelized reach of Spider Creek. The restoration plan would utilize existing historical meanders and additional excavation to reestablish a channel alignment that is longer and more sinuous than the existing, channelized alignment.

Spider Creek construction-related activities are considered temporary and limited to the Project site. Action would include establishing lateral scour pools, replacing an existing culvert and one to two smaller floodplain culverts, and floodplain excavation. Construction would be accomplished in two phases and is proposed to take place during late-summer, low-flow conditions. Stream restoration would be sequenced to limit the area of open soil disturbance during construction. The activities would be subject to on-going public regulatory authority by MPCA's National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater General Permit. The Proposer is committed to Project construction methods and sequencing that would minimize the potential for erosion and downstream sedimentation.

b. Cover Types

This topic was addressed in EAW Items 7 and 11 and public comments A1 and D

Land cover reflects land use within and surrounding the Project site that includes forested vegetation, prime farmland, and wetland.

Cover type change from the Project can be considered permanent. Some areas may experience an increase in surface water flooding and surface soil saturation, leading to an increase in the area of wetland. Following construction, the area of deep water/streams would increase due to the increased length of the restored channel by approximately 1.3 acres. As a result of the longer channel, the area of brush/grassland would decrease by approximately 1.3 acres. The Project is consistent with the St. Louis County Recreation Plan for the Cloquet, St. Louis and Whiteface River Corridors; Statewide Conservation and

Preservation Plan; St. Louis County Comprehensive Water Management Plan; and Wetlands Restoration Strategy: A Framework for Prioritizing Efforts in Minnesota.

c. Land Use

This topic was addressed in EAW Item 9 and public comments I and L.

Much of the area surrounding Spider Creek is owned by the State of Minnesota as tax-forfeit land that is primarily forested. There are some homes and small farms in the Project area. Approximately 36 percent of the land affected by the Project is privately held. The majority of the privately held land, approximately 28 percent of the total Project area, is owned by the Spider Creek Hunting Association. There is prime farmland located nearby the Project site, with approximately 3.2 acres of farmland of statewide importance within the Project boundary.

Spider Creek currently has, for multiple reaches, a perpetual non-conservation easement for an Aquatic Management Area (AMA) that is held by the State of Minnesota and applies to land within 60 feet from the top edge of the stream banks on either side. AMA properties are managed by the DNR to maintain access for fishing and other recreational uses along these streams.

The Project site and proposed action fall within the purview of a number of plans and planning efforts including the St. Louis County Recreation Plan for the Cloquet, St. Louis and Whiteface River Corridors, Statewide Conservation and Preservation Plan, the St. Louis County Comprehensive Water Management Plan, and Wetlands Restoration Strategy: A Framework for Prioritizing Efforts in Minnesota.

St. Louis County Shoreland Standards have limits or thresholds of allowable land alteration. The Spider Creek restoration Project would exceed the limits and would require a land alteration permit. Minnesota Rule 6120.3300, Subp.4. requires that evaluation of such Projects include determining if other permits, such as Section 404 Authorization and 401 Certification, are required.

The Spider Creek Restoration Project is fully compatible with the nearby land use and applicable zoning and plans for the Project area.

U. S. Steel has been in discussion with the Spider Creek Hunting Association and would obtain the necessary permissions for the proposed work on their property. U. S. Steel would also provide documentation from the DNR that the agency is willing to continue site management along Spider Creek after all conditions of the restoration plan and the agreement between DNR and U. S. Steel are met.

d. Soils

This topic was addressed in EAW Item 10 and public comments A, B, and I.

Potential impacts to erosion and sedimentation would be associated with construction activities and stormwater management. During site preparation and construction, control measures would be used to manage erosion and sedimentation.

The proposed restoration Project would elevate the new stream bed approximately 0 to 2 feet higher than the existing stream bed elevation to reconnect Spider Creek with its floodplain. Construction of the restored stream would require excavation of approximately 19,000 cubic yards of soil as well as the placement and grading of approximately 19,000 cubic yards of the excavated soil.

