

November 25, 2013

Wisconsin Department of Natural Resources ATTN: Larry Lynch 101 South Webster Street PO Box 7921 Madison, WI 53707-7921

Dear Mr. Lynch:

Re: Bulk Sample Plan

Response to Comments dated August 13, 2013

Wisconsin Statutes 295.45

This letter serves to reply to your comments dated August 13, 2013.

The Bulk Sample plan has been revised to include a variety of changes, many resulting in a smaller footprint for the project. The revisions include the following:

- 1) Bulk Sample Site 1 has been modified to show a truck turning area.
- 2) Bulk Sample Site 2 has been modified to reduce the footprint of the activity.
- 3) Bulk Sample Site 5 has been modified to propose the sample collection from the existing access road. This alleviates the need to relocate the road and provides a smaller disturbance.
- 4) Bulk Sample Site 3A and Bulk Sample Site 4 have been removed from the Bulk Sample Plan. The grunerite issue has been the subject of a media debate and the removal of these areas leaves the debate to be resolved by the systematic and scientific study of the issue that will be required within the permit application. Our position remains that asbestiform material is unlikely to be present in the reserve, but will defer to a proven and methodical approach to address the potential of asbestiform materials in the future mining permit application.
- 5) Archeological Review has been included within the Stormwater Application. A Phase I review has been performed on the site. The new disturbance area of Access Road 6 and the Bulk Sample Sites were reviewed for historic content. The field review of the new disturbance for Access Road 6 as well as the Bulk Sample sites indicate that no historic artifacts were discovered. In the area of the Tyler Forks Mine, it is proposed to place road fabric and commercial gravel over the existing road surface to provide a physical barrier between the existing ground conditions and road traffic.
- 6) Endangered Species review has been completed as part of the Stormwater Application review. The report is also included within this Bulk Sampling Plan.

Bulk Sample Plan Response to Comments dated August 13, 2013 Page 2

- 7) Blasting is not included in the primary method for collecting a bulk sample. If a sufficient rock sample is not available, an alternative plan has been included to address the issues of blasting.
- 8) Landowner letters from RGGS Land and Minerals and LaPointe Iron Company acknowledging the Right of Entry for Gogebic Taconite, LLC have been provided.
- 9) A revised air emissions estimate was performed to estimate emissions if blasting activities were not used. The results generally illustrate that the removal of blasting provides less air emissions than the original estimate that included blasting.
- 10) From the DNR August 13, 2013 comment letter Item 1: The tonnage amount proposed to be removed is 2,400 tons or 800 tons from each of the three Bulk Sampling Sites.
- 11) From the DNR August 13, 2013 comment letter Item 2: Site 3A has been removed from the Bulk Sampling Plan.
- 12) From the DNR August 13, 2013 comment letter Item 3: Plans for incorporating the drainage of groundwater and/or precipitation will be addressed in the storm water application. No groundwater has been identified at the bulk sample sites.
- 13) From the DNR August 13, 2013 comment letter Item 4: Only one staging area is now proposed and it is located at Moores Park Road. The preferred operation would be to have the highway trucks receive their loads at the Bulk Sample Sites. If site conditions such as steep grades combined with cold weather conditions prevent the highway trucks from accessing the Bulk Sample sites, then off highway trucks would be used to transport the bulk sample material to the staging area near Moores Park Road. The highway trucks would then receive their loads out of the Staging Area.
- 14) From the DNR August 13, 2013 comment letter Item 5: A sulfide and grunerite screening process has been included within the Bulk Sample Plan.
- 15) From the DNR August 13, 2013 comment letter Item 6: The wetlands delineation report has been modified and revised drawings are provided. Additional offsite delineation was performed.
- 16) From the DNR August 13, 2013 comment letter Item 7: Documentation is provided that a diesel powered light plant is classified as a non-road engine, for purposes of air emissions.
- 17) From the DNR August 13, 2013 comment letter Item 8: The asbestiform issue has been addressed by removing Bulk Sample Site 4 from the Plan as well as providing a screening process in the Bulk Sample activity.
- 18) From the DNR August 13, 2013 comment letter Item 9: The extent of clearing, road base improvement and topsoil removal necessary for Access Road 6 has been further detailed in the stormwater application.

Bulk Sample Plan Response to Comments dated August 13, 2013 Page 3

Included in this submittal, you will find:

- A Bulk Sampling Plan addressing comments dated November 22, 2013.
- A revised Map 1 Corresponds with the Stormwater Application details
- A revised Map 2 Corresponds with the Stormwater Application details
- Drawing B001 Bulk Sample Site 1 Erosion and Sediment Control Plan
- Drawing B002 Bulk Sample Site 2 Erosion and Sediment Control Plan
- Drawing B003 Bulk Sample Site 5 Erosion and Sediment Control Plan
- Drawing B004 Material Staging Area Erosion and Sediment Control Plan

We look forward to discussing the project in more detail with your staff. Any questions should be directed to our Hurley office at (715) 561-2601. Our mailing address is:

Gogebic Taconite, LLC 402 Silver Street Hurley, WI 54534

Sincerely

Timothy J Myers

Engineer

DNR COMMENT LETTER DATED JULY 2, 2013

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor Cathy Stepp, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



July 2, 2013

Timothy J. Myers, Engineer Gogebic Taconite, LLC 402 Silver Street Hurley, WI 54534

Subject: Bulk Sampling Plan - Necessary Approvals and Supplemental Information

Dear Mr. Myers:

The Department of Natural Resources has completed its initial review of the Bulk Sample Plan submitted by Gogebic Taconite, LLC on June 18, 2013. As required by s. 295.45(3), Stats., the Department is required to identify, in writing, all approvals that will be required before bulk sampling may be initiated.

Based on the information provided in the Bulk Sample Plan, the Department has determined that coverage under a storm water permit will be needed under s. 283.33, Stats. The storm water permit application should include all activities related the proposed bulk sampling activity, including use and maintenance of any access routes and should also include areas affected by the ongoing exploration drilling. Other approvals, such as those related to air emissions, wetland and waterway protection and wastewater discharge, may also be needed but there is insufficient information contained in the plan to thoroughly assess whether other permits are required. For the Department to complete its review of the approvals that may be required and any waivers, exemptions or exceptions that may be potentially available for bulk sampling activities, the Department requests the following additional information.

- 1. Provide a more detailed description of the actual sampling procedures. For each bulk sampling location identify which member of the Ironwood Formation is being sampled, the approximate volume of material to be removed and the anticipated depth of excavation. Also include a representation of the approximate final site contours upon reclamation of the sites. Are any of the sites deep enough to intercept groundwater and if so, how will water such water be handled? Similarly, describe how water that accumulates in the sampled areas prior to reclamation will be handled. A wastewater discharge permit may be needed if the company intends to pump water from the excavations and discharge it to a waterway or groundwater.
- 2. Provide additional detail regarding the blasting activity including the approximate number of holes per area, depth and diameter of the holes and what type of explosive materials are anticipated to be used. How will drilling water and cuttings be controlled during the drilling process? Describe any dust control measures that will be implemented during blasting. Describe safety procedures related to blasting including pre-blast notification and designation of restricted access areas.
- 3. The plan indicates salvageable soil will be stockpiled separately from the rock removed from the sites prior to sampling and stored on-site for use in reclamation. Describe measures which will be taken to minimize erosion of the topsoil during the temporary storage period.



- 4. Describe the loading and transportation process in more detail. What type of heavy machinery will be used to load the rock onto the trucks? What measures will be taken to control dust during the loading process? What size and approximately how many trucks will be needed to transport the rock? Will the transport trucks be covered? Provide additional detail about the alternative procedure for handling the rock described in the plan including a specific location for the staging area, any site preparation necessary for the working pad, drainage control measures, access routes and descriptions of the vehicles that would be used to move the rock from the sampling sites to the staging area.
- 5. Describe what precautions will be taken in regard to rock and water handling procedures if any of the sampling sites encounters rock with visible or known quantities of sulfide mineralization (e.g., the lower Yale Member).
- 6. The letters from the landowners referenced on p. 6 of the plan were not included as part of the submittal. Please include them with your response to this letter.
- 7. The bulk sampling plan indicates the sampling and revegetation will occur between July 2013 and November 2014. Roughly how long will it take to complete the sampling phase for a given site? Will all bulk sampling be completed before any reclamation activity begins or will reclamation of individual sites take place as soon as the sampling is completed for that site?
- 8. The sampling plan refers to a preliminary wetland inventory for the site. The wetland delineation information must be submitted to the Department. This information is needed in order for the Department to determine if any bulk sampling activities including access route maintenance or improvements will require a wetland general permit or individual permit, as required by s. 295.60(3)(b), Stats. Department approval will be required prior to any work that results in a discharge of dredged material or fill material into a wetland. We will also need specific information about of bulk sampling and access route activities that may be located in or adjacent to any streams or other water bodies in order to determine if any permits are needed for navigable water activities as required by s. 295.605(2), Stats. To evaluate the need for wetland and waterway permits, detailed information regarding anticipated road maintenance work in specific locations involving wetlands and drainageways, must be submitted.
- 9. Elements of the proposed bulk sampling activity including blasting, loading and hauling may generate air pollutants, notably fugitive emissions of particulate matter. Based on the information provided, the Department cannot determine if an air pollution control construction permit is required for this activity. These emissions, on a maximum theoretical basis, may exceed the permitting thresholds in ch. NR 406, Wis. Adm. Code. To facilitate our regulatory determination of the need for a permit, Gogebic Taconite must develop an estimate of total particulate matter emissions (including PM10 and PM2.5 emissions) for the activity based on the anticipated level of activity and the proposed methods. This estimate should be based on available emission factors in EPA document AP-42 or other reliable sources of emission data for blasting, loading, road traffic and the other activities as applicable.
- 10. Additionally, given the documented occurrence of asbestiform minerals in ore bodies of similar nature in Minnesota and reports of similar minerals (amphiboles of the cummingtonite-grunerite series) in the vicinity of the proposed bulk sampling activity, it will also be necessary to evaluate the bulk sampling activity to determine whether regulation pertaining to control of asbestos emissions under Chapters NR 445 or NR 447, Wis. Adm. Code, is required. If these minerals are present or potentially present in an asbestiform habit within the excavated material, a percentage of the total emissions would likely be asbestos emissions. To calculate an estimate of the potential asbestos emissions, provide an estimate of the percentage, by weight, of the asbestiform mineral content of the material to be sampled and then calculate an estimated asbestos emission rate based on the total emission rate calculated above. This weight percent data for asbestos could be derived from actual measured quantities of asbestos in samples

collected from the site or could be based on review of data from studies of similar deposits that may be present in other taconite mining areas of Minnesota or other parts of the upper Midwest.

Section 295.45(3s), Stats., specifies that all applications for approvals related to bulk sampling are to be submitted at the same time. Once the Department has received the information outlined in this letter, we will be able to identify all of the required approvals.

The permits addressed in this letter only apply to regulatory requirements under the purview of the Department of Natural Resources. This letter does not consider any approvals, permits or other authorization required by federal, local or other state agencies. Gogebic Taconite, LLC is responsible for ensuring the proposed bulk sampling activity is conducted in compliance with all such requirements.

Please contact me if you have any questions concerning the information requested.

Sincerely,

Lawrence J. Lynch, P.G., Hydrogeologist

Water Use Section

Bureau of Drinking Water & Groundwater

DNR COMMENT LETTER DATED AUGUST 13, 2013

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor Cathy Stepp, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



August 13, 2013

Timothy J. Myers, Engineer Gogebic Taconite, LLC 402 Silver Street Hurley, WI 54534

Subject: Review of Bulk Sample Plan Response Submittal

Dear Mr. Myers:

The Department of Natural Resources has completed its review of the *Bulk Sample Plan Response to Comments* dated July 28, 2013, submitted by Gogebic Taconite, LLC, on July 30, 2013. In accordance with s. 295.45(3), Stats., the Department is required to identify, in writing, all approvals that will be required before bulk sampling may be initiated and any information the Department needs to issue a decision relating to bulk sampling approvals.

As indicated in previous correspondence, it will be necessary for you to obtain a storm water permit. Based on the information submitted, we have determined that coverage under the State's General Discharge Permit for Construction Site Storm Water Runoff (General Permit # WI-S067831-4) will be required prior to initiating bulk sampling activities. As part of the application, a detailed site-specific construction site erosion control plan and storm water management plan in accordance with Section 3 of the General Permit and ss. NR 216.46, 216.47, and NR 151.121 to 151.128 Wis. Adm. Code, must be submitted The application and supporting materials should cover the proposed bulk sampling sites, staging areas and all potential access routes which may be used as part of the bulk sampling process.

Based on information provided in the response, the proposed bulk sampling activity will not require wetland or waterway permits. However, should the scope of the activity change such that it would result in a discharge of dredged material or fill material into a wetland, separate Department approval would be required. For example, work to "improve" your roadways with aggregate, install culverts, use the blade of a bulldozer or install timber mats in wetland areas would require Department approval.

An estimate of air emissions was included as part of the response. The estimate is based on the original bulk sampling plan which relied on blasting as the means of recovering the samples. A supplemental air emission estimate reflecting the proposed sampling procedures must be developed and submitted in order for the Department to reach a final regulatory determination regarding the need for an air permit or exemption. The estimate should consider all reasonable sources of emissions from the bulk sampling plan as currently envisioned and should include sources related to blasting if you intend to collect samples using the non-blasting option augmented with limited blasting.

Following are specific additional issues identified in the review of the response document:

 The cover letter and the response document do not provide consistent estimates of the amount of material to be sampled. The cover letter indicates about 2,400 tons will be removed from three sites,



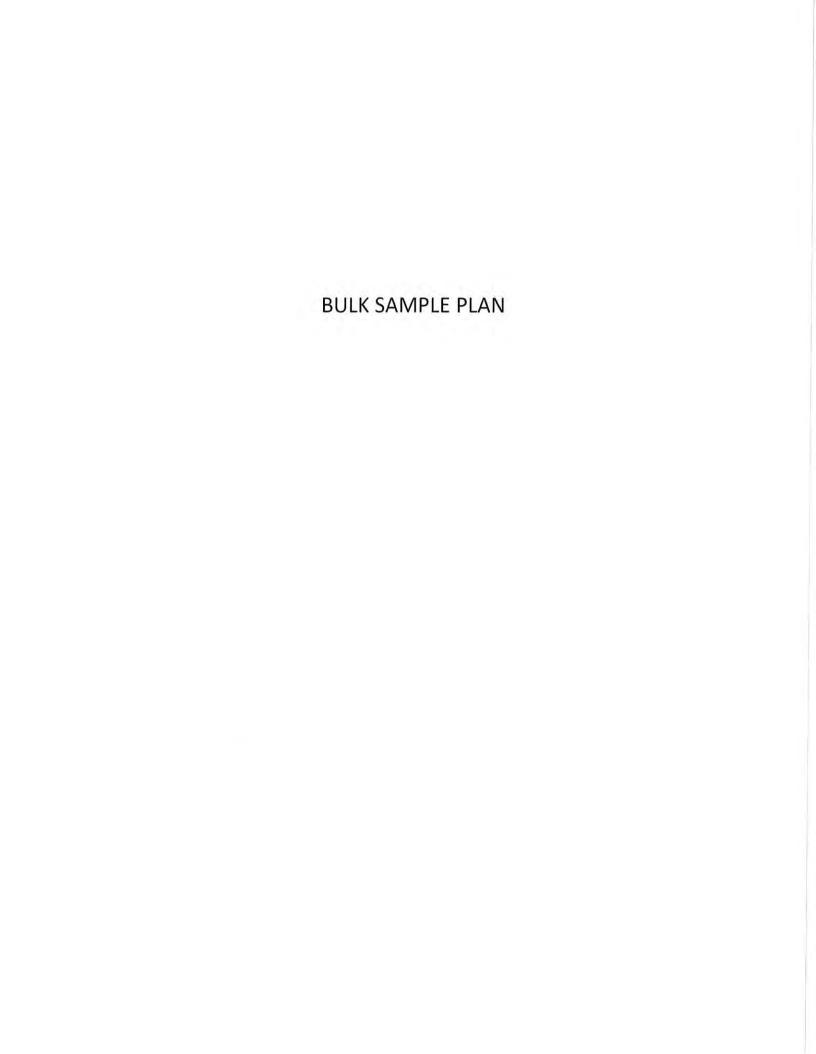
- while the response (response # 1) indicates 4,000 tons will be removed. Similarly, in one part of Response 1, it is stated that "a target of 400 tons from each member horizon is required..." while further in the response it states "each site will remove approximately 800 tons of material..." Please clarify the anticipated amount of material that will be removed in total and from each site.
- 2. It is not clear whether the bulk sampling activity will be conducted at Site 3a or not. The introductory description of the non-blasting option suggests that Site 3a would not be needed if the non-blasting option is used but Site 3a is mentioned in Response 1 and Response 2, regarding the intended blasting details for the various sites. Will Site 3a be used?
- Response #1 indicates that the bulk sampling sites will be graded to allow for drainage of
 groundwater or accumulated precipitation or drainage. Plans for this drainage must be incorporated
 into the application coverage under the storm water permit.
- 4. Response #4 describes two staging areas to be used for material storage and loading. Will the areas be operated simultaneously? In preparing these sites, what measures will be taken to salvage topsoil? Since one of the sites is located east of Moore Park Road, describe safety measures that will be implemented in relation to crossing the road. The staging areas and drainage control features must be described as part of the storm water permit application.
- 5. The response to Comment #5 suggests that since material from the Yale Member is not intended to be sampled, concerns regarding the presence of sulfide-bearing rock are not an issue. The original request for information was addressing sulfide-bearing rock in a broader sense. The Yale Member was cited as an example, but sulfide minerals could occur in other units as well. Please outline measures that will be taken if the bulk sampling activities encounter materials with visible sulfide mineralization.
- Response #8 refers to the wetlands delineation report. Figures 3 and 4 from that report are of poor resolution and are difficult to read. Please submit better quality versions of figures 3 and 4.
- 7. The air emissions estimate included with the response indicated that a diesel-powered generator would be used on the site. Your future submittal should include documentation that the generator is classified as a non-road engine, for purposes of air emissions.
- 8. Response #10 suggests that asbestiform minerals are unlikely to be present in the material removed as part of bulk sampling. While not widespread in the Mesabi Iron Range, asbestiform minerals are nevertheless present. Given the low estimated emission rates, release of asbestos should not be an issue with bulk sampling; therefore, we are not requiring additional identification or characterization at this point. However, if the project progresses to the point where a mining project is proposed or contemplated, a more systematic evaluation of the potential for asbestiform minerals may be needed. Since you will handle a significant volume of material if you bulk sample, we recommend you take the opportunity to evaluate the material you handle for the presence and characterization of grunerite and other similar amphibole minerals.
- 9. The response document provides a proposed route and basic description of Access Road 6. Describe the extent of clearing, road base improvement and topsoil removal necessary for construction of the road. Drainage features associated with the new road must be thoroughly described in the storm water application package.

Please contact me if you have any questions concerning the information requested.

Sincerely,

Lawrence J. Lynck, P.G., Hydrogeologist Hazardous Waste and Mining Section

Bureau of Waste & Materials Management



Bulk Sampling Plan

Applicant: Gogebic Taconite, LLC

402 Silver Street Hurley, WI 54534

Project Name: GTAC Bulk Sampling Project

Date: November 25, 2013

OVERVIEW

The Bulk Sampling Plan describes the excavation of less than 10,000 tons of material at a potential mining site for the purposes of obtaining site-specific data to assess the quality and quantity of the ferrous mineral deposits and of collecting data from and analyzing the excavated materials in order to prepare the application for a mining permit or other approval.

The excavated materials will be processed in an off-site laboratory. The results of the testing are used to determine the sizes and quantities of the machinery needed to beneficiate the raw ore to a saleable product.

Bulk sampling activities were performed on this property in 1960 by Oliver Iron Mining Division of US Steel Corporation. During this period, taconite processing was an emerging technology. The testing was performed with the best technology of the time. Now, over fifty years later, another set of rock samples are required for the specific design of a new beneficiation mill for this reserve.

Four locations were disturbed in 1960. Trenches were excavated that were approximately 200 feet long by 24 feet wide. The pit locations were stripped of vegetation. Soils were removed by heavy equipment. Drilling and blasting was performed to break the rock. Each location produced about 100 tons of material that was hauled offsite to a railroad siding for shipment.

Reclamation activities were not performed and the disturbed sites were allowed to grow vegetation with volunteer species.

The original proposed activity would have utilized three (3) of the previously disturbed sites to collect another sample set. Those sites are identified as Bulk Sample Sites 1, 2

Gogebic Taconite, LLC Bulk Sampling Application November 25, 2013

and 4. Two additional sites would have been disturbed in new locations. Bulk Sample Site 3A is located on an existing logging road. Bulk Sample Site 5 is a previously disturbed site that was used for a blasting test in 1961.

The current proposal now reduces the activity to occurring at three sample sites which are identified as Bulk Sample Sites 1, 2 and 5. All of these sites will be accessed from Moores Park Road in Iron County.

This application describes the procedures to be used to collect these rock samples.

295.45 (2)(a)

A description and map of the bulk sampling site, including the number of acres in the site, the number of acres of land that will be disturbed, if any, associated with each bulk sampling location, and the locations and types of sampling or studies to be conducted at each bulk sampling location.

Three bulk sample sites are proposed to be disturbed. Using the names from the 1960 activity, the previously disturbed bulk sample sites are identified as Bulk Sample Site 1 and Bulk Sample Site 2. Bulk Sample Site 5 is located in the eastern part of the reserve. See the map entitled "Map 1 - Bulk Sample Sites" for the generalized location of the disturbances.

Bulk Sample Site 1 is located in the Northeast quarter of the Southwest Quarter of Section 33 Township 45 North, Range 1 West. The site will include and disturb 0.88 acres. Refer to "Drawing B001-Bulk Sample Site 1 Erosion and Sediment Control".

Rock Samples are proposed to be collected from a trench that is approximately 234 feet long and averages 21 feet wide. Remaining material left in the trench with an estimated depth of 5 feet indicates a volume of approximately 2,800 tons.

Bulk Sample Site 2 is located in the Northeast Quarter of the Southwest Quarter of Section 33 Township 45 North, Range 1 West. The site will include and disturb 0.63 acres. Refer to "Drawing B002-Bulk Sample Site 2 Erosion and Sediment Control".

Rock Samples are proposed to be collected from two trenches with dimensions of approximately 150 feet long and averaging 13 feet wide and dimensions of 70 feet long and averaging 20 feet wide. Remaining material left in the trench with an estimated depth of 5 feet indicates a volume of approximately 1,900 tons.

Bulk Sample Site 5 is located in the Southwest Quarter of the Northeast Quarter of Section 33 in Township 45 North, Range 1 West. The site will include and disturb 0.64 acres. Refer to "Drawing B005- Bulk Sample Site 5 Erosion and Sediment Control".

Rock Samples are proposed to be collected from the road bed. A hydraulic hammer will be used to break the bedrock into sizes that can be loaded with an excavator or endloader. The proposed pit will be 12 feet wide and approximately 200 feet long.

Samples will collected from representative strata to be processed through an offsite pilot plant or to equipment manufacturers to determine the types and number of machines necessary to design a new processing mill for the reserve.

295.45 (2)(b)

A description of the methods to be used for bulk sampling.

The bulk sampling plan describes the methods to collect rock samples to process through a laboratory pilot plant to determine the equipment requirements for the construction of an iron ore beneficiation mill. There are two distinct methods that have been proposed in this activity. The first method (Plan A) would involve the collection of samples from existing test pits that were disturbed in 1960 and to use a mechanical hammer to produce a sample in Bulk Sample Site 5. If sufficient material is not available from the existing disturbances, the second method (Plan B) would be employed to include blasting activities would be used to produce a sample. Details and descriptions of each Plan are found below.

Three distinct sample areas are targeted. They are the Plymouth Member, the Norrie Member and the Pence Member of the Ironwood Iron Formation. The target tonnage is 800 tons from each member, totaling a minimum of 2,400 tons. The following chart describes the target member in each Bulk Sample Site.

Member of the Ironwood Formation to be sampled by Bulk Sample Site Number:

Bulk Sample Site 1 Plymouth member
Bulk Sample Site 2 lower pit
Bulk Sample Site 2 upper pit
Bulk Sample Site 5 Pence member

All bulk sample sites are located on privately owned lands, owned by:

RGGS Lands and Minerals, LTD., L.P. PO Box 1266 Virginia, MN 55792

Access Roads are located on privately owned lands, owned by:

RGGS Lands and Minerals, LTD., L.P. PO Box 1266 Virginia, MN 55792

LaPointe Iron Company 3920 13th Avenue East, Suite 7 Hibbing, MN 55746 The property has been enrolled in the Managed Forestland Program with Wisconsin DNR. As found at Wisconsin Statutes 77.83 (2)(a), the land is open to the public for hunting, fishing, hiking, sight-seeing and cross-country skiing. All other activities on these lands, including camping, biking, and operation of unauthorized motorized vehicles, are prohibited.

77.883 Managed Forestland Disturbance – The total disturbance to Managed Forestland for this project totals less than 5 acres. The disturbances are as follows:

Bulk Sample Site 1 - 0.88 Acres (includes road from Access Road 3 Station 38+47 to Bulk Sample Site 1)

Bulk Sample Site 2 – 0.63 Acres Bulk Sample Site 5 – 0.64 Acres Access Road 6 – 1.25 Acres

TOTAL - 3.40 Acres

Approximate volume of material to be removed and the anticipated depth of excavation:

Each site will remove approximately 800 tons of material which is equivalent to
approximately 300 bank cubic yards. Without blasting, the anticipated depth of excavation
will be an average of 2.25 feet. Materials will be regraded to insure no newly exposed
vertical ledges are left after the project is completed.

If blasting was to occur and assuming a 30% swell factor, most of the sites will not have a change in post reclamation contours from the existing surface contours. The rock removed as a bulk sample will be replaced by the expanded volume of the blasted material.

Access from the public roads will be posted to notify the public that a bulk sampling activity is occurring on the Managed Forest Lands. During the time of activity, a 600 ft buffer is created from each road and each point with a fixed sampling activity. The 600 ft buffer will be designated as a closed area of the Managed Forest Lands.

A safety perimeter will be established approximately 300 feet outside of the proposed activity area. The area will be marked with Danger Signs to alert the general public that an industrial activity is occurring nearby. A safety fence will be erected around the disturbance to further protect the public from ongoing activities on the site.

Vegetation will be removed from the proposed disturbance. Any marketable material will be recovered for commercial use such as a lumber mill raw product, pulp mill raw product or biofuel. Any remaining woody material will be disposed of in compliance with existing rules and regulations such as mulching.

Gogebic Taconite, LLC Bulk Sampling Application November 25, 2013

Stormwater drainage control will be established by the utilization of berms, diversion ditches, hay bales, sand bag berms and/or sediment fence. When the conditions allow, up gradient surface runoff may be directed away from the site by diversion ditches or berms. A detailed stormwater drainage plan is provided in a separate submittal.

Soils material will be removed from the disturbed areas and stockpiled for later use in reclamation of the site. Any material deemed as topsoil will be segregated and reserved for application during the regrading activities. Due to the previous disturbances on these sites, topsoil, if any would have been intermixed with other materials. Any soils layer encountered will be maintained in stockpiles separate from bedrock materials.

Two options are proposed for the excavation of the bulk sample. Plan A will address the collection of a sample from the previously blasted materials left from the 1960 bulk sample campaign. Plan B will address the procedures if Plan A does not provide sufficient material for the necessary tonnage. Plan B will address drilling and blasting to produce material for a bulk sample.

Bulk Sampling Plan
Plan A – Rock Samples gathered without Blasting Activity
Site Descriptions

Bulk Sample Sites 1 and 2 were disturbed during the 1960 bulk sampling activities in the project area. These sites contain broken rock samples in the volume necessary to meet the requirements of the tonnage requested by the equipment manufacturers for testing.

Bulk Sample Site 5 is the location of a Blasting Test Pit that was previously disturbed in 1961. This proposal would use a mechanical breaking device such as a hydraulic hammer to break a sample from the bedrock.

Equipment to be utilized during Plan A will include an excavator or wheel loader capable of loading highway legal trucks, a bulldozer and various support equipment such as a portable light plant. Off highway trucks rated at 25 tons or higher may be used if field conditions prohibit the use of highway trucks to the sites.

Comment #4 from DNR letter dated July 2, 2013:
What type of heavy machinery will be used to load the rock onto the trucks?
The trucks will be loaded with either an excavator or a wheel loader.

The excavator has the advantage of being able to work the excavation from positioning the machine on top of the broken material. It can also place material in the bed of the truck with more precision than a wheel loader.

A wheel loader can be used to excavate a larger volume of material quicker. It has to work the broken rock from the same level as the bottom of the broken rock.

What measures will be taken to control dust during the loading process?

The rock pile can be watered down before the loading process takes place. This would saturate smaller particles to prevent liberation into the air as dust. If loading activities occur in freezing weather, the use of water will be minimized.

What size and approximately how many trucks will be needed to transport the rock?

Two types of trucks may be used on the project.

Off Highway construction trucks will be 25 ton to 40 ton capacity articulated trucks. The trucks have up to three axles. These trucks will be used to bring the bulk sample to a staging area where they will dump on a constructed pad. The material would then be loaded onto highway trucks for delivery to the laboratory.

Highway trucks would be tandem axle, tri-axle or tractor trailer arrangements. The highway trucks could haul directly from the pit to the final destination. Average payload for a highway truck will be 20 tons. It will take approximately 120 truck loads to deliver the material to the

laboratory. It is expected to that 10 truck loads per day will leave the project for a period of approximately 3 weeks.

Will the transport trucks be covered?

The highway trucks will be covered. The off highway construction trucks are not covered. The highway trucks' ground speed will be controlled by the road conditions and is expected to be less than 10 miles per hour.

<u>Plan A – Operational Descriptions</u> Bulk Sample Sites 1 and 2

Bulk Sample Sites 1 and 2 are located in the Plymouth and Norrie members of the Ironwood Formation. The sites were created in 1960 where extensive excavation and blasting activities occurred. The simplified approach to collecting a sample is to load rock left from the 1960 activity into trucks. The following narrative describes the proposed activity in greater detail.

The previously disturbed Bulk Sample Sites 1 and 2 will be cleared of vegetative material and any soils material will be stockpiled for future use during site reclamation. Soil stockpile areas will be protected from erosion by seeding and mulching with a temporary seed mixture such as oats or annual rye. Soil stockpile areas may also be protected by covering with tarps. Site specific stormwater control measures will be installed prior to excavation beginning.

The activity records found indicated that the 1960 activity included an Air-Trac pneumatic drill and compressor. This type of drill would have been capable of drilling approximately 10 feet deep. The depth of material available in Bulk Sample Sites 1 and 2 is estimated to range from 4 to 10 feet deep. The records also indicated that only 100 tons were shipped from each Bulk Sample Site from the 1960 activity. This activity proposes that approximately 800 tons per site will be collected.

Excavated materials from the Bulk Sample Sites will be screened through a nominal 2-inch spacing grizzly screen and the oversized material will be collected as a bulk sample. The undersized material that passes the grizzly screen will be saved for use as a backfill material in the excavation in anticipation of regrading and revegetation activities. An excavator or wheel loader may be used to accomplish these tasks.

The oversize material from the grizzly screen will be stockpiled in preparation for shipment from the site. These stockpiles will vary in size and location and will be placed within the bulk sample site to accommodate the loading and transportation of the bulk sample into trucks for removal from the site.

If site conditions are not conducive for the grizzly to perform correctly, such as during freezing weather, another option is to collect the sample without screening. The shipment would include undersized material that would be removed at the final destination.

Loading activity will be accomplished by an excavator or wheel loader into a highway classified truck. The truck capacity is estimated at 20 tons payload. Each truck will have the load covered before leaving the site.

If road conditions dictate that highway trucks would not be feasible, a set of off-highway trucks may be used to transport the bulk sample material to a Transfer Location near the public roads system. (see Staging Area details discussed below.)

The undersized material will be used as backfill material in the excavation in anticipation of regrading and revegetation of the bulk sample site. These materials may be moved to regrade positions as the material is being sized through the grizzly screen. Regrading activities will be performed to backfill excavations.

Revegetation requirements will be discussed in the response to 295.45 (2)(d) found below.

<u>Plan A – Operational Descriptions</u> <u>Bulk Sample Site 5</u>

Bulk Sample Site 5 is located in the Pence member of the Ironwood Formation. This site was used in 1961 for blasting tests. Several exposures have been found where explosives were used to break the rock, leaving small craters. Very limited excavation occurred on this site.

This rock is described as a layered shale or slate and is not considered as structurally sound as the Plymouth or Norrie members. Therefore, a mechanical method to reduce and break the bedrock is proposed.

The previously disturbed Bulk Sample Site 5 will be cleared of vegetative material and any soils material will be stockpiled for future use during site reclamation. Soil stockpile areas will be protected from erosion by seeding and mulching with a temporary seed mixture such as oats or annual rye. Soil stockpile areas may also be protected by covering with tarps. Site specific stormwater control measures will be installed prior to excavation beginning.

The soils material will be removed to bedrock. A mechanical rock breaker such as a hydraulic hammer mounted on an excavator will be used to break the bedrock to sizes suitable for an excavator or wheel loader to handle.

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The material may be loaded directly into highway trucks, or may be collected into small stockpiles in anticipation of loading onto highway trucks. These stockpiles will be located throughout the bulk sample site as the activity progresses.

Loading activity will be accomplished by an excavator or wheel loader into a highway classified truck. The excavator has the advantage of being able to work the excavation from positioning the machine on top of the broken material. It can also place material in the bed of the truck with more precision than a wheel loader.

A wheel loader can be used to excavate a larger volume of material quicker. It has to work the broken rock from the same level as the bottom of the broken rock.

The truck capacity is estimated at 20 tons payload. Each truck will have the load covered before leaving the site.

If road conditions dictate that highway trucks would not be feasible, a set of off-highway trucks may be used to transport the bulk sample material to a Transfer Location near the public roads system. (see Staging Area details discussed below.)

Bulk Sample Site 5 will be excavated within the existing road. Once the bulk sample has been removed, the pit will be regraded to reform the roadway at about 2.25 feet below the existing road grade. Commercial stone will be used to smooth out the rough portions of the bedrock.

Revegetation requirements will be discussed in the response to 295.45 (2)(d) below.

Bulk Sampling Plan
Plan B – Rock Samples gathered with Blasting Activity
Operational Requirements

This method would be used in Bulk Sample Sites 1 and 2 if the Plan A operational procedures do not produce the necessary material required for machinery testing.

The bedrock will be cleared of extraneous materials. Drilling will be performed on a prescribed pattern and will be accomplished by using a construction drill. The material will be blasted to a size comparable to the projected run-of-mine size material (approximately 6 to 12 inches in size). Blasting will be performed by contracted blasting services. No explosives will be stored on site.

