

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): December 12, 2013

B. ST PAUL, MN DISTRICT OFFICE, FILE NAME, AND NUMBER: Hibbing Taconite Company, 2008-02566-DWW, Area 5

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Minnesota County/parish/borough: St. Louis County City: Hibbing
Center coordinates of site (lat/long in degree decimal format): Lat. 47.530891° N, Long. -92.983053° W.
Universal Transverse Mercator: 15

Name of nearest waterbody: unnamed tributary to Day Lake

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); Little Fork, Minnesota (09030005)

- 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 18, 2013
 Field Determination. Date(s): October 24, 2012 with St. Paul 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 waters² (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: W-38 and W-39 = 8.31 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

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).

Elevation of established OHWM (if known): .

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 waterbody⁴ 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: 42.1 square miles
Drainage area: 1.6 approx 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 3 tributaries before entering TNW.

Project waters are 30 (or more) river 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)** river miles from RPW.
Project waters are **30 (or more)** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW⁵: The unnamed tributary flows into Day Lake with a surface area of 126.88 acres. The lake outlets to the north into Day Brook, which flows 28.15 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 Prairie River outlets from the lake and flows 2.0 miles into Lawrence Lake and Lower Lawrence Lake (combined surface area of 588.66 acres). The Prairie River outlets from Lower Lawrence Lake and flows 18.5 miles and connects to Prairie Lake (surface area of 1,167.86 acres). The Prairie River outlets from the lake and flows 10.7 miles and connects to the Mississippi River. The Mississippi River is a Navigable water of the United States (TNW). The confluence of the Prairie River and Mississippi River is near the town of La Prairie and Grand Rapids.

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: **The unnamed tributary may have been channelized/straightened on the south side of Day Brook Road for mine dewatering purposes.**

Tributary properties with respect to top of bank (estimate):

Average width: **16** feet
Average depth: **3** feet
Average side slopes: **3:1**.

Primary tributary substrate composition (check all that apply):

<input checked="" type="checkbox"/> Silts	<input checked="" type="checkbox"/> Sands	<input type="checkbox"/> Concrete
<input type="checkbox"/> Cobbles	<input type="checkbox"/> Gravel	<input checked="" type="checkbox"/> Muck
<input type="checkbox"/> Bedrock	<input type="checkbox"/> Vegetation. Type/% cover:	
<input type="checkbox"/> 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 flow in the tributary seems to be continuous throughout the year. The flow has not been altered by dams or diversion berms. The flow may be contributed by recharge events from the adjacent wetlands that would be saturated throughout most of the year and overland flow from adjacent uplands; drainage area has been estimated to 1.6 square miles.**

Other information on duration and volume: **The tributary flows through a large shallow marsh and shrub wetland complex that are inundated and saturated throughout most of the growing season. These wetlands would contribute to longer periods of annual flow in the tributary. The wetlands would naturally capture and release water from overland flow to the tributary during storm events throughout the growing season. There is sufficient hydraulic energy to carry sediments downstream into the eastern inlet of Day Lake.**

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.

Surface flow is: **Discrete and confined**. Characteristics: The unnamed tributary has meandering characteristics with defined bed and banks and can be viewed on aerial imaging.

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 with relatively short flow paths. The groundwater movement would be expected to be towards the remaining wetlands and the unnamed tributary.

Dye (or other) test performed: .

Tributary has (check all that apply):

- Bed and banks
 - OHWM⁶ (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: The turbidity in the unnamed tributary is expected to be minimal because of the large buffer area along the length of the corridor and its distance from land disturbance and/or land clearing activities. The water quality for this tributary has not been formally assessed with the MPCA, but is expected to be similar to and/or comparable to the 1996 NPDES/SDS permit limits for the mine facility and the Hibbing Taconite tailings basin (upstream 0.67-mile) at the mine site, which include: a pH not less than 6.5 and no greater than 8.5; TSS monthly avg. 20mg/L, daily max. 30mb/L; and dissolved iron monthly avg. 1.0mg/L, daily max. 2.0mg/L. There was no water quality data available for Day Lake.