The Project proposer would apply for a construction NPDES/SDS permit, requiring a stormwater pollution-prevention plan (SWPPP) for the Project to include BMPs for site erosion and sediment control. The material excavated to create the new stream channel would be used to fill the existing stream channel. Any excess material would be placed on site to create mounds in the floodplain and surrounding upland areas, or disposed of at an approved off-site location. The mounds would be field fit, so are not included in the design. Disturbed soils would be kept to a minimum and would be revegetated as soon as possible following construction.

e. Water Resources

This topic was addressed in EAW Item 11.

The proposed Project would take place within Spider Creek, which is identified as a public water on the MDNR's Public Water Inventory (PWI No. S-002-035-002). It is a second order, perennial stream that begins approximately 4 miles east of the Project area in a wetland complex associated with Muskrat Lake. Spider Creek flows north and west to the Whiteface River, located approximately 4.25 miles downstream. The Whiteface River discharges into the St. Louis River, approximately 4 miles downstream of the Spider Creek confluence.

A portion of Spider Creek currently has a perpetual non-conservation easement for an AMA that is held by the State of Minnesota and applies to land within 60 feet from the top edge of the stream banks on either side. The AMA is managed by the DNR to maintain access for fishing and other recreational uses along these streams.

The primary goals of the Spider Creek restoration include bank stabilization, restoration of a naturally-sustainable stream channel, maintenance of aquatic habitat, and restoration of the natural characteristics of the stream ecosystem, as appropriate for this landscape and watershed. Connecting the channel to the floodplain would help the system maintain a higher and more consistent base flow than the current system allows. At present, Spider Creek has extremely limited floodplain connectivity.

Short-term impacts to Spider Creek include localized physical disturbance caused by construction equipment during site preparation, including vegetation clearing, grading, excavation, and soil stockpiling. These activities increase the potential for localized soil erosion and subsequent sedimentation to Spider Creek. The presence of exposed topsoil or disturbed vegetation during construction may also increase sediment runoff from stormwater, which may also have a short-term influence on turbidity in Spider Creek.

The restoration Project is not expected to result in any measureable change to stormwater drainage patterns, discharge rates, or locations because no structures or features (i.e.

impervious surfaces) would be created that would affect land surface elevations or surface drainage patterns. Once the Project is established, the quality of downstream stormwater runoff could improve as channel banks are stabilized.

An SWPPP would be developed prior to construction as part of the construction NPDES/SDS permit. Specific BMPs used for site stabilization and sediment control during Project construction would be identified in the SWPPP and detailed site plans.

Project construction methods and sequencing have been planned to minimize erosion potential and downstream sedimentation to the extent practicable. Stream restoration activities would be sequenced to limit the area of open soil disturbance during construction.

f. Hazardous Materials

This topic was addressed in EAW Item 12

During the construction phases of the restoration Project, fuels, oils, lubricants and other materials typical for use by earthmoving equipment would be used during construction. No other chemicals or hazardous materials would be needed for, or generated by this Project.

The contractor would be required to prepare a Spill Prevention and Response Plan to address accidental spills or the release of any hazardous material or petroleum products. To minimize the likelihood of spills and leaks of petroleum and hydraulic fluids during Project construction, equipment would be inspected daily for leaks and petroleum contamination, fuels for construction would be stored at staging areas away from Spider Creek and floodplain vegetation, and equipment refueling and maintenance would be done away from the stream and wetlands. In addition, the contractor would be required to utilize double-walled tanks or secondary containment for single-walled tanks to store petroleum products. Any bulk lubricants would also be stored with secondary containment protection. All petroleum and lubricant storage containers would be inspected on a weekly basis and the inspections would be documented.

g. Fish, Wildlife, and Plant Communities

This topic was addressed in EAW Item 13 and public comments A, K, and L

The Project site is located in a larger complex of open floodplains, emergent wetlands, scrub-shrub wetlands, forested wetlands, and forested uplands. Erosion and sediment control BMPs would be installed to prevent impacts from migrating off site.