Blasting details will be discussed below.

Loading activity will be accomplished by an excavator or wheel loader into a highway classified truck.

An excavator has the advantage of being able to work the excavation from positioning the machine on top of the broken material. It can also place material in the bed of the truck with more precision than a wheel loader.

A wheel loader can be used to excavate a larger volume of material quicker. It has to work the broken rock from the same level as the bottom of the broken rock.

The highway truck capacity is estimated at 20 tons payload. Each truck will have the load covered before leaving the site.

If road conditions dictate that highway trucks would not be feasible, a set of off-highway trucks may be used to transport the bulk sample material to a Staging Area Location near the public roads system. (see Staging Area details discussed below.)

Plan B – Blasting Requirements

Number of holes per area:

Bulk Sample Site 1 240 holes Bulk Sample Site 2 lower pit 156 holes Bulk Sample Site 2 upper pit 90 holes Bulk Sample Site 5 205 holes

Depth and diameter of the holes:

Holes will be 10 feet deep, 4-inch diameter

Type of explosive materials will be used: ANFO prell will be used

Drilling water and cuttings controlled during drilling:

Drill rigs for this type of work use compressed air to flush the cuttings from the hole. The drill rig will be provided with a dust collection system. Cuttings will be reused to stem the hole.

Dust control measures implemented during blasting:

Dust control measures will not occur for the blasting activity. Dusts of fugitive emissions from the blasting activities are minimal as demonstrated in Attachment 1 (Air Emissions Estimates). The estimated maximum theoretical emissions from the blasting activity are less than 0.001 tons per year of particulate matter.

Safety procedures related to blasting including pre-blast notification and designation of restricted access areas:

Pre-Blast notifications will conform to the requirements of Wisconsin Statutes DPS 307 and the Town of Anderson blasting ordinance and any other local ordinance in place at the time of the blasting activity.

A restricted zone will be constructed at least 300 feet from each blast site. The zone will be marked by brightly colored construction fencing and/or posted signs to warn the general public of the restricted area.

Audible blasting alarms will be used. The alarms will consist of horns or sirens capable of broadcasting at least ¼ mile from the blasting site. Commercial truck or automobile horns will not be used. Warning signs describing the blasting signals will be posted to all entrances to the blast area.

STAGING AREA DETAILS

A Staging Area has been proposed in the event that highway trucks cannot access the Bulk Sampling sites. The use of off-highway trucks is considered an alternative in this plan.

If the Staging Area is necessary, the site will be prepared by removing all topsoil materials and storing the materials within a berm. Soils materials will be used to create a berm and the downslope end of the berm will be provided with a flow through device such as filter fabric wrapped hay bales or other device normally considered under Best Management Practices for stormwater.

Geotextile road fabric will be placed and then covered by either commercial stone or undersized rock from the bulk sampling areas.

If the Staging Area is used, a traffic control flagman during off highway truck haulage activities will be positioned on Moores Park Road for public safety. The loaded off highway trucks would cross Moores Park Road to reach the Staging Area. Any damage to the public road will be reimbursed to the township.

At the end of the activity, the base rock and filter fabric will be removed. The Staging Area will be scarified to relieve soil compaction. Soils material will be replaced and topsoil material will be returned to the site. The site will be seeded and mulched.

Comment #4 from DNR letter dated July 2, 2013:

Provide additional detail about the alternative procedure for handling the rock described in the plan including a specific location for the staging area, any site preparation necessary for the working pad, drainage control measures, access routes and descriptions of the vehicles that would be used to move the rock from the sampling sites to the staging area.

The specific location for the staging area is found on Map 1: Bulk Sampling Plan map provided in the original submittal. The site is a pre-existing disturbance adjacent to existing roads.

Drawing B004-Material Staging Area Erosion and Sediment Control Plan provides a detailed view of the layout of the proposed staging area.

A working pad will be created with the purpose of preventing rock sample contamination from materials such as soils or gravels located at the transfer site. The working pad will be constructed by placing a geotextile materials such as woven road base fabric on the ground. Smaller diameter rock from the bulk sampling activity will be used to create a minimum 6-inch covering over the fabric. Other materials that could be used for a working pad would include concrete, plate steel or commercial gravel.

Drainage control would be accomplished by utilizing silt fence, hay bale dikes, earthen berms, sand bags and/or other temporary drainage control method.

Access routes are designated on Map 1: Bulk Sampling Plan Map.

If highway trucks cannot reach the sample pits due to site conditions, off highway trucks will be used to bring material to the staging areas. The material would be placed on a prepared pad and stockpiled until highway trucks could be scheduled. The material would be loaded by either a wheel loader or an excavator from the pad to the highway truck.

The sample material will be loaded by heavy machinery into highway trucks for transport to the pilot plant facility. The alternative procedure will be the loading off-highway trucks at the pit and transporting the material to a staging area where the sample material will be transferred to highway trucks for transport to the pilot plant. Material will be transferred directly to the highway truck or the material may be placed on a pad to prevent contamination of the sample. The highway truck would then be loaded from the material stored on the pad. Stormwater control will be provided around the pad.

BULK SAMPLING COMPLETION DEPARTMENT NOTIFICATION

After the bulk sampling activity has been completed and no further sampling is required, the Department will be notified that final regrading will begin. Notification will be by email or Registered Mail. Regrading will begin within 5 days of the notification to the Department. The excavation slopes will be graded to remove excessive grades. Regrading will be performed with the available material with the goal to blend the disturbance into the existing ground contours. Stockpiled soils material will be applied to the regraded area before revegetation occurs.

Seeding will follow. See the Revegetation Plan as discussed at the discussion of the requirements of Statute 295.45 (2)(d) below for details.

GROUNDWATER CONSIDERATIONS

Comment #1 from DNR letter dated July 2, 2013:

Are any of the sites deep enough to intercept groundwater and if so, how will such water be handled?

Each site is located at or near the higher ground in the area. Site inspections of the area have not identified the presence of springs during the high flow period in May 2013.

If groundwater were encountered during the project excavation, the pit will be graded to allow gravity discharge to the perimeter silt fence.

Similarly, describe how water that accumulates in the sampled areas prior to reclamation will be handled. A wastewater discharge permit may be needed if the company intends to pump water from the excavations and discharge it to a waterway or groundwater.

By designing the excavation to be freely draining, the requirement for pumping is eliminated.

The existing sites have been disturbed for more than 50 years. No evidence of groundwater discharge or precipitation retainment have been found at the Bulk Sample sites.

ACCESS ROADS

Access to the Bulk Sample Sites will be made by utilizing existing roads to the extent possible.

Bulk Sample Sites 1, 2 and 5 would be accessed from Moores Park Road in Section 33, Township 45 North, Range 1 West. Access Road 3 from Moores Park Road to the abandoned railroad grade (approximately 465 feet) will be the access from the public road system. Access Road 6 begins at the abandoned railroad grade and is an existing road. This section has been used for forestry activities in the past. In addition, a new road section will be constructed (identified as Access Road 6) to connect Bulk Sample Sites 1 and 2 to the existing road near the former Tyler Forks Mine. Access Road 6 construction details are provided within this submittal.

New Road Construction – A new road is proposed to access Bulk Sample Sites 1 and 2. The location of a small wetland area on the access road to Bulk Sample Site 1 as well as the steep and damp conditions of the existing access roads to Bulk Sample Sites 1 and 2 have caused a concern in the original proposal. The proposed road will include 2,100 feet of existing roads and 1,906 feet of new construction.

The new road has been designed to follow existing contours and does not require drilling and blasting to construct.

Refer to the Typical Road Cross Section drawing for a general arrangement of the new road construction.

The new road will be regraded and vegetated after completing the bulk sample collection.

295.45 (2)(c)

A site-specific plan for controlling surface erosion that conforms to requirements under ss. 281.33 (3) and 283.33 and that identifies how impacts to plant and wildlife habitats will be avoided or minimized to the extent practicable.

Refer to Drawings B001, B002 and B003 attached to this application. Each of the three bulk sample sites are detailed in these sketches with the applicable Stormwater Management procedures proposed.

Stormwater Management may include the use of silt fence, earthen berms, hay bales, diversion ditches or similar barriers to divert water away from the disturbance. Silt fence, earthen berms, hay bales or similar barriers will be used to filter any runoff before it leaves the site. Vehicular access to the site will be managed to maintain the surface runoff through sediment control such as silt fence prior to leaving the work site.

At the end of the activity, each site will be regraded and any topsoil will be replaced. The area will be seeded and mulched with the appropriate mixtures.

The bulk sampling activities will occur in areas of previous disturbances. Plant and wildlife habitat in these areas have adapted to the previously disturbed sites. A redisturbance of an area already impacted by activities was the deciding factor for locating the bulk sampling sites. Each of the sites is relatively small and located in a forested area. Animals displaced by the activity have adequate habitat to relocate.

A Stormwater Application that will address this activity will be submitted separate from this application.

295.45 (2)(d)

A revegetation plan for each area where bulk sampling will be performed that describes how adverse impacts to the environment will be avoided or minimized to the extent practicable and how the site will be revegetated and stabilized and that identifies how adverse impacts to plant and wildlife habitats will be avoided or minimized to the extent practicable.

REVEGETATION PLAN

In the event that any topsoil has been stockpiled, it will be returned to the site and spread once regrading is completed.

All sites shall be seeded to establish vegetation. Composite soil samples will be collected. The samples will be submitted to the local agronomy center for available nutrient analysis. The analysis will provide a recommended fertilizer application rate.

Soil preparation may include raking, discing or harrowing to loosen the soil.

Seed mix would contain:

68% Common Oats 14% Annual Rye 4% Timothy

7% Virginia Wild Rye

7% Canada Wild Rye

0.25% Black-eyed Susan

The seed will be planted no deeper than 1/8-inch at 73.25 pounds per acre. Seed bed shall be loosened to 4 inches of depth.

Once fertilizer and seed have been applied, the seeded area will be raked, disked, harrowed or utilize other methods in order to cover the seed.

Mulching material shall consist of straw or hay in an air-dry condition, wood excelsior fiber or wood chips. Mulch shall be spread at a thickness of $\frac{1}{2}$ to 1-1/2 inches. Compacted bales are to be broken and loosened to create a loose blanket over the seeded area.

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The pre-existing roads shall be graded and left in place for future use by the landowner. Refer to the landowner letter in the appendix. If the road is aggregate surfaced, grading will be performed to establish drainage towards the ditchline.

New road disturbances will be regraded after bulk sampling activities are completed. The road disturbance will have any aggregate materials removed and the disturbance will be regraded. Any disturbance will be seeded and mulched.

295.45 (2)(e)

The estimated time for completing the bulk sampling and revegetation of the bulk sampling locations.

The original submittal estimated the time frame of the bulk sampling and revegetation will occur during the period from July 2013 to November 2014. The anticipated time frame is now from January 2014 to April 2015.

295.45 (2)(f)

A description of any known adverse environmental impacts that are likely to be caused by the bulk sampling and how those impacts will be avoided or minimized to the extent practicable.

There are no known adverse environmental impacts that are likely to be caused by the bulk sampling activity.

Two sites (Sites 1 and 2) were previously disturbed in 1960 and were not reclaimed and have remained open to the elements. From this 50 year old activity, no adverse environmental impacts have been identified. The process of collecting a sample replicates the 1960 activity. Site No. 5 was disturbed in 1961 as a blasting test site. Site reclamation will include areas that the previous activities left behind.

A wetland inventory for the sites has been prepared and is attached to this letter. In summary, the wetland delineation identified one site on the access road to Bulk Sample Site 1 as having a wetland area. Steps have been taken to avoid the wetland by providing an alternative route (Access Road 6) into Bulk Sample Site No. 1.

Additional wetland areas were identified in locating the overland route for Access Road 6. These areas are addressed in the Wetlands and Waterways, LLC report included within this submittal. The additional wetland areas were avoided by proposing a new construction portion in upland areas. No navigable streams will be crossed with this activity.

The target areas of the Ironwood Formation to be collected will be in the Pence, Norrie and Plymouth members. These geologic members consist of sedimentary rocks that are iron oxide in nature. Long term exposure to the elements has not produced negative environmental impacts on the site.

Each proposed site has existing disturbances that allow surface runoff to exit the site and not pool water. No wetlands have been identified in these bulk sample sites.

295.45 (2)(g)

A description of any adverse effects, as defined in s. 44.31 (1), that the bulk sampling might have on any historic property, as defined in s. 44.31 (3), that is a listed property, as defined in s. 44.31 (4), that is on the Wisconsin inventory of historic places, as defined in s. 44.31 (12), or that is on the list of locally designated historic places under s. 44.45; or any scenic or recreational areas; and plans to avoid or minimize those adverse effects to the extent practicable.

First, a check to the Wisconsin Historical Society inventory reveals no known archeological sites in the Project Area. Access Road 6 includes an existing road through the site of the Tyler Forks Mine (c. 1887 to 1911). The road use through the area will be provided with a commercial graveled road surface underlain by geotextile road fabric to provide a physical barrier between the existing ground and the road surface.

Second, Sites 1, 2 and 5 are located on sites with previous extensive disturbances. Site access will be by using the existing roads used with the active forestry practices on the site or roads that were used in the previous bulk sampling activity.

The sites are remote and are forested. Activities will be screened from the general public by the forested areas.

A Phase 1 archeological study for new disturbance areas will be provided in conjunction with the stormwater application.

295.45 (5)(a) BONDING

A person who intends to engage in bulk sampling shall submit with the bulk sampling plan a bond in the amount of \$5,000 that is conditioned on faithful performance of the requirements of this section, that is issued by a surety company licensed to do business in this state, and that provides that the bond may not be canceled by the surety, except after not less than 90 days' notice to the department in writing by registered or certified mail.

A surety bond in the amount of \$5,000 has been provided with the June 18, 2013 application. A specific bond estimate has been provided within "Table 1 – Reclamation Cost Estimate". After DNR review, the appropriate bond amount will be provided to the Department.

295.45 (5)(e)

The department may require that the amount of the bond submitted under this subsection be increased at any time, if the department determines that it is unlikely that the bond would be adequate to fund the cost to this state of completing the revegetation plan.

A Reclamation Cost Estimate has been included. See "Table 2 – Reclamation Cost Estimate" that follows this page. The Reclamation Cost Estimate totals \$27,192.00 for reclaiming 3 bulk sample sites and Access Road 6. A Surety Bond in the amount of \$5,000.00 has been provided with this submittal as required by 295.45 (5)(a). After DNR review, the appropriate bond amount will be provided to the Department.

295.45 (7)

Notwithstanding any provision in ch. 23, 29, 30, 31, 169, 281, 283, 285, 289, or 291 or a rule promulgated under those chapters applicable to an approval identified under sub. (3), the department shall require the bulk sampling activity for which the approval is issued to be conducted at locations that result in the fewest overall adverse environmental impacts.

By reusing existing unreclaimed disturbed areas, this activity will minimize the impacts as compared to areas that have not been disturbed in the past. Regrading and revegetation of the existing disturbances will also be accomplished.

The construction of a temporary access road avoids the disturbance of wetland areas. Berming on the existing roads will be used to minimize the impacts to wetland areas.

Air Emissions Discussions

The June 18, 2013 submittal proposed blasting to provide rock samples. The DNR comments requested air emissions discussions. Air modeling was performed and the results indicated that the activity did not trigger the requirement of air permitting.

Since that time, the number of sites proposed has been reduced and a further reduction in air emissions will be made.

The following comments were generated in the past correspondence and are provided to document the air emissions submittals.

Comment #9 from DNR letter dated July 2, 2013:

Elements of the proposed bulk sampling activity including blasting, loading and hauling may generate air pollutants, notably fugitive emissions of particulate matter. Based on the information provided, the Department cannot determine if an air pollution control construction permit is required for this activity. These emissions, on a maximum theoretical basis, may exceed the permitting thresholds in ch. NR 406, Wis. Adm. Code. To facilitate our regulatory determination of the need for a permit, Gogebic Taconite must develop an estimate of total particulate matter emissions (including PM10 and PM2.5 emissions) for the activity based on the anticipated level of activity and the proposed methods. This estimate should be based on available emission factors in EPA document AP-42 or other reliable sources of emission data for blasting, loading, road traffic and the other activities as applicable.

RESPONSE: (This following response was submitted in our July 10, 2013 letter to address the option of using blasting to create a bulk sample. A second air emissions estimate was completed to address the bulk sampling emissions without blasting activities. Since that activity, the proposed activity has been reduced in scope from 5 sample sites to 3. In as much, the provided air emission estimates fall below any threshold for the requirements of an air quality permit. By reducing the number of disturbed areas, the total air emissions would be even further reduced.)

Provided as Attachment 1 are emission estimates for fugitive emissions as a result of blasting, loading, transfer of material and fugitive road dust; along with a minimal amount of combustion emissions as a result of operating temporary light towers powered by diesel engines. In all cases, the emission calculations are based on AP-42 emission factors. Key assumptions were already addressed in the responses to Questions 2 and 4 and are included in Attachment 1.

Based on the emission estimates provided in Attachment 1 and summarized in Table 1 the Bulk Sampling Plan activity qualifies for an exemption from Construction and Operating Permits based on actual emissions per s. NR 406.04(1q) and 407.03 (1m) of the Wisconsin Administrative Code (WAC). The bulk sampling emissions are less than the thresholds for a construction permit (Chapter 405 WAC) and for an operating permit (Chapter 406 WAC). The construction permit exemptions are provided at s. NR 406.04(1q) as follows:

"Sources Exempt Based on Controlled Actual Emissions. No construction permit is required for any emissions unit constructed, modified, replaced, relocated or reconstructed at a stationary source where all of the following criteria and requirements are met:

- (a) The owner or operator of the stationary source has a facility-wide operation permit under ch. NR 407 or has submitted a timely and complete application for a facility-wide operation permit.
- (b) Actual emissions from all of the constructed, modified, replaced, relocated, and reconstructed emissions units do not exceed any of the following levels:
 - 1. 1,666 pounds in any month averaged over consecutive 12-month period for each of the following air contaminants: particulate matter, nitrogen oxide, sulfur dioxide, PM10, carbon monoxide and volatile organic compounds.
 - 2. 10 pounds in any month averaged over any consecutive 12-month period for lead.
- (c) None of the emissions units constructed, modified, replaced, relocated, or reconstructed requires a new BACT or LAER determination under ch. NR 445 as a result of the new project.
- (d) None of the emissions units constructed, modified, replaced, relocated, or reconstructed are subject to new permitting requirements under ch. NR 405 (New Source Review) or 408 (Non-Attainment New Source Review) as a result of the project.
- (e) The owner or operator of the stationary source submits to the department a complete application for an operation permit revision, or an updated application for an operation permit, which include each new, modified, replaced, relocated, or reconstructed emissions unit, prior to commencing construction, modification, replacement, relocation, or reconstruction and does all of the following:
 - In the operation permit revision application, or updated operation permit application, proposes
 monitoring of any control equipment used to limit actual emissions from any emissions unit being
 constructed, modified, replaced, relocated or reconstructed in accordance with the monitoring
 requirements in s. NR 439.055.
 - 2. Commences monitoring of any control equipment as proposed in subd. 1., and maintains any records necessary to demonstrate compliance with any applicable emission limitation, upon startup of any newly constructed, modified, replaced, relocated or reconstructed emissions unit.
- (f) The owner or operator of the source submits to the department a claim of exemption from construction permitting requirements. The exemption claim shall identify the emissions units which are being constructed, modified, replaced, relocated or reconstructed. The department shall respond to the claim of exemption submittal within 20 business days after receipt of the claim.
- (g) Any newly constructed emissions unit is not subject to an emission limitation under section 111 or 112 of the Act (42 USC 7411 or 7412). Any modified, replaced, relocated or reconstructed emissions unit does not trigger any new emission limitation or other requirement for the emissions unit under section 111 or 112 of the Act (42 USC 7411 or 7412), excluding section 112(d)(5) or (r) (42 USC 7412(d)(5) or (r))."

The proposed bulk sampling activities will meet the criteria above. Item (a) for submittal of a timely and complete application for a facility-wide operation permit is met with the filing of an exemption since the proposed bulk sampling activities emissions will also be below the threshold for operating permit as specified at s. NR 407.03(1m)(a), thus an operating permit application is not required.

Operating Permit exemptions are provided in s. NR 407.03(1m) as follows:

"FACILITIES EXEMPT BASED ON ACTUAL EMISSIONS.

- (a) Any facility that is required to submit an annual emission inventory report under s. NR 438.03 is exempt from the requirement to obtain an operation permit following notification under par. (c), where all of the following criteria and requirements are met:
 - 1. The actual emissions of each air contaminant from the facility do not exceed any of the following levels:
 - a. 10 tons in any calendar year for each of the following air contaminants: particulate matter, nitrogen oxide, sulfur dioxide, PM10, carbon monoxide and volatile organic compounds.
 - b. 0.5 tons in any calendar year for lead.
 - c. Any stack—appropriate thresholds for emissions points in columns (c), (d), (e) and (f) of Table A, B or C of ch. NR 445. If the facility is a source of incidental emissions under s. NR 445.11, this subdivision only applies to emissions of air contaminants which are listed as substances of concern in Table E of ch. NR 445.
 - 2. The facility is not subject to a standard under section 111 or 112 or the Act (42 USC 7411 or 7412) except for a source subject solely to regulations or requirements under section 112(d)(5) or (r) of the Act (42 USC 7412 (d)(5) or (r)).
 - 3. The owner or operator conducts monitoring and maintains records sufficient to demonstrate compliance with the requirements of this paragraph, including the calculation of annual facility—wide emissions. These records shall be maintained on site for at least 5 years, unless a longer period is required by statute or rule.
 - 4. If a control device is used to limit actual emissions, the owner or operator uses a compliance monitoring method which is identified in s. NR 439.055.
- (b) Any facility that is not required to submit an annual emission inventory report under s. NR 438.03 is exempt from the requirement to obtain an operation permit where all of the criteria and requirements in par. (a) 1. to 4. are met.
- (c) 1. The owner or operator of a facility required to submit an air emission inventory report under s. NR 438.03 shall notify the department of their intent to operate the facility under the exemption criteria in par. (a). A claim of exemption made under s. NR 406.04 (1q) from construction permit requirements shall satisfy this notification requirement.
 - Any existing permit shall remain in effect until the permit is revoked or coverage under a general
 or registration permit is withdrawn. A notification under subd. 1. shall serve as a request for
 revocation of an individual permit or withdrawal from coverage under a general or registration
 permit.
 - 3. A notification under subd. 1. shall serve as a request for withdrawal of any pending permit application.

Note: An owner or operator exempt under this subsection is responsible for complying with all other applicable requirements in chs. NR 400 to 499.

As demonstrated in Table 1 the project does not trigger the New Source Review (NSR) Requirements at Chapter 405 WAC. The Bulk Sampling Plan activity will occur in a county deemed in attainment or unclassifiable for all criteria air pollutants, thus Chapter 408 WAC does not apply.

Table 1 s. NR 406.04(1q) and 407.03(1m) WAC/NSR Threshold Comparison

Pollutant	Uncontrolled Potential to Emit (tons per year)	(tons per year)	s. NR 406.04(1q) s. NR 407.03(1m) Thresholds (b) (tons per year)	NSR Significance Thresholds (tons per year)	
CO	0.14	0.11	10	100	
NO_X	0.30	0.16	10	40	
PM	2.37	0.54	10	25	
PM_{10}	0.67	0.19	10	15	
PM _{2,5}	0.13	0.08	N/A	10	
SO_2	0.02	0.01	10	40	
VOC	0.02	0.01	10	40	
Pb	0.00	0.00	0.06 / 0.5	0.5 0.6	
CO ₂ e	10.3	5.2	N/A	100,000	

(a) Actual emissions are based on controlled emission levels. Specifically, the use of a watering truck on haul routes (80% emission reduction) and light tower operation of no more than 12 hours per day (50% emission reduction).

(b) The emission thresholds under NR 406.04(1q) are 1,666 pounds per month averaged over 12 consecutive months, which

is 9.996 tons per year, essentially equivalent to the less than 10 tons per year threshold specified at NR 407.03(1m). The only exception is for the pollutant lead, the threshold under NR 406.04(1q) is 10 pounds per month, or 0.06 tons per year, compared to 0.5 tons per year under NR 407.03(1m).

As discussed above, the GTAC Bulk Sampling Plan meets exemption thresholds under s. NR 406.04(1q) and 407.03 (1m). Additionally, the proposed project emissions are less than those listed in s. NR 445.11 Table E. This approach is corroborated by use of the Department form, "Notice of Intent Under the Actual Emissions Exemption ss. NR 406.04(1q) or NR 407.03(1m), Wis. Adm. Code Optional form (revised 9/07)." Thus, GTAC will submit a written claim of exemption as required by s. NR 406.04(1q) and 407.03(1m) for air quality related emissions associated with the Bulk Sampling Plan.

Plan A - No Blasting Option

The No Blasting Option was analyzed and the results are indicated below. The scenario assumed a total volume of 2,400 tons of material removed and included activity at 4 bulk sample site locations. To demonstrate worst case conditions, screening was included as well as blasting – in case sufficient material for a bulk sample was not available.

Overall, the emissions did not change radically since the air quality emission impact associated with the bulk sampling plan activity is minimal. For comparison below is a summary table of the previously represented emissions and the revised emissions. Note that the CO and NOx reduced slightly for due to reduced blasting and PM emissions reduced with less sample sites.

Pollutant	7-2-2013 Emission Estimate – Actual Blasting Option (tons per year)	Revised Emission Estimate – Actual No Blasting Option (tons per year)	s. NR 406.04(1q) s. NR 407.03(1m) Thresholds (tons per year)	NSR Significance Thresholds (tons per year)
СО	0.11	0.08	10	100
NOx	0.16	0.15	10 4	
PM	0.54	0.32	10	25
PM10	0.19	0.12	10	15
PM2.5	0.08	0.06	N/A	10
SO2	0.01	0.01	10	40
voc	0.01	0.01	10	40
Pb	0.00	0.00	0.06/0.5	0.60
CO2e	5.2	5.2	N/A	100,000

Portable Light Tower Emissions

From August 13, 2013 DNR Comment Letter:

7. The air emissions estimate included with the response indicated that a diesel-powered generator would be used on the site. Your future submittal should include documentation that the generator is classified as a non-road engine, for purposes or air emissions.

RESPONSE: To describe in a non-regulatory context, the light tower engines are not subject to any of the New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAPS/MACT) which apply to engines since the light tower unit(s) are 1) transportable and 2) will not remain at the location for greater than 12 months.

We did previously look at the applicability of any Federal 40 CFR Part 60 NSPS or 40 CFR Part 63 NESHAPS/MACT in relation to the engines for the light tower operation to ensure we met the WI ss. NR 406.04(1q)(g) and s. NR 407.03(1m)(a)2 requirements (Section 111 or 112 of the Clean Air Act). We had planned that level of detail would be included in the actual exemption request to WDNR. However since they are requesting it now a regulatory explanation is provided below that represents the light tower engines are not subject to any potentially applicable NSPS or MACT standards and thus, meets the WI ss. NR 406.04(1q)(g) and s. NR 407.03(1m)(a)2 exemption provisions.

40 CFR Part 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. This applies to owners and operators of stationary compression ignition (i.e., diesel-fueled) engines that commence construction after July 11, 2005. As specified in the definition of Stationary Internal Combustion Engine identified at 40 CFR Part 60.4219, "a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30..." As specified in the definition of Nonroad Engine at 40 CFR 1068.30 item (1)(iii) a nonroad engine is considered, "By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly trailer, or platform. The light towers by definition are considered transportable. Further, the light tower operation will coincide with the approximate 22 days of bulk sampling activity, thus the source will not be at the location for more than 12 consecutive months. The definition of Nonroad Engine at 40 CFR 1068.30 item(2)(iii) specifies an engine of (1)(iii) or transportable is no longer considered a nonroad engine when it "remains at a location for more than 12 consecutive months..." Since the light towers will

only remain at the location for approximately 22 days, much less than 12 consecutive months, the light towers meet the definition established at 40 CFR 1068.30 for nonroad engines. Thus, it meets the exemption provision identified at 40 CFR 60.4200(d) for NSPS Subpart IIII.

- 40 CFR Part 60 Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. This applies to owners and operators of stationary spark ignition internal combustion engines that commence construction after June 12, 2006. As specified in the definition of Stationary Internal Combustion Engine identified at 40 CFR Part 60.4248, "a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30..." As specified in the definition of Nonroad Engine at 40 CFR 1068.30 item (1)(iii) a nonroad engine is considered, "By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly trailer, or platform. The light towers by definition are considered transportable. Further, the light tower operation will coincide with the approximate 22 days of bulk sampling activity, thus the source will not be at the location for more than 12 consecutive months. The definition of Nonroad Engine at 40 CFR 1068.30 item(2)(iii) specifies an engine of (1)(iii) or transportable is no longer considered a nonroad engine when it "remains at a location for more than 12 consecutive months..." Since the light towers will only remain at the location for approximately 22 days, much less than 12 consecutive months, the light towers meet the definition established at 40 CFR 1068.30 for nonroad engines. Thus, it meets the exemption provision identified at 40 CFR 60.4230(e) for NSPS Subpart JJJJ.
- 40 CFR Part 63 Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. This applies to owners and operators of stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. As specified in the definition of Stationary RICE identified at 40 CFR Part 63.6675 "Stationary RICE differ from mobile RICE in that stationary RICE is not a nonroad engine as defined at 40 CFR 1068.30..." As specified in the definition of Nonroad Engine at 40 CFR 1068.30 item (1)(iii) a nonroad engine is considered, "By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly trailer, or platform. The light

Gogebic Taconite, LLC Bulk Sampling Application November 25, 2013

towers by definition are considered transportable. Further, the light tower operation will coincide with the approximate 22 days of bulk sampling activity, thus the source will not be at the location for more than 12 consecutive months. The definition of Nonroad Engine at 40 CFR 1068.30 item(2)(iii) specifies an engine of (1)(iii) or transportable is no longer considered a nonroad engine when it "remains at a location for more than 12 consecutive months..." Since the light towers will only remain at the location for approximately 22 days, much less than 12 consecutive months, the light towers meet the definition established at 40 CFR 1068.30 for nonroad engines. Thus, it meets the exemption provision identified at 40 CFR 63.6585(a) for MACT Subpart ZZZZ.

Sulfide Mineralization Considerations

From the July 27, 2013 response to comments letter:

5. Describe what precautions will be taken in regard to rock and water handling procedures if any of the sampling sites encounters rock with visible or known quantities of sulfide mineralization (e.g., the lower Yale Member).

RESPONSE:

The Yale member is not proposed for disturbance with this activity. The target zones are the Pence, Norrie and Plymouth members.

From the August 13, 2013 comment letter from DNR:

5. The response to Comment #5 suggests that since material from the Yale Member is not intended to be sampled, concerns regarding the presence of sulfide-bearing rock are not an issue. The original request for information was addressing sulfide-bearing rock in a broader sense. The Yale Member was cited as an example, but sulfide minerals could occur in other units as well. Please outline measures that will be taken if the bulk sampling activities encounter materials with visible sulfide mineralization.

RESPONSE:

Since the strata being sampled is an iron oxide, the sulfur present in the rock is generally too minute to be a participant in the production of Acid Mine Drainage. In addition, the materials are not expected to be currently acid generating given the absence of evidence of sulfide oxidation associated with the disturbed material in place and given the time that the material has been disturbed and exposed for over 50 years.

Sulfide mineralization does not confirm acid forming conditions. There is an extensive history of Acid Mine Drainage research in the public domain that indicates that certain factors must be present to create an acidic condition. Some of the factors include the amount of sulfur and the forms of sulfur present, the pH of the host rock, the acidic nature of the host rock, the basic nature of the host rock, the potential for neutralization of the rock, the presence of a source of water, etc.

Also the extensive history of the Gogebic Iron Range over the past 130 years provides the best laboratory of the potential of acid drainage potential in that no obvious acid discharges are found on the range after years of unregulated mining activity.

In addition, the sites are previously disturbed, unreclaimed, unregulated areas that have had over 50 years to create any negative conditions. This proposal is to reenter the same disturbed areas to recover samples. Nature has had 50 years to expose adverse conditions and there are no documented problems after numerous visits by qualified professionals, including DNR staff.

Gogebic Taconite, LLC Bulk Sampling Application November 25, 2013

Since this agency has already requested that asbestiform materials be inspected for, the following is proposed as a method to document the existence or lack of sulfide mineralization on the project:

While not a normal constituent of iron ore deposits, the existence of asbestiform and sulfide mineralization material will be investigated during the excavation of the bulk sample materials. A geologist, familiar with asbestiform and sulfide mineralization materials, will visually inspect ore piles and the excavated pit to identify any potential occurrence of asbestiform and sulfide mineralization materials. The inspections will occur on accumulated stockpiles prior to shipping from the site. Another inspection will be made of the bedrock in the excavated pit to document any occurrence of asbestiform or sulfide mineralization materials in the bedrock.

If any positive documentation of asbestiform or sulfide mineralization in bedrock is found, the locations will be located by survey techniques, photographed and documented so that the site could be located at a later date. Any loose material found to contain asbestiform material or sulfide mineralization will be isolated and stockpiled on an elevated pad and protected from surface drainage. Any loose material found to contain asbestiform or sulfide mineralization will be disposed of offsite in an approved landfill.

Asbestiform Materials

From the July 27, 2013 response to comments letter:

10. Additionally, given the documented occurrence of asbestiform minerals in ore bodies of similar nature in Minnesota and reports of similar minerals (amphiboles of the cummingtonite-grunerite series) in the vicinity of the proposed bulk sampling activity, it will also be necessary to evaluate the bulk sampling activity to determine whether regulation pertaining to control of asbestos emissions under Chapters NR 445 or NR 447, Wis. Adm. Code, is required. If these minerals are present or potentially present in an asbestiform habit within the excavated material, a percentage of the total emissions would likely be asbestos emissions. To calculate an estimate of the potential asbestos emissions, provide an estimate of the percentage, by weight, of the asbestiform mineral content of the material to be sampled and then calculate an estimated asbestos emission rate based on the total emission rate calculated above. This weight percent data for asbestos could be derived from actual measured quantities of asbestos in samples collected from the site or could be based on review of data from studies of similar deposits that may be present in other taconite mining areas of Minnesota or other parts of the upper Midwest.

RESPONSE:

Putting aside whether NR 445 would apply to the mining activities, NR 445 does not apply to the proposed bulk sampling activities because asbestiform minerals are not likely to be present in the Gogebic Iron Range near Mellen, WI. There are documented occurrences of amphibole minerals in the geology of this area but not all amphibole minerals are asbestiform minerals or asbestos. Based on our due diligence, the geologic conditions in the Gogebic Iron Range do not support the formation of asbestos. Based on research on the Mesabi Iron Range in MN by Ross et al. (2007) where the geology is similar to the Gogebic Iron Range near Mellen, WI no asbestos has been found in the portion of the Mesabi Iron Range where amphibole minerals are found. Based on the lack of geologic conditions that would favor the formation of asbestos and the absence of the presence of asbestos in the similar geology of the Mesabi Iron Range asbestos is not likely to be present in the Gogebic Iron Range.