Identify specific pollutants, if known: Not known.

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

Riparian corridor. Characteristics (type, average width): The unnamed tributary is buffered by shallow marsh and a scrub-shrub riparian corridor that varies in width ranging from 50 linear feet up to 500 linear feet throughout its length. The riparian corridor boundary was not outlined/delineated for this review, but can be easily seen on aerial photos. The approximate wetland area adjacent to the relevant reach is 316.7 acres. The riparian corridor's wetland vegetation is dense, which would most likely affect (reduce) the average daily temperature of the unnamed tributary.

Wetland fringe. Characteristics: .

⁶A 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.

⁷Ibid.

Habitat for:

Federally Listed species. Explain findings: .

Fish/spawn areas. Explain findings: The MnDNR surveyed the fish populations of Day Lake in 1989, collecting 18 total species; five of these species included: walleye, northern pike, crappie, bluegill, and yellow perch. It is unknown if fish populations have the ability to swim upstream in the unnamed tributary that flows into Day Lake and/or what fish species still thrive.

Other environmentally-sensitive species. Explain findings: The wetlands are adjacent to unnamed tributary that flows into Day Lake. The outlet of Day Lake is Day Brook, which is a riverine system that flows 28.15 miles and connects to the Prairie River. According to a 2011 Wild Rice Survey for Hibbing Taconite Company, there have been at least 17 locations of wild rice stands documented along the Day Brook system. Approximately 60% of the documented locations had a coverage of wild rice that were less than 10%; no vegetation data had been previously recorded for the waterway.

Aquatic/wildlife diversity. Explain findings: .

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: W38 (6.40 acres) and W39 (1.91 acres) for a total of 8.31 acres

Wetland type. Explain: W38 is a 6.40-acre, Type 6,7 (PFO/SSB) hardwood swamp and alder thicket wetland located in the southwest portion of Area 5. Vegetation in this wetland is dominated by Canada bluejoint grass, quaking aspen, black spruce, tamarack, and speckled alder. W39 is a 1.91-acre, Type 6 (PSSB) shrub swamp wetland located in the central portion of Area 5. Vegetation in this wetland is dominated by Canada bluejoint grass, quaking aspen, and black ash.

Wetland quality. Explain: W38 and W39 would be qualitatively assigned a medium to high functional rating with respect to maintenance of characteristic vegetative diversity/integrity. This is mainly attributable to the absence of continual disturbances/alterations that significantly affect the function of the wetlands. The additional wetland functions for these wetlands would include the following: 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 western three-fourths of Area 5 drains west into Day Brook. W38 and W39 would be hydraulically connected with overland flow events, which would reach the unnamed tributary. These intermittent flows would be the result of above average precipitation during the growing season and large snowmelts during the spring season.

Surface flow is: **Discrete and confined**

Characteristics: The flow would be sheetflow across the wetlands, which then outlets into and through a more confined drainage point with visible drainage pattern downslope to the unnamed tributary. The surface flow characteristics would be best described as seasonal and intermittent with saturated soils at the surface during the growing season.

Subsurface flow: **Unknown**. Explain findings: There has been no formal investigation of the subsurface flow from the wetlands. It would be estimated that the groundwater would be directed towards nearby surface water features such as the unnamed tributary to the west.

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

The wetlands are adjacent to two (2) natural drainage features that are 600 linear feet in length that cross a wooded area that connect to a 316.7-acre wetland complex outside the review area. The wetland complex directly abuts an unnamed tributary that flows to the north and then west 1.05 before connecting to Day Lake.

- 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 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: **The chemical characteristics of the wetlands were not directly assessed.**

Identify specific pollutants, if known: **Sediment deposition from land clearing activities (indirect water quality impairments).**

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

- Riparian buffer. Characteristics (type, average width): .
- Vegetation type/percent cover. Explain: **W38 is a 6.40-acre, Type 6,7 (PFO/SSB) hardwood swamp and alder thicket; and W39 is a 1.91-acre, Type 6 (PSSB) shrub swamp wetland.**
- 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 (**118.31**) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
W-38 - N	6.40		
W-39 - N	1.91		
W-40 - Y	316.7		

See discussion below.