Spider Creek is classified as a second order perennial stream in the Minnesota PWI. Spider Creek is currently listed as a Class 2A (cold water) stream. Fish and other aquatic species would experience increased stream turbidity as the new channel is connected to the streamflow of Spider Creek. Potential effects for wildlife include temporary loss of habitat due to excavation and construction. The fish community present in the channelized reach proposed for restoration includes many blacknose dace, creek chubs, Johnny darters, and

pearl dace, as well as several other species. All impacts to the fish community would be temporary and effects would be mitigated by the long-term result of an improved stream and riparian area.

To keep wildlife from entering areas where construction activities are occurring, wildlife friendly silt fence or exclusion fencing would be used. The area is likely used by commonly occurring species such as migratory songbirds; small mammals such as voles, mice, shrews; and medium to large mammals such as beavers, raccoons, opossum, white-tailed deer, bear, and gray wolves.

There are no anticipated effects on the Canada lynx and gray wolf, which are both long-ranging mammals with large home ranges that would not construct a den in a riparian and wetland habitat. The piping plover and rufa red knot are migratory bird species that occupy open, sparsely vegetated sandy areas, whereas the Project site is a well vegetated riparian area. In St. Louis County, both species are associated with Lake Superior and would not be expected inland at the Project site

Potential summer roosting and foraging habitat for the federally threatened northern long-eared bat may be present within the proposed Project area. Habitat for the northern long-eared bat can occur where there are trees measuring at least 3 inches in diameter at breast height with peeling bark or crevices. If tree clearing is needed during June or July, when bats may be roosting with young, a survey would be completed prior to any clearing.

Native plant communities expected to be present in the area would be those typical of the Tamarack Lowlands subsection of the Northern Minnesota Drift and Lake Plains section in the Laurentian Mixed Forest Province. Riparian vegetation consists of herbaceous plants and woody vegetation less than 20 feet tall, typical of a scrub-shrub and emergent floodplain habitat. The Project would have temporary negative effects to surrounding plant communities in upland areas within the Project area due to equipment and material staging.

Vegetation removal, including clearing of woody shrubs and trees, would be required to establish new stream meanders. Native vegetation on site would be retained to the extent practicable during construction, following the guidelines of the Minnesota Forest Resource Council for woody plant collection. No wood would be harvested within 50 feet of the restoration reach and shrub cuttings collected from live plants would be limited to that which would allow for continued growth of existing shrubs. All trees to be removed for the Project would be identified by an ecologist prior to clearing. If any eastern hemlocks are identified, they would be avoided. If they cannot be avoided, coordination with the DNR would be required.

Much of the floodplain within the Project area is currently dominated by reed canary grass (*Phalaris arundinacea*), an invasive species. The Project proposer is committed to ensuring that equipment brought onto the site is cleaned prior to entering the site to prevent introducing additional invasive species. All equipment used during construction would be pressure washed to remove soil or other debris before being transported to the Project site.

A population of western Jacob's-ladder has been identified along Spider Creek approximately 0.90 miles upstream of the Project area. This population occurs along the edge of a northern cedar swamp in a brushy riparian zone growing with sphagnum mosses. In this area, Spider Creek is a relatively undisturbed natural channel and the adjacent floodplain likely has natural hydrology. Suitable habitat for this species is not likely to occur within the Project area. Western Jacob's-ladder occurs in forested black-spruce, tamarack, or cedar swamps in areas with high groundwater table. The Project area is primarily open floodplain dominated by non-native grasses; the groundwater table has been lowered by previous channelization of Spider Creek. The area was previously used for agriculture and was highly disturbed. The wetland portions of the site would not be directly impacted during construction and tree removal would be minimal.

h. Visual

This topic was addressed in EAW Item 15.

Temporary visual impacts would include clearing, ground disturbance, and material stockpiling associated with the construction activities, as well as during the early establishment phases of the Project. The Project is proposed to occur in two phases. An added benefit of this phased approach is that construction activities would be limited to up to two months at a time, thereby minimizing on-going visual effects.

Disturbed areas would be seeded and/or planted with native species. It is anticipated that the re-meandering and re-vegetation efforts, as well as the improved stream function, would improve the visual quality of the stream over the long-term.

i. Air/Dust

This topic was addressed in EAW Item 16.