We are not aware of any documented occurrence of asbestiform minerals in ore bodies in Minnesota. The references provide by Ann Coakley on July 10th to Tim Myers of Gogebic Taconite, acknowledge the presence of amphibole minerals in the Gogebic Iron Range but do not discuss the presence of asbestiform minerals or asbestos. Although there are deposits that contain amphibole minerals in Minnesota Ross et al. (2007) conducted an extensive survey of the amphibole at Peter Mitchell Pit, the only location on the Mesabi Iron Range in Minnesota where amphibole-containing ore is currently being mined, looking for occurrences of fibrous minerals. This work concluded that fibrous amphibole make up a "tiny fraction of one percent of the total rock mass" and "no asbestos of any type was found in the mine pit".

Although the geology in parts of the Gogebic Iron Range are similar to the geology in parts of the Mesabi Iron Range and amphibole minerals may be present, based on the above discussion we

do not expect asbestos or asbestiform minerals to be present in the Gogebic Iron Range near Mellen, WI. In any case, the estimated particulate emissions are below 5 tpy (see response to question 9). The note in NR 445.07 states "Owners and operators of facilities emitting less than 3 tons of volatile organic compounds and 5 tons particulate matter on an annual basis, or who engage in limited or no manufacturing activities, should refer to s. NR 445.11 prior to determining applicable requirements under this section. NR 445.11 reduces the list of HAPS for sources with PM emissions less than 5 tpy to those in Table E. Asbestos is not listed in Table E. Therefore, NR 445 does not apply to the proposed bulk sampling activities.

NR 447 does not apply to the Bulk Sampling Plan for several reasons, including that no asbestos is expected to be present. In addition, the Bulk Sampling Plan does not fit into any of the categories regulated by NR 447. Asbestos is defined in NR 447.02 (4) as "Asbestos" means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite–grunerite (amosite), anthophyllite and actinolite–tremolite." As discussed above, asbestiform minerals are not likely to be present in the Gogebic Iron Range near Mellen, WI based on similar geology in Minnesota where studies have been conducted and asbestiform minerals have not been found. Therefore, NR 447 does not apply to the Bulk Sampling Plan.

NR 447 provides specific requirements for the following activities but the Gogebic Bulk Sampling does not meet the definition of any of these activities:

- NR 447.03 Asbestos mills
- NR 447.04 Roadways (constructed with asbestos)
- NR 447.05 Manufacturing (operations using commercial asbestos)
- NR 447.06, .07, .08 Demolition and renovation
- NR 447.09 Spraying
- NR 447.10 Fabricating (using commercial asbestos)
- NR 447.11 Insulating materials
- NR 447.12 Waste disposal for asbestos mills
- NR 447.13 Waste disposal for manufacturing, fabricating, demolition, renovation and spraying operations
- NR 447.14 Inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations
- NR 447.15 Air cleaning
- NR 447.16 Reporting (for listed sources in 447)
- NR 447.17 Active waste disposal sites (applies to sites that receive wastes from sourced covered under 447.12, 447.13, or 447.18)
- NR 447.18 Operations that convert asbestos-containing waste material into non-asbestos (asbestos-free) material

From the August 13, 2013 comment letter from DNR:

1. Response #10 suggests that asbestiform minerals are unlikely to be present in the material removed as part of bulk sampling. While not widespread in the Mesabi Iron Range, asbestiform minerals are nevertheless present. Given the low estimated emission rates, release of asbestos should not be an issue with bulk sampling; therefore, we are not requiring additional identification or characterization at this point. However, if the project progresses to the point where a mining project is proposed or contemplated, a more systematic evaluation of the potential for asbestiform minerals may be needed. Since you will handle a significant volume of material if you bulk sample, we recommend you take the opportunity to evaluate the material you handle for the presence and characterization of grunerite and other similar amphibole minerals.

RESPONSE:

While not a normal constituent of iron ore deposits, the existence of asbestiform and sulfide mineralization material will be investigated during the excavation of the bulk sample materials. A geologist, familiar with asbestiform and sulfide mineralization materials, will visually inspect ore piles and the excavated pit to identify any potential occurrence of asbestiform and sulfide mineralization materials. The inspections will occur on accumulated stockpiles prior to shipping from the site. Another inspection will be made of the bedrock in the excavated pit to document any occurrence of asbestiform or sulfide mineralization materials in the bedrock.

Endangered Species

An Endangered Species Review was made for the Bulk Sampling Project. The review results are provided below:

Actions that need to be taken to comply with state and/or federal endangered species laws:

For American Marten:

- Tree cutting greater than 11" dbh will be avoided between March 15 and May 31st.
- In the existing rock piles, the site will be prepped without moving rocks. A waiting
 period of 24 hours will be observed before moving any rocks. The prepping
 activities should be enough disturbance to cause any martens to vacate the area.

Actions recommended to help conserve Wisconsin's rare species and high-quality natural communities:

For Bald Eagle:

 If bald eagles are observed nesting within or near the project area, a contact to the Endangered Resources Review Program will be made for immediate quidance.

For White Mandarin:

• If White Mandarin is present on site, survey information will be reported to the DNR for inclusion in the Natural Heritage Inventory database.

For Northern Goshawk:

• If Northern Goshawk are present on site, survey information will be reported to the DNR for inclusion in the Natural Heritage Inventory database.

MAPS

Map 1 – Bulk Sampling Sites (revised November 22, 2013)

Map 2 – Access Road 6 (revised November 22, 2013)

FIGURES

Figure 1-1 Cross Sections Site 1

Figure 2-1 Cross Sections Site 2

Figure 2-2 Cross Sections Site 2

Figure 5-1 Cross Sections Site 5

DRAWINGS

Drawing B001 – Bulk Sample Site 1 Erosion and Sediment Control Plan

Drawing B001A - Cross Section Location

Drawing B002 – Bulk Sample Site 2 Erosion and Sediment Control Plan

Drawing B002A - Cross Section Location

Drawing B003 – Bulk Sample Site 5 Erosion and Sediment Control Plan

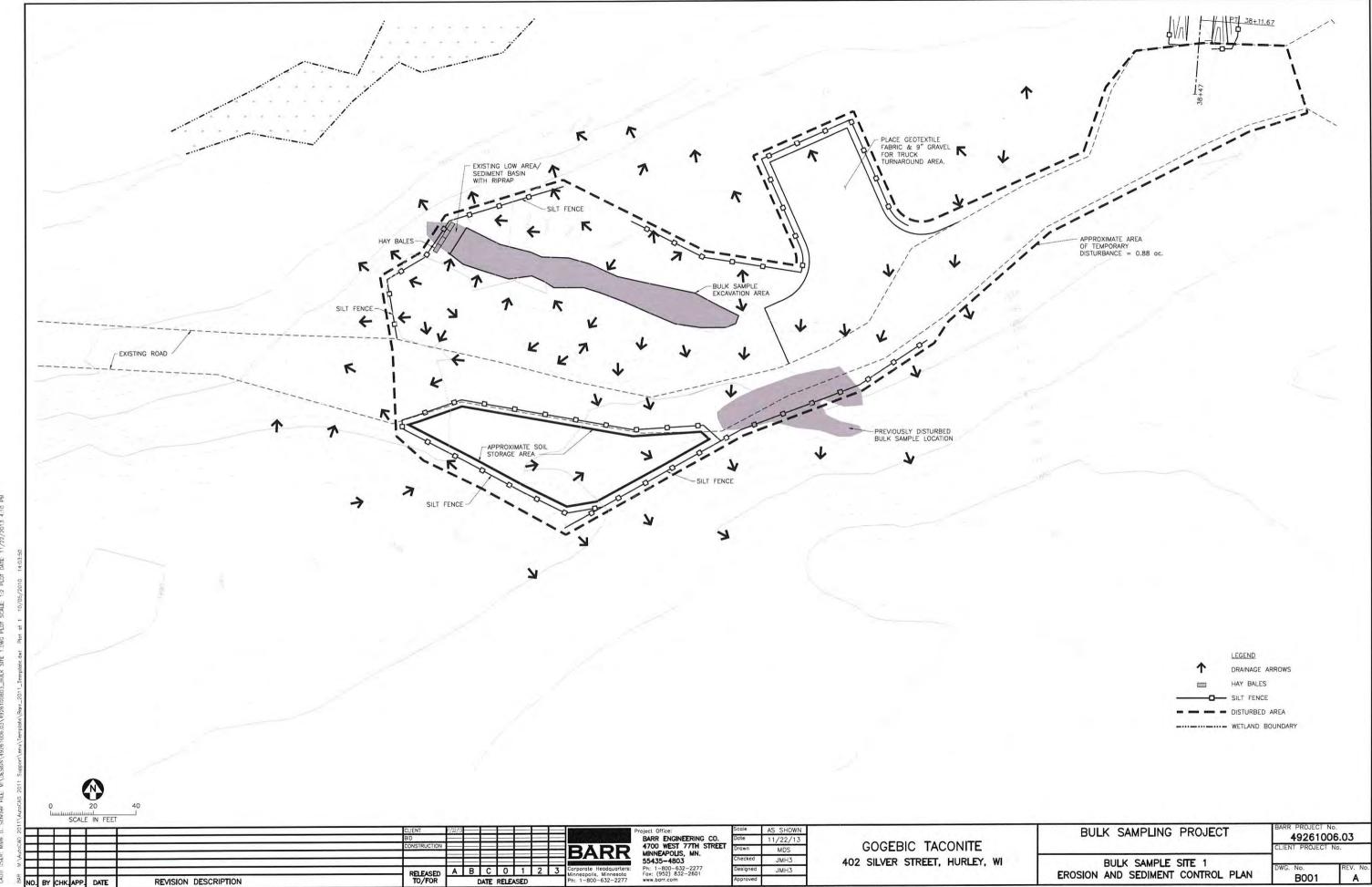
Drawing B003A - Cross Section Location

Drawing B004 – Material Staging Area Erosion and Sediment Control Plan

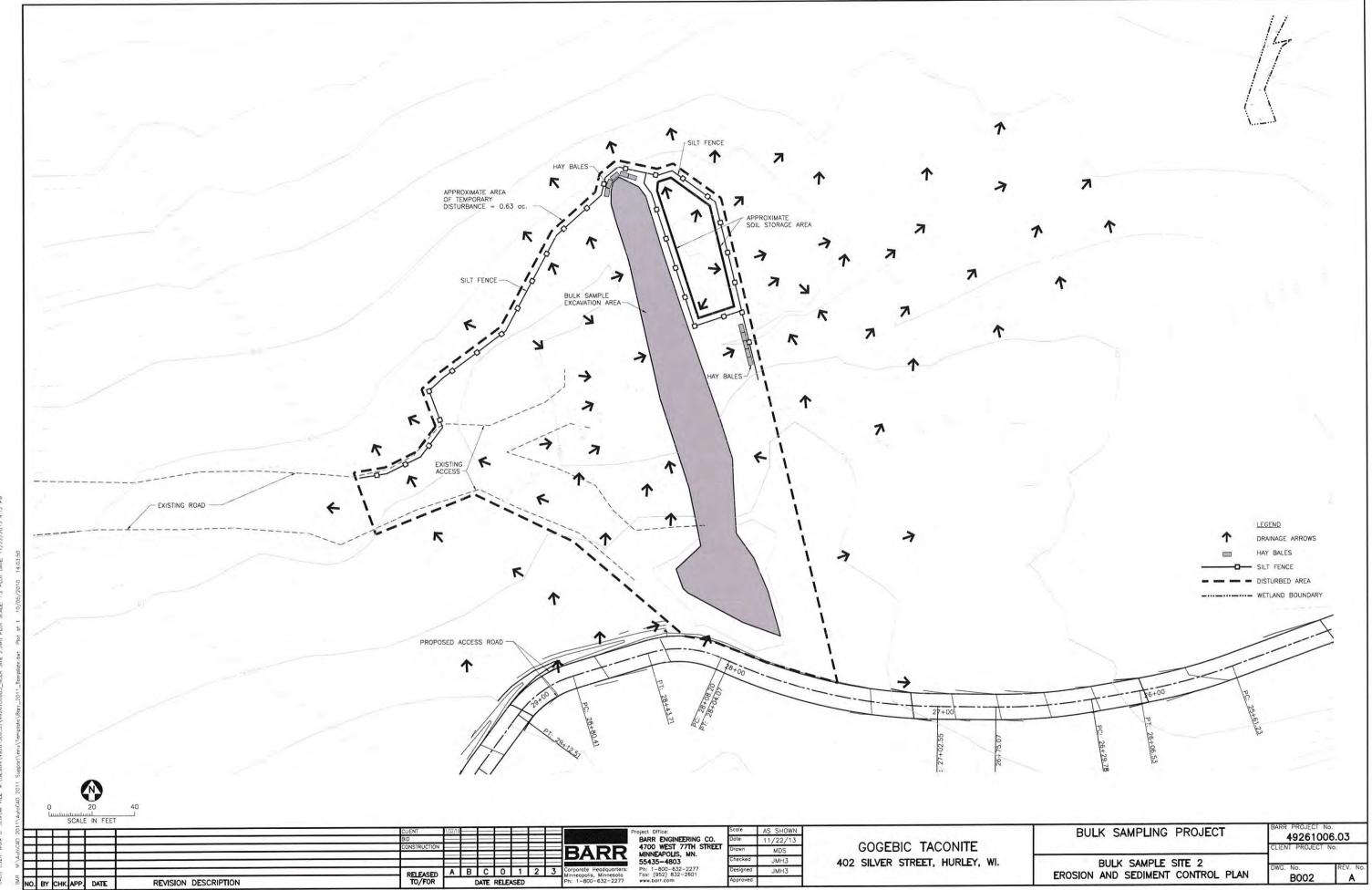
TABLES

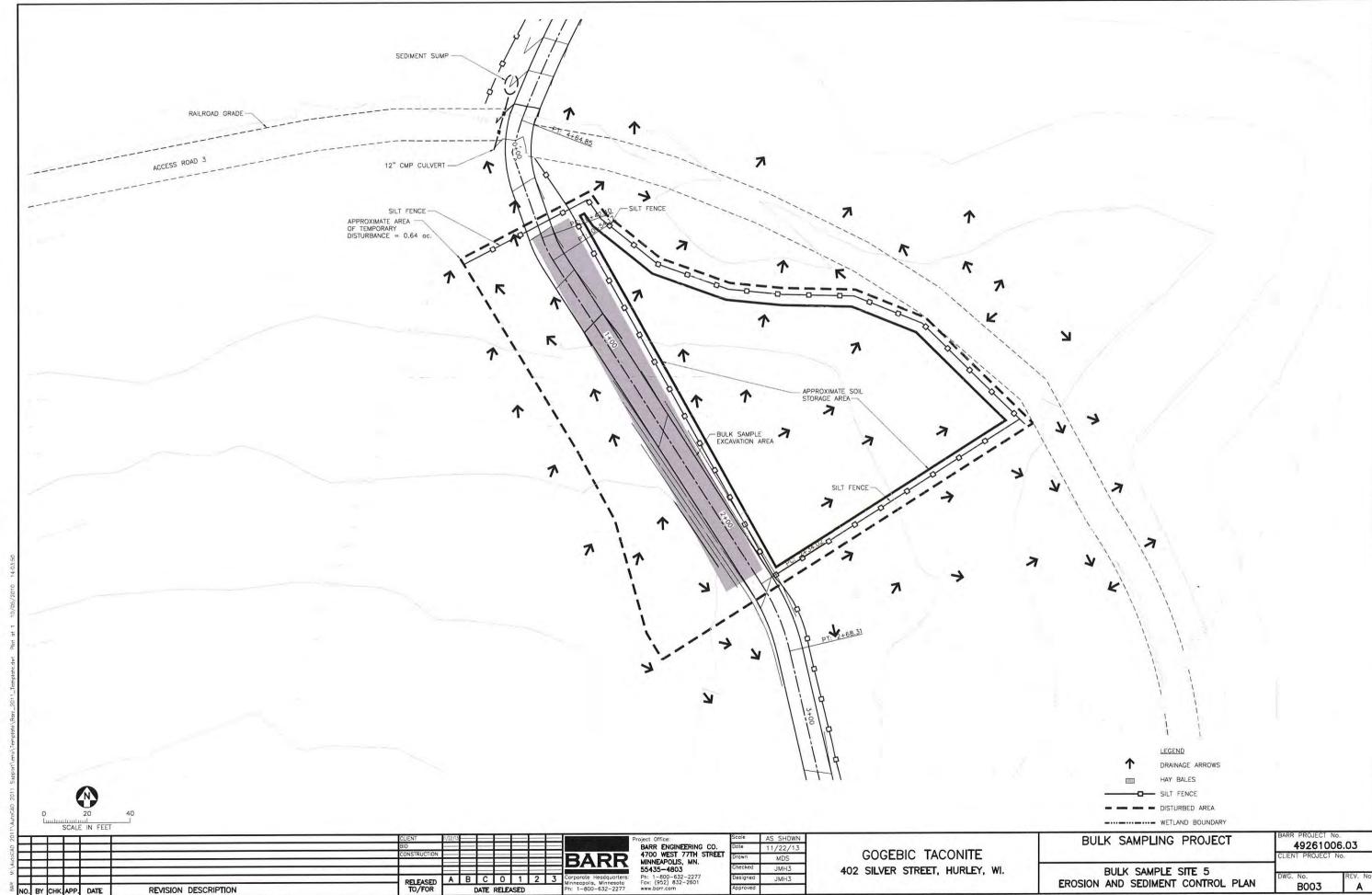
Table 1 – Reclamation Cost Estimate

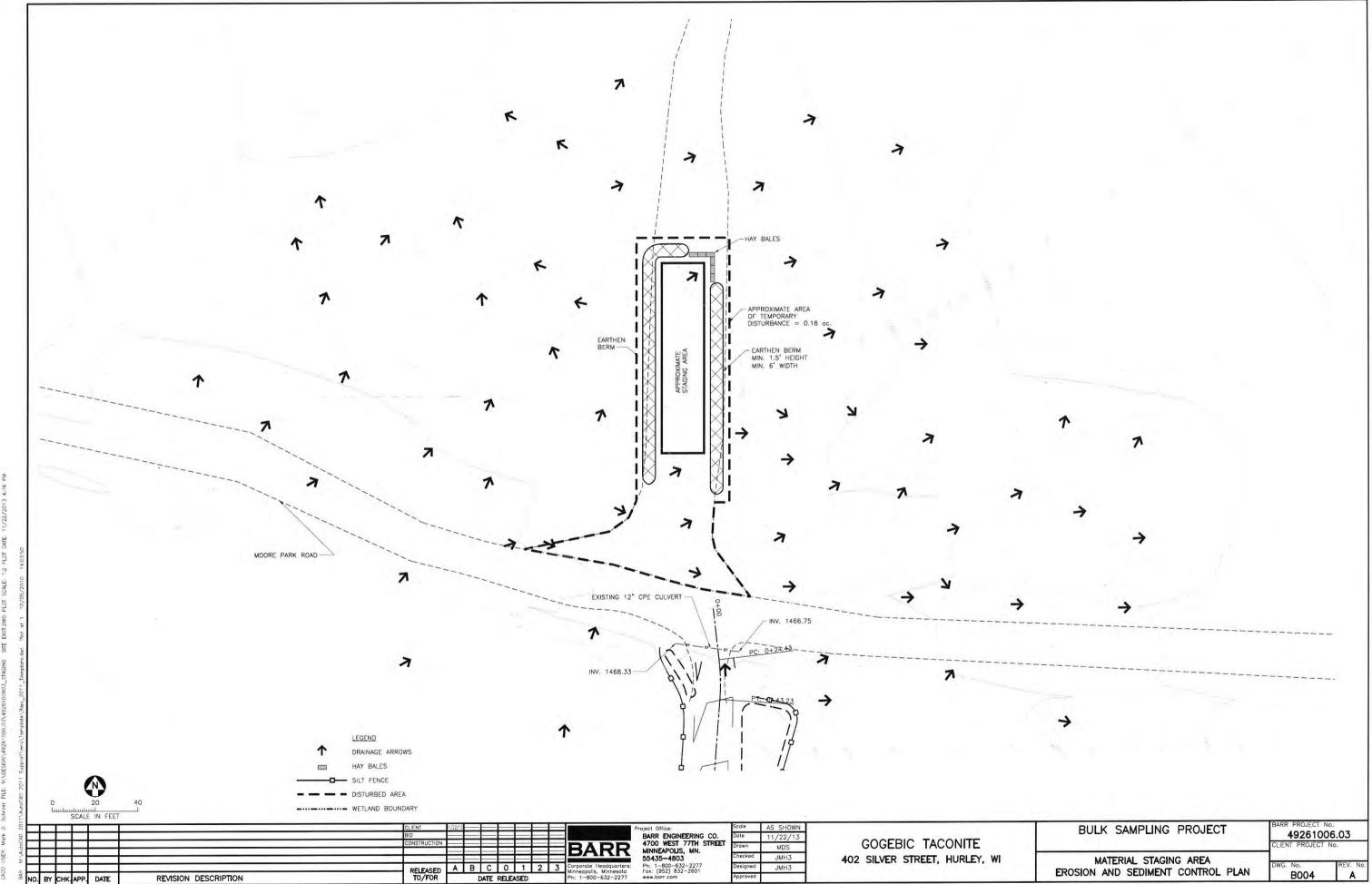


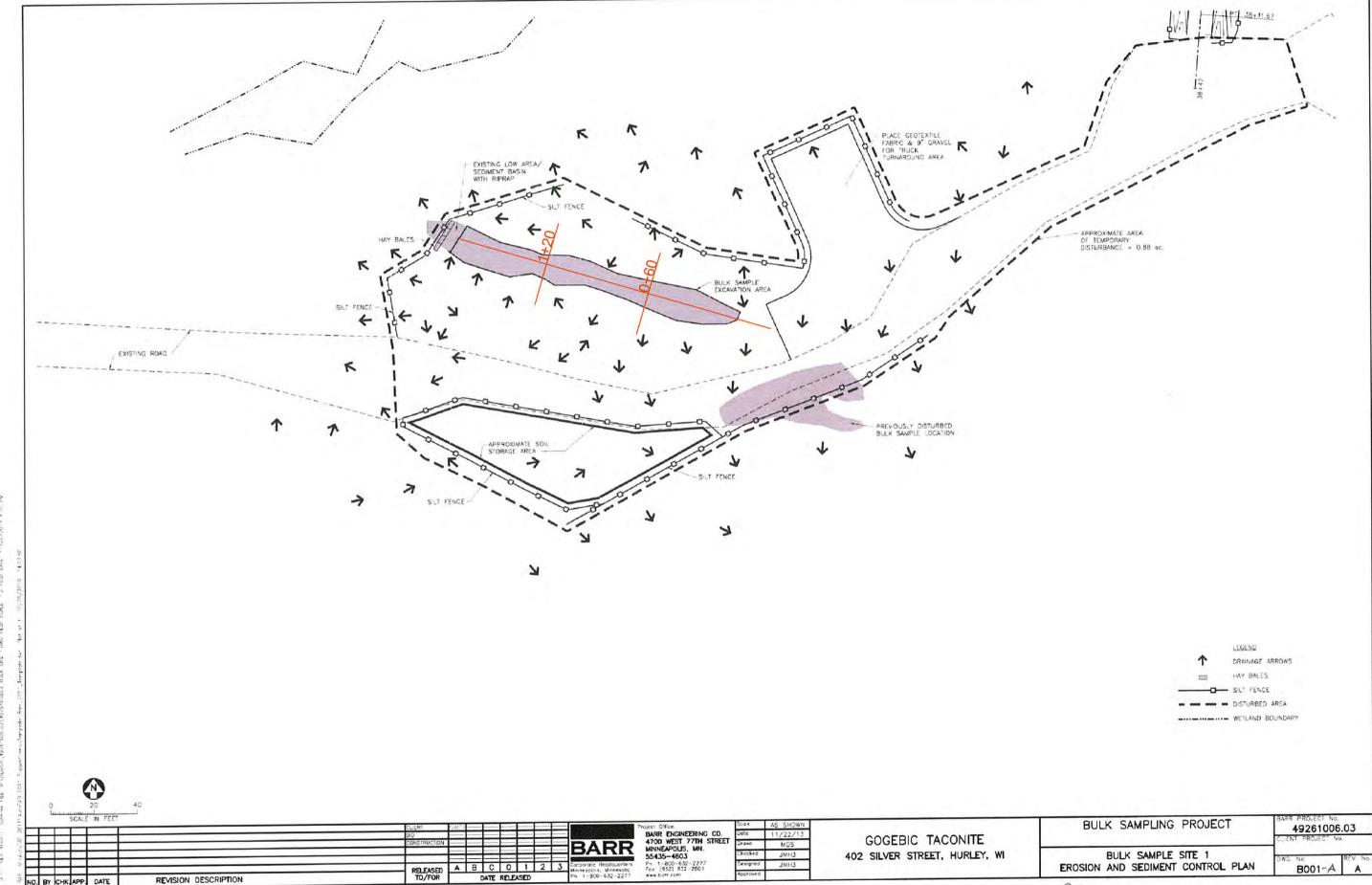


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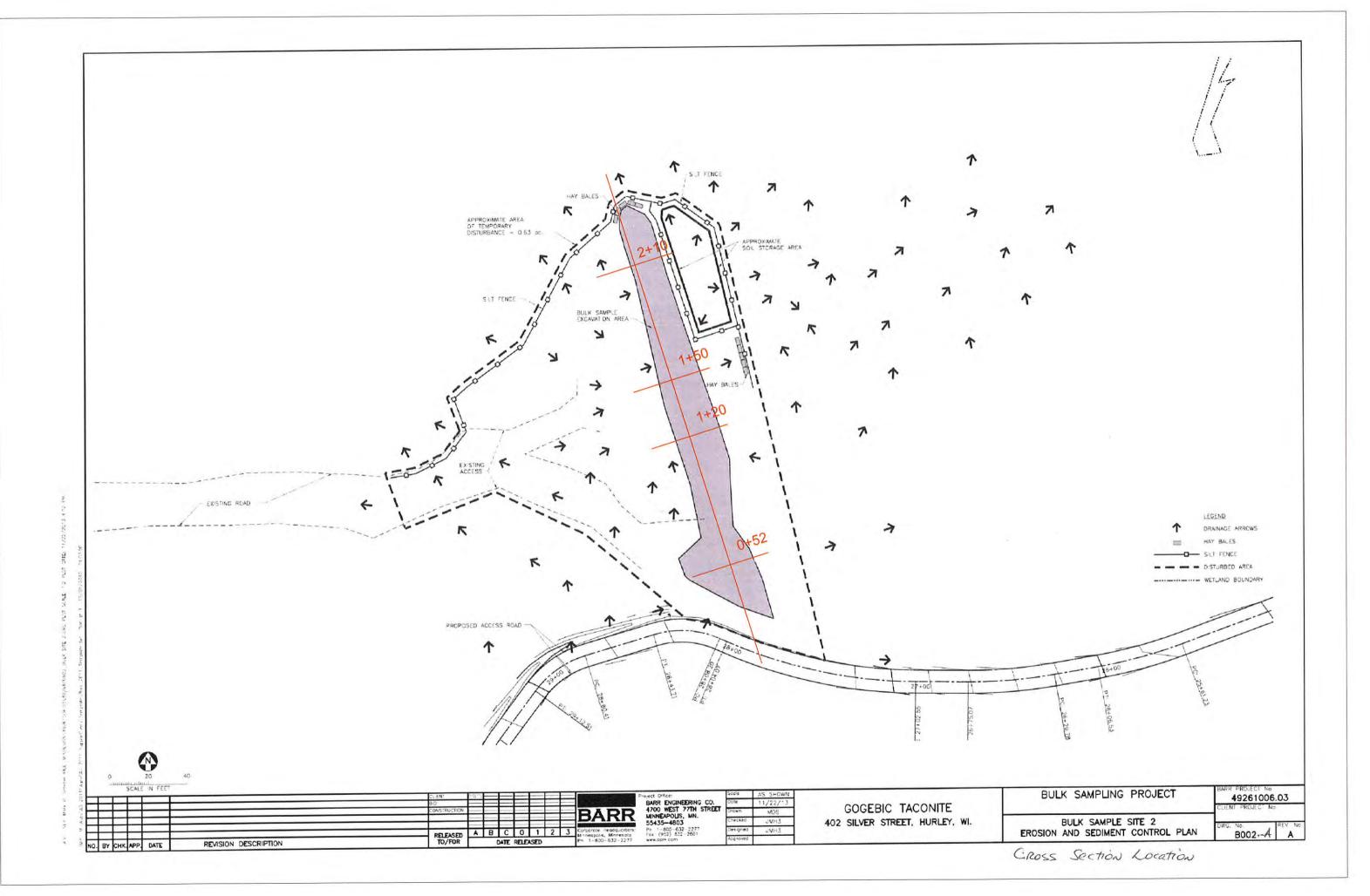