Summarize overall biological, chemical and physical functions being performed: **The district has determined, based on a 2008 wetland delineation and Minnesota National Wetland Inventory, that there are 325.01 acres of wetlands adjacent to the relevant reach, including those within the review area. The wetland types (overall) would be Type 7/6/2 (PFO/SS/EMB) hardwood swamp, shrub swamp, and wet meadow wetland.**

For permit to mine boundary purposes: W38 (6.4); and W39 (1.91) are adjacent to two (2) natural drainage features that are 600 linear feet in length that cross a wooded area that connect to a 316.7-acre wetland complex outside the review area. The wetland complex directly abuts an unnamed tributary that flows to the north and then west 1.05-mile before connecting to Day Lake.

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: **The overall unnamed tributary system has the capacity to carry nutrients and pollutants downstream and have a cumulatively affect to the TNW. The review area contains 8.31 acres of wetlands within the headwaters of the relevant reach of the tributary system that would be subject to hard rock mining activities (borrow area for mining projects). Based on a review of the NWI map for Minnesota, it is estimated that an additional 316.7 acres of wetlands that were not evaluated and/or delineated for this review are located on the lower portion of the relevant reach of this tributary system. These wetlands are upstream of Day Lake and could also receive direct overland flow, and stormwater and spring runoff as the primary source of hydrology. The surrounding land use would deliver nutrients and pollutants into these wetlands within the releveant reach. These 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 vegetation types in the wetlands outside of review Area 5 would consist mostly of shrub-carr and shallow marsh 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.**

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:

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-RPWs⁸ 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **8.31** 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.

⁸See 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 for Hibbing Taconite Company.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur 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.

- 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 Geodetic 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):

B. ADDITIONAL COMMENTS TO SUPPORT JD: These conclusions are based on the October 24, 2012, field visit to determine hydrologic connections, the information within the Barr Engineering wetland delineation for the wetlands in review Area 5, and desktop information from topography mapping and Lidar imaging.

The wetlands in review Area 5 include W38 (6.40 acres) and W39 (1.91 acres). The wetland boundaries 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 approximated with NWI and topography maps. The lake dimensions were taken from the Minnesota Department of Natural Resources website with the lake information reports)

The unnamed tributary has natural erosion from adjacent upland areas. The lower portion of relevant reach meanders through extensive lowland vegetation, minerotrophic shrub swamp, and open shallow marsh complexes before emptying into Day Lake. This open water feature would have continuous/yearly flow that pushes sediments downstream throughout the year; sediments could deposit adjacent to the flow and provide areas for riparian vegetation to establish and grow.

Additional information on function and value for the wetlands in review Area 5:

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 and 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 from downstream waters.

4) The shrub-carr swamps are wetland plant communities dominated by woody vegetation less than 20 feet in height and with a dbh of less than 6 inches. Plant communities are composed of tall, deciduous shrubs growing on saturated to seasonally flooded soils. Dominant shrubs are typically willows, red-osier dogwood, silky dogwood or gray dogwood. Groundlayer species include some of the ferns, forbs, grasses, and sedges of sedge meadow and fresh (wet) meadow communities. The diversity of ground layer species is dependent upon the degree of shrub canopy cover, degree of disturbance, water source and other factors. For example, disturbed shrub-carrs may have a ground layer dominated by reed canary grass, an invasive species.

5) Relatively undisturbed shrub-carrs, like the wetlands within the relevant reach, can have a high diversity of groundlayer species. Shrub-carrs are common both north and south of the vegetative tension zone. Artificial drainage and fire suppression are two factors that promote succession of inland fresh meadow communities to shrub-carr communities. Shrub-carr swamps are an important habitat for many songbirds, ruffed grouse, American woodcock and small mammals.

6) 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.

It was determined that W35, W36, W37, W40, W41, W42, and W43 within Area 5 are not waters of the United States and are not subject to Corps jurisdiction (jurisdictional determination response letter dated February 26, 2013).