The Project would result in temporary, localized air quality impacts due to emissions from construction vehicles for two periods of up to two months during the construction phases, a total of up to four months. In order to reduce on-site emissions, efforts will be made to ensure that the selected contractor utilizes equipment that was purchased within the last 10 years.

Construction activities may create temporary dust and odors during daytime operations depending on site conditions. Affects associated with fugitive dust and any potential offensive odors are expected to be limited to the construction site. Fugitive dust impacts will be temporary and localized to the area along the linear stream corridor where the construction work is occurring. Additionally, the selected contractor will be required to implement dust control measures and other appropriate BMPs to minimize fugitive dust.

j. Noise

This topic was addressed in EAW Item 17.

The nearest sensitive receptor is a private residence, owned by the Spider Creek Hunting Association, located approximately 200 feet away from the Project boundary. An additional nearby dwelling is approximately 350 feet from the Project area. To minimize noise-related impacts, construction activities would be temporary and limited to daytime hours.

Construction noise is expected to be minimal and limited to the noise generated by construction equipment and workers accessing the Project. No change in long-term noise level is expected after completion of the restoration Project.

k. Cumulative Potential Effects

This topic was addressed in EAW Item 19

Cumulative potential environmental effects are the combined effects of the proposed Project and past, present, and reasonably foreseeable future Projects. *See* Minn R. 4410.0200, subp. 11a. There are no reasonably foreseeable Projects identified within the environmentally relevant area of the Project; therefore any cumulative potential effects are limited to those created by this Project.

Potential environmental effects associated with the Project that could combine to result in cumulative environmental effects have been identified as temporary disturbance or displacement of fish, wildlife and habitats, and disruption of plant communities due to tree and vegetation removal. While construction is in progress, water resources may be impacted by sedimentation, turbidity, and runoff. Air quality impacts from use of construction vehicles including noise and dust would also occur during construction.

Environmental effects resulting from the Project would be expected to be temporary in nature and minor. It is also anticipated that, following Project completion, the affected environment would benefit from restoration of a natural sustainable stream channel, maintenance of aquatic habitat, and restoration of the natural characteristics of the Spider Creek ecosystem. This would include re-establishing the natural meander pattern, feature distribution, and stream connectivity to the floodplain that would result in a more stable system with natural in-stream habitat.

11. The DNR requested and was granted by the Minnesota Environmental Quality Board (MEQB) a 15-day extension for making a decision on the need for an EIS. See Minn. R. 4410.1700, subp. 2b

12. The following permits and approvals would be needed for the Project:

Unit of government	Type of application	Status
St. Louis County	Wetland Conservation Act No Loss Application Land Alteration Permit Right-of-Way Permit	To be submitted To be submitted To be submitted
MDNR	Public Waters Work Permit Aquatic Management Area easement Dewatering Permit	To be submitted In progress To be submitted if needed
MPCA	NPDES/SDS Construction Stormwater General Permit	To be submitted
Minnesota State Historic Preservation Office (SHPO)	Archaeological and Cultural Resource Reviews (NHPA Section 106)	To be submitted
USACE	Clean Water Act Section 404 Permit	To be submitted
MPCA	Clean Water Act Section 401 Certification	Approved January 21, 2014 and amended May 29, 2015

CONCLUSIONS

1. The Minnesota Environmental Review Program Rules, Minnesota Rules part 4410.1700, subparts 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.

   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 the Findings of Fact above, the DNR concludes that the following types of potential environmental effects, as described in the Finding of Facts, will be limited in extent, temporary, or reversible:

Project Construction
Cover Types
Land Use
Soils
Water Resources
Hazardous Materials
Fish, Wildlife, and Plant Communities
Visual
Air/Dust
Noise
Cumulative Potential Effects

Based on the Findings of Fact above, the DNR concludes the following topics of potential environmental effects of the Project, as described in Findings No. 10a through 10k would be beneficial:

- Restore the natural characteristics of the stream ecosystem, appropriate for this landscape and watershed.
- Restore groundwater connectivity of the system, improving baseflow conditions for aquatic habitat.
- Reduce peak flow velocities through more effective floodplain connectivity and reduced channel slope.
- Restore a sustainable stream channel that maintains its form without aggradation or degradation and moves its bedload during high flow events.
- Reconnect the channel to the surrounding floodplain.
- Reduce sediment loading by stabilizing bank erosion and vertical down-cutting.
- Increase in fish, waterfowl and reptile/amphibian habitat in the floodplain and adjacent plant communities, where the natural hydrology would be restored.

