APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 24, 2014

B. ST PAUL, MN DISTRICT OFFICE, FILE NAME, AND NUMBER: Hibbing Taconite Company, 2014-00396-DWW, Group 5

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Minnesota County/parish/borough: St. Louis & Itasca City: Hibbing

Center coordinates of site (lat/long in degree decimal format): Lat. 47.43682° **N**, Long. -93066507° **W**.

Universal Transverse Mercator: 15

Name of nearest waterbody: Unnamed tributary to Rock Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Mississippi River

Name of watershed or Hydrologic Unit Code (HUC): Prairie-Willow, Minnesota (07010103)

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: March 13, 2014

☒ Field Determination. Date(s): October 23, 2012 with TH OP-R staff

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      - ☐ TNWs, including territorial seas
      - ☐ Wetlands adjacent to TNWs
      - ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      - ☐ Non-RPWs that flow directly or indirectly into TNWs
      - ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      - ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      - ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      - ☐ Impoundments of jurisdictional waters
      - ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: (W32=70.13 + W33=0.79 + W34=1.69) = 72.61 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.

[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: .

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 35.5 **square miles**
   Drainage area: approx. 2.3 **square miles**
   Average annual rainfall: 25.3 inches
   Average annual snowfall: 60.3 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **4** tributaries before entering TNW.

   Project waters are **30 (or more)** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **25-30** aerial (straight) miles from TNW.

[3] Supporting documentation is presented in Section III.F.
[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: The unnamed tributary flows north and northwest 2.74 miles into Shafer Lake (surface area of 54.0 acres). The lake outlets into an unnamed tributary that flows north 1.42 miles before connecting with Rock Creek. The section of Rock Creek flows 0.40 mile to the northwest into the East River, which then flows directly west 13.29 miles and connects to the Prairie River. The Prairie River flows 10.58 miles and connects to Crooked Lake (surface area of 418 acres). The lake outlets into the Prairie River that flows 2.0 miles into Lawrence Lake and Lower Lawrence Lake (combined surface area of 588.66 acres). Lower Lawrence Lake outlets into the Prairie River that flows another 18.5 miles and connects to Prairie Lake (surface area of 1,167.85 acres). The lake outlets into the Prairie River and flows a final 10.7 miles, until it ultimately connects to the Mississippi River, a Navigable Water of the United States (TNW). The confluence of the Prairie River and the Mississippi River is near the town of La Prairie and Grand Rapids, Minnesota.
Tributary stream order, if known: First.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 10.95 feet
Average depth: 3 feet
Average side slopes: **3:1**.

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Natural erosion.
Presence of run/riffle/pool complexes. Explain: Unknown.
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 1.0 %

(c) Flow:
Tributary provides for: **Perennial**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: The unnamed tributary has a natural bed and bank, and is identified as perennial in the National Hydrograph Data set (NHD). The perennial flow is evident from aerial photographs within the past 10 years. This flow has not been altered by dams or diversion berms, and would ultimately connect downstream with another unnamed tributary. The drainage area for this review area and unnamed tributary was approximated to be 2.3 square miles at the confluence of the other perennial water.
Other information on duration and volume: The unnamed tributary is part of the longest perennial tributary system in the 22,726-acre watershed. The volume of water in the unnamed tributary would be greatest in early spring and summer months with a draw down in later summer and fall. Stream flow data was not collected during the field visit.

Surface flow is: **Discrete and confined**. Characteristics: The unnamed tributary has natural meanders and small bends throughout the 2.17 mile relevant reach with an average depth of 3 feet.

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Subsurface flow: **Unknown**. Explain findings: The local groundwater divides would underlie and approximately coincide with topographic highs and generally delineate local groundwater flow systems. The bedrock and low permeability till could disrupt the flow through surficial deposits in some areas. The groundwater drainage roughly would mimic surface water drainage, and would locally be directed towards nearby surface water features (unnamed tributary) with relatively short flow paths. The groundwater movement would be expected to be towards the remaining wetlands and the unnamed tributaries.