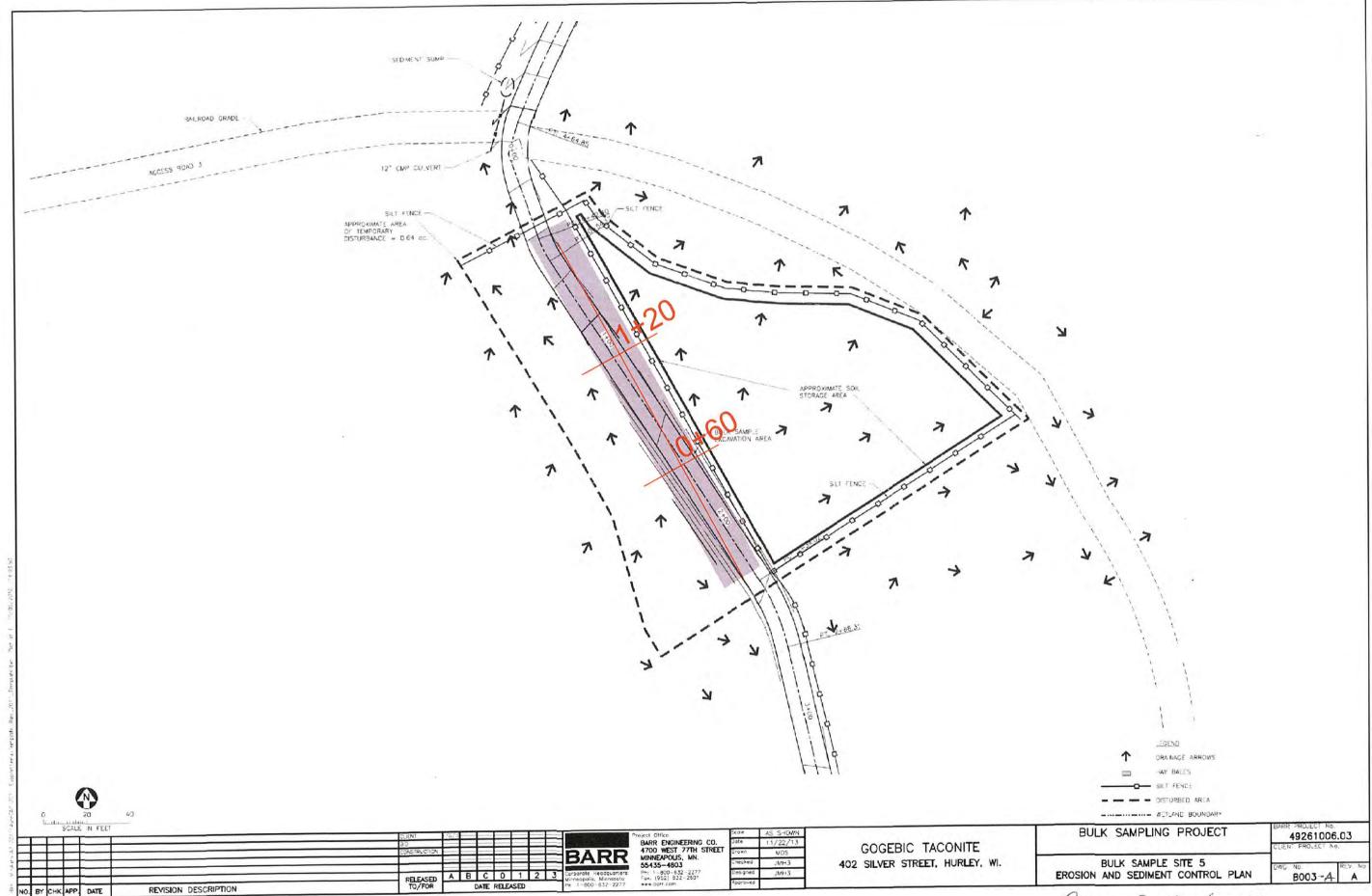




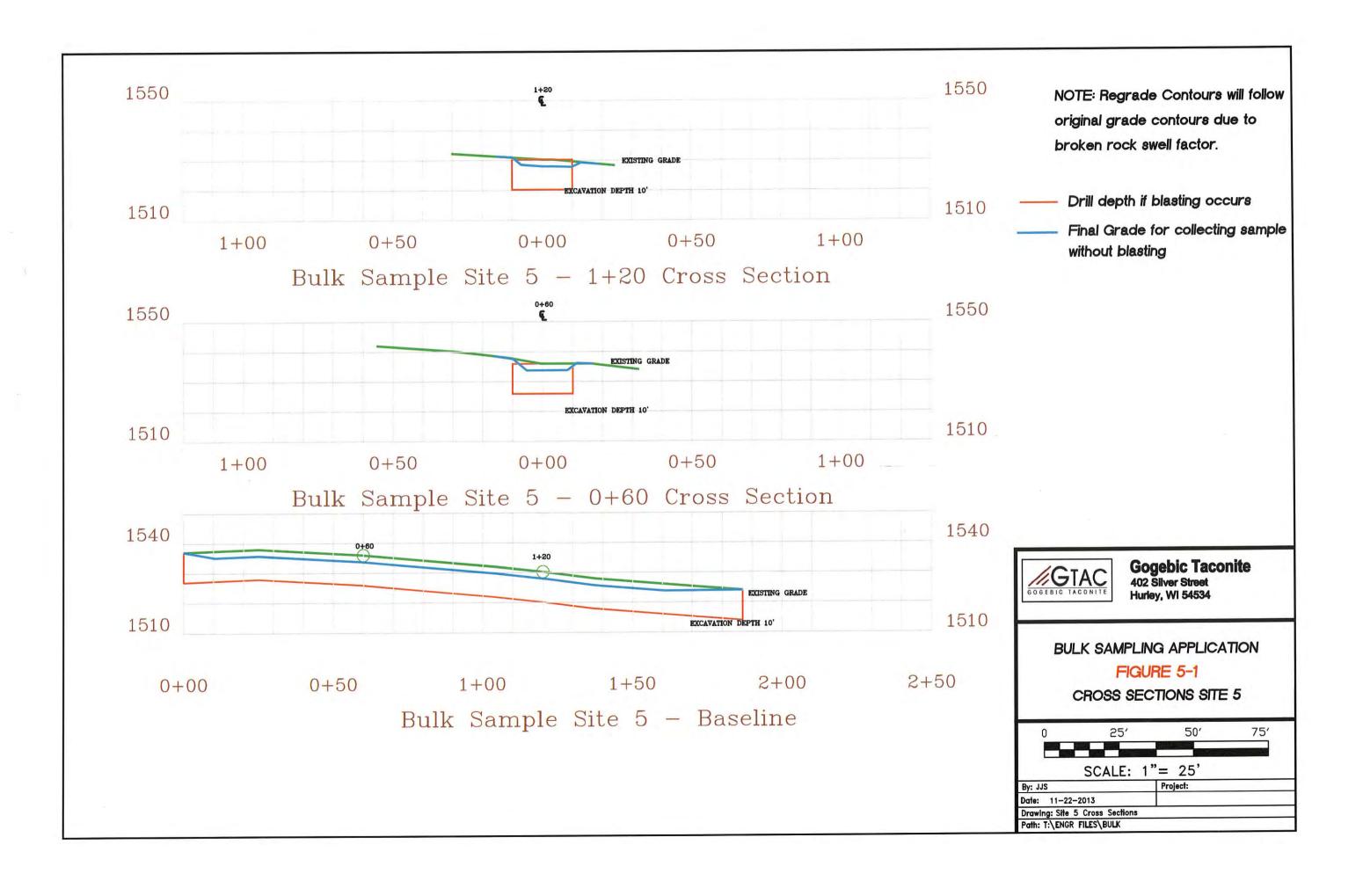


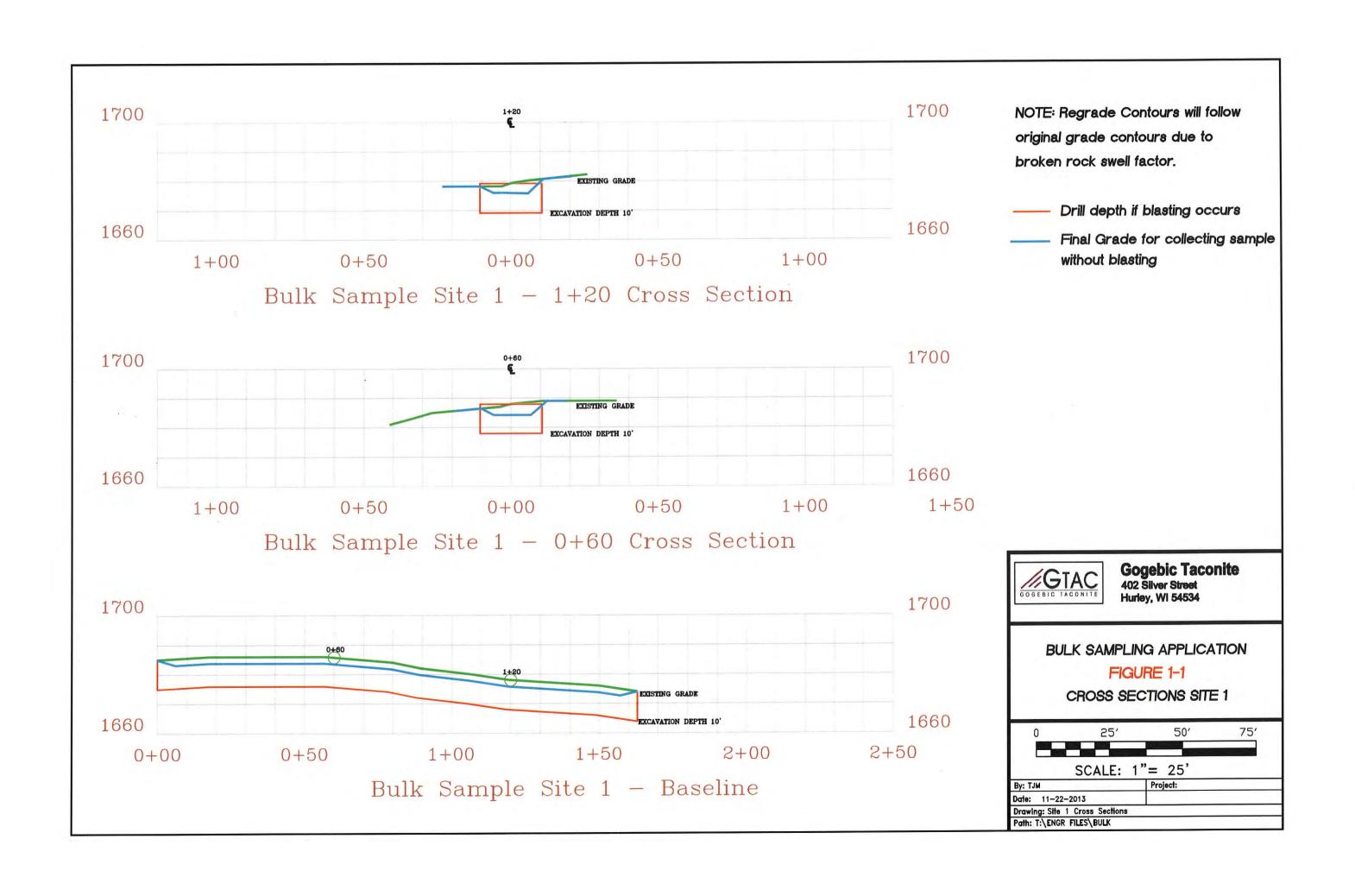
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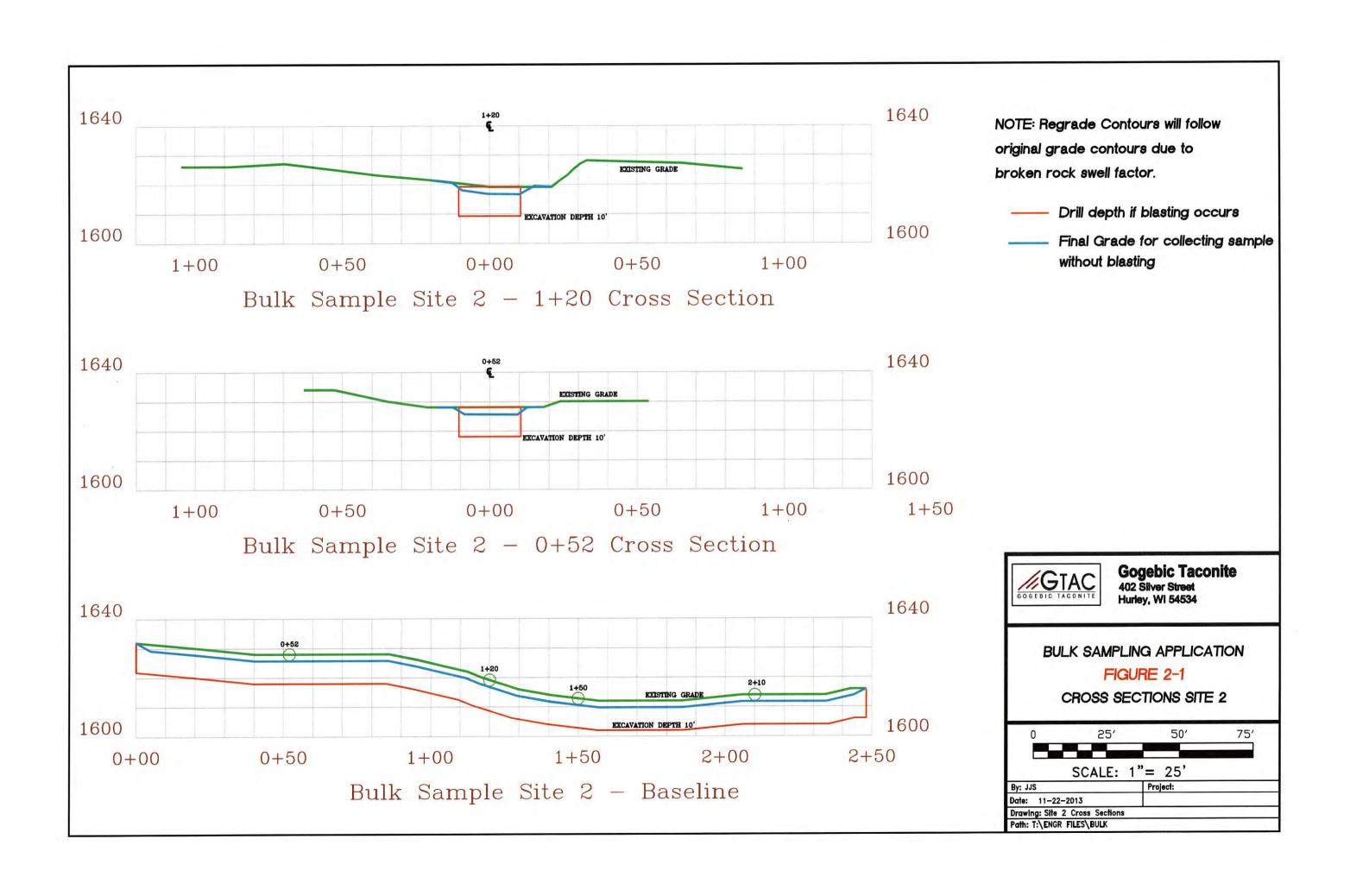


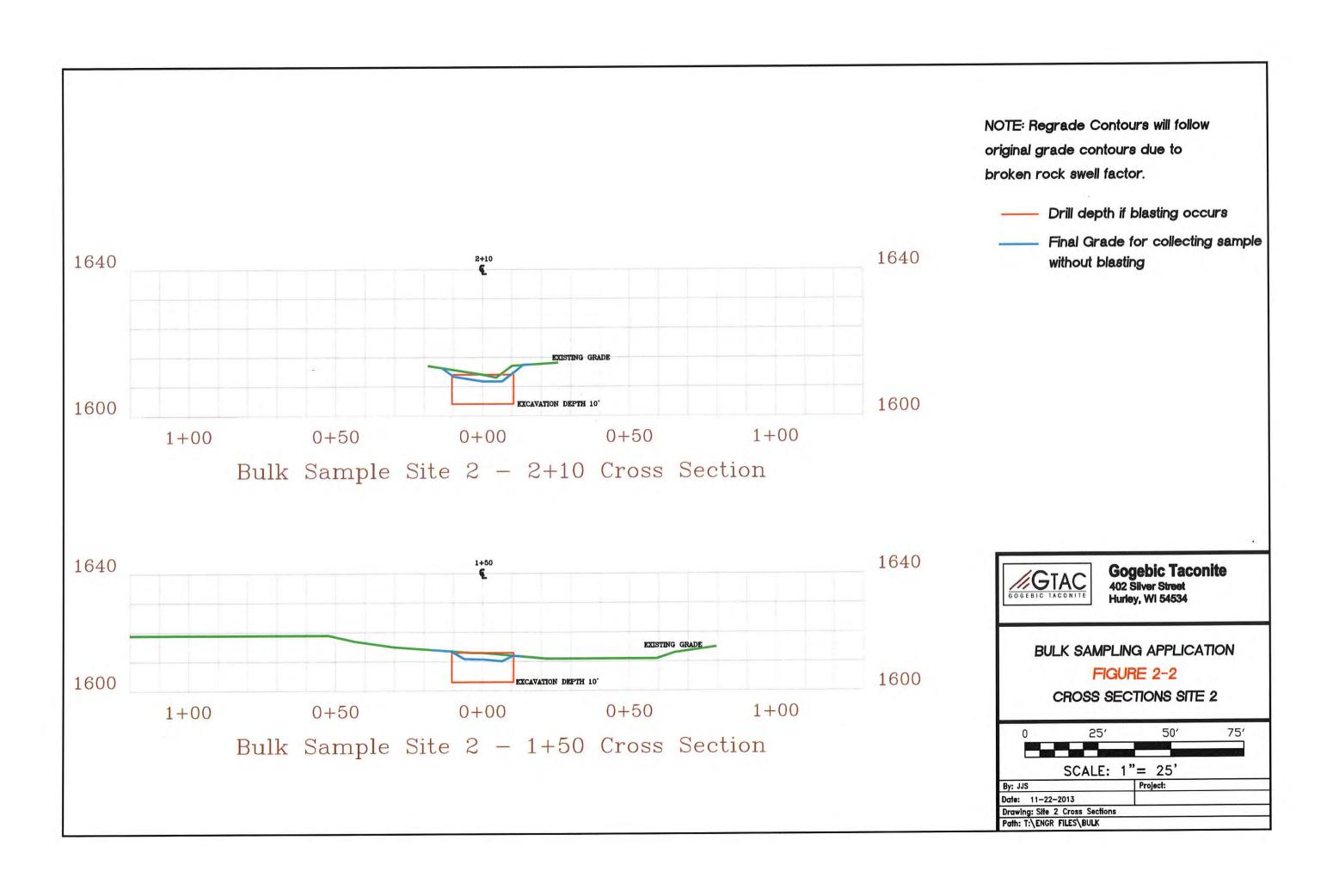


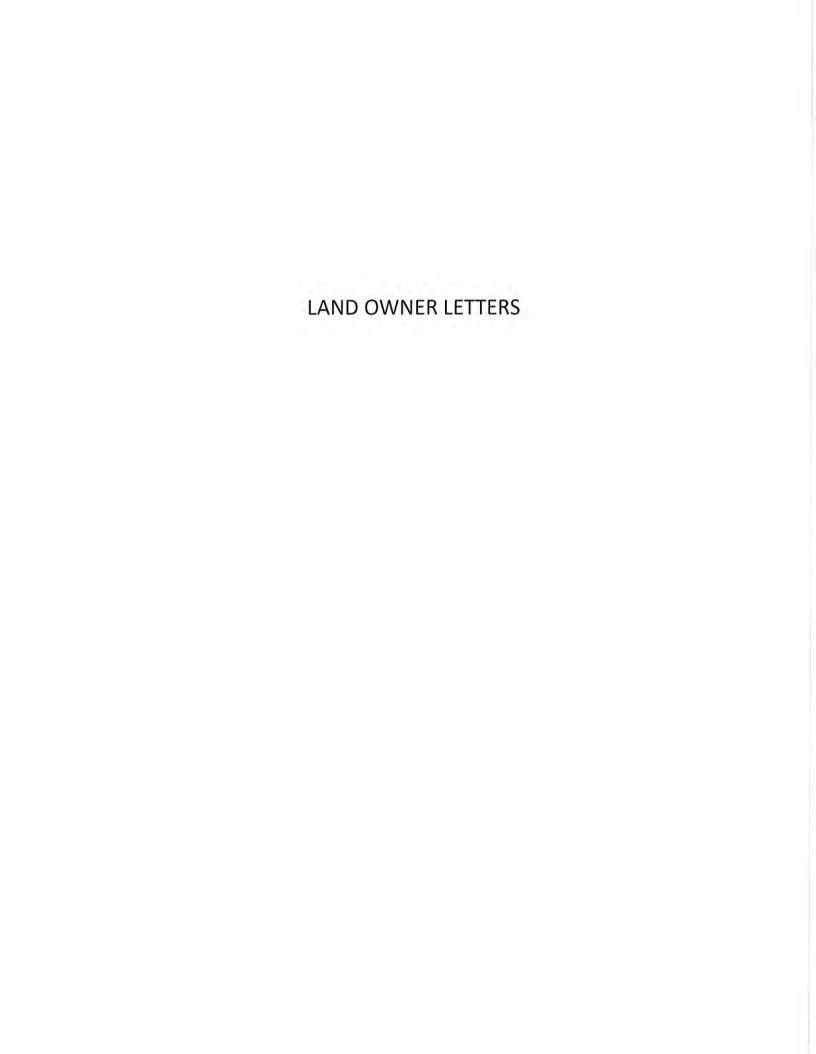
Cross Section Location











Wisconsin Department of Natural Resources Mining Coordinator – WA/5 101 South Webster Street PO Box 7921 Madison, WI 53707-7921

Dear Director:

Gogebic Taconite, LLC Bulk Sampling, Exploration and Environmental Studies Right of Entry

This letter serves to inform your agency that through the Option Agreement signed by RGGS Land and Minerals, Ltd., L.P. and Gogebic Taconite, LLC, the right to access the Optioned Lands and the right to perform Bulk Sampling, Exploration and Environmental Studies on the Optioned Lands has been granted to Gogebic Taconite, LLC.

The Optioned Lands include parcels in the following areas in Iron County, Wisconsin:

Sections 31, 32, and 33, Township 45 North, Range 1 West.

Sections 5 and 6, Township 44 North, Range 1 West.

The Optioned Lands include parcels in the following areas in Ashland County, Wisconsin Sections 1, 2, 11, and 12, Township 44 North, Range 2 West.

The various roads that would be used in the Bulk Sampling and Exploration Activities are used for timber harvesting operations on the property. These roads are to be left in place for future activities. Therefore, the proposed reclamation of the bulk sampling sites and roads which will remain in the road system on the property meets the requirements of RGGS Land and Minerals, Ltd., L.P., the land owner.

The proposed reclamation of the bulk sampling sites by regrading and revegetation, conforming to the Wisconsin DNR reclamation standards, also meets the requirements of RRGS Land and Minerals, Ltd., L.P., the land owner.

Terry Villa

RGGS Land & Minerals, LTD., L.P.

Tmy Villa

PO Box 1266

Virginia, MN 55792

LAPOINTE IRON COMPANY

a Wisconsin corporation

TELEPHONE 218/262-0799 3920 13th Avenue East, Suite #7 Hibbing, Minnesota 55746

FAX 206/203-0098

July 25, 2013

Wisconsin Department of Natural Resources Mining Coordinator ATTN: Mr. Larry Lynch 101 South Webster Street PO Box 7921 Madison, WI 53707-7921

Re:

Gogebic Taconite, LLC

Bulk Sampling, Exploration and Environmental Studies

Right of Entry

Dear Mr. Lynch:

This letter serves to inform your agency that through the Option Agreement signed by LaPointe Iron Company and Gogebic Taconite, LLC, the right to access the Optioned Lands and the right to perform Bulk Sampling, Exploration and Environmental Studies on the Optional Lands has been granted to Gogebic Taconite, LLC.

The Optioned Lands include parcels in the following areas in Iron County, Wisconsin:

Township 45 North, Range 1 West, Sections 28 and 33

The Optioned Lands include parcels in the following areas in Ashland County, Wisconsin:

Township 44 North, Range 2 West, Sections 1, 2, 11 and 12

The various roads that would be used in the Bulk Sampling and Exploration Activities are used in timbering operations on the property. These roads are to be left in place for future activities. Therefore, the proposed reclamation of the drill sites and roads as remaining in the road system on the property meets the requirements of LaPointe Iron Company, the land owner.

Sincerely,

David C. Adams, President LaPointe Iron Company

CHESTER COMPANY, LIMITED

TELEPHONE 218/262-0799 3920 13th Avenue East, Suite # 7 Hibbing, Minnesota 55746 Fax 206/203-0098

July 25, 2013

Wisconsin Department of Natural Resources Mining Coordinator ATTN: Mr. Larry Lynch 101 South Webster Street PO Box 7921 Madison, WI 53707-7921

Re:

Gogebic Taconite, LLC

Bulk Sampling, Exploration and Environmental Studies

Right of Entry

Dear Mr. Lynch:

This letter serves to inform your agency that through the Option Agreement signed by Chester Company, Limited and Gogebic Taconite, LLC, the right to access the Optioned Lands and the right to perform Bulk Sampling, Exploration and Environmental Studies on the Optional Lands has been granted to Gogebic Taconite, LLC.

The Optioned Lands include parcels in the following areas in Iron County, Wisconsin:

Township 44 North, Range 1 West, Sections 5 and 6

The various roads that would be used in the Bulk Sampling and Exploration Activities are used in timbering operations on the property. These roads are to be left in place for future activities. Therefore, the proposed reclamation of the drill sites and roads as remaining in the road system on the property meets the requirements of Chester Company, Limited, the land owner.

Sincerely,

David C. Adams, President Chester Company, Limited

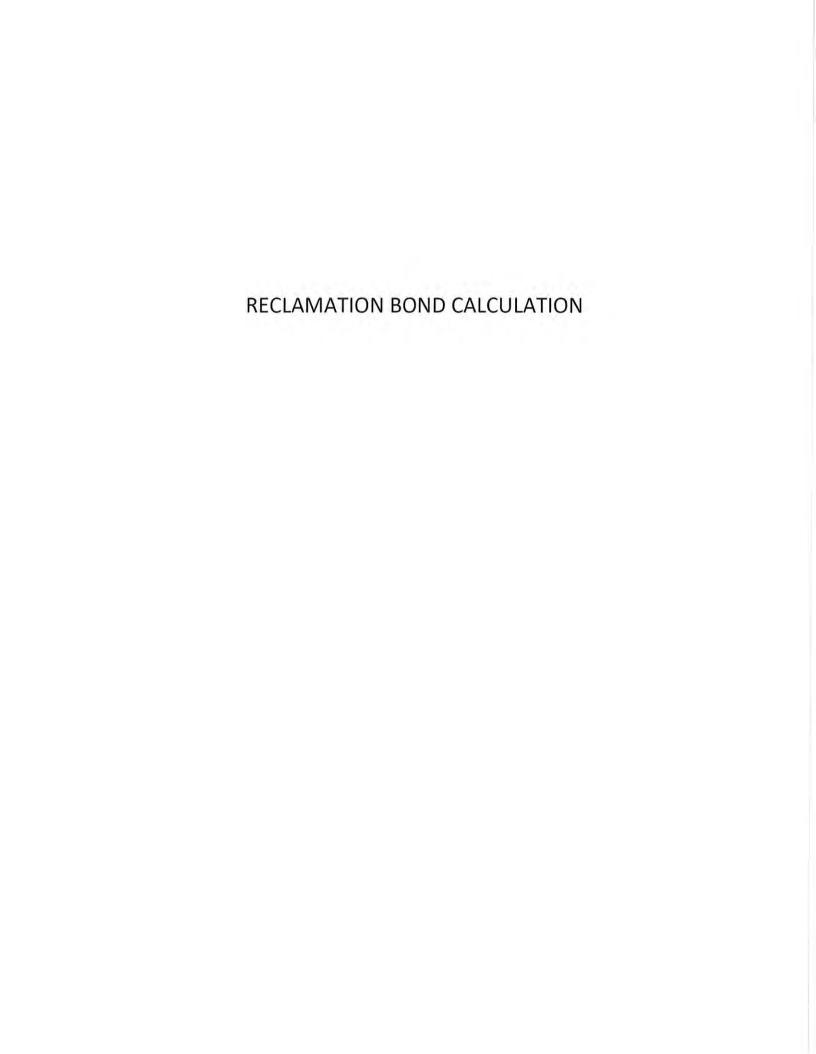


Table 1 - Reclamation Cost Estimate Gogebic Taconite, LLC Bulk Sampling Project November 22, 2013

pagairas	A = 25 A 25 C	NI como la a	112145	Hall Cont	T-4.5	Location
Location	Activity	Number	Units	Unit Cost	Tot Cost	Cost
Bulk Samp	le Site 1					
	Regrading	8	Hours D6 dozer	\$110	\$880	
	Seed	0.65	Acres	\$235	\$153	
	Mulch	10	Straw Bales	\$10	\$100	
	Seed Labor	4	Hours Labor	\$50	\$200	
	TOTAL					\$1,333
Bulk Samp	le Site 2					
	Regrading	8	Hours D6 dozer	\$110	\$880	
	Seed	0.6	Acres	\$235	\$141	
	Mulch	10	Straw Bales	\$10	\$100	
	Seed Labor	4	Hours Labor	\$50	\$200	
	TOTAL					\$1,321
Bulk Samp	le Site 5					
	Regrading	8	Hours D6 dozer	\$110	\$880	
	Seed	0.65	Acres	\$235	\$153	
	Mulch	10	Straw Bales	\$10	\$100	
	Seed Labor	4	Hours Labor	\$50	\$200	
	TOTAL					\$1,333
Access Roa	nd 6					
	Regrading	40	Hours D6 dozer	\$110	\$4,400	
	Aggregate Removal	40	Hours Excavator	\$180	\$7,200	
	Aggregate Removal	80	Hours Truck	\$120	\$9,600	
	Seed	3	Acres	\$235	\$705	
	Mulch	50	Straw Bales	\$10	\$500	
	Seed Labor	16	Hours Labor	\$50	\$800	
	TOTAL					\$23,205





Wetland Delineation Report Amendment

Gogebic Taconite, LLC

Bulk Sample Sites and Access Road 6
Town of Anderson, Iron County, Wisconsin
and

Town of Morse, Ashland County, Wisconsin

November 11, 2013





WETLAND DELINEATION REPORT AMENDMENT

GOGEBIC TACONITE, LLC BULK SAMPLE SITES and ACCESS ROAD 6 TOWN OF ANDERSON, IRON COUNTY, WISCONSIN AND TOWN OF MORSE, ASHLAND COUNTY, WISCONSIN

November 11, 2013

Prepared for:

Mr. Tim Myers, P.E. Chief Engineer Gogebic Taconite, LLC 402 Silver Street Hurley, Wisconsin 54534

Prepared By:

Wetlands and Waterways, LLC 5742 Warbonnet Lane Hazelhurst, Wisconsin 54531 (715) 892-4211

Project Number: 007

Ann M. Michalski, PSS, PWS, CST WDNR Professionally Assured Wetland Delineator

Wetlands and Waterways, LLC ~ 5742 Warbonnet Lane, Hazelhurst, WI 54531 ~ Phone: 715-892-4211 www.wetlandsandwater.com



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Introduction

Gogebic Taconite, LLC contracted Wetlands and Waterways, LLC to delineate wetlands within five proposed bulk sample site areas and along associated access routes at property located in Part of Township 44 North, Range 2 West, Town of Morse, Ashland County, Wisconsin and Part of Township 45 North, Range 1 West, Town of Anderson, Iron County, Wisconsin. See Figure 1 for the property location and local topography.

Four of the bulk sample sites and the access roads located immediately adjacent to the sites were examined on May 24, 2013 by Ms. Ann Michalski, PSS, PWS, Wisconsin Department of Natural Resources (WDNR) Professionally Assured Wetland Delineator for areas meeting jurisdictional wetland criteria as specified in the 1987 Corps of Engineers Wetlands Delineation Manual and the Northcentral and Northeast Regional Supplement. A fifth bulk sample site was examined on June 19, 2013 by Ms. Michalski along with U.S. Army Corps of Engineers (USACOE) and WDNR personnel. Due to the presence of a wetland across the secondary access road leading into Bulk Sample Site 1, a third site visit was conducted on July 8, 2013 to examine an alternate access route for Bulk Sample Sites 1 and 2. This delineation also revealed the presence of wetlands within the proposed route so a new route was identified and wetlands adjacent to that new route, referred to as Access Road 6, were delineated on October 11, 2013. A follow up site visit was conducted on October 24, 2013 with representatives from Gogebic Taconite, WDNR, USACOE, the Bad River Tribe and Thompson and Associates Wetland Services to review and discuss Access Road 6.

The portions of the property examined consist primarily of mature hardwood forest with existing forest roads throughout much of the area from historic logging and mining activities. Five proposed bulk sample sites were reviewed for this study as well as proposed access routes to several of those sites. Most of the bulk sample sites are located in areas that were historically explored for taconite. One primary access road runs across the property from west to east with the bulk sample site locations ranging from the west end of the property to the east end of the property. The primary access road is improved more so than the secondary access roads and will not require any alterations or permitting for purposes of accessing the bulk sample sites. Therefore, the primary access road was not included as part of the delineation. The logging roads and/or old mining roads that branch off of the primary road and lead to each of the bulk sample sites were reviewed as part of the delineation and are referred to as secondary access roads. Lastly, due to the presence of a wetland on one of the secondary access roads, a new temporary access road is being proposed and wetlands along that route were delineated as well. That route is referred to as Access Road 6. Much of Access Road 6 consists of existing forest roads but some earthwork will be necessary to make the road usable and bring it up to safety standards for heavy equipment. The road improvements are proposed to serve as a temporary access road to Bulk Sample sites 1 and 2 and the road area will be restored once bulk sampling activities have been completed.

The five bulk sample sites reviewed were all located in uplands. Bulk Sample Site 2 had a small area of standing water at the time of the visit following some significant rain events. Vegetation was sparse in this area but soils were evaluated and indicated upland conditions. The standing



water appeared to be temporary and soils did not indicate hydric conditions. This same area was reviewed again during the follow-up site visit with regulatory agencies in July and a third time during October, confirming that this area is upland. The secondary access routes to each bulk sample site were also evaluated and suitable upland access routes were identified.

The purpose of delineating the bulk sample sites and access routes was to identify wetlands to be avoided or permitted for temporary impacts associated with equipment transport to the bulk sample sites and proposed bulk sampling activities. Figure 2 shows the overall site layout, bulk sample site locations and existing access roads leading to the sites. Figures 2A through 2C show the locations of the bulk sample sites and associated secondary access roads, Access Road 6 and all delineated wetlands in greater detail. Representative data points were recorded at each sample site location and a Field Data Sheet was recorded for each location. The sample points are shown on Figures 2A through 2C and Field Data Sheets are included in Appendix A.

One wetland area (Wetland 1) was delineated along the existing secondary access road leading to Bulk Sample Site 1 during the first site visit. Figure 2B shows the location of the wetland in relation to the access road and bulk sample site. In order to avoid impacts to this wetland, an alternative access route was evaluated on July 8, 2013 to find a more suitable upland route. Four wetlands (Wetlands 2 through 5) were delineated along that route during the site visit. Based on evaluations of that proposed route and nearby wetlands, Gogebic Taconite identified a third route (Access Road 6) which was evaluated for wetlands within an area ranging from 50 to 300 feet from the proposed roadway on October 11, 2013. Nine wetlands (Wetlands 6 through 14) were delineated during that site visit but none of the wetlands identified are located within the proposed roadway. A small area, approximately 4 feet in diameter was discussed during the October 24, 2013 site visit as a possible connection to Wetland 14. Regulatory agents agreed with the original wetland boundary and this area was added to Figure 2C as a potential stormwater connection. This area, as well as all identified wetlands, will be avoided during construction activities associated with Access Road 6. Wetland boundaries will be staked prior to construction to ensure that contractors are aware of the wetland locations.

Per the Wisconsin Wetland Inventory (WWI) classification system, the wetlands identified for this study are classified primarily as T3K (Forested, broad-leaved deciduous, palustrine, wet soil) and E2K (Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil) wetlands with the exception of Wetland 5, which had virtually no vegetation and could only be classified as a F3K (Flat/unvegetated wet soil, mud, wet soil, palustrine) wetland although this classification is more appropriate for larger floodplain areas. This wetland is a very small, narrow seep with minimal vegetation that appears to potentially have been created from historic mining activities nearby. The Field Data Sheets classify Wetlands 1 through 14 according to the Cowardin ET AL 1979 classification system as a PFO1 (Palustrine, Forested, Broad-Leaved Deciduous) and PEM1 (Palustrine, Emergent, Persistent) wetlands. A drainageway flows northward through both Wetland 1 and Wetland 4 but by the second site visit on June 19th, the drainageway in Wetland 1 no longer had flowing or standing water present and the drainageway in Wetland 4 was not flowing at the time of the visit. Wetlands 2, 3, 5, 6, 7, 9, 10, 11, 12 and 13 appear to be isolated although that determination should be made by regulatory staff. Several other locations (SB1 through SB9) were evaluated for the presence or absence of wetlands due to either topographical position or prior mapping conventions indicating those areas may contain wetlands. These areas were evaluated based on soils, vegetation and hydrology and were determined to not meet wetland criteria.



Wetland boundaries were identified using procedures outlined in the 1987 Corps of Engineers Wetland Delineation Manual and Northcentral and Northeast Regional Supplement. Boundaries for areas identified as wetland were determined based on topographical changes, transitions from hydric soils and hydric vegetation to upland soils and upland vegetation and presence or lack of hydrology indicators. Regulatory personnel present at the site during both the June 19th and October 24th site visits reviewed the delineated areas and agreed with the findings of the wetland delineation.

Overall, most of the access routes and all historic bulk sample site locations are considered Significantly Disturbed due to the clearing of vegetation at one time and soil disturbances from historic road construction and bulk sampling activities. Most areas outside of the forest roads and historic bulk sample sites were not considered Significantly Disturbed. Most areas observed were not considered Problematic with the exception of shallow rock at some sample sites preventing full soil profile viewing.

Precipitation totals for this area were in general higher than normal throughout the 2013 growing season. The National Weather Service historical precipitation data reviewed for Duluth, Minnesota, Rhinelander, Wisconsin and Marquette, Michigan indicated that the month-to-date precipitation levels were near normal but the year-to-date precipitation levels were much higher than normal (+3 to +4" above normal) at the time of the first site visit on May 24, 2013. Precipitation data for the July 8th site visit indicated that the month-to-date precipitation levels were slightly higher than normal and the year-to-date precipitation levels were again much higher than normal (+4 to +5" above normal). Precipitation data for the October site visits also indicated that the month-to-date precipitation levels were slightly higher than normal and the year-to-date precipitation levels were much higher than normal (+4 to +5" above normal). The Palmer Drought Index also indicated that as of May 25th, the area was "extremely moist" with a +4 value indicating very wet conditions and as of July 6th and through October 26th the area was "moderately moist" with hydrology conditions above normal with a +2.00 to +2.99 value. It is important to note that the site meeting conducted on October 24, 2013 was conducted under snow cover and after the growing season and therefore, data collected during that site visit is not valid. However, regulatory agencies indicated that based on their review of data collected within the growing season and observations of those areas during that site visit and previous site visits, they agree with the wetland delineation.

Standing and flowing water was observed in many wetland areas at the time of first site visit but by the June 19th and July 8th site visit, most wetland areas observed only had saturated soils. Primary hydrology indicators present at the time of the site visits varied between site visits and between wetlands but most wetland areas had primary hydrology indicators including high water table (A2), saturation (A3) and water-stained leaves (B9) and secondary hydrology indicators including geomorphic position (D2) and FAC-neutral test (D5). Other hydrology indicators observed but less frequently included standing water (A1), sparsely vegetated concave surface (B8), drainage patterns (B10) and oxidized rhizospheres (C3).

Hydric soil indicators applied at the site include Histosol (A1), Depleted Below Dark Surface (A11), Depleted Matrix (F3), Redox Dark Surface (F6) and Iron Manganese Masses (F12). A few areas identified as wetlands did not meet hydric soil indicators, primarily due to shallow rock



preventing full soil profile viewing but hydric soils were assumed based on hydrology indicators and vegetation in those locations.