Overall, re-establishing the natural meander pattern, feature distribution, and stream connectivity to the floodplain would result in a more stable system with natural in-stream habitat

3. *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.

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

Based on the Findings of Fact above, the DNR concludes that the cumulative potential environmental effects associated with the proposed project consist of a disturbance or displacement of fish, wildlife and habitats; disruption of plant communities; a water resource impact resulting in sedimentation, turbidity, and runoff; and air quality impacts of noise and dust. Overall potential environmental effects would be expected to be minimal and temporary and it is anticipated that the affected environment would benefit from the restoration.

The DNR concludes that the cumulative potential environmental effects, as described above, are not significant because there are no there are no known future projects identified within the geographic scale and timeframe of the proposed project and associated environmental effects that would contribute to the cumulative potential effect. The Project proposes construction methods and sequencing that will minimize erosion and sedimentation, the long-term result of an improved stream and riparian area will mitigate impact on fish and wildlife. The Project proposer is committed to using wildlife friendly fencing to minimize disturbance of wildlife in construction area, completing a tree survey, and following Minnesota guidelines to minimize disruption of habitat. The Project proposer has committed to mitigation measures and BMPs for noise and dust.

4. *Extent to which environmental effects are subject to mitigation by ongoing public regulatory authority*.

Based on the information in the EAW and Findings of Fact above, the DNR concludes that the following potential environmental effects, as described in Findings of Fact paragraphs 10a through 10k would be subject to mitigation by ongoing public regulatory authority:

The effects of Project Construction are subject to public regulatory authority under St. Louis County Land Alteration and Right-of-Way Permits.

The effects on Water Resources (public waters) are subject to public regulatory authority under DNR Public Waters Work permit; USACE Clean Water Act (CWA) § 404 permit and MPCA CWA § 401 and NPDES/SDS Construction Stormwater permit.

Environmental effects from spills or releases of hazardous materials are subject to ongoing public regulatory authority under the MPCA Hazardous Waste Rules. *See* Minn. R. 7045. For spills that may cause pollution of waters of the state, these are subject to the reporting requirements of Minn. Statutes §115.061. The proposer commits to providing spill kits for use in emergency situations.

Noise emissions are subject to the ongoing public regulatory authority under the MPCA's Noise Rules. *See* Minn. R. 7030.

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 environmental studies assist in the anticipation and controlling of potential environmental effects:

   Rosgen, D. 2014. River Morphology & Applications, Fort Collins, CO: Wildland Hydrology.

   Minnesota Department of Natural Resources (DNR), "Geomorphology: Minnesota Regional Curve Information". Retrieved from http://www.dnr.state.mn.us/eco/streamhab/geomorphology/index.html.

   Federal Highway Administration (FHWA), 2010. Culvert Design for Aquatic Organism Passage, Hydraulic Engineering Circular No. 26, First Edition, Publication No. FHWA-HIF-11-008.

   U.S. Army Corps of Engineers (USACE), 1987. Corps of Engineers Wetland Delineation Manual: U.S. Army Corps of Engineers, Environmental Laboratory. Technical Report Y-87-1.

   U.S. Army Corps of Engineers (USACE), 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0).

   U.S. Army Corps of Engineers (USACE), 2015. Public Notice: Guidance for Submittal of Delineation Report to the St. Paul District Army Corps of Engineers and Wetland Conservation Act Local Governmental Units in Minnesota, Version 2.0, March 4, 2015.

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 U.S. Steel Spider Creek Stream Restoration Project in St. Louis County, Minnesota.

Based on consideration of the criteria and factors specified in the Minnesota Environmental Review Program Rules (Minnesota Rules part 4410.1700, subparts 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 the proposed U.S. Steel Spider Creek Stream 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 U.S. Steel Spider Creek Stream Restoration Project

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 28th day of September, 2017

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

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Barb Naramore
Assistant Commissioner