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☒ Bed and banks

☒ OHWM[6] (check all indicators that apply):

- ☐ clear, natural line impressed on the bank
- ☐ changes in the character of soil
- ☐ shelving
- ☐ vegetation matted down, bent, or absent
- ☐ leaf litter disturbed or washed away
- ☐ sediment deposition
- ☐ water staining
- ☐ other (list):
- ☐ the presence of litter and debris
- ☐ destruction of terrestrial vegetation
- ☐ the presence of wrack line
- ☐ sediment sorting
- ☐ scour
- ☒ multiple observed or predicted flow events
- ☐ abrupt change in plant community

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:

- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:

- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: No chemical data was collected within the relevant reach.

Identify specific pollutants, if known: No specific pollutants is known for the unnamed tributary.

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): Emergent, forested, and shrub-carr wetlands abut a large portion of the relevant reach.

☒ Wetland fringe. Characteristics: Emergent, forested, and shrub-carr wetlands abut a large portion of the relevant reach.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☒ Fish/spawn areas. Explain findings: No fish species are present in the MNDNR lake information search for Shafer Lake.

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: No macroinvertebrate habitat assessment was completed within the relevant reach.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: Within the review area: W32 (70.13); W33 (0.79); and W34 (1.69)acres

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

[7]Ibid.

Wetland type. Explain: W32, W33, and W34 are Type 7 (PFO1CPFOB/PFO1A) hardwood swamp and coniferous wetlands. W32 vegetation is dominated by green ash, sensitive fern, fox sedge, northern bedstraw, sphagnum moss, red maple, and marsh marigold. W33 vegetation is dominated by balsam fir, speckled alder, interrupted fern, and sphagnum moss. W34 vegetation is dominated by green ash, quaking aspen, sensitive fern, broom sedge, and Canada bluejoint grass.

Wetland quality. Explain: High. Intact with relatively little disturbance from mine activity from the east and south. The adjacent logging roads/paths would have minimal adverse impacts on the hydrologic function and value of the wetlands. The wetland functions for W32, W33, and W34 would include: vegetative diversity/integrity; flood attenuation; downstream water quality; wetland water quality; and characteristic wildlife habitat structure.

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: The wetlands would contribute surface flow to the unnamed tributary during storm events and after snow melt in early to late spring. The wetlands have high saturation with surface water during the normal growing season.

Surface flow is**: Confined**

Characteristics: The flow would be confined to culverts under logging roads/paths and an abandoned drainage ditch.

Subsurface flow: **Unknown**. Explain findings: There has been no formal investigation of the subsurface flow from the wetlands.

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: The wetlands have a hydrologic surface connection to a non-jurisdictional abandoned county road ditch that is approximately 800 linear feet in length with a rock bottom and a relatively steep grade. The ditch connects to another large wetland complex that flows west through a series of beaver dams, and a couple of finger swales that fan out and have discrete flow for approximately 0.79-mile before connecting to the unnamed tributary.

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **30 (or more)** river miles from TNW.

Project waters are **30 (or more)** aerial (straight) miles from TNW.

Flow is from: **Wetland to/from navigable waters.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Visual inspections of the water in the wetlands provided no obvious indications of water quality impairments (surface water in the wetland appeared to be clear).

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): .

☒ Vegetation type/percent cover. Explain: W32 vegetation is dominated by green ash, sensitive fern, fox sedge, northern bedstraw, sphagnum moss, red maple, and marsh marigold. W33 vegetation is dominated by balsam fir, speckled alder, interrupted fern, and sphagnum moss. W34 vegetation is dominated by green ash, quaking aspen, sensitive fern, broom sedge, and Canada bluejoint grass. The

percent cover of each type of vegetation varies throughout the wetlands, but dominated by the vegetation listed.

- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **3**

Approximately (192.61) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

See discussion below.