Study Methods

Available topographic maps, survey maps, aerial photos, WWI maps, and the Ashland and Iron County Soil Survey maps were reviewed prior to visiting the property to identify potential wetland areas. The WWI is included as Figure 3. The combined Ashland and Iron County Soil Survey Map is included as Figure 4.

Examination of vegetation, soils and hydrology, as outlined in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Northcentral Regional Supplement, were used to characterize and determine wetland boundaries. The NRCS Field Indicators of Hydric Soils in the United States guide was also utilized to identify hydric soils at the site. Wetland edges were marked with pink flagging labeled "Wetland Delineation" for the purposes of photos and wetland boundary documentation during several of the site visits but flagging was then removed. The wetland edge was considered the highest extent of the jurisdictional wetland. Areas below the delineated wetland edge met required wetland criteria, while areas above did not. Wetland boundaries and sample site locations were located with a Trimble GeoXT 6000 Series GPS with sub-meter accuracy. The wetland boundaries and sample site locations are shown on Figures 2A, 2B and 2C with all wetlands identified being located in the eastern portions of the study area. In the event that no wetlands were present within a bulk sample site, a representative sample site was chosen and a Field Data Sheet was completed. Other sample sites (SB1 through SB10) were evaluated to confirm that despite topographic position, these areas did not meet all required wetland criteria.

In the location of the delineated wetlands, a sample transect was established in a representative wetland to upland transition zone. The transect was comprised of two sample points located along a line running perpendicular to the wetland edge, with one point in obvious wetland and one point in obvious upland. A field data form was completed for each of the upland and wetland sample points. Sample point locations for the wetland transects, bulk sample site sample locations and other sample locations were also located with a GPS and are shown on Figures 2A through 2C. A field data form was not completed for Bulk Sample Site 5 but the area was reviewed by USACOE and WDNR personnel on June 19th and confirmed to be upland. Field data forms are included in Appendix A.

Wetland classification was performed according to Cowardin and Wisconsin Wetland Inventory classification systems. Vegetation was identified using suitable keys (Eggers and Reed, 1987; Knopt, 1980; Courtenay/Zimmerman, 1972; Fassett, 1951; Chadde, 1998) and a plant's hydrophytic status was determined using the most recent Northcentral-Northeast Region – National Wetlands Plant List (U.S. Army Corps of Engineers, 2012 and 2013.



Results

OFF-SITE SURVEY

The WWI/Hydric Soils map indicates some small wetland symbols (< 2 acres) in the vicinity of Bulk Sample Sites 1 and 2 and associated access roads but no wetlands are mapped within the vicinity of Bulk Sample Sites 3 and 4. Based on observations during the site visits, the wetland symbols appear to be indicating the approximate location of nearby wetlands but not necessarily within the immediate study areas. The WWI also indicates a stream near Bulk Sample Site 2, but based on the map it appears this stream is located slightly further south than Bulk Sample Site 2. The Iron and Ashland County Soil Surveys indicate that the bulk sample sites consist primarily of moderately well to well drained upland soils. One area is mapped as having hydric soils or soils with hydric inclusions along the eastern portion of Access Road 6 but no wetlands were identified within the proposed roadway.

The Ashland and Iron County Soil Surveys indicate that the following soil series are present within the study areas:

5351C – Gogebic Silt Loam, 6 to 18% slopes, Very Stony, Rocky - These soils consist primarily of moderately well drained silt loam soils overlying fine sandy loam and gravelly fine sandy loam soils. These soils are typically formed on convex or linear crests, side slopes, base slopes, nose slopes or head slopes of till plains with gently rolling to moderately steep terrain. These soils are classified as Frigid Alfic Oxyaquic Fragiorthods. These soils are not listed on the Wisconsin or National Hydric Soils lists.

5353B - Tula-Gogebic Complex, 0 to 6% slopes, Stony - These soils consist primarily of somewhat poorly drained cobbly very fine sandy loam overlying gravelly sandy loam and moderately well drained silt loam soils oelrying fine sandy loam and gravelly fine sandy loam. These soils are typically formed on concave to linear footslopes and linear summits of till plains with level to gently rolling terrain. These soils are classified as Frigid Argic Fragiaquods and Frigid Alfic Oxyquaic Fragiothods. These soils are listed on the Wisconsin or National Hydric Soils lists due to the following inclusions:

- Gay 10% within Depressions, Till Plains
- Pleine 5% within Drainageways

5369D – Dishno-Gogebic-Peshekee-Rock Outcrop Complex, 18 to 35% slopes – These soils consist primarily of moderately well to well drained cobbly silt loam overlying cobbly loam or very stony loamy sand or sandy loam over bedrock. These soils are typically formed on convex or linear summits, backslopes, shoulders and footslopes of moraines with moderately steep to very steep terrain. These soils are classified as Frigid Oxyaquic Haplorthods, Alfic Oxyaquic Fragiorthods and Frigid Lithic Haplorthods. These soils are not listed on the Wisconsin or National Hydric Soils lists.



5369E – Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35 to 55% slopes - These soils consist primarily of well drained cobbly fine sandy loam and cobbly silt loam or very fine sandy loam overlying cobbly and/or gravelly soils over bedrock. These soils are typically formed on convex shoulders, backslopes, sideslopes and summits on hills and till plains with very steep to extremely steep terrain. These soils are classified as Frigid Fragic Haplorthods, Frigid Alfic Fragiothods and Frigid Lithic Haplorthods. These soils are not listed on the Wisconsin or National Hydric Soils lists.

The combined Ashland and Iron County Soil Survey map is included as Figure 4.

FIELD DELINEATION

Fourteen wetland areas were delineated during the site visit. Fourteen other sample sites were also evaluated and identified as uplands. The following text describes the wetlands identified at the site and the basis for determining the wetland boundaries. See Appendix A for Wetland Data Forms. Refer to Figures 2A through 2C for the location of the delineated wetlands, the wetland sample points and transects and sample points within the bulk sample sites.

DELINEATED WETLAND BASINS

Areas Evaluated on May 24, 2013

Wetland 1 is primarily a PFO1 (Palustrine, Forested, Broad-Leaved Deciduous (T3K - Forested, broad-leaved deciduous, palustrine, wet soil)) wetland. A drainageway flows northward through this wetland. The drainageway was flowing with approximately 1 to 2 inches of water at the time of the delineation but when observed during a later visit on June 19th no flowing or standing water was observed. Hydrology indicators observed at the time of the visit included standing water (A1) high water table (A2), saturation to the soil surface (A3), Drainage Patterns (B10) and Geomorphic Position (D2). This wetland area did not have a dominance of hydric vegetation but was tied for upland/wetland dominants and if non-dominants were considered wetland vegetation criteria would be met.

The wetland soils consist primarily of sandy loam and loam soils with redoximporphic features overlying shallow rock. Upland soils consist primarily of loam soils overlying shallow rock. Due to the shallow rock, a full soil profile could not be viewed within the wetland or upland sample points but obvious transitions in hydrology and vegetation, as well as defined topographic breaks in most areas, were considered and most heavily evaluated in determining wetland boundaries. Hydric Soil Indicators applied at this location included Redox Dark Surface (F6) and Iron-Manganese Masses (F12).

Site 1-1, Site 2-1, Site 2-2, Site 3-1 and Site 4-1 are located within Bulk Sample Sites 1 through 4, respectively and were all determined to be upland. Most of the sample locations were considered to be Significantly Disturbed due to historic bulk sampling activities that occurred in these locations. Some areas were also considered Problematic due to shallow rock that prevented full soil profile viewing. However, all locations other than Site 2-1 had a dominance of upland vegetation and all locations had upland soils consisting primarily of high chroma brown sandy loam or loam soils lacking redoximorphic features. Sample Site 2-1 had a



dominance of hydric vegetation due to Facultative species but was determined to be upland based on observations of soils and with concurrence from regulatory agents.

Areas Evaluated on July 8, 2013

Wetland 2 is primarily a PFO1 (Palustrine, Forested, Broad-Leaved Deciduous (T3K - Forested, broad-leaved deciduous, palustrine, wet soil)) wetland. This wetland appears to be part of a wetland/non-wetland mosaic that extends north of the study area although the specific area delineated for purposes of this study was not identified as a mosaic type system. An old logging road runs through the southern edge of this wetland and likely resulted in an expansion of the wetland. Standing water was present in the rutted areas but the sample site, which was placed in a less disturbed area, did not have standing water but rather soil saturation and a high water table at the time of the visit. Hydrology indicators observed at the time of the visit included high water table (A2), saturation to the soil surface (A3), Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of silt soils with redoximporphic features overlying shallow rock. Upland soils consist primarily of silt soils overlying sandy soil. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as a defined topographic break. The Hydric Soil Indicator applied at this location was Depleted Matrix (F3).

Wetland 3 is primarily a PFO1/PSS1 (Palustrine, Forested, Broad-Leaved Deciduous/Palustrine, Scrub-Shrub, Broad-Leaved Deciduous (T3/S3K - Forested, broad-leaved deciduous/Scrub-shrub, broad-leaved deciduous, palustrine, wet soil)) wetland. This wetland appears to be isolated and not directly connected to any other wetland or waterway although this should be determined by regulatory staff. This wetland had saturation to the soil surface and a high water table at the time of the visit. Hydrology indicators observed at the time of the visit included high water table (A2), saturation to the soil surface (A3), Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of silt and silt loam soils with redoximorphic features. Upland soils consist primarily of silt soils overlying sandy soil. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The Hydric Soil Indicator applied at this location was Depleted Matrix (F3).

Wetland 4 is primarily a PFO1 (Palustrine, Forested, Broad-Leaved Deciduous) (T3K - Forested, broad-leaved deciduous, palustrine, wet soil)) wetland. A drainageway flows northward through this wetland. However, the drainageway was not flowing at the time of the visit. Based on observations of soils and vegetation, portions of the drainageway appear to be narrow "upland" drainages that only have water present for short periods following spring melt or larger precipitation events. Hydrology indicators observed at the time of the visit included high water table (A2), saturation to the soil surface (A3), Oxidized Rhizospheres along living roots (C3), Drainage Patterns (B10), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of silt loam soils with redoximporphic features overlying rock. Upland soils consist primarily of loam soils lacking redoximorphic features. This wetland also had relatively obvious transitions in hydrology, soils and vegetation, as well as defined topographic breaks in most areas. An old logging road runs through the northern edge of the



delineated wetland area and that location was considered Significantly Disturbed although the rest of the wetland area examined appeared to be in a relatively natural state. The Hydric Soil Indicator applied at this location was Redox Dark Surface (F6).

Wetland 5 is primarily a narrow seep and wetland classification was not quite applicable due to very minimal vegetation present. The wetland area appears to be isolated and originates at a rocky interface along a hillside to the south. It is possible that this wetland may be created by water flowing out of a historic mining cavity in the hillside but the specific history of the specific area is unknown. An old logging road runs through the northern edge of the delineated wetland area and that location was considered Significantly Disturbed although the rest of the wetland area examined appeared to be in a relatively natural state. Hydrology indicators observed at the time of the visit included high water table (A2), saturation to the soil surface (A3), Water-Stained Leaves (B9), Oxidized Rhizospheres along living roots (C3) and Geomorphic Position (D2). This location did not meet hydric vegetation criteria due to the lack of vegetation.

The wetland soils consist primarily of black silt overlying reduced silt with redoximporphic features. Upland soils consist primarily of silt loam soils overlying silt loam mixed with rock. Transitions in hydrology and soils were very evident although vegetation was sparse and topographic breaks were not as evident as in other areas evaluated during the site visit. The Hydric Soil Indicator applied at this location was Depleted Matrix (F3).

SB1 is a sample point that was evaluated between two wetlands and determined to be a seasonal drainageway with upland soils and vegetation present. Flowing water was present at the time of the site visit but later visits revealed that this area was dry and appears to only have water present following larger precipitation and runoff events. Although minimal vegetation was present, the vegetation observed was primarily upland species and soils consist of higher chroma site loam soils lacking redoximorphic features.

Areas Evaluated on October 11, 2013

Wetland 6 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland with the eastern portion of the wetland expanding across a historic logging or mining road. This wetland is considered to be Significantly Disturbed due the historic logging road likely causing soil compaction in this location. This is considered the new normal circumstance due to the amount of time that has passed since the disturbance. This wetland appears to be isolated and not directly connected to any other wetland or waterway although this should be determined by regulatory staff. This wetland had a high water table (A2) and saturation to the soil surface (A3) at the time of the visit as well as other hydrology indicators including Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of silt and silt loam soils with redoximorphic features within the upper portion of the soil profile. Upland soils consist primarily of silt loam soils overlying very fine sandy loam soils lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils met Hydric Soil Indicators Depleted Below Dark Surface (A11) and Redox Dark Surface (F6).



Wetland 7 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland is considered Significantly Disturbed by historic earthmoving activities that are evident based upon observations of a soil stockpile to one side of the wetland, however, this is the new normal circumstance. This wetland appears to be isolated and not directly connected to any other wetland or waterway although this should be determined by regulatory staff. This wetland had a high water table (A2) and saturation to the soil surface (A3) at the time of the visit as well as other hydrology indicators including Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of a thin layer of muck overlying rock. Upland soils consist primarily of silt loam soils overlying very fine sandy loam soils lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils met Hydric Soil Indicator Histosol (A1).

Wetland 8 is primarily a PFO1/PEM1 (Palustrine, Forested, Broad-Leaved Deciduous/Palustrine, Emergent, Persistent)(T3/E2K – Forested, broad-leaved deciduous/Emergent-wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland does not appear to have been disturbed in the past and appears to be connected to Wetland 1 to the west. This wetland had standing water (A1), high water table (A2) and saturation to the soil surface (A3) at the time of the visit as well as other hydrology indicators including Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of a thick muck/peaty muck soil profile. Upland soils consist primarily of fine sandy loam soils overlying sandy loam lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils met Hydric Soil Indicator Histosol (A1).

Wetland 9 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland is considered Significantly Disturbed by historic earthmoving activities from a historic mine road that was located in this location and likely created a slight depression where this wetland formed over time. However, this is the new normal circumstance since these activities occurred many years ago. This wetland appears to be isolated and not directly connected to any other wetland or waterway although this should be determined by regulatory staff. This wetland had a high water table (A2) and saturation to the soil surface (A3) at the time of the visit as well as other hydrology indicators including Water Stained Leaves (B9), Geomorphic Position (D2) and FACneutral Test (D5).

The wetland soils consist primarily of a silt loam overlying rock. Although redoximorphic features were not observed, a full soil profile could not be evaluated and the area was determined to be wetland based upon observations of vegetation, hydrology, topographic position and best professional judgment. Upland soils consist primarily of higher chroma silt loam soils lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils did not



meet Hydric Soil Indicators but hydric soils were assumed based on vegetation, hydrology, topographic position and best professional judgment.

Wetland 10 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland does not appear to have been disturbed in the past and appears to be isolated and not directly connected to any other wetland or waterway although this should be determined by regulatory staff. This wetland did not have saturation or high water table at the time of the visit, making it somewhat problematic due to seasonal hydrology conditions but it did have several other hydrology indicators including Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Dry Season Water Table (C2), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of a silt loam overlying reduced loam soils. Although redoximorphic features were not observed, the area was determined to be wetland based upon observations of vegetation, hydrology, topographic position and best professional judgment. Upland soils consist primarily of higher chroma silt loam soils lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils did not meet Hydric Soil Indicators but hydric soils were assumed based on vegetation, hydrology, topographic position and best professional judgment.

Wetland 11 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland does not appear to have been disturbed in the past and appears to be isolated and not directly connected to any other wetland or waterway although this should be determined by regulatory staff. This wetland had a high water table (A2) and saturation within the upper 12 inches of the soil profile (A3) at the time of the visit, plus several other hydrology indicators including Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of a silt loam overlying reduced sandy loam soils. Although redoximorphic features were not observed, a full soil profile could not be evaluated due to shallow rock and the area was determined to be wetland based upon observations of vegetation, hydrology, topographic position and best professional judgment. Upland soils consist primarily of higher chroma silt loam soils lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils did not meet Hydric Soil Indicators but hydric soils were assumed based on vegetation, hydrology, topographic position and best professional judgment.

Wetland 12 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland is considered Significantly Disturbed by historic earthmoving activities from a historic mine road that was located in this location and likely created a slight depression where this wetland formed over time. However, this is the new normal circumstance since these activities occurred many years ago. This wetland appears to be isolated and not directly connected to any other wetland or waterway although this should be determined by regulatory staff. This wetland had a high water table (A2) and saturation to the soil surface (A3) at the time of the visit as well as other



hydrology indicators including Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of a silt loam overlying reduced clay loam soils with redoximorphic features present. Upland soils consist primarily of higher chroma very fine sandy loam and sandy loam soils lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils met Hydric Soil Indicators Depleted Below Dark Surface (A11) and Depleted Matrix (F3).

Wetland 13 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland is considered Significantly Disturbed by historic earthmoving activities from a historic earthmoving activities that were apparent along some of the wetland edges. However, this is the new normal circumstance since these activities occurred many years ago. This wetland appears to be isolated and not directly connected to other wetlands or waterways but this should be determined by regulatory staff. This wetland had a high water table (A2) and saturation to the soil surface (A3) at the time of the visit as well as other hydrology indicators including Water Stained Leaves (B9), Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of reduced silt loam soils overlying rock. Although redoximorphic features were not observed, a full soil profile could not be evaluated and the area was determined to be wetland based upon observations of vegetation, hydrology, topographic position and best professional judgment. Upland soils consist primarily of higher chroma very fine sandy loam and fine sandy loam soils lacking redoximorphic features. The wetland/upland boundary had relatively obvious transitions in hydrology, vegetation and soil, as well as defined topographic breaks. The wetland soils did not meet Hydric Soil Indicators but hydric soils were assumed based on vegetation, hydrology, topographic position and best professional judgment.

Wetland 14 is primarily a PEM1 (Palustrine, Emergent, Persistent) (E2K - Emergent/wet meadow, narrow-leaved persistent, palustrine, wet soil)) wetland. This wetland is considered Significantly Disturbed due to historic earthmoving activities from a historic mine road that was located in this location and likely created a slight depression where this wetland formed over time. However, this is the new normal circumstance since these activities occurred many years ago. This wetland appears to be isolated and not directly connected to other wetlands or waterways but this should be determined by regulatory staff. This wetland had a high water table (A2) and saturation to the soil surface (A3) at the time of the visit as well as other hydrology indicators including Geomorphic Position (D2) and FAC-neutral Test (D5).

The wetland soils consist primarily of dark silt loam soils with higher organic content overlying rock. Although redoximorphic features were not observed, a full soil profile could not be evaluated and the area was determined to be wetland based upon observations of vegetation, hydrology, topographic position and best professional judgment. Upland soils consist primarily of higher chroma very fine sandy loam and fine sandy loam soils lacking redoximorphic features. The wetland/upland boundary had gradual transition in hydrology, vegetation and soil and topographic breaks. The wetland soils did not meet Hydric Soil Indicators but hydric soils were assumed based on vegetation, hydrology, topographic position and best professional judgment.



SB2 through SB9 are sample points that were evaluated primarily due their topographic positions being slightly lower in the landscape. All of these sites were considered Significantly Disturbed because they had all been created by historic earthmoving activities related to former mining and logging activities at the site. However, this was considered the new normal circumstance in all cases. Sample sites SB2 and SB3 were both located in areas that are very small historic backhoe borrow pits. Minimal vegetation was present in each pit but vegetation that was present consisted primarily of upland species. Both pits met wetland hydrology criteria due to high water table and soil saturation as well as geomorphic position but soils did not meet hydric soil criteria and consisted primarily of high chroma sandy loam and sandy clay loam lacking redoximorphic features. Sample site SB4 had been previously evaluated as Site 2-1 within Bulk Sample Site 2 and was determined to be upland despite a dominance of Facultative species. Soils consisted of very high chroma sand soils and lacked any indication of redoximorphic features. Sample sites SB5 and SB6 were both located in lower lying areas near Bulk Sample Site 2 and it is apparent that historic earthmoving activities occurred in this area. Sample site SB5 has a dark silt loam surface horizon overlying high chroma very fine sandy loam soils and SB6 was similar with a slightly brighter surface horizon. Hydrology was observed within the lowest lying area of SB5 but the higher chroma soils within the lower portions of the soil profile indicate hydrology is not present for long enough periods of time throughout the growing season to create wetland conditions. Sample sites SB7, SB8 and SB9 were all located within a depression that was historically a railroad and mining area. All sample sites had a dominance of hydric vegetation, most of the species consisting of Facultative species. Although the geomorphic position and vegetation indicated possible wetland conditions, soils consisted of high chroma sandy loam soils and did not meet hydric soil indicators.

The dominant vegetation found in the wetland sample site location includes the following:

Scientific Name	Common Name	Indicator
Abies balsamea	Balsam Fir	FAC
Acer saccharum	Sugar Maple	FACU
Betula alleghaniensis	Yellow Birch	FAC
Carex comosa	Bristly Sedge	OBL
Carex crinita	Fringed Sedge	OBL
Carex gracillima	Graceful Sedge	FACU
Carex intumescens	Bladder Sedge	FACW
Carex oligosperma	Few Seed Sedge	OBL
Carex scoparia	Broom Sedge	FACW
Carpinus caroliniana	American Hornbeam	FAC
Corylus americana	American Hazelnut	FACU
Dryopteris carthusiana	Spinulose Wood Fern	FACW
Dryopteris intermedia	Evergreen Wood Fern	FAC
Equisetum arvense	Common Horsetail	FAC
Equisetum sylvaticum	Woodland Horsetail	FACW
Fraxinus nigra	Black Ash	FACW
Geum aleppicum	Yellow Avens	FAC
Glyceria striata	Fowl Mannagrass	OBL
Impatiens capensis	Orange Jewelweed	FACW
Onoclea sensibilis	Sensitive Fern	FACW



Ostrya virginiana	Ironwood	FACU
Ranunculus acris	Tall Buttercup	FAC
Ribes americanum	Wild Black Currant	FACW
Rubus idaeus	Red Raspberry	FACU
Scirpus cyperinus	Wool-Grass	OBL
Scutellaria lateriflora	Blue Skullcap	OBL
Solidago gigantea	Giant Goldenrod	FACW
Symphyotrichum lateriflorum	Calico Aster	FACW
Ulmus americana	American Elm	FACW

The dominant vegetation found in the upland sample site locations at this site includes the following:

Scientific Name	Common Name	Indicator
Abies balsamea	Balsam Fir	FAC
Acer rubrum	Red Maple	FAC
Acer saccharum	Sugar Maple	FACU
Adiantum pedatum	Northern Maidenhair Fern	FACU
Allium tricoccum	Wild Leek	FACU
Aralia nudicaulis	Wild Sarsaparilla	FACU
Betula alleghaniensis	Yellow Birch	FAC
Betula papyrifera	White Birch	FACU
Cardamine concatenata	Cutleaf Toothwort	FACU
Carex gracillima	Graceful Sedge	FACU
Carex pensylvanica	Pennsylvania Sedge	UPL
Caulophyllum thalictroides	Blue Cohosh	UPL
Corylus americana	American Hazelnut	FACU
Dryopteris intermedia	Evergreen Wood Fern	FAC
Erythronium americanum	Yellow Trout-Lily	UPL
Fraxinus nigra	Black Ash	FACW
Fraxinus pennsylvanica	Green Ash	FACW
Gymnocarpoum dryopteris	Northern Oak Fern	FACU
Hieracium aurantiacum	Orange Hawkweed	UPL
Maianthemum canadense	Canada Mayflower	FACU
Osmunda claytoniana	Interrupted Fern	FAC
Ostrya virginiana	Ironwood	FACU
Phegopteris connectilis	Northern Beech Fern	FACU
Populus tremula	Quaking Aspen	FAC
Prunus serotina	Black Cherry	FACU
Pteridium aqualinum	Bracken Fern	FACU
Quercus rubra	Northern Red Oak	FACU
Ribes cynosbati	Prickly Wild Gooseberry	FACU
Rubus idaeus ssp. strigosus	Red Raspberry	FACU
Sphagnum magellanicum	Sphagnum Moss	OBL
Thuja occidentalis	Northern White Cedar	FACW
Tilia americana	American Basswood	FACU
Tsuga Canadensis	Eastern Hemlock	FACU



Ulmus americana American Elm FACW

The wetland edges were identified based on the transition from upland vegetation to wetland vegetation and differences in soil and hydrology observed at upland and wetland sample points.



Conclusions

Five bulk sample sites and associated secondary access roads were examined on various dates between May 24 and October 11, 2013 for areas meeting jurisdictional wetland criteria as specified in the 1987 Corps of Engineers Wetlands Delineation Manual and the Northcentral and Northeast Regional Supplement. The purpose of delineating the bulk sample sites and associated access routes was to identify wetlands to be avoided or permitted for temporary impacts associated with equipment transport to the sites and proposed bulk sampling activities. The attached Figure 2 shows the overall site layout, bulk sample site locations and existing and proposed access roads leading to those sites. Figures 2A through 2C show the bulk sample sites, associated access routes, delineated wetlands and sample locations in greater detail.

Four of the bulk sample sites and the access roads located immediately adjacent to the sites were examined on May 24, 2013 by Ms. Ann Michalski, PSS, PWS, Wisconsin Department of Natural Resources (WDNR) Professionally Assured Wetland Delineator for areas meeting jurisdictional wetland criteria as specified in the 1987 Corps of Engineers Wetlands Delineation Manual and the Northcentral and Northeast Regional Supplement. A fifth bulk sample site was examined on June 19, 2013 by Ms. Michalski along with U.S. Army Corps of Engineers (USACOE) and WDNR personnel. Due to the presence of a wetland across the secondary access road leading into Bulk Sample Site 1, a third site visit was conducted on July 8, 2013 to examine an alternate access route for Bulk Sample Sites 1 and 2. This delineation also revealed the presence of wetlands within the proposed route so a new route was identified and wetlands adjacent to that new route, referred to as Access Road 6, were delineated on October 11, 2013. A follow up site visit was conducted on October 24, 2013 with representatives from Gogebic Taconite, WDNR, USACOE, the Bad River Tribe and Thompson and Associates Wetland Services to review and discuss Access Road 6.

Wetland boundaries were identified using procedures outlined in the 1987 Corps of Engineers Wetland Delineation Manual and Northcentral and Northeast Regional Supplement. The areas identified as wetland were primarily identified based on topographical changes, transitions from hydric soils and hydric vegetation to upland soils and upland vegetation and presence or lack of hydrology indicators. Best professional judgment was also applied based on many years of conducting wetland delineations in northern Wisconsin. Regulatory personnel present at the site on June 19th and October 24th reviewed the delineated areas and agreed with the wetland boundaries.

Overall, the access routes and historic bulk sample site locations are considered Significantly Disturbed due to the clearing of trees and shrubs at one time and soil disturbances from historic road construction and bulk sample site disturbance. Areas immediately adjacent to the roads and historic bulk sample sites were not considered disturbed. Most areas observed were not considered Problematic with regards to identifying wetland boundaries with the exception of shallow rock in some areas preventing full soil profile viewing.

One wetland area (Wetland 1) was delineated along the existing secondary access road leading to Bulk Sample Site 1 during the first site visit. Figure 2B shows the location of the wetland in



relation to the access road and bulk sample site. In order to avoid impacts to this wetland, an alternative access route was evaluated on July 8, 2013 to find a more suitable upland route. Four wetlands (Wetlands 2 through 5) were delineated along that route during the site visit. Based on evaluations of that proposed route and nearby wetlands, Gogebic Taconite identified a third route (Access Road 6) which was evaluated for wetlands within an area ranging from 50 to 300 feet from the proposed roadway on October 11, 2013. Nine wetlands (Wetlands 6 through 14) were delineated during that site visit but none of the wetlands identified are located within the proposed roadway. A small area, approximately 4 feet in diameter was discussed during the October 24, 2013 site visit as a possible connection to Wetland 14. Regulatory agents agreed with the original wetland boundary and this area was added to Figure 2C as a potential stormwater connection. This area, as well as all identified wetlands, will be avoided during construction activities associated with Access Road 6. Wetland boundaries will be staked prior to construction to ensure that contractors are aware of the wetland locations.

The findings of this wetland delineation report are only valid for the site conditions which existed at the time of this investigation. All wetland boundaries and jurisdictional determinations have been subject to verification by USACOE, St. Paul District.

The final authority for wetland boundaries and permit requirements rests with the government agencies which have jurisdiction over this project. Findings of this wetland delineation are subject to revision based upon natural or induced changes in weather, vegetation management, land use, topography, surface water flow, subsurface drainage, stormwater management, within or near the project site which may affect the soils, hydrology, or vegetative community on the project site.

This report provides a description of existing wetland conditions within the project area and does not include quantification of any temporary or permanent impacts to wetlands or waterbodies. Such impacts would require review and approval from all appropriate agencies. Activities which impact or potentially impact jurisdictional wetlands are currently regulated at several levels of government. Federal (USACE), State (WDNR) and local government agencies may all be involved in reviewing a single project. To avoid potential penalties and project delays it is necessary to acquire necessary permits and approvals from all jurisdictional agencies before initiating activities in wetlands. It is important to obtain a USACOE jurisdictional determination (JD) on the wetland boundaries prior to proceeding with activities on the property.



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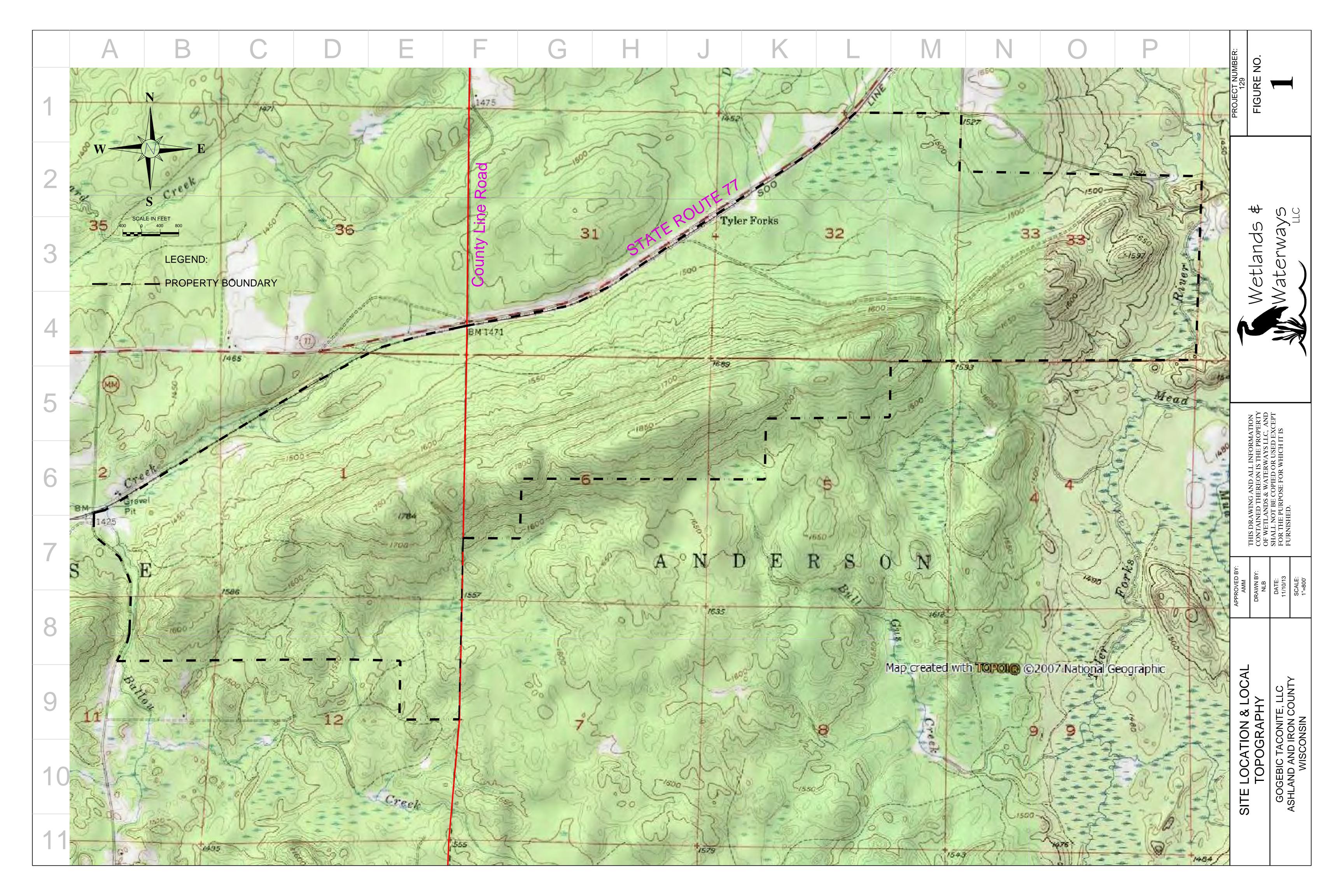
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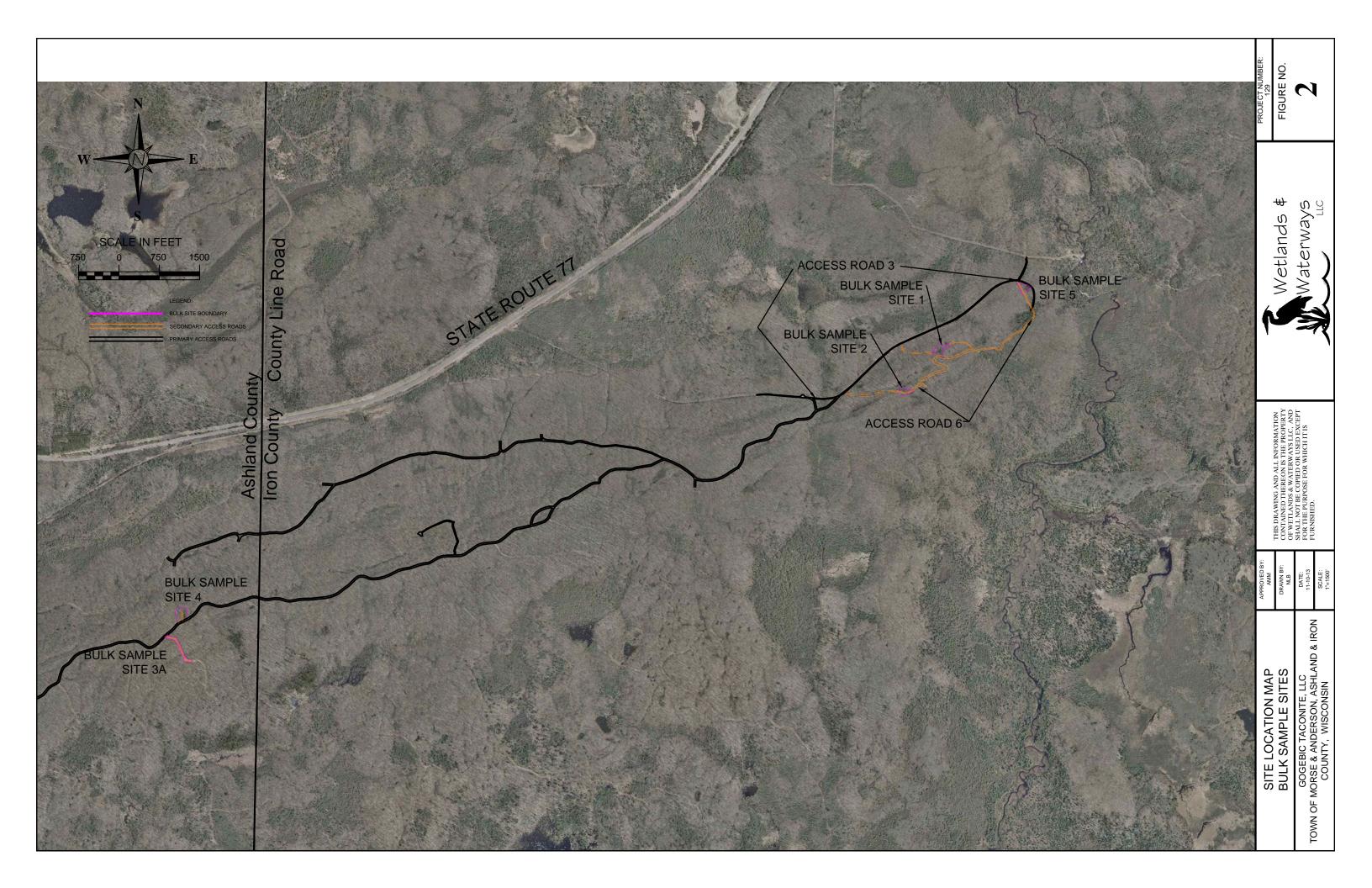