Summarize overall biological, chemical and physical functions being performed: The district has determined, based on a 2012 wetland delineation and National Wetland Inventory, that there are 192.61 acres of wetlands adjacent to the beginning relevant reach; including those within the review area. There are 72.61 acres of wetlands that could be considered one wetland complex (W32, W33, W34) and there are approximately 120 acres of wetland that is also considered to be one wetland complex downstream and outside of the project review area that has not been delineated. The wetland types in the two above wetland complexes would be Type 7 (PFO1CPFOB/PFO1A) hardwood swamp and coniferous wetlands.

For permit to mine boundary purposes: W32, W33, and W34 connect to a non-jurisdictional abandoned road ditch via a small 8" diameter culvert/pipe under a logging road. The pipe was in good structural condition during the field visit on Oct. 23, 2012, with the authorized agent and mine staff. Based on the condition and capacity of the culvert, water has the potential to pass through the culvert from the wetland complex and connect to the ditch. The ditch is approximately 800 linear feet in length, has a narrow bed and bank, with rock sides and bottom, with a relatively steep grade, and connects downgrade with an approximate 120-acre wetland that has not been delineated. Note: the logging road does not sever the connection to the ditch.

The water would flow west from the abandoned county road through a series of beaver dams and then a couple of finger swales that fan out and flow 0.79-mile before connecting with an unnamed tributary. This large wetland complex has the capacity to carry water, nutrients, and pollutants to the unnamed tributary. Note also: the abandoned county road (that runs north and south) does not sever the connection between the approximate 120-acre wetland complex.

As discussed in the preceding section of the JD, the entire drainage area and wetlands within it that are adjacent to the unnamed tributary exist in a mostly undisturbed condition. The district OP-R staff has qualitatively assessed the functions these wetlands provide and concluded that the wetlands outside the review area would be rated exceptional or high for the suite of functions previously identified.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The overall unnamed tributary system and its adjacent wetlands has the capacity to carry nutrients and pollutants downstream and have a cumulative effect on the TNW. The review area contains 72.61 acres of wetlands within the headwaters of the relevant reach of the tributary system that could be subject to hard rock mining activities. It is estimated that an additional 120 acres of wetlands that were not evaluated and/or delineated for this review are adjacent to the relevant reach. The surrounding land use would deliver nutrients and a larger percentage of pollutants into the wetlands within the relevant reach because of the surrounding mining activity. The wetlands, therefore in the overall relevant reach, provide assimilation and uptake of nutrients and pollutants, and provide stormwater treatment functions as well as water quality functions. The vegetative types of the wetlands outside of Group 5 would consist mostly of shrub-carr and forested wetlands that would provide vegetative cover which attributes to better water quality and maintenance of the hydrologic regime; absence of these wetlands could potentially carry increased flows of overland and stormwater runoff from the mining areas resulting in increased nutrient and pollutant loading to the Mississippi River. Therefore, it has been determined that the unnamed tributary system and its adjacent wetlands have a significant nexus to the Mississippi River, a TNW. The first order stream provides the following functions to the TNW: helps to maintain base flow; transports nutrients, pollutants, organic carbon, and aquatic organisms; and mitigates the effects of flooding by reducing peak flow following snow melt and large precipitation events. The 192.61 acres of wetlands (overall) located adjacent to the relevant reach of the tributary are estimated to provide medium to high functions, which helps maintain the physical, biological, and chemical integrity of the Mississippi River. These wetlands provide the following important functions: they receive and transport downstream ecosystems a large amount of detrital energy (organic carbon); retain and transform nutrients that enter both laterally (runoff) and longitudinally (upstream); intercept storm runoff and snow melt, which changes sharp runoff peaks to slower discharges over longer amounts of time; help maintain base flow within the stream system; and

provide habitat for species that rely on wetlands during their lifecycles. The combined functions that the wetlands within the relevant reach provide along with the functions and flow provided by the tributary results in a significant nexus to the Mississippi River, a TNW.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: **72.61** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

[8]See Footnote # 3.

7. **Impoundments of jurisdictional waters.**[9]
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Barr Engineering, Hibbing Taconite Company.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☐ U.S. Geological Survey map(s). Cite scale & quad name: .
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: Minnesota NWI 2008.
☒ State/Local wetland inventory map(s): Minnesota Department of Natural Resources PWI 2008.
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Arc Map aerial imagery 2012.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☒ Applicable/supporting case law: Regulatory Guidance for Significant Nexus.
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): We completed an approved JD in December 2013 for a review area that included approximately 51.05 acres of wetlands (W21a, W21b, W23, W23a, and W24) that were adjacent to the same relevant reach under consideration for this determination. Those wetlands were determined to have a significant nexus to the Mississippi River, a TNW.

B. ADDITIONAL COMMENTS TO SUPPORT JD: These conclusions are based on field visits in fall of 2012 to determine hydrologic connections, the information within the Barr Engineering wetland delineation for the wetlands in Group 5 review area, and desktop information from topography mapping and Lidar imaging.

The wetland boundaries for W32, W33, and W34 have been created from field surveys and desktop resources; and the lengths of the reviewed ditches and waterways have been approximated with tools from GIS Arcmap 10.1. The wetland boundaries outside the review area have been created from field surveys and approximated with NWI mapping. The lake dimensions were taken from the Minnesota Department of Natural Resources website with the lake information reports.

Additional information on function and value for W32 (70.13 acres), W33 (0.79-acre), and W34 (1.69 acres):

1) The wetlands are in close proximity to potential sources of waterborne contaminants and are more likely to have an opportunity for sediment/toxicant retention. a) The shallowness of the wetlands are more likely to retain sediments and toxicants than are deep wetlands; shallow wetlands offer greater frictional resistance, both directly and as a result of their favoring rooted vegetation, thus the resultant velocity reduction favors sedimentation. b) The wetlands have a greater average width of emergent, scrub-shrub, or forest vegetation and are more likely to retain sediment and associated toxicants than where vegetation is narrow. c) The wetlands muddy and organic substrates are likely to have a higher potential for, and be indicators of, sediment trapping. d) The wetlands would have predominantly lower water velocities during annual peak flows are more likely to retain sediments and toxicants than are those with rapid flow.