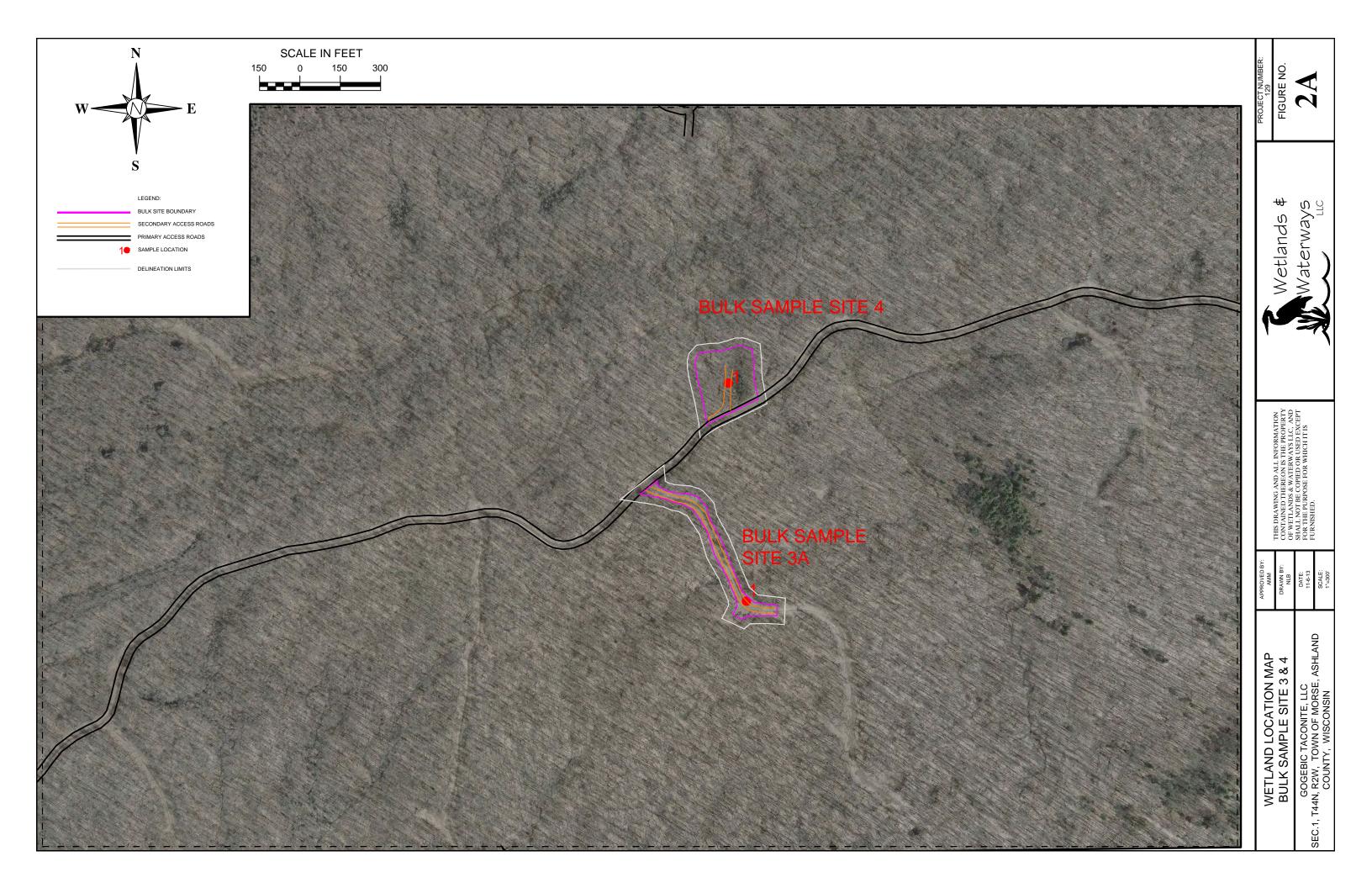
(May through October, 2013).

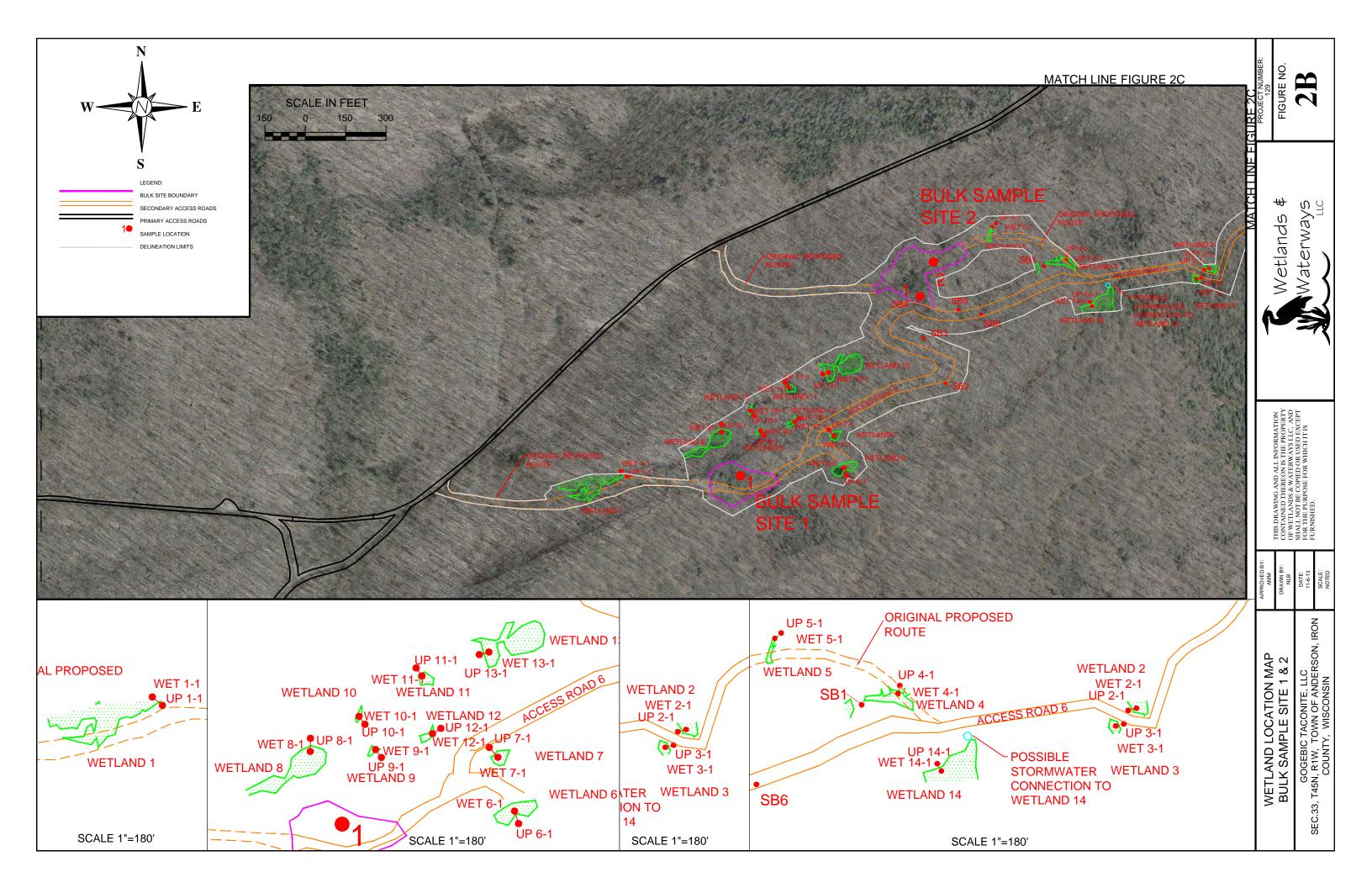
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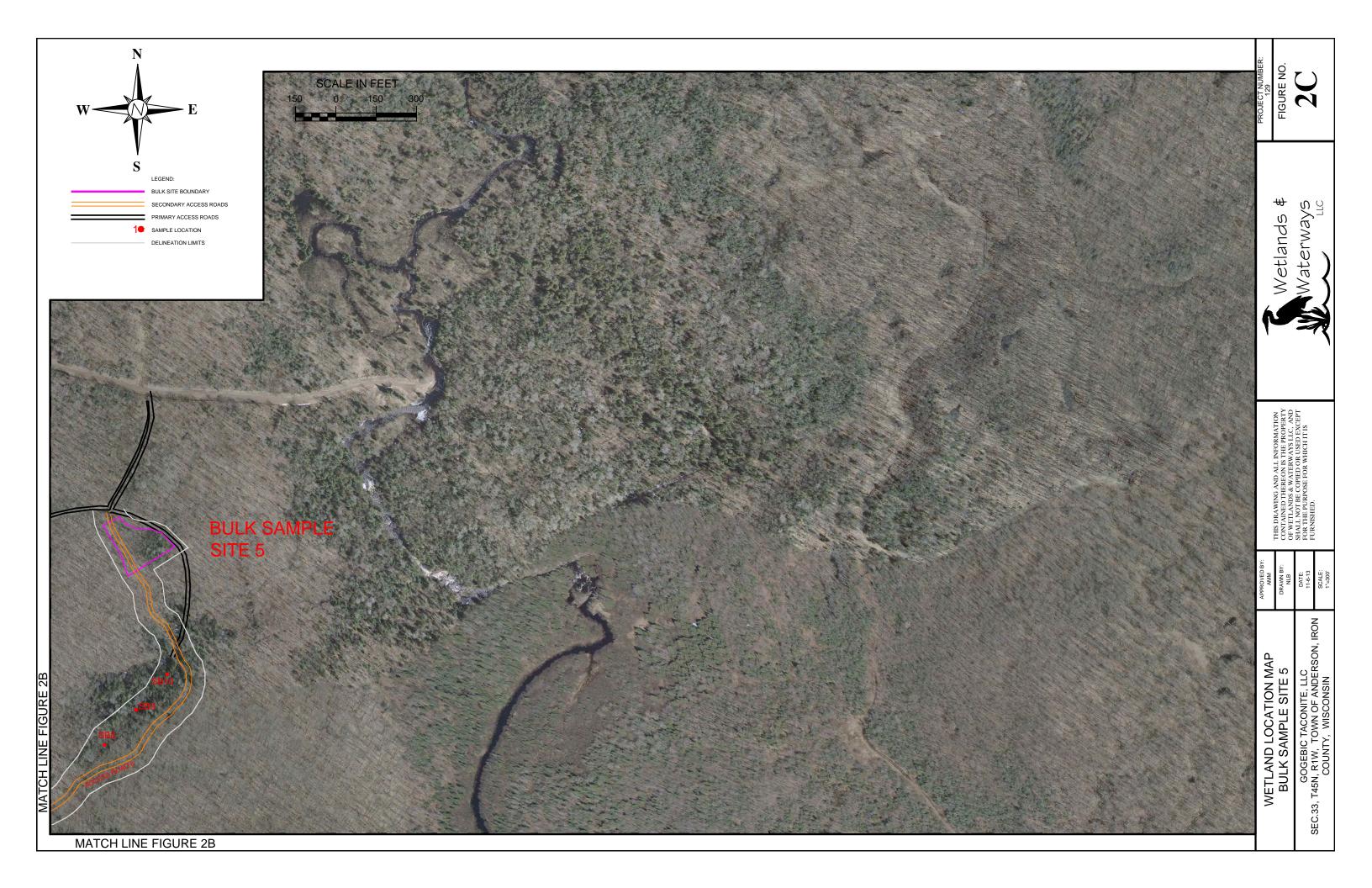
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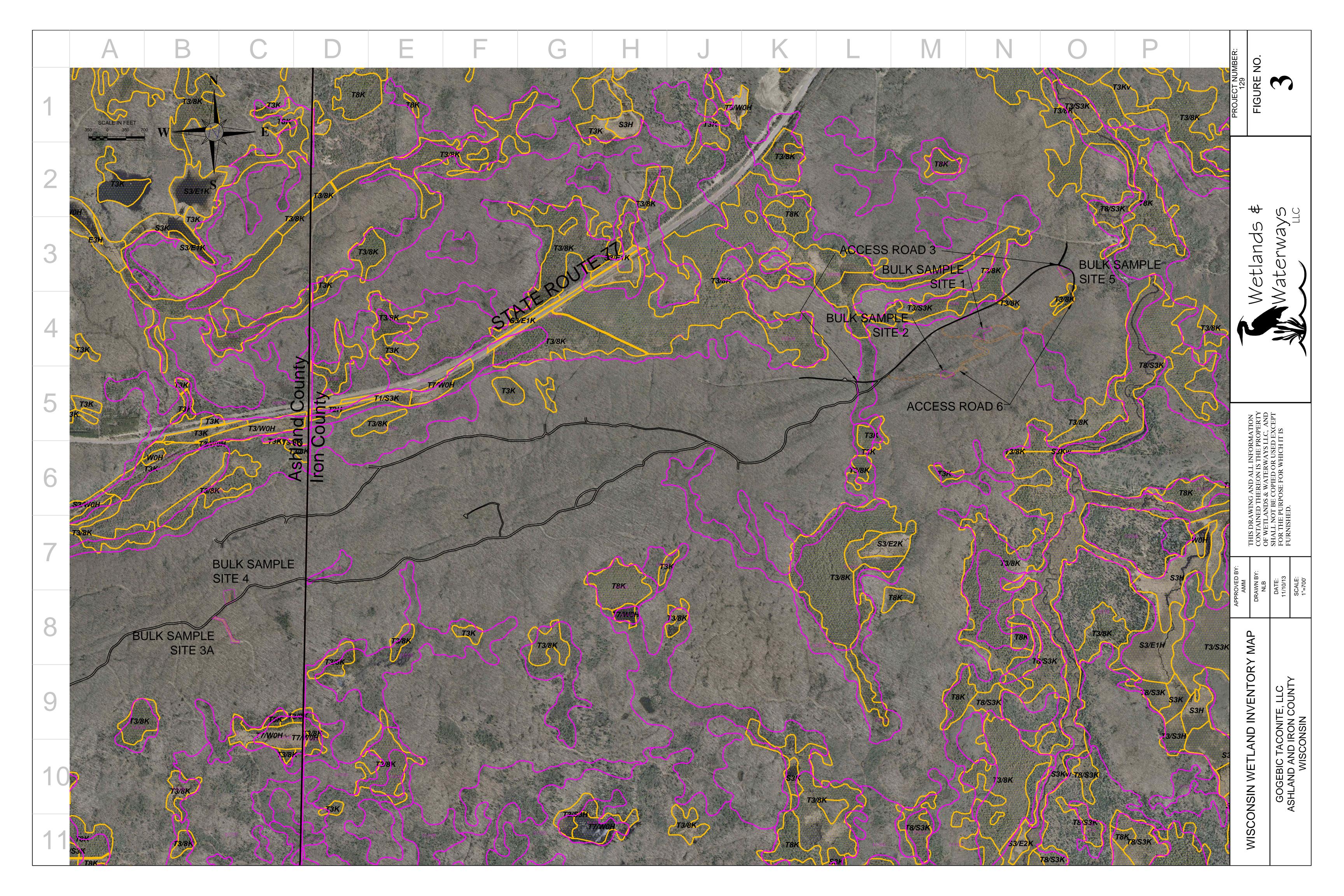


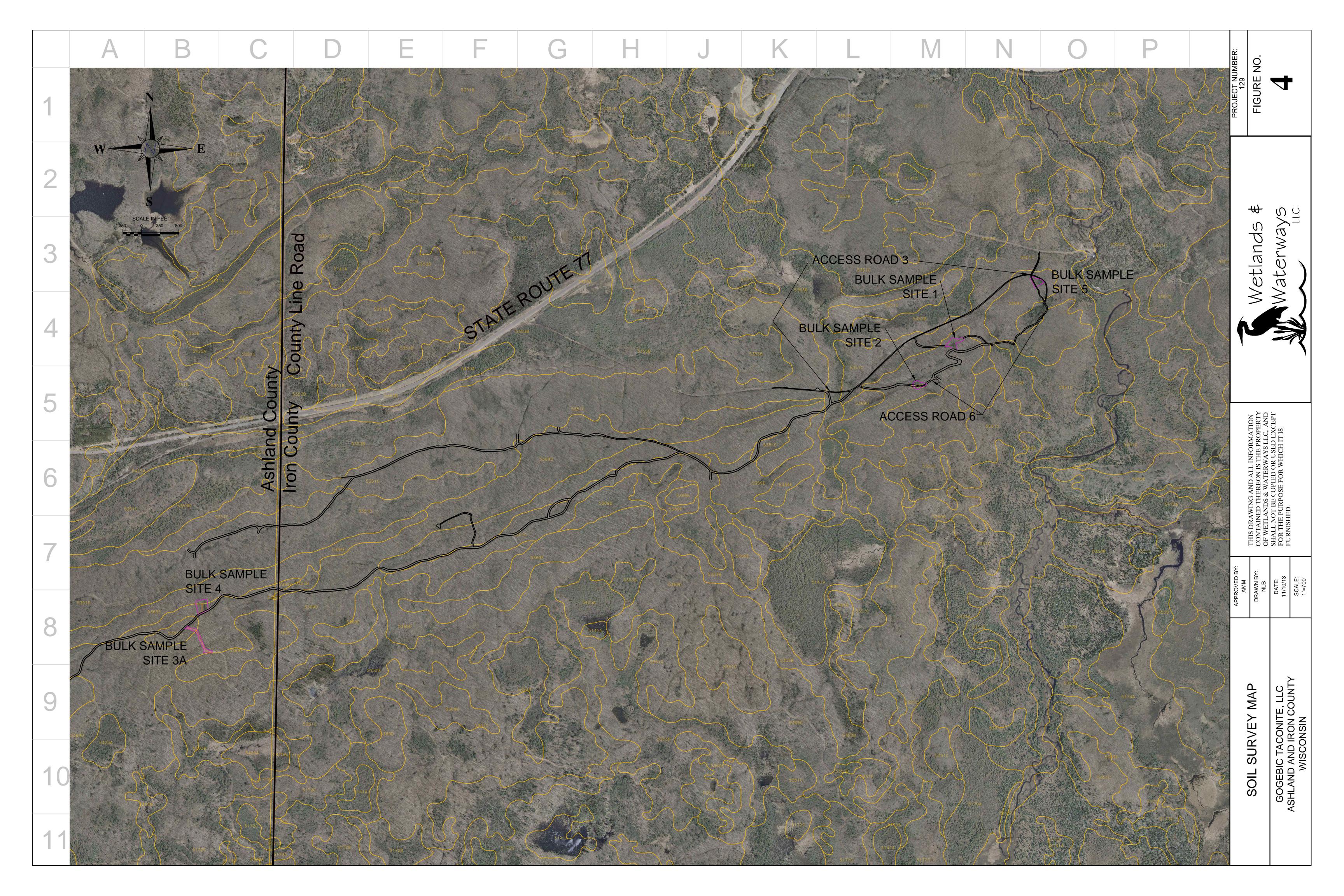














APPENDIX A – FIELD DATA SHEETS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County: To	own of Anderson, Iron	Co.	Sampling Date: 24-May-13
Applicant/Owner: Gogebic Taconite	_	State: W	VI	Sampling Point: Wet 1-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Town	nship, Range: S. 33	T. T	45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope/swale	Local relief (conc	ave, convex, none):	concave	Slope: 3.0 % / 1.7 °
- · · · · · · · · · · · · · · · · · · ·	— t.: 46.331237	Long.: 90	503552	Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Out	-			cation: PFO1
		2 0		
Are climatic/hydrologic conditions on the site typical for this time	,	(o, explain in I	, v. (a) v. (
, , , ,	cantly disturbed?	Are "Normal Circu	mstances" pr	resent? Yes S NO
Are Vegetation $igsqcup$, Soil $igvee igvee$, or Hydrology $igsqcup$ natura	lly problematic?	(If needed, explain	n any answer	rs in Remarks.)
Summary of Findings - Attach site map showin	g sampling poi	nt locations, tr	ansects,	important features, etc
Hydrophytic Vegetation Present? Yes No				
Hydric Soil Present? Yes No		mpled Area Wetland? Yes	s • No O	
Wetland Hydrology Present? Yes ● No ○				
Remarks: (Explain alternative procedures here or in a separate r	eport.)			
Hydrology				
Wetland Hydrology Indicators:		Secon	ndary Indicator	s (minimum of 2 required)
Primary Indicators (minimum of one required; check all that appl	-		Surface Soil Cra	. ,
✓ Surface Water (A1) Water-Stained ✓ High Water Table (A2) Aguatic Fauna	, ,		Drainage Patter	• •
✓ High Water Table (A2) ☐ Aquatic Fauna ✓ Saturation (A3) ☐ Marl Deposits	• •		Moss Trim Line: Dry Season Wa	, ,
Water Marks (B1) Hydrogen Sulf			Crayfish Burrow	• •
	ospheres along Living Ro		,	ole on Aerial Imagery (C9)
	educed Iron (C4)		Stunted or Stre	ssed Plants (D1)
Algal Mat or Crust (B4)	eduction in Tilled Soils (0	(6)	Geomorphic Po	sition (D2)
Iron Deposits (B5) Thin Muck Sur	face (C7)		Shallow Aquitar	• •
Inundation Visible on Aerial Imagery (B7) Other (Explain	in Remarks)		Microtopograph	
Sparsely Vegetated Concave Surface (B8)		□ F	FAC-neutral Tes	st (D5)
Field Observations:				
	es):1			
Water Table Present? Yes No Depth (inche	es):0			Yes No
Saturation Present? (includes capillary fringe) Yes No Depth (inche		Wetland Hydrology	Present?	Yes Somo
Describe Recorded Data (stream gauge, monitoring well, aerial pl	hotos, previous inspe	ctions), if available:		
Remarks:				

VEGETATION - Use scientific names of plant
--

VEGETATION OSC Scientific fidines of pla			Sampling Point: Wet 1-1						
Tree Stratum (Plot size: 15' x 240')	Absolute % Cover	R	pecies? el.Strat. over	Indicator Status	Dominance Test worksheet:				
1. Acer saccharum	25	V	50.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)				
2. Betula alleghaniensis	25	✓	50.0%	FAC	mature obe, mon, or mo.				
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)				
4			0.0%		Species Across Air Strata.				
5			0.0%		Percent of dominant Species				
6			0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)				
7			0.0%		Prevalence Index worksheet:				
Continue (Shouth Structure (District 10'v00'	50	= T	otal Cove	r	Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 10'x90')					OBL species 0 x 1 = 0				
1			0.0%		FACW species $10 \times 2 = 20$				
2			0.0%		FAC speciles 28 x 3 = 84				
3			0.0%		FACU speci es 35 x 4 = 140				
4	-		0.0%		UPL speciles $0 \times 5 = 0$				
5			0.0%		Column Totals: 73 (A) 244 (B)				
6			0.0%		Total and Total of To				
7		_	0.0%		Prevalence Index = B/A = 3.342				
Herb Stratum (Plot size: 5' x 20')		= To	otal Cove	r	Hydrophytic Vegetation Indicators:				
1. Ribes americanum	10	V	43.5%	FACW	Rapid Test for Hydrophytic Vegetation				
2. Acer saccharum	10	V	43.5%	FACU	Dominance Test is > 50%				
3. Dryopteris intermedia	3	\Box	13.0%	FAC	Prevalence Index is \leq 3.0 ¹				
4		\Box	0.0%		Morphological Adaptations ¹ (Provide supporting				
5			0.0%		data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)				
6			0.0%		Problematic Hydrophytic Vegetation (Explain)				
7			0.0%		¹ Indicators of hydric soil and wetland hydrology must				
8.			0.0%		be present, unless disturbed or problematic.				
9			0.0%		Definitions of Vegetation Strata:				
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1			0.0%		at breast height (DBH), regardless of height.				
2			0.0%		Carling/about Mandy plants less than 2 in DDI and				
4.51 240l	23	= T	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall				
Woody Vine Stratum (Plot size: 15' x 240')	_								
1			0.0%		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
2			0.0%		oles, and woody planto look than oles it tall.				
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in				
4		_	-		height.				
		= 10	otal Cove	r					
					Hydrophytic				
					Vegetation Present? Yes No				
					Fresent 100 0 110 0				
Domanico (Tuelindo mboto mumboso boso os os osciolos de	\				1				
Remarks: (Include photo numbers here or on a separate sh	eet.)								

 $vegetation \ is \ problematic \ due \ to \ limited \ vegetation \ and \ upland \ tree \ species \ present$

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 1-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)													
Depth	-	Matrix			Re	dox Featu			_				
(inches)	Color (r	noist)	%	Color (r	noist)	%	Type 1	Loc2	Texture	Rem	narks		
0-6	7.5YR	2.5/1	95%	7.5YR	4/3	5%	С	М	Sandy Loam				
6-9	7.5YR	4/3	75%	7.5YR	2/1	25%	С	M	Loam	manganese	masses		
9-12	7.5YR	3/3	100%		-	-			Sandy Loam				
12+		-	-		-	-	-		Rock				
										_			
										_			
									-				
						-			-				
1 Type: C. Cons	ontration D	Donlotio	n DM Dod	used Matrix (°C Cover	od or Coata	d Sand Cr	nine 21 oco	ition: PL=Pore Lining. M=				
		=Depletio	n. Rivi=Redi	iced Matrix, C	2=covere	ed of Coate	eu Sanu Gr	airis -Loca			2		
Hydric Soil I				□ p-l	alera Dalar	C	(CO) (LDD I	2	Indicators for Prob	lematic Hydri	c Soils:		
Histosol (A	-			☐ Polyv MLRA	alue Belov A 149B)	w Surface ((58) (LRR I	≺,	2 cm Muck (A10)	(LRR K, L, MLR	RA 149B)		
Black Histic				☐ Thin	Dark Surfa	ace (S9) (l	RR R, ML	RA 149B)	Coast Prairie Rec				
	Sulfide (A4)					Mineral (F1			5 cm Mucky Pear		RR K, L, R)		
	_ayers (A5)			Loam	y Gleyed	Matrix (F2))		Dark Surface (S7				
	Below Dark S	iurface (A	11)	☐ Deple	eted Matri	x (F3)			Polyvalue Below Surface (S8) (LRR K, L)				
	Surface (A1		,	✓ Redo	x Dark Su	rface (F6)							
	ck Mineral (S	•		☐ Deple	eted Dark	Surface (F	7)						
	yed Matrix (S			Redo	x Depress	ions (F8)			Piedmont Floodplain Soils (F19) (MLRA 149B)				
Sandy Red		.,							Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
Stripped M									☐ Red Parent Material (F21)☐ Very Shallow Dark Surface (TF12)				
_	ice (S7) (LRF	R R, MLRA	149B)						Other (Explain in		-)		
³ Indicators of	hydronhytic	vegetatio	n and wetla	nd hydrology	must he r	resent un	less distur	ned or proble		Kemarks)			
Restrictive La			Trana Wona				.ooo a.ota.	504 01 p. 02.					
Type: Ro		erveu).											
Depth (inch									Hydric Soil Present?	Yes	No O		
Remarks:	100)												
Shallow rock p					ervations	of topog	raphy, ve	getation tr	ansitions and presence	or lack of hyd	Irology indicators		
were used to	help detern	nine wet	land boun	daries.									

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County: Town of Anderson, Iron Co. Sampling Date: 24-May-13
Applicant/Owner: Gogebic Taconite	State: WI Sampling Point: Up 1-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Township, Range: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): backslope	Local relief (concave, convex, none): convex Slope: 5.0 % / 2.9 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.331210 Long.: 90.503528 Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock O	
Are climatic/hydrologic conditions on the site typical for this tim	ne of year? Yes No (If no, explain in Remarks.)
	ificantly disturbed? Are "Normal Circumstances" present? Yes No
	ing sampling point locations, transects, important features, etc
	ing sampling point locations, transects, important leatures, etc
Hydrophytic Vegetation Present? Yes No •	Is the Sampled Area
Hydric Soil Present? Yes No •	Is the Sampled Area within a Wetland? Yes ○ No ●
Wetland Hydrology Present? Yes No Remarks: (Explain alternative procedures here or in a separate	
experience working in Ashland and Iron Counties was applied. Hydrology	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that ap	Secondary Indicators (minimum of 2 required) Oply) Surface Soil Cracks (B6)
	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Faul	
Saturation (A3) Marl Deposi	its (B15) Dry Season Water Table (C2)
	Sulfide Odor (C1) Crayfish Burrows (C8)
	nizospheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	f Reduced Iron (C4) Stunted or Stressed Plants (D1) Converge to the Cartesian (D2)
	n Reduction in Tilled Soils (C6) Geomorphic Position (D2) Surface (C7) Shallow Aguitard (D3)
I I I I I I I I I I I I I I I I I I I	Surface (C7) Shallow Aquitard (D3) In in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-neutral Test (D5)
Field Observations:	
· ·	ches):
Water Table Present? Yes No Depth (inc	ches): Wetland Hydrology Present? Yes ○ No ●
Saturation Present? (includes capillary fringe) Yes No Depth (inc	
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if available:
Remarks:	

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of p	iants		minant ecies?		Sampling Point: Up 1-1			
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:			
1 Acer saccharum	50	V	76.9%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)			
2. Betula alleghaniensis	15	✓	23.1%	FAC				
3		\Box	0.0%		Total Number of Dominant Species Across All Strata: 5 (B)			
4		\Box	0.0%		Species Across All Strata: 5 (B)			
5		\Box	0.0%		Percent of dominant Species			
6		\Box	0.0%		That Are OBL, FACW, or FAC: 40.0% (A/B)			
7.		\Box	0.0%		Prevalence Index worksheet:			
		—. – То	tal Cove		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 15' radius)			cui cove	•	0BL species 0 x 1 = 0			
1 . Acer saccharum	15	✓.	60.0%	FACU	FACW species $0 \times 2 = 0$			
2. Betula alleghaniensis	10	✓.	40.0%	FAC				
3	0		0.0%					
4	_		0.0%		17400 Specifics x 4			
5	0		0.0%		UPL Species x 5 =			
6			0.0%		Column Totals: 195 (A) 750 (B)			
7	0		0.0%		Prevalence Index = B/A = 3.846			
Herb Stratum (Plot size: 5' radius)		= To	tal Cove	r	Hydrophytic Vegetation Indicators:			
1 Allium tricoccum	70	~	66.7%	FACU	Rapid Test for Hydrophytic Vegetation			
2. Acer saccharum			14.3%	FACU	Dominance Test is > 50%			
O Cordomino concetenate	15	\Box	14.3%	FACU	Prevalence Index is ≤3.0 ¹			
4. Bakala allambandanda		\Box	4.8%	FAC	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
		\Box	0.0%	TAC				
5		Π.	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
6		Π.	0.0%		¹ Indicators of hydric soil and wetland hydrology must			
7		Π.	0.0%		be present, unless disturbed or problematic.			
8		Π.	0.0%		Definitions of Vegetation Strata:			
9		Η.	0.0%					
10		Η.	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
11		Η.	0.0%		at breast height (DDH), regardless of height.			
12					Sapling/shrub - Woody plants less than 3 in. DBH and			
Woody Vine Stratum (Plot size: 30 ' radius)	105	= 10	tal Cove	ŗ	greater than 3.28 ft (1m) tall			
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4			0.0%		height.			
	-	= To	tal Cove	r				
					Hydrophytic Vegetation Present? Yes No No			
Remarks: (Include photo numbers here or on a separate s	sheet.)							

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 1-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix	_	Red	ox Features						
(inches)	Color (m	oist)	%	Color (moist)	% Type 1	Loc ²	Texture	Remarks			
0-5	7.5YR	3/2	100%			-	Loam				
5-6	7.5YR	3/3	100%			-	Loam				
6+	_	-	_			_	Rock				
¹ Type: C=Cond	centration. D=	Depletion	n. RM=Red	uced Matrix, CS=Covered	or Coated Sand Grai	ns ² Locat	tion: PL=Pore Lining. M=Ma	trix			
Hydric Soil I	indicators:						Indicators for Proble	matic Hydric Soils: 3			
Histosol (A	A1)				Surface (S8) (LRR R,			.RR K, L, MLRA 149B)			
Histic Epip	oedon (A2)			MLRA 149B)				(A16) (LRR K, L, R)			
☐ Black Hist	ic (A3)				e (S9) (LRR R, MLRA	A 149B)		Peat (S3) (LRR K, L, R)			
Hydrogen	Sulfide (A4)				ineral (F1) LRR K, L)		Dark Surface (S7) (
Stratified	Layers (A5)			Loamy Gleyed M				rface (S8) (LRR K, L)			
_	Below Dark Su		11)	Depleted Matrix			Thin Dark Surface (
Thick Darl	k Surface (A12	2)		Redox Dark Surf	, ,			asses (F12) (LRR K, L, R)			
Sandy Mu	ck Mineral (S1)		Depleted Dark S			Piedmont Floodplain Soils (F19) (MLRA 149B)				
	eyed Matrix (S	4)		Redox Depression	ons (F8)			(MLRA 144A, 145, 149B)			
Sandy Red							Red Parent Material	l (F21)			
_	Matrix (S6)						Very Shallow Dark S	Surface (TF12)			
Dark Surfa	ace (S7) (LRR	R, MLRA	149B)				Other (Explain in Re	emarks)			
³ Indicators of	hydrophytic v	egetation/	n and wetla	nd hydrology must be pr	esent, unless disturbe	ed or proble	ematic.				
Restrictive La	ayer (if obse	rved):									
Type: Ro		,									
Depth (inch	hes): 6						Hydric Soil Present?	Yes O No 💿			
Remarks:											
					of topography, veg	etation tra	ansitions and presence or	lack of hydrology indicators			
was asca to i	icip determi	ne wen	and bodine	di ics.							

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Gogebic Taconite Bulk Sample Sites	City/Cou	inty: Town of Anderson,	Iron Co.	Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite		Stat	e: WI	Sampling Point: Wet 2-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Secti	on, Township, Range: S	s. 33 T. T	45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope		ief (concave, convex, n		Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.33340)6 Long	.: 90.494938	Datum: WGS84
Soil Map Unit Name: Gogebic Silt Loam, 18 to 35°				cation: PFO1
Are climatic/hydrologic conditions on the site typic	1 7 3 37 37	Yes No	— (If no, explain in	Remarks.)
Are Vegetation , Soil , or Hydrolog	_		Circumstances" p	V (A) N (
Are Vegetation , Soil , or Hydrolog	. –		•	
Summary of Findings - Attach site n			xplain any answe	
		ig point location	s, transects,	important reatures, etc
, , , , , , ,		Is the Sampled Area		
V ()		within a Wetland?	Yes ● No ○	
Remarks: (Explain alternative procedures here o				
Hydrology				
Wetland Hydrology Indicators:	acak all that apply)	-		rs (minimum of 2 required)
Primary Indicators (minimum of one required; ch	✓ Water-Stained Leaves (B9)		Surface Soil Cr Drainage Patte	• •
✓ High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Line	• ,
✓ Saturation (A3)	Marl Deposits (B15)		Dry Season Wa	• •
Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrow	ws (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along	•		ble on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C	•		essed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5)	Recent Iron Reduction in Tille	ed Soils (C6)	✓ Geomorphic Po	, ,
Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)		Microtopograp	` '
Sparsely Vegetated Concave Surface (B8)	Uniei (Explain in Remarks)		✓ FAC-neutral Te	
Field Observations: Surface Water Present? Yes No No	Depth (inches):			
Water Table Present? Yes No	Depth (inches): 0			
Saturation Present? (includes capillary fringe) Yes No	· · · · · · · · · · · · · · · · · · ·	Wetland Hydro	ology Present?	Yes No
(includes capillary fringe)		us inspections) if availa	abla:	
Describe Recorded Data (stream gauge, monitoring	ng well, aerial priotos, previol	us irispections), ii avalid	ible.	
Remarks:				
Incilial v2.				

VEGETATION -	Use scientific	names of	plants

VEGETATION - Use scientific names of pl	ants		ominant pecies?		Sampling Point: Wet 2-1
Tree Stratum (Plot size: 50' x 50')	Absolute % Cover	R		Indicator Status	
1 Acer saccharum	30	✓	60.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)
2. Fraxinus nigra	20	V	40.0%	FACW	
3			0.0%		Total Number of Dominant Species Across All Strata: 7 (B)
4			0.0%		Species Across Air Strata.
5			0.0%		Percent of dominant Species
6			0.0%		That Are OBL, FACW, or FAC: 71.4% (A/B)
7			0.0%		Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15' radius)		= T	otal Cove	er	Total % Cover of: Multiply by:
1. Acer saccharum	15	~	60.0%	FACU	0BL species 10 x 1 = 10
2. Fraxinus nigra	10	V	40.0%	FACW	FACW speciles $60 \times 2 = 120$
3.	0		0.0%		FAC speciles $10 \times 3 = 30$
4	=		0.0%		FACU speci es $\frac{48}{2}$ x 4 = $\frac{192}{2}$
5			0.0%		UPL speci es $0 \times 5 = 0$
6			0.0%		Column Totals: 128 (A) 352 (B)
7			0.0%		Prevalence Index = B/A = 2.750
Herb Stratum (Plot size: 5' radius)	25	= T	otal Cove	er	Hydrophytic Vegetation Indicators:
1 Fraxinus nigra	15	✓	28.3%	FACW	Rapid Test for Hydrophytic Vegetation
2. Solidago gigantea		<u>✓</u>	18.9%	FACW	✓ Dominance Test is > 50%
3. Carex crinita		✓	18.9%	OBL	Prevalence Index is ≤3.0 ¹
4. Dryopteris intermedia			9.4%	FAC	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. Ranunculus acris			9.4%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
6. Onoclea sensibilis			9.4%	FACW	Problematic Trydrophytic Vegetation (Explain)
7. Acer saccharum			5.7%	FACU	1 Indicators of hydric soil and wetland hydrology must
8	0		0.0%		be present, unless disturbed or problematic.
9			0.0%		Definitions of Vegetation Strata:
D			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
1	0		0.0%		at breast height (DBH), regardless of height.
2.	0		0.0%		Continued by Mandaga to Long the Co. DDU and
Woody Vine Stratum (Plot size: 50'x50')	53	= T	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of
2	0		0.0%		size, and woody plants less than 3.28 ft tall.
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in
4	0		0.0%		height.
	0	= T	otal Cove	r	
					Hydrophytic Vegetation
Remarks: (Include photo numbers here or on a separate s	hoot)				Present? Yes No

Some upland vegetation was present in this wetland but hydric vegetation was dominant.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 2-1

Profile Descr	iption: (Des	scribe to	the depth	needed to d	ocument	the indic	ator or co	onfirm the	absence of indicators.)		
Depth		Matrix	_			dox Featu		_	_		
(inches)	Color (r	moist)	%	Color (ı	noist)	%	Type 1	Loc ²	Texture	Remarks	
0-12	10YR	4/2	70%	7.5YR	4/4	30%	C	M	silt		
12+			-	-		-	-	-	Rock		
									-		
									-		
									-		
		-							-		
1- 00											
		=Depletio	n. RM=Rec	luced Matrix, (CS=Covere	ed or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N		
Hydric Soil I						6 6	(CO) (LDD		Indicators for Prob	lematic Hydric Soils: ³	
Histosol (nedon (A2)				raiue Beiov A 149B)	v Surrace	(S8) (LRR I	₹,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)	
Black Hist				☐ Thin	Dark Surfa	ace (S9) (I	LRR R, MLI	RA 149B)		ox (A16) (LRR K, L, R)	
	Sulfide (A4)			Loan	ny Mucky N	Mineral (F1) LRR K, L)		or Peat (S3) (LRR K, L, R)	
	Layers (A5)			Loan	ny Gleyed I	Matrix (F2))		Dark Surface (S7		
	Below Dark S	Surface (A	11)	✓ Depl	eted Matrix	(F3)			Polyvalue Below Surface (S8) (LRR K, L)		
Thick Darl	k Surface (A1	12)		Redo	x Dark Su	rface (F6)			☐ Thin Dark Surface (S9) (LRR K, L) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy Mu	ck Mineral (S	51)				Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gle	yed Matrix (S	S4)		☐ Redo	x Depress	ions (F8)				6) (MLRA 144A, 145, 149B)	
Sandy Red	dox (S5)								Red Parent Mater		
Stripped N									Very Shallow Dar	, ,	
Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)						Other (Explain in		
³ Indicators of	hydrophytic	vegetatio	n and wetla	and hydrology	must be p	resent, un	less distur	oed or probl	ematic.		
Restrictive La	aver (if obs	erved):									
Type: Ro		,.									
Depth (inch									Hydric Soil Present?	Yes 💿 No 🔾	
Remarks:											
	nrevented f	full soil n	rofile viev	vina hut the	unner 12	inches n	net hydrid	soil indica	ators and observations of	of topography, vegetation	
transitions an										r topography, vogetation	

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County	: Town of Anderson, I	ron Co.	Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite		State	: WI	Sampling Point: Up 2-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section,	Township, Range: S.	33 T. T	745N R. R1W
Landform (hillslope, terrace, etc.): sadde	Local relief ((concave, convex, no	ne): convex	Slope: 3.0 % / 1.7°
Subregion (LRR or MLRA): LRR K	Lat.: 46.333324	Long.:	90.495004	Datum: WGS84
Soil Map Unit Name: Gogebic Silt Loam, 18 to 35				cation: Upland
		res ● No ○ r	_	<u>.</u>
Are Climatic/hydrologic conditions on the site typ		•	If no, explain in	· · · · ·
Are Vegetation U , Soil U , or Hydrolo		Are "Normai C	ircumstances" p	resent? TES C NO C
Are Vegetation U , Soil U , or Hydrolo	· · · · · · · · · · · · · · · · · · ·	-	plain any answe	-
Summary of Findings - Attach site		point locations	, transects,	important features, etc
	No •			
,	with	he Sampled Area hin a Wetland?	$Yes \bigcirc No \bullet$	
Wetland Hydrology Present? Yes	No •			
This specific sample location was not disturbed				·
Hydrology Wetland Hydrology Indicators:		c	acandan, Indicato	es (minimum of 2 required)
Primary Indicators (minimum of one required; c	heck all that apply)	<u> </u>	econdary Indicator Surface Soil Cr	rs (minimum of 2 required)
Surface Water (A1)	Water-Stained Leaves (B9)		Drainage Patte	
High Water Table (A2)	Aquatic Fauna (B13)	[Moss Trim Line	
Saturation (A3)	Marl Deposits (B15)	[Dry Season Wa	ater Table (C2)
Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrov	ws (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along Livir	ng Roots (C3)	Saturation Visil	ble on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C4)	Į	Stunted or Stre	essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled So	oils (C6)	Geomorphic Po	osition (D2)
Iron Deposits (B5)	☐ Thin Muck Surface (C7)	Į	Shallow Aquita	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		Microtopograp	
Sparsely Vegetated Concave Surface (B8)		Į	FAC-neutral Te	est (D5)
Field Observations: Surface Water Present? Yes No •	Depth (inches):	_		
Water Table Present? Yes No •	Depth (inches):	_		
Saturation Present? (includes capillary fringe) Yes No •	Depth (inches):	Wetland Hydro	ogy Present?	Yes ○ No •
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, previous in	nspections), if availal	ole:	
Remarks:				

VEGETATION -	Use scientific	names of	plants

VEGETATION - OSE SCIENTIFIC Harries of pr	ancs		ominant pecies?	Sampling Point: Up 2-1	
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:
1 Acer saccharum	25	V	35.7%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
2. Acer rubrum	15	✓	21.4%	FAC	(7
3. Quercus rubra		<u>✓</u>	21.4%	FACU	Total Number of Dominant
		✓	21.4%	FACU	Species Across All Strata: 11 (B)
4 _. Ostrya virginiana 5			0.0%		Percent of dominant Species
6		\Box	0.0%		That Are OBL, FACW, or FAC: 9.1% (A/B)
		\Box	0.0%		Prevalence Index worksheet:
7Sapling/Shrub Stratum (Plot size: 15' radius)		 = To	otal Cove	r	Total % Cover of: Multiply by:
· · · · · · · · · · · · · · · · · · ·					0BL species 0 x 1 = 0
1 Ostrya virginiana		V	33.3%	FACU	FACW species 15 x 2 = 30
2. Corylus americana	15	✓	33.3%	FACU	FAC speciles $25 \times 3 = 75$
3. Acer saccharum		✓	22.2%	FACU	FACU speciles 200 x 4 = 800
4. Abies balsamea	-		11.1%	FAC	
5			0.0%		or L species
6	0	\sqcup	0.0%		Column Total s: 240 (A) 905 (B)
7	0		0.0%		Prevalence Index = B/A = 3.771
Herb Stratum (Plot size: 5' radius)	45	= T	otal Cove	r	Hydrophytic Vegetation Indicators:
1 Pteridium aquilinum	40	V	32.0%	FACU	Rapid Test for Hydrophytic Vegetation
O Ouerous rubre		✓	16.0%	FACU	Dominance Test is > 50%
2. Acer saccharum		✓	12.0%	FACU	Prevalence Index is ≤3.0 ¹
4. Malanthemum canadense		✓	12.0%	FACU	Morphological Adaptations ¹ (Provide supporting
5. Onoclea sensibilis			8.0%	FACW	data in Remarks or on a separate sheet)
C. Drupus corotina		\Box	8.0%	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
7 Fravinua nigra		П	4.0%	FACW	¹ Indicators of hydric soil and wetland hydrology must
O Comundo eleutenione		П	4.0%	FAC	be present, unless disturbed or problematic.
0 Ph		П	4.0%	FACU	Definitions of Vegetation Strata:
		П	0.0%	FACU	_
0					Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
1			0.0%		at breast height (DBH), regardless of height.
2		\Box	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size: 30 ' radius)	125 :	= To	otal Cove	r	greater than 3.28 ft (1m) tall
1	0	Ш	0.0%		Herb - All herbaceous (non-woody) plants, regardless of
2	0		0.0%		size, and woody plants less than 3.28 ft tall.
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in
4	0		0.0%		height.
	0 :	= To	otal Cove	r	
					Hydrophytic Vegetation Present? Yes ○ No ●
Remarks: (Include photo numbers here or on a separate s	heet.)				rieseitti 100 - 110 -

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 2-1

Profile Descr	iption: (Des	cribe to	the depth	needed to docui	nent the indi	cator or co	nfirm the	absence of indicators.)	
Depth	1	Matrix	•		Redox Feat			,	
(inches)	Color (m	noist)	%	Color (mois	t) %	Type 1	Loc2	Texture	Remarks
0-3	10YR	3/2	100%	-		-	-	silt	
3-4	10YR	4/2	100%	-		-	-	Sandy Loam	
4-20+	10YR	3/4	100%					sand	
1201	10111		10070					Suriu	
		-Depletio	n. RM=Red	uced Matrix, CS=C	overed or Coat	ted Sand Gra	iins ² Loca	ation: PL=Pore Lining. M=M	atrix
Hydric Soil 1								Indicators for Proble	ematic Hydric Soils: 3
Histosol (☐ Polyvalue MLRA 149	Below Surface	(S8) (LRR R	,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)
	pedon (A2)			_	Surface (S9)	(IRRR MIR	Δ 149R)	Coast Prairie Redo	x (A16) (LRR K, L, R)
Black Hist					cky Mineral (F		A 1470)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			_	eyed Matrix (F2			☐ Dark Surface (S7)	(LRR K, L, M)
	Layers (A5)				Matrix (F3)	-)		Polyvalue Below S	urface (S8) (LRR K, L)
	Below Dark Su		.11)		k Surface (F6)			☐ Thin Dark Surface	(S9) (LRR K, L)
	k Surface (A12			_	Dark Surface (10)			☐ Iron-Manganese №	Masses (F12) (LRR K, L, R)
	ıck Mineral (S1				oressions (F8)	,,		Piedmont Floodpla	nin Soils (F19) (MLRA 149B)
	eyed Matrix (S	4)			0.000.01.0 (1.0)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re								Red Parent Materi	
	Matrix (S6)	D MI DA	1.40D)					Very Shallow Dark	
	ace (S7) (LRR		•					Other (Explain in F	Remarks)
³ Indicators o	f hydrophytic v	vegetatio	n and wetla	nd hydrology mus	be present, u	nless disturb	ed or probl	ematic.	
Restrictive L	ayer (if obse	rved):							
Type:									
Depth (inc	hes):							Hydric Soil Present?	Yes O No 💿
Remarks:	-								

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County: Town of Anderson, Iron Co. Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite	State: WI Sampling Point: Wet 3-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Township, Range: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, convex, none): concave Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR K Lat.:	46.333265 Long.: 90.495120 Datum: WGS84
Soil Map Unit Name: Gogebic Silt Loam, 18 to 35% slopes, very ston	
<u> </u>	<u></u>
Are climatic/hydrologic conditions on the site typical for this time of y	(1. 1.0) Exp. (1. 1.0)
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Normal Circumstances" present? Yes Volume No
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing s	sampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes ● No ○	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
This specific sample location was not disturbed but all old logging to	oad nearby would be considered significantly disturbed by historic activities.
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of 2 required)
	Surface Soil Cracks (B6) Drainage Patterns (B10)
Surface Water (A1) ✓ Water-Stained Lea ✓ High Water Table (A2) Aquatic Fauna (B1)	
Saturation (A3) Marl Deposits (B15)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide (
	eres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3) Presence of Reduc	ced Iron (C4) Stunted or Stressed Plants (D1)
	ction in Tilled Soils (C6)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	· /
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in F	
Sparsely Vegetated Concave Surface (B8)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes ● No ○
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	

VEGETATION -	Use scientific	names of	plants
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	lants		ominant pecies?		Sampling Point: Wet 3-1					
Tree Stratum (Plot size: 30' x 30')	Absolute % Cover		el.Strat. over	Indicator Status	Dominance Test worksheet:					
1. Fraxinus nigra	25	V	100.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)					
2			0.0%		That are obe, thow, or the.					
3			0.0%		Total Number of Dominant					
4			0.0%		Species Across All Strata: 3 (B)					
5		Н	0.0%		Percent of dominant Species					
			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)					
6			0.0%		Prevalence Index worksheet:					
7					Total % Cover of: Multiply by:					
Sapling/Shrub Stratum (Plot size: 15' radius)	25	= 1	otal Cove	er						
1. Fraxinus nigra	50	~	100.0%	FACW	0BL species 0 x 1 = 0					
2			0.0%		FACW species $125 \times 2 = 250$					
3			0.0%		FAC speci es $\frac{15}{2}$ x 3 = $\frac{45}{2}$					
4			0.0%		FACU speci es $\frac{10}{}$ x 4 = $\frac{40}{}$					
5			0.0%		UPL species $0 \times 5 = 0$					
6			0.0%		Column Totals:150 (A)335 (B)					
7.			0.0%		Prevalence Index = B/A = 2.233					
· ·	50	_ T	otal Cove							
Herb Stratum (Plot size: 5' radius)		- •	otal Cove		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation					
1. Fraxinus nigra	40	✓	53.3%	FACW	✓ Dominance Test is > 50%					
2. Onoclea sensibilis	10		13.3%	FACW	✓ Prevalence Index is ≤3.0 ¹					
3. Dryopteris Intermedia	10		13.3%	FAC						
4. Corylus americana	5		6.7%	FACU	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)					
5. Acer saccharum	-		6.7%	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)					
6. Ables balsamea	5		6.7%	FAC						
7	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must					
8			0.0%		be present, unless disturbed or problematic.					
9			0.0%		Definitions of Vegetation Strata:					
0			0.0%		Troe Woody plants 2 in (7.6 cm) or more in diameter					
1			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.					
2.			0.0%		,,					
Woody Vine Stratum (Plot size: 30' x 30')		= T	otal Cove	er	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall					
<u> </u>	0		0.0%		Harb All barbassaus (non woody) plants, regardless of					
1					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.					
2			0.0%		Cize, and needy plante less than 6.26 it tain					
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in					
4			0.0%	-	height.					
Ti-	0	_ T	otal Cove	-						

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 3-1

Profile Descr	iption: (Des	cribe to	the depth	needed to	locumen	t the indic	ator or co	nfirm the	absence of indicators.)	
Depth (inches)		Matrix				dox Featu	ires		- <u>-</u> .	
	Color (n		%	Color (moist)	%	Туре	Loc ²	Texture	Remarks
0-4	10YR	3/2	100%	-	-	-	-		silt	
4-11	10YR	4/2	70%	7.5YR	4/6	30%	С	М	Silt Loam	
11-20+	7.5YR	3/4	100%		_	-		-	Sandy Loam	_
									-	
									-	
				-	-				-	
1 Type: C. Con	contration D	Doplotio	n DM Dod		CS Cover	od or Coata	od Sand Cra	inc 21 occ	ation: PL=Pore Lining. M=N	
		=Depletio	iii. Kivi=Keu	uceu iviati ix,	C3=C0Vei	eu or coate	eu Sanu Gra	IIIIS ~LUC	-	
Hydric Soil 1				Dolu	valuo Polo	w Surface (ממטו) (29)			lematic Hydric Soils: 3
	pedon (A2)				value Belo A 149B)	w Surface ((58) (LKK K	,		(LRR K, L, MLRA 149B)
Black Hist				☐ Thin	Dark Surf	ace (S9) (I	LRR R, MLR	A 149B)		ox (A16) (LRR K, L, R)
	Sulfide (A4)			Loar	ny Mucky	Mineral (F1) LRR K, L)			or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loar	ny Gleyed	Matrix (F2))		Dark Surface (S7)	
	Below Dark S	urface (A	11)	✓ Dep	eted Matri	ix (F3)			_	Surface (S8) (LRR K, L)
	k Surface (A1		,	Rede	ox Dark Su	ırface (F6)			Thin Dark Surface	
	ıck Mineral (S	•		☐ Dep	eted Dark	Surface (F	7)		_	Masses (F12) (LRR K, L, R)
	eyed Matrix (S			Red	ox Depress	sions (F8)				ain Soils (F19) (MLRA 149B)
Sandy Re									Red Parent Mater	6) (MLRA 144A, 145, 149B)
	Matrix (S6)								Very Shallow Dar	, ,
	ace (S7) (LRR	R, MLRA	A 149B)						Other (Explain in	
³ Indicators of	f hydronhytic	vegetatio	n and wetla	nd hydrology	must ha i	nrasant un	lace dieturh	ed or probl		Kemarks)
			m and wetta	na nyarology	must be	present, un	icas distarb	cu or probi	icinatic.	
Restrictive L	ayer (if obse	erved):								
Type:									Hydric Soil Present?	Yes ● No ○
Depth (inc	hes):								,	163 0 110 0
Remarks:										
I										

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County: Town of A	nderson, Iron Co. Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite		State: WI Sampling Point: Up 3-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Township, R	tange: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): Saddle	Local relief (concave, co	nvex, none): convex Slope: 3.0 % / 1.7
Subregion (LRR or MLRA): LRR K	Lat.: 46.333299	Long.: 90.495057 Datum: WGS84
Soil Map Unit Name: Gogebic Silt Loam, 18 to 35% slope		NWI classification: Upland
	·	<u> </u>
Are Venetation Coll.		(a. 1.0, express in resistance)
Are Vegetation . , Soil . , or Hydrology		Normal Circumstances" present? Yes Vo No
Are Vegetation , Soil , or Hydrology	-	eeded, explain any answers in Remarks.)
<u> </u>	showing sampling point loc	ations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No •	T. H. G	•
Hydric Soil Present? Yes No No	Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes No No		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all		Surface Soil Cracks (B6)
	ter-Stained Leaves (B9) latic Fauna (B13)	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
	l Deposits (B15)	Dry Season Water Table (C2)
	Irogen Sulfide Odor (C1)	Crayfish Burrows (C8)
	dized Rhizospheres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
	sence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	ent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thir	n Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	er (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No De	epth (inches):	
Water Table Present? Yes O No O	epth (inches):	0 6
Saturation Present? (includes capillary fringe) Yes No • De	epth (inches):	nd Hydrology Present? Yes O No 🖲
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, previous inspections),	if available:
Remarks:		

VEGETATION - Use scientific names of plant	names of plants	scientific	VEGETATION -
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		Dominant Species?			Sampling Point: Up 3-1						
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:						
1. Acer saccharum	25	V	35.7%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)						
2. Acer rubrum	15	V	21.4%	FAC							
3. Quercus rubra	15	~	21.4%	FACU	Total Number of Dominant Species Across All Strata: 11 (B)						
4. Ostrya virginiana	15	~	21.4%	FACU	Species Across Air Strata.						
5	0		0.0%		Percent of dominant Species That Are ORL FACING or FAC: 9.1% (A/B)						
6	0		0.0%		That Are OBL, FACW, or FAC: 9.1% (A/B)						
7	0		0.0%		Prevalence Index worksheet:						
Sapling/Shrub Stratum (Plot size: 15' radius)	70	= T	otal Cover	r	Total % Cover of: Multiply by:						
1 Ostrya virginiana	15	V	33.3%	FACU	0BL speci es 0 x 1 = 0						
O. Conduc americana	15	✓	33.3%	FACU	FACW species 15 x 2 = 30						
3. Acer saccharum	10	✓	22.2%	FACU	FAC speci es 25 x 3 = 75						
4. Ables balsamea	5		11.1%	FAC	FACU speci es $\underline{200}$ x 4 = $\underline{800}$						
5.		\Box	0.0%		UPL species $0 \times 5 = 0$						
6		\Box	0.0%		Column Totals: 240 (A) 905 (B)						
7.	0		0.0%		Prevalence Index = B/A = 3.771						
Herb Stratum (Plot size: 5' radius)	45	= To	otal Cover	- ———	Hydrophytic Vegetation Indicators:						
	40		22.00/	FACU	Rapid Test for Hydrophytic Vegetation						
1 Pteridium aquilinum	40	✓✓	32.0%	FACU	☐ Dominance Test is > 50%						
2. Quercus rubra		∨	16.0%	FACU	Prevalence Index is ≤3.0 ¹						
3. Acer saccharum	15	V	12.0%	FACU	Morphological Adaptations ¹ (Provide supporting						
4. Malanthemum canadense			12.0%	FACU	data in Remarks or on a separate sheet)						
5. Onoclea sensibilis	10		8.0%	FACU FACU	Problematic Hydrophytic Vegetation ¹ (Explain)						
6. Prunus serotina 7. Fraxinus nigra	<u>10</u> 5		4.0%	FACW	¹ Indicators of hydric soil and wetland hydrology must						
0 0			4.0%	FAC	be present, unless disturbed or problematic.						
		П	4.0%	FACU	Definitions of Vegetation Strata:						
9. Phegopteris connectilis 0.		\Box	0.0%	TACO	-						
	0	\Box	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.						
1 2	0	\Box	0.0%		at broadt Holgrit (BBH), regardiess of Height.						
		= Total Cover		·	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall						
Woody Vine Stratum (Plot size: 30 ' radius) 1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless o						
2	0	\Box	0.0%		size, and woody plants less than 3.28 ft tall.						
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in						
4	0		0.0%		height.						
	0	= To	otal Cover	•							
					Hydrophytic Vegetation Present? Yes ○ No ●						

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 3-1

Profile Descr	iption: (Des	cribe to	the depth	needed to doo	ument t	he indic	ator or co	nfirm the	absence of indica	ators.)		
Depth	1	Matrix	•			x Featu				•		
(inches)	Color (m	noist)	%	Color (mo	ist)	%	Type 1	Loc2	Texture		Rem	narks
0-3	10YR	3/2	100%	-	-	-	-	-	silt			
3-4	10YR	4/2	100%	-	-	-	-	-	Sandy Loam			
4-20+	10YR	3/4	100%			_			sand			
1201	10111	- O/ 1	10070						Suriu			
									<u> </u>			
									· ·			
									-			
		-Depletio	n. RM=Red	uced Matrix, CS	=Covered	or Coate	d Sand Gra	nins ² Loca	ation: PL=Pore Lin	ing. M=Ma	trix	
Hydric Soil 1	Indicators:								Indicators f	or Proble	matic Hydric	c Soils: 3
Histosol (A1)					Surface (S8) (LRR R	.,			.RR K, L, MLR	
Histic Epi	pedon (A2)			MLRA 1	•	- (CO) (I	DD D MID	A 140D)			(A16) (LRR k	
Black Hist							RR R, MLR				Peat (S3) (L	
	Sulfide (A4)				-) LRR K, L)				LRR K, L, M)	
	Layers (A5)				Gleyed Ma						rface (S8) (LF	RR K, L)
	Below Dark Su		11)		d Matrix (Dark Surfa				☐ Thin Dar	k Surface (S9) (LRR K, I	L)
	k Surface (A12			_	d Dark Sun		7)		☐ Iron-Mar	nganese Ma	isses (F12) (L	_RR K, L, R)
	ıck Mineral (S1				Depressio		′)		Piedmon	it Floodplair	n Soils (F19) ((MLRA 149B)
	eyed Matrix (S	4)		□ Redux I	Jehi essio	115 (10)			Mesic Sp	odic (TA6)	(MLRA 144A,	, 145, 149B)
Sandy Re									Red Pare	ent Material	(F21)	
	Matrix (S6)								Very Sha	allow Dark S	Surface (TF12	2)
Dark Surf	ace (S7) (LRR	R, MLRA	(149B)						Other (E	xplain in Re	emarks)	
³ Indicators of	f hydrophytic v	vegetatio	n and wetla	nd hydrology m	ust be pre	esent, un	less disturb	ed or proble	ematic.			
Restrictive L	aver (if obse	rved):										
Type:	, ,	,										
Depth (inc	hes):								Hydric Soil Pr	resent?	Yes 🔾	No 💿
Remarks:												
Kemarks.												

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County: Town of Anderson, Iron Co. Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite	State: WI Sampling Point: Wet 4-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Township, Range: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none): concave Slope: 6.0 % / 3.4 °
Subregion (LRR or MLRA): LRR K Lat.:	: 46.333433
Soil Map Unit Name: Gogebic Silt Loam, 18 to 35% slopes, very sto	ony, rocky NWI classification: PFO1
Are climatic/hydrologic conditions on the site typical for this time of	f year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significal	antly disturbed? Are "Normal Circumstances" present? Yes ● No ○
Are Vegetation , Soil , or Hydrology naturally	y problematic? (If needed, explain any answers in Remarks.)
	sampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes ● No ○	Willia Welland.
Hydrology	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of 2 required)
Surface Water (A1) Water-Stained L	
✓ High Water Table (A2) Aquatic Fauna (II) Aquatic Fauna (II)	
Saturation (A3) Marl Deposits (B	
Water Marks (B1) Hydrogen Sulfide	le Odor (C1) Crayfish Burrows (C8)
	pheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3) Presence of Red	
	duction in Tilled Soils (C6) Geomorphic Position (D2) Shallow Aguitard (D3)
☐ Iron Deposits (B5) ☐ Thin Muck Surfa ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	
Sparsely Vegetated Concave Surface (B8)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches)):
Water Table Present? Yes No Depth (inches)):0 Wetland Hydrology Present? Yes ● No ○
Saturation Present? (includes capillary fringe) Yes No Depth (inches)	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:
Remarks:	

VEGETATION - Use scientific names of plant
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VEGETATION OSC Scientific names of pic		DominantSpecies?			Sampling Point: Wet 4-1						
Tree Stratum (Plot size: 100' x 35')	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:						
1. Fraxinus nigra	30	✓	60.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)						
2. Ostrya virginiana	20	✓	40.0%	FACU	mat are obe, mow, or me.						
3			0.0%		Total Number of Dominant Species Across All Strata: 10 (B)						
4			0.0%		Species Across Air Strata.						
5			0.0%		Percent of dominant Species						
6			0.0%		That Are OBL, FACW, or FAC: 70.0% (A/B)						
7			0.0%		Prevalence Index worksheet:						
Cauling (Church Churchurg (Diet sings 15) radius	50	= T	otal Cove	r	Total % Cover of: Multiply by:						
Sapling/Shrub Stratum (Plot size: 15' radius)					0BL speci es 15 x 1 = 15						
1 Fraxinus nigra			50.0%	FACW	FACW species 85 x 2 = 170						
2. Acer saccharum			50.0%	FACU	FAC speci es 25 x 3 = 75						
3			0.0%		FACU speciles 70 x 4 = 280						
4	-		0.0%		UPL species $0 \times 5 = 0$						
5			0.0%		Col umn Total s: 195 (A) 540 (B)						
6			0.0%		Total of (//						
7		_	0.0%		Prevalence Index = B/A = 2.769						
Herb Stratum (Plot size: 5' radius)		= 10	otal Cove	r	Hydrophytic Vegetation Indicators:						
1 Carex gracillima	40	V	32.0%	FACU	Rapid Test for Hydrophytic Vegetation						
2. Impatiens capensis	15	✓	12.0%	FACW	✓ Dominance Test is > 50%						
3 Carex crinita	15	V	12.0%	OBL	✓ Prevalence Index is ≤3.0 ¹						
4. Solidago gigantea		V	12.0%	FACW	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)						
5. Equisetum arvense	4-	V	12.0%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)						
6. Fraxinus nigra	- —— 15	V	12.0%	FACW	- Problematic Hydrophytic Vegetation (Explain)						
7. Ranunculus acris	10		8.0%	FAC	1 Indicators of hydric soil and wetland hydrology must						
8	0		0.0%		be present, unless disturbed or problematic.						
9			0.0%		Definitions of Vegetation Strata:						
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter						
1			0.0%		at breast height (DBH), regardless of height.						
2			0.0%		Capling/abrub Waady plants less than 2 in DRI and						
	125	= T	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall						
Woody Vine Stratum (Plot size: 100' x 35'	_										
1			0.0%		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.						
2			0.0%		oleo, and woody planto look than oleo it tall.						
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in						
4		_	-		height.						
		= 1	otal Cove	r							
					Hydrophytic						
					Vegetation Present? Yes No No						
					Fresent 100 0 100 0						
Domanico (Tuelindo mboto mumboro boro or or o construito de	\				<u> </u>						
Remarks: (Include photo numbers here or on a separate sh	eet.)										

Some upland vegetation was present in this wetland but hydric vegetation was dominant.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 4-1

	ription: (Des	cribe to	the depth	needed to o	locumen	t the indic	ator or co	onfirm the	absence of indicators.)		
Depth (inches)	Color (n	Matrix	_ %	Color (edox Featu %	ires Type 1	Loc²	Texture	Remai	dro
0-3	10YR	3/2	100%		illoist)			LUC-	Silt Loam	Reiliai	<u> </u>
								-	·		
3-9	10YR	3/2	80%	7.5YR	4/6	20%	C		Silt Loam		
9-14	10YR	4/3	80%	7.5YR	4/6	20%	C	M	Silt Loam		
14+		-							Rock		
									<u> </u>		
							_				
				. ——					·		
									·		
				. ——					·		
					-			-			
								-	·		
		=Depletio	n. RM=Rec	duced Matrix, (CS=Cover	red or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=M		
Hydric Soil 1									Indicators for Proble	ematic Hydric S	Soils: 3
Histosol (value Belo A 149B)	ow Surface ((S8) (LRR F	₹,	2 cm Muck (A10) ((LRR K, L, MLRA	149B)
	pedon (A2)					face (S9) (I	LRR R. MLI	RA 149B)	Coast Prairie Redo	x (A16) (LRR K,	L, R)
Black Hist	Sulfide (A4)					Mineral (F1			5 cm Mucky Peat of		R K, L, R)
	Layers (A5)					d Matrix (F2)			Dark Surface (S7)		
	Below Dark S	urface (A	(11)	☐ Depl	eted Matr	rix (F3)			Polyvalue Below S		K, L)
	k Surface (A1		,	✓ Redo	ox Dark Si	urface (F6)			☐ Thin Dark Surface		2 (
	ıck Mineral (S			Depl	eted Dark	k Surface (F	7)		Iron-Manganese M		
	eyed Matrix (S			Redo	x Depres	ssions (F8)			☐ Piedmont Floodpla☐ Mesic Spodic (TA6		
☐ Sandy Re									Red Parent Materia		43, 1470)
Stripped I	Matrix (S6)								Very Shallow Dark		
☐ Dark Surf	ace (S7) (LRR	R, MLRA	4 149B)						Other (Explain in F		
³ Indicators of	f hydrophytic	vegetatio	on and wetla	and hydrology	must be	present, un	ıless disturl	oed or probl		,	
Restrictive L						-					
Type: R		or veay.									
Depth (inc									Hydric Soil Present?	Yes 💿 N	lo O
Remarks:											
Nemarks.											