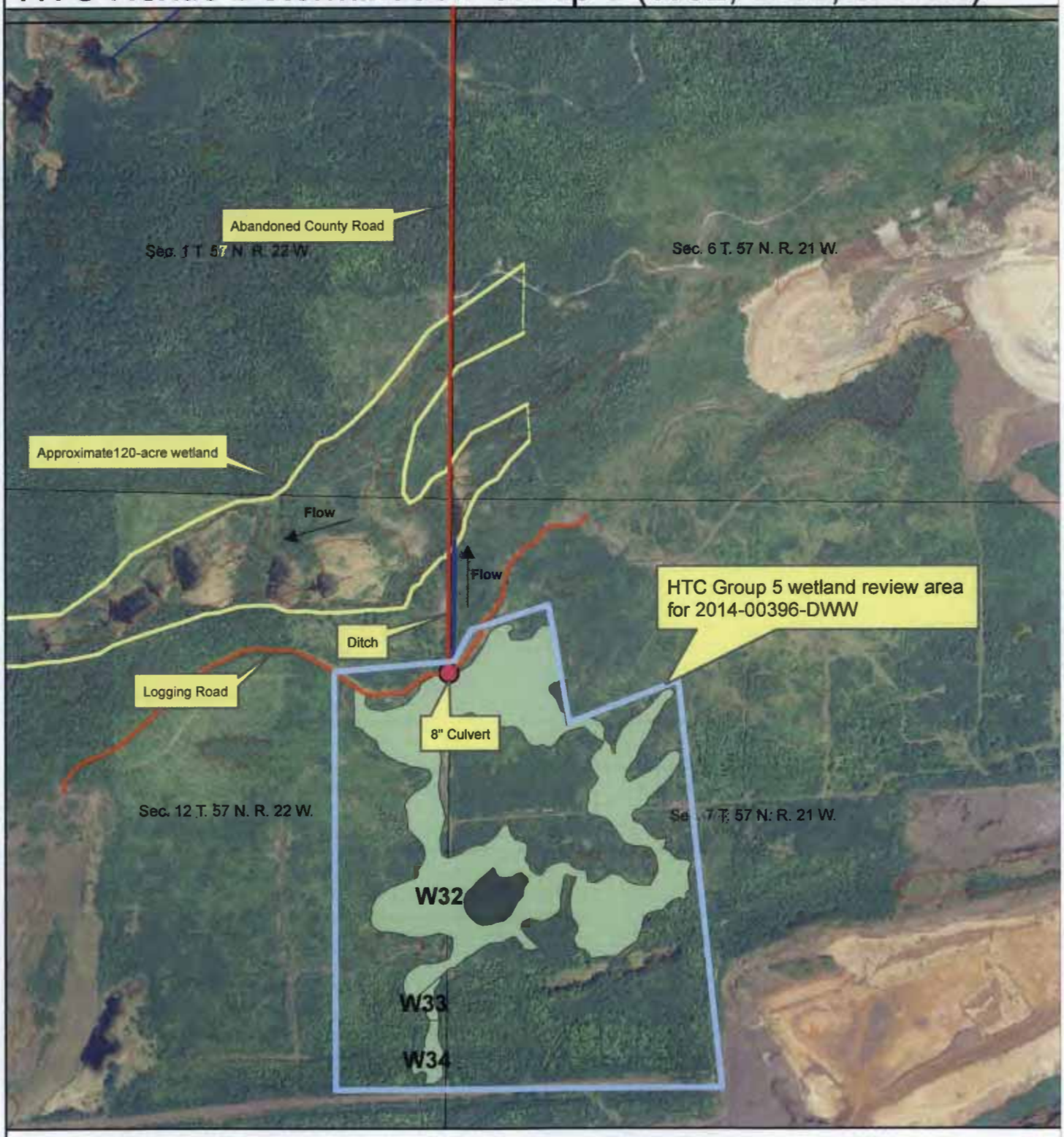
2) The wetlands position and vegetative composition in the landscape are more likely to have an opportunity for retention and nutrient transformation. a) The wetlands have gradual gradients and are more likely to retain or transform nutrients than those with steep gradients. The slower water velocities increases the retention time for nutrients; the more gradual the wetland gradient, the greater potential for retention of sediment-adsorbed nutrients by burial. b) The wetlands with predominantly forested, scrub-

shrub, or persistent emergent vegetative cover are more likely to remove or transform nutrients. The wetlands vegetation may retain nutrients on a long-term basis in woody tissues, which includes seasonally nutrient uptake in the spring and summer during the growing season.

3) The wetlands with predominantly fine mineral sediments or those sediments containing high levels of aluminum or iron are more likely to remove or transform nutrients. These wetlands would be able to remove phosphorus and nitrogen before reaching downstream waters.

4) The hardwood swamps are forested wetlands dominated by deciduous lowland hardwoods with soils that are saturated during much of the growing season, and may be temporarily inundated by as much as a foot of standing water. They are usually associated with ancient lake basins and retired riverine oxbows. Wooded swamps include the northern wet-mesic forest. Wooded swamps provide numerous important functions. Multiple strata (e.g., tree, sapling, shrub, vine, herbaceous) provide a high diversity of habitats for a wide range of wildlife species including white-tailed deer, furbearers, songbirds, ruffed grouse, barred owl, and amphibians. The flora is also diverse and reflects the water regime, soil/water chemistry and microtopography present. Habitat for threatened or endangered species is provided by some wooded swamps.

HTC Nexus Determination Group 5 (W32, W33, & W34)



0 650 1,300 2,600 Feet

Corps of Engineers Nexus Determination 2014-00396-DWW

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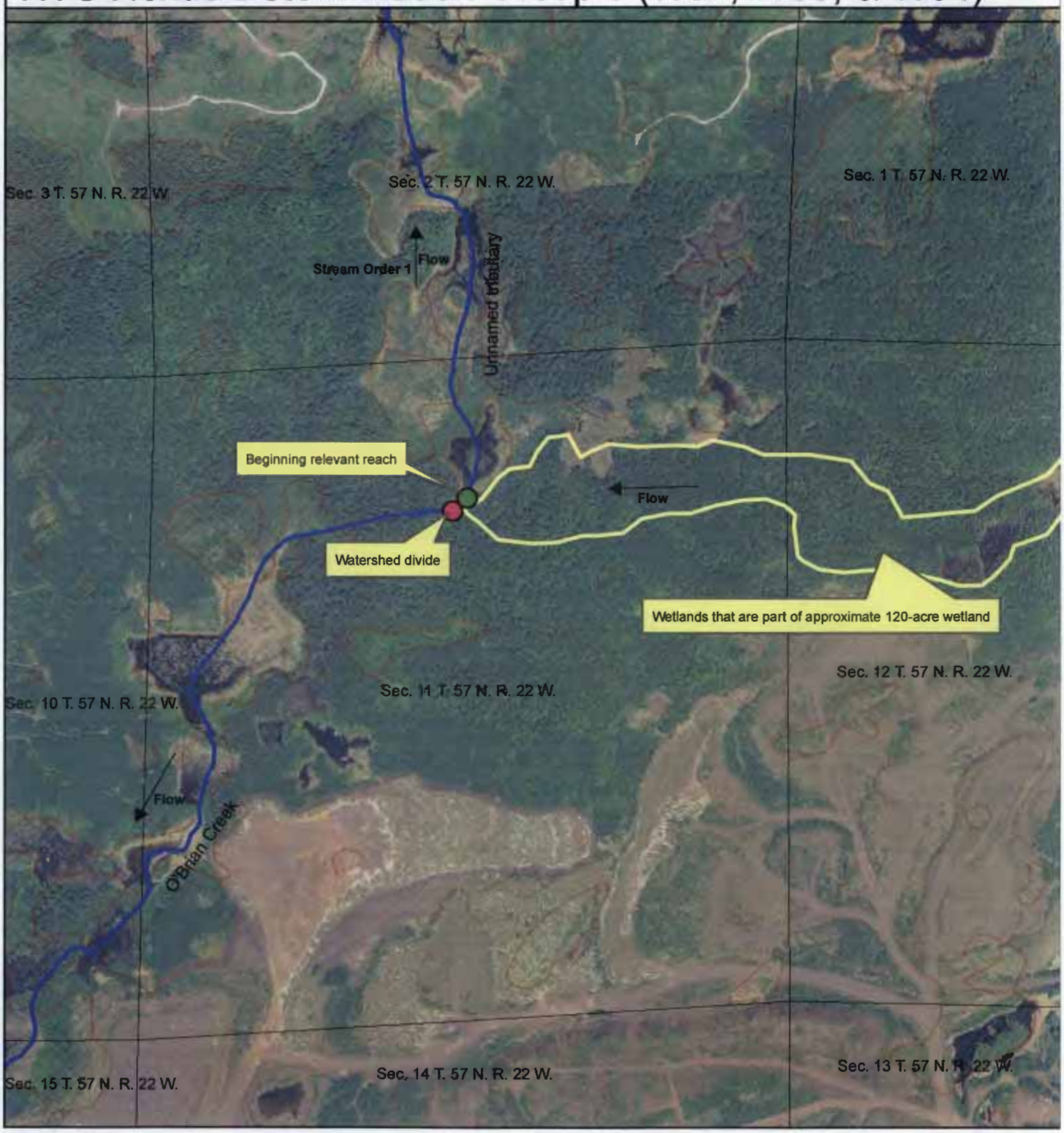
HTC Nexus Determination Group 5 (W32, W33, & W34)



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