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County:	Town of Anderson, Iron Co.	Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite		State: WI	Sampling Point: Up 4-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Tow	vnship, Range: S. 33 T.	T45N R. R1W
Landform (hillslope, terrace, etc.): sideslope	Local relief (con	cave, convex, none): convex	Slope: 3.0 % / 1.7 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.333500	Long.: 90.497054	Datum: WGS84
Soil Map Unit Name: Gogebic Silt Loam, 18 to 35% s			ification: Upland
-			<u>.</u>
Are climatic/hydrologic conditions on the site typical		(2. 110) (2.1)	V (A) N- (
Are Vegetation , Soil , or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes • No O
Are Vegetation , Soil , or Hydrology	naturally problematic?	(If needed, explain any answ	vers in Remarks.)
Summary of Findings - Attach site ma	p showing sampling poi	int locations, transects	s, important features, etc
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No	WITHIN a	Sampled Area $_{ m a}$ Wetland? Yes $_{ m o}$ No $_{ m o}$	•
Wetland Hydrology Present? Yes No	•		
Hydrology.			
Hydrology			
Wetland Hydrology Indicators:	k all that apply)		tors (minimum of 2 required)
Primary Indicators (minimum of one required; check		Surface Soil Drainage Pa	, ,
High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Moss Trim L	• ,
Saturation (A3)	Marl Deposits (B15)		Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Bur	rows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along Living Re	oots (C3) Saturation V	isible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C4)	Stunted or S	tressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aqu	• •
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		aphic Relief (D4)
Sparsely vegetated concave surface (Bo)		FAC-neutral	Test (D5)
Field Observations:			
Surface Water Present? Yes No •	Depth (inches):		
Water Table Present? Yes No •	Depth (inches):	Wetland Hydrology Present?	Yes ○ No ●
Saturation Present? (includes capillary fringe) Yes No	Depth (inches):	wedand hydrology Present?	163 C NO C
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspe	ections), if available:	
Remarks:			

VEGETATION -	Use sci	entific	names	of	plants
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ance Test worksheet: of Dominant Species c OBL, FACW, or FAC: umber of Dominant Across All Strata: 4 (B) t of dominant Species re OBL, FACW, or FAC: otal Strata: otal % Cover of: otal strata: otal % Cover of: otal strata:
aumber of Dominant Across All Strata: d (B) t of dominant Species re OBL, FACW, or FAC: otal % Cover of: otal % Cov
tof dominant Species re OBL, FACW, or FAC: otal % Cover of: ota
t of dominant Species re OBL, FACW, or FAC: otal % Cover of: ot
t of dominant Species re OBL, FACW, or FAC: otal % Cover of: Multiply by: otal es otal % Cover of: otal % Cover of:
re OBL, FACW, or FAC: 0.0% (A/B) nce Index worksheet: otal % Cover of: Multiply by: occl es 0 x 1 = 0 occl es 5 x 2 = 10 occl es 0 x 3 = 0 occl es 5 x 4 = 740 occl es 5 x 5 = 25 Total s: 195 (A) 775 (B) evalence Index = B/A = 3.974 hytic Vegetation Indicators: opid Test for Hydrophytic Vegetation ominance Test is > 50% evalence Index is ≤ 3.0 ¹ orphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
nce Index worksheet: otal % Cover of: Multiply by: otal % Cover of: Doll of the second of
otal % Cover of: Multiply by: cecl es 0 x 1 = 0 cecl es 5 x 2 = 10 cecl es 0 x 3 = 0 cecl es 185 x 4 = 740 cecl es 5 x 5 = 25 Total s: 195 (A) 775 (B) cevalence Index = B/A = 3.974 cevalence Index is ≤ 3.0 cevalence Index is ≤ 3.0 certain Remarks or on a separate sheet) coblematic Hydrophytic Vegetation cetators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
otal % Cover of: Multiply by: cecl es 0 x 1 = 0 cecl es 5 x 2 = 10 cecl es 0 x 3 = 0 cecl es 185 x 4 = 740 cecl es 5 x 5 = 25 Total s: 195 (A) 775 (B) cevalence Index = B/A = 3.974 cevalence Index is ≤ 3.0 cevalence Index is ≤ 3.0 certain Remarks or on a separate sheet) coblematic Hydrophytic Vegetation cetators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
peci es 5 x 2 = 10 peci es 0 x 3 = 0 peci es 185 x 4 = 740 peci es 5 x 5 = 25 Total s: 195 (A) 775 (B) pevalence Index = B/A = 3.974 phytic Vegetation Indicators: pid Test for Hydrophytic Vegetation perinance Test is > 50% pevalence Index is ≤3.0 1 perinance Test is > 50% perinance Test is >
ecl es 0 x 3 = 0 pecl es 185 x 4 = 740 pecl es 5 x 5 = 25 Total s: 195 (A) 775 (B) evalence Index = B/A = 3.974 hytic Vegetation Indicators: pid Test for Hydrophytic Vegetation ominance Test is > 50% evalence Index is ≤3.0 1 orphological Adaptations 1 (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation 1 (Explain) eators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
peciles 185 x 4 = 740 peciles 5 x 5 = 25 Total s: 195 (A) 775 (B) Evalence Index = B/A = 3.974 Phytic Vegetation Indicators: pid Test for Hydrophytic Vegetation Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Porphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Deminance Test is > 50% Evalence Index is ≤ 3.0 ¹ Evale
ecles 5 x 5 = 25 Total s: 195 (A) 775 (B) evalence Index = B/A = 3.974 hytic Vegetation Indicators: pid Test for Hydrophytic Vegetation ominance Test is > 50% evalence Index is ≤ 3.0 ¹ orphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) eators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
Total s: 195 (A) 775 (B) evalence Index = B/A = 3.974 hytic Vegetation Indicators: upid Test for Hydrophytic Vegetation ominance Test is > 50% evalence Index is ≤3.0 ¹ orphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
Total s: 195 (A) 775 (B) evalence Index = B/A = 3.974 hytic Vegetation Indicators: pid Test for Hydrophytic Vegetation ominance Test is > 50% evalence Index is ≤3.0 ¹ orphological Adaptations ¹ (Provide supporting ita in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
evalence Index = B/A = 3.974 hytic Vegetation Indicators: pid Test for Hydrophytic Vegetation pminance Test is > 50% evalence Index is ≤3.0 ¹ prephological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
hytic Vegetation Indicators: pid Test for Hydrophytic Vegetation pminance Test is > 50% evalence Index is ≤3.0 ¹ prphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
pid Test for Hydrophytic Vegetation ominance Test is > 50% evalence Index is ≤3.0 ¹ orphological Adaptations ¹ (Provide supporting ita in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
ominance Test is > 50% evalence Index is ≤3.0 ¹ orphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
evalence Index is ≤3.0 ¹ orphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
orphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) sators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
ta in Remarks or on a separate sheet) oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
oblematic Hydrophytic Vegetation ¹ (Explain) cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
cators of hydric soil and wetland hydrology must sent, unless disturbed or problematic.
sent, unless disturbed or problematic.
sent, unless disturbed or problematic.
tions of Vogatation Strate:
nons or vegeration strata:
Voody plants, 3 in. (7.6 cm) or more in diameter
st height (DBH), regardless of height.
/shrub - Woody plants less than 3 in. DBH and
than 3.28 ft (1m) tall
All herbaceous (non-woody) plants, regardless of
nd woody plants less than 3.28 ft tall.
vine - All woody vines greater than 3.28 ft in
st height (D /shrub - Wo than 3.28 f All herbaced d woody pl

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 4-1

Profile Descr	ription: (Des	cribe to	the depth	needed to docur	nent the indi	cator or co	nfirm the	absence of indicators.)	
Depth		Matrix			Redox Feat			-	
(inches)	Color (n	noist)	%	Color (mois	t) %	Type 1	Loc2	Texture	Remarks
0-7	7.5YR	3/2	100%	<u> </u>		-	-	Silt Loam	
7-13	7.5YR	3/4	100%	-		-	-	Silt Loam	
13+		_	-				_	Rock	
1 Type: C=Con	centration. D	=Depletic	n. RM=Red	luced Matrix, CS=C	overed or Coa	ted Sand Gra	ins ² Loca	ation: PL=Pore Lining. M=M	 latrix
Hydric Soil									
Histosol (Polyvalue	Below Surface	(S8) (LBB B			ematic Hydric Soils: 3
	pedon (A2)			MLRA 149		(50) (ERIT IT	1		(LRR K, L, MLRA 149B)
Black Hist				☐ Thin Dark	Surface (S9)	(LRR R, MLR	A 149B)		ox (A16) (LRR K, L, R)
	Sulfide (A4)			Loamy Μι	ıcky Mineral (F	1) LRR K, L)			or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loamy Gle	eyed Matrix (F	2)		Dark Surface (S7)	
	Below Dark S	urface (A	111)		Matrix (F3)			_	Surface (S8) (LRR K, L)
	k Surface (A1		111)		rk Surface (F6))		Thin Dark Surface	
	uck Mineral (S			_	Dark Surface (Masses (F12) (LRR K, L, R)
	eyed Matrix (S			Redox De	pressions (F8)				ain Soils (F19) (MLRA 149B)
Sandy Re		14)							6) (MLRA 144A, 145, 149B)
	Matrix (S6)							Red Parent Materi	
	face (S7) (LRR	R MIRA	149R)					Very Shallow Dark	
			•					Other (Explain in I	Remarks)
³ Indicators o	f hydrophytic	vegetatio	n and wetla	and hydrology must	be present, u	nless disturb	ed or probl	ematic.	
Restrictive L	ayer (if obse	erved):							
Type: R	ock								
Depth (inc	hes):_13							Hydric Soil Present?	Yes O No 💿
Remarks:									

Project/Site: Gogebic Taconite Bulk Sample Sit	es City/Co	ounty: Town of Anderson,	Iron Co. Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite		Stat	e: WI Sampling Point: Wet 5-1
Investigator(s): Ann Michalski, WDNR Prof. As	ssured Sec	tion, Township, Range: §	T. T45N R. R1W
Landform (hillslope, terrace, etc.): seep	Local re	elief (concave, convex, no	one): concave Slope: 1.0 % / 0.6
Subregion (LRR or MLRA): LRR K	Lat.: 46.333	736 Long .	: 90.498149 Datum : WGS84
Soil Map Unit Name: Michigamme-Schweitz			NWI classification: NA
Are climatic/hydrologic conditions on the si			(If no, explain in Remarks.)
	drology significantly distu		Circumstances" present? Yes • No
	drology naturally problema		F. C.
		(======================================	xplain any answers in Remarks.) 5, transects, important features, etc
Hydrophytic Vegetation Present? Yes			, transects, important reactives, etc
,		Is the Sampled Area	Yes ● No ○
Yes (within a Wetland?	yes S No C
Wetland Hydrology Present? Remarks: (Explain alternative procedures			
Hydrology			
Wetland Hydrology Indicators:		-	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one requint Surface Water (A1)			Surface Soil Cracks (B6)
✓ High Water Table (A2)	✓ Water-Stained Leaves (B9) Aquatic Fauna (B13)		☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
✓ Saturation (A3)	Marl Deposits (B15)		Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1))	Crayfish Burrows (C8)
Sediment Deposits (B2)	✓ Oxidized Rhizospheres alon		Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Ti	lled Soils (C6)	Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-neutral Test (D5)
Field Observations:			
Surface Water Present? Yes No			
Water Table Present? Yes • No) Wetland Hydro	ology Present? Yes No
Saturation Present? (includes capillary fringe) Yes No	O Depth (inches):C		nogy Present:
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos, previ	ous inspections), if availa	ble:
Remarks:			

VEGETATION -	Use scientific	names of	plants
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and the second s	Absolute % Cover 0 0 0 0	R	pecies? el.Strat. over	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2	0				
2	0				
3		_			mat are obe, mow, or me.
			0.0%		Total Number of Dominant Species Across All Strata: 0 (B)
	0	$\overline{\Box}$	0.0%		Species Across All Strata: 0 (B)
5	0	$\overline{\Box}$	0.0%		Percent of dominant Species
6	0	$\overline{\Box}$	0.0%		That Are OBL, FACW, or FAC:
7	0		0.0%		Prevalence Index worksheet:
	0	= T	otal Cove	r	Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 60' x 10')					0BL species 0 x 1 = 0
1. Acer saccharum	3		75.0%	FACU	FACW speci es 1 x 2 = 2
2. Fraxinus nigra	_1_		25.0%	FACW	FAC speciles
3	0		0.0%		FACU species $\frac{3}{2}$ x 4 = $\frac{12}{2}$
4	0		0.0%		
5	0		0.0%		UPL Species x 5 =
6	0		0.0%		Column Totals: 4 (A) 14 (B)
7	0		0.0%		Prevalence Index = B/A = 3.500
Herb Stratum (Plot size: 5' radius)	4	= T	otal Cove	r	Hydrophytic Vegetation Indicators:
					Rapid Test for Hydrophytic Vegetation
1			0.0%		Dominance Test is > 50%
2	0		0.0%		Prevalence Index is ≤3.0 ¹
3	0		0.0%		Morphological Adaptations ¹ (Provide supporting
4	0		0.0%		data in Remarks or on a separate sheet)
5	0		0.0%		✓ Problematic Hydrophytic Vegetation ¹ (Explain)
6	0	Ц	0.0%		1
7	0	Ц	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8	0	Ц	0.0%		
9	0		0.0%		Definitions of Vegetation Strata:
0	0		0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
1	0		0.0%		at breast height (DBH), regardless of height.
2	0		0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size: 60' x 10')	0	= T	otal Cove	r	greater than 3.28 ft (1m) tall
	0		0.00/		Hart All barbasses (see see a bonde of a second land
1			0.0%		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
2			0.0%		Size, and woody plante look than 6.20 it tall.
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in
4	0	Ш	0.0%		height.
	0	= T	otal Cove	r	

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation is assumed here due to evident wetland soils and hydrology

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 5-1

	ription: (Des	cribe to	the depth	needed to d	ocumen	t the indic	ator or co	onfirm the	absence of indicators.)		
Depth (inches)	. Color (Matrix	_ _% -	- Color (dox Featu		Loc ²	- Taxtuura	Remarks	
	Color (r			Color (r	noist)	%	туре	LOC2	Texture	Kemarks	
0-6	7.5YR	2.5/1	100%						Silt Loam		
6-12	7.5YR	4/2	70%	7.5YR	3/4	30%	C	M	Silt Loam		
12-20+	7.5YR	3/2	70%	7.5YR	3/4	30%	С	М	Silt Loam		
									-		
¹ Type: C=Con	centration. D	=Depletio	n. RM=Redu	uced Matrix, (- CS=Cover	ed or Coate	d Sand Gra	ains ² Loca	ation: PL=Pore Lining. M=N	latrix	
Hydric Soil	Indicators:	···							Indicators for Brob	ematic Hydric Soils: 3	
Histosol (w Surface (S8) (LRR F	₹,			
☐ Histic Epi	pedon (A2)			MLRA	149B)					(LRR K, L, MLRA 149B) ox (A16) (LRR K, L, R)	
☐ Black His	tic (A3)					ace (S9) (L				or Peat (S3) (LRR K, L, R)	
Hydroger	n Sulfide (A4)					Mineral (F1)	Dark Surface (S7)		
Stratified	Layers (A5)			_		Matrix (F2)				Surface (S8) (LRR K, L)	
	Below Dark S		11)		eted Matri				Thin Dark Surface		
	rk Surface (A1	•				urface (F6) Surface (F1	7)		Iron-Manganese	Masses (F12) (LRR K, L, R)	
	uck Mineral (S					sions (F8)	′)		Piedmont Floodpl	ain Soils (F19) (MLRA 149B)	
	eyed Matrix (S	54)		□ Kedo	х Бергез.	310113 (1 0)			Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)	
Sandy Re									Red Parent Mater	• •	
	Matrix (S6) face (S7) (LRF	OD MIDA	\ 140P\						Very Shallow Dar		
									Other (Explain in	Remarks)	
³ Indicators o	f hydrophytic	vegetatio	n and wetla	nd hydrology	must be p	present, un	less disturb	oed or probl	lematic.		
Restrictive L	ayer (if obs	erved):									
Type:											
Depth (inc	ches):								Hydric Soil Present?	Yes ● No ○	
Remarks:											
ĺ											

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County: Town of Anderson	, Iron Co. Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite	Sta	te: WI Sampling Point: Up 5-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Township, Range:	s. 33 t. T45N R. R1W
Landform (hillslope, terrace, etc.): sideslope	Local relief (concave, convex, n	
	_	Datum: WGS84
		701170100
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Outcro		NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of γ	rear? Yes No	(If no, explain in Remarks.)
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology $\ \square$ significan	tly disturbed? Are "Normal	Circumstances" present? Yes No
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology $\ \square$ naturally	problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point location	s, transects, important features, etc
Hydrophytic Vegetation Present? Yes No •	To the Commission Associated	
Hydric Soil Present? Yes No •	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present? Yes ○ No ●		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	, ,	Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B¹ ☐ Saturation (A3) ☐ Marl Deposits (B1)		Moss Trim Lines (B16)
□ Saturation (A3) □ Water Marks (B1) □ Hydrogen Sulfide □ Hydrogen Sulfide		☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8)
	peres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3) Presence of Redu		Stunted or Stressed Plants (D1)
	ction in Tilled Soils (C6)	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	` '	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	• ,	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	Kemarksy	FAC-neutral Test (D5)
Field Observations:		
• • • • • • • • • • • • • • • • • • • •		
Water Table Present? Yes No Depth (inches):		ology Present? Yes O No 💿
Saturation Present? (includes capillary fringe) Yes No Depth (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if avail	able:
Remarks:		

VEGETATION - Use scientific names of plants

Test worksheet: ominant Species ., FACW, or FAC: 1
r of Dominant ss All Strata: dominant Species BL, FACW, or FAC: "Multiply by: s
r of Dominant ss All Strata: dominant Species BL, FACW, or FAC: 25.0% (A/B) Index worksheet: % Cover of: Multiply by: s
Marce Marc
Section Sect
Section Sect
Section Sect
% Cover of: Multiply by: s
% Cover of: Multiply by: s
s 0 x 1 = 0 es 0 x 2 = 0 s 20 x 3 = 60 es 130 x 4 = 520 s 0 x 5 = 0 al s: 150 (A) 580 (B) ence Index = B/A = 3.867 E Vegetation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
es 0 x 2 = 0 s 20 x 3 = 60 es 130 x 4 = 520 s 0 x 5 = 0 al s: 150 (A) 580 (B) ence Index = B/A = 3.867 Every expectation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
s 20 x 3 = 60 es 130 x 4 = 520 s 0 x 5 = 0 al s: 150 (A) 580 (B) ence Index = B/A = 3.867 every expectation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
es 130 x 4 = 520 s 0 x 5 = 0 al s: 150 (A) 580 (B) ence Index = B/A = 3.867 E Vegetation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
s 0 x $5 = 0$ al s: 150 (A) 580 (B) ence Index = B/A = 3.867 E Vegetation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
al s: 150 (A) 580 (B) ence Index = B/A = 3.867 E Vegetation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
ence Index = B/A = 3.867 E Vegetation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
Vegetation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
Vegetation Indicators: Test for Hydrophytic Vegetation ance Test is > 50%
Test for Hydrophytic Vegetation ance Test is > 50%
ance Test is > 50%
ence Index is ≤3.0 ¹
ological Adaptations ¹ (Provide supporting Remarks or on a separate sheet)
matic Hydrophytic Vegetation ¹ (Explain)
matic Hydrophytic vegetation (Explain)
s of hydric soil and wetland hydrology must
unless disturbed or problematic.
s of Vegetation Strata:
du planta 2 in /7 C and) an arrana in diameter
dy plants, 3 in. (7.6 cm) or more in diameter ight (DBH), regardless of height.
·g··· (= = · ·/), · · ·g················g····
ub - Woody plants less than 3 in. DBH and
a 3.28 ft (1m) tall
erbaceous (non-woody) plants, regardless of
oody plants less than 3.28 ft tall.
- All woody vines greater than 3.28 ft in
7 iii 11000g 111100 g. 00101 t. 11011 0.20 1 t 111

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 5-1

Profile Desc Depth	ription: (Descri	be to the d trix	epth needed		t the indic		firm the a	bsence of	f indicators.)		
(inches)	Color (moi		% Col	or (moist)	%	Type 1	Loc ²	Text	ture	Ren	marks
0-10	7.5YR	3/2 100	% -	-	-	-	-	Silt Loam	1		
10-20+	7.5YR	3/4 100	 % -			-	-	Silt Loam	1	Rocky	
								-			
										_	
								-			
								-			
1 _{Typo:} C_Co	ncentration. D=De	nlotion DM		riv CS_Covo	od or Coate	nd Sand Crain	ns 2locat	tion: DI_D	Poro Liping M-	—	
Hydric Soil		epietion. Kivi	-Reduced Mat	TIX, C3=COVE	eu or coate	su Sanu Gran	is -Lucat		-		3
Histosol				Polyvalue Belo	ow Surface ((S8) (I RR R				olematic Hydri	
	ipedon (A2)		i	MLRA 149B)	ow Sarrace ((OO) (ERRY IX,) (LRR K, L, MLI	
Black His				Thin Dark Sur	face (S9) (I	LRR R, MLRA	149B)			dox (A16) (LRR	
	n Sulfide (A4)			Loamy Mucky						t or Peat (S3) (I 7) (LRR K, L, M)	
Stratified	Layers (A5)			Loamy Gleyed)				Surface (S8) (L	
Depleted	Below Dark Surfa	ace (A11)		Depleted Matr						e (S9) (LRR K,	
	rk Surface (A12)			Redox Dark S		7)				Masses (F12) (
_	uck Mineral (S1)			Depleted Dark Redox Depres		/)		Pi	iedmont Floodp	lain Soils (F19)	(MLRA 149B)
	leyed Matrix (S4)			redux Depres	310113 (1 0)			M	lesic Spodic (TA	A6) (MLRA 144 <i>A</i>	A, 145, 149B)
	edox (S5)								ed Parent Mate		
	Matrix (S6) face (S7) (LRR R,	MI DA 140D	1							rk Surface (TF1	2)
									ther (Explain ir	Remarks)	
³ Indicators (of hydrophytic veg	jetation and	wetland hydro	logy must be	present, un	less disturbe	d or proble	ematic.			
Restrictive I	Layer (if observ	ed):									
Type: _								Hydric	Soil Present?	Yes 〇	No •
Depth (in	ches):							Tiyanc	Jon Fresent:	res \smile	NO ©
Remarks:											

Project/Site: Gogebic Taconite Bulk Sam	ple Sites and	d Access Roads	City/County:	Town of Anderso	n, Iron Co.	Sampling Date: 11	-Oct-13
Applicant/Owner: Gogebic Taconite				Sta	ate: WI	Sampling Point:	Wet 6-1
Investigator(s): Ann Michalski, PSS, PW	S, WDNR PA	AWD	Section, To	ownship, Range:	s. 33 t.	T45N R. R1	W
Landform (hillslope, terrace, etc.): T	oeslope		Local relief (co	oncave, convex,	none): concave	Slope:	0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR K		Lat.:	46.331313	Lon	90.500266	Datu	m: WGS84
Soil Map Unit Name: Michigamme-Sch	- าweitzer-Pe		p Complex, 18	to 35% slopes	NWI classi	ification: PEM1	
Are climatic/hydrologic conditions on				s • No O	(If no, explain i	n Remarks,)	
	or Hydrolo		tly disturbed?	Are "Norma	I Circumstances"	, , ,	No \bigcirc
	or Hydrolo		problematic?		explain any answ	•	
Summary of Findings - Atta	-					•	tures, etc
Hydrophytic Vegetation Present?	Yes	No O				<u> </u>	<u> </u>
Hydric Soil Present?	Yes	No O		Sampled Area n a Wetland?	Yes ● No C		
Wetland Hydrology Present?	Yes 💿	No O	Within	ii a Wetialiu:			
Remarks: (Explain alternative proce	dures here	or in a separate repo	rt.)				
Hydrology							
Wetland Hydrology Indicators:					Secondary Indicat	tors (minimum of 2 requi	red)
Primary Indicators (minimum of one	required; o	11 37			Surface Soil (• •	
Surface Water (A1) ✓ High Water Table (A2)		✓ Water-Stained LeaAquatic Fauna (B1)			☐ Drainage Pat☐ Moss Trim Li	, ,	
Saturation (A3)		Marl Deposits (B15	•			Water Table (C2)	
Water Marks (B1)		Hydrogen Sulfide (•		Crayfish Burr		
Sediment Deposits (B2)		Oxidized Rhizospho	eres along Living	Roots (C3)	Saturation Vi	isible on Aerial Imagery ((C9)
Drift deposits (B3)		Presence of Reduc				tressed Plants (D1)	
Algal Mat or Crust (B4) Iron Deposits (B5)		Recent Iron Reduc		s (C6)	✓ Geomorphic Shallow Aqui	` ,	
Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface☐ Other (Explain in F				aphic Relief (D4)	
Sparsely Vegetated Concave Surface		Utilet (Explain in i	teniaiks)		FAC-neutral		
Field Observations:							
Surface Water Present? Yes	No 💿	Depth (inches):					
Water Table Present? Yes •	No 🔾	Depth (inches):	-4			Yes ● No ○	
Saturation Present? (includes capillary fringe) Yes •	No O	Depth (inches):	0	Wetland Hyd	Irology Present?	Yes ♥ No ∪	
Describe Recorded Data (stream gauge Remarks: Sparsely vegetated in natural wetland					ilable:		

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of p		_s	ominant pecies?		Sampling Point: Wet 6-1
Tree Stratum (Plot size: 30' x 95')	Absolute % Cover		el.Strat. over	Indicator Status	Dominance Test worksheet:
	0		0.0%	Status	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)
1			0.0%		That are OBL, FACW, or FAC: 5 (A)
2					Total Number of Dominant
3			0.0%		Species Across All Strata: 5 (B)
4			0.0%		Percent of dominant Species
5			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		
7		_			Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15' radius)	0	= T	otal Cove	r	Total % Cover of: Multiply by:
1 Fraxinus nigra	10	~	100.0%	FACW	0BL speci es 50 x 1 = 50
2			0.0%		FACW species $35 \times 2 = 70$
3			0.0%		FAC speciles $10 \times 3 = 30$
4	=		0.0%		FACU speci es $0 \times 4 = 0$
5			0.0%		UPL speci es $0 \times 5 = 0$
6			0.0%		Column Totals: 95 (A) 150 (B)
7			0.0%		Prevalence Index = B/A = 1.579
	10		otal Cove		
Herb Stratum (Plot size: 5' radius)		-		-	Hydrophytic Vegetation Indicators:
1. Carex comosa	20	V	23.5%	OBL	✓ Rapid Test for Hydrophytic Vegetation
2. Equisetum sylvaticum		V	23.5%	FACW	✓ Dominance Test is > 50%
3. Scirpus cyperinus	- 15	V	17.6%	OBL	V Prevalence Index is ≤3.0 ¹
4. Scutellaria lateriflora		V	17.6%	OBL	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. Geum aleppicum			11.8%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
6. Carex scoparia			5.9%	FACW	Troblematic Hydrophytic regetation (Explain)
7. Rubus idaeus ssp. strigosus			0.0%	FACU	$^{ m 1}$ Indicators of hydric soil and wetland hydrology must
8	0		0.0%		be present, unless disturbed or problematic.
9			0.0%		Definitions of Vegetation Strata:
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
1			0.0%		at breast height (DBH), regardless of height.
2			0.0%		
Woody Vine Stratum (Plot size: 30' x 95')	85	= T	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of
1		\Box	0.0%		size, and woody plants less than 3.28 ft tall.
3			0.0%		
		\Box	0.0%		Woody vine - All woody vines greater than 3.28 ft in height.
4					neight.
	0	= 1	otal Cove	•	
					Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 6-1

Profile Descr	iption: (Des	cribe to	the depth	needed to d	ocument	the indic	ator or co	onfirm the a	absence of indicators.)		
Depth		Matrix			Red	dox Featu					
(inches)	Color (n	noist)	%	Color (ı	noist)	%	Type 1	Loc ²	Texture	Rema	arks
0-5	7.5YR	3/1	80%	7.5YR	3/3	20%	C	M	Silt Loam		
5-10	7.5YR	5/2	100%		-	-		-	Silt Loam		
10+									Rock		
							-				
¹ Type: C=Con	centration. D	=Depletio	n. RM=Redu	uced Matrix, (S=Covere	ed or Coate	d Sand Gr	ains ² Loca	tion: PL=Pore Lining. M=Ma	ntrix	
Hydric Soil I	Indicators:								Indicators for Proble	matic Hvdric	Soils: 3
Histosol ((A1)			Polyv	alue Belov	w Surface (S8) (LRR I	₹,	2 cm Muck (A10) (I	-	
	pedon (A2)			_	A 149B)	ace (S9) (L		DA 140D)	Coast Prairie Redox		
Black Hist						Mineral (F1)			5 cm Mucky Peat o		
	Sulfide (A4)			_		Matrix (F2)		,	Dark Surface (S7)	(LRR K, L, M)	
	Layers (A5) Below Dark S	urface (A	11\	_	eted Matri				Polyvalue Below Su		
	k Surface (A1		11)		x Dark Su				Thin Dark Surface		
_	ick Mineral (S					Surface (F	7)		☐ Iron-Manganese M		
	eyed Matrix (S			Redo	x Depress	ions (F8)			☐ Piedmont Floodplain Soils (F19) (MLRA 149B) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy Re		.,							Red Parent Materia		145, 1498)
	Matrix (S6)								Very Shallow Dark		
Dark Surfa	ace (S7) (LRR	R R, MLRA	149B)						Other (Explain in R		
³ Indicators of	f hydrophytic	vegetatio	n and wetla	nd hydrology	must be n	resent. un	less disturl	oed or proble		omarno,	
Restrictive L				<u> </u>		-					
Type: _1(ei veu j.									
	hes): Rock								Hydric Soil Present?	Yes	No O
Remarks:	,										
Nemarks.											

Project/Site: Gogebic Taconite Bulk Sample Sites an	d Access Roads City/Co	ounty: Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		Sta	te: WI	Sampling Point: Up 6-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR P	AWD Sec	tion, Township, Range:	s. 33 t.	T45N R. R1W
Landform (hillslope, terrace, etc.): sideslope		elief (concave, convex, n		Slope: 6.0 % / 3.4°
Subregion (LRR or MLRA): LRR K	Lat.: 46.3312	245 Long	90.500246	Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-P			-	ication: Upland
Are climatic/hydrologic conditions on the site ty		Yes ● No ○	— (If no, explain in	<u>.</u>
Are Vegetation, Soil, or Hydrolo			Circumstances" p	·
Are Vegetation, Soil, or Hydrole			•	
Summary of Findings - Attach site	·· — ··		explain any answers.	
Hydrophytic Vegetation Present? Yes	No •	9 po	,	
Hydric Soil Present? Yes	No •	Is the Sampled Area	Yes ○ No ●)
V (No •	within a Wetland?	TES - NO -	,
Wetland Hydrology Present? Remarks: (Explain alternative procedures here				
Hydrology Westland Hydrology Indicators			-	
Wetland Hydrology Indicators:	-b-alcall that annly)			ors (minimum of 2 required)
Primary Indicators (minimum of one required; Surface Water (A1)	Water-Stained Leaves (B9)		Surface Soil C Drainage Patte	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lin	
Saturation (A3)	Marl Deposits (B15)			/ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1))	Crayfish Burro	
Sediment Deposits (B2)	Oxidized Rhizospheres along		Saturation Vis	ible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (ressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Til	lled Soils (C6)	Geomorphic P	
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)		Shallow Aquita	
Sparsely Vegetated Concave Surface (B8)	Under (Explain in Remarks)		FAC-neutral To	ohic Relief (D4) est (D5)
			The neutral re	cot (50)
Field Observations: Surface Water Present? Yes No No	Depth (inches):			
	Depth (inches):	Wetland Hydr	ology Present?	Yes ○ No •
(includes capillary fringe) Yes V No V	Depth (inches):			
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previo	ous inspections), if avail	able:	
Remarks:				

VEGETATION -	Use scientific	names of	plants
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VEGETATION - OSE SCIENTIFIC Harries of pr	ants	ominant pecies?		Sampling Point: Up 6-1			
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status			
1 Acer saccharum	50	V	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)		
2	0		0.0%				
3			0.0%		Total Number of Dominant Species Across All Strata: 3 (B)		
4			0.0%		Species Across Air Strata.		
5			0.0%		Percent of dominant Species		
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)		
7			0.0%		Prevalence Index worksheet:		
		= T	otal Cove		Total % Cover of: Multiply by:		
Sapling/Shrub Stratum (Plot size: 15' radius)		_		-	OBL species 0 x 1 = 0		
1. Acer saccharum	40	✓	100.0%	FACU	FACW species $0 \times 2 = 0$		
2	0		0.0%				
3	0		0.0%		1/0 300103 /10		
4	0		0.0%		17.00 Species x +		
5			0.0%		UPL species		
6			0.0%		Column Totals: 170 (A) 670 (B)		
7			0.0%		Prevalence Index = B/A = 3.941		
Herb Stratum (Plot size: 5' radius)		= T	otal Cove	r	Hydrophytic Vegetation Indicators:		
1. Acer saccharum	EO	~	42 50/	FACU	Rapid Test for Hydrophytic Vegetation		
					☐ Dominance Test is > 50%		
2. Gymnocarplum dryopteris	15		18.8%	FACU	Prevalence Index is ≤3.0 ¹		
3. Dryopteris Intermedia			12.5%	FAC	Morphological Adaptations ¹ (Provide supporting		
4. Allium tricoccum			6.3%	FACU	data in Remarks or on a separate sheet)		
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)		
6			0.0%		1		
7			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
8		Ш	0.0%				
9	0	Ц	0.0%		Definitions of Vegetation Strata:		
0	0	Ш	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter		
1	0		0.0%		at breast height (DBH), regardless of height.		
2	0		0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and		
Woody Vine Stratum (Plot size: 30' radius)	80	= T	otal Cove	r	greater than 3.28 ft (1m) tall		
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of		
2			0.0%		size, and woody plants less than 3.28 ft tall.		
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in		
4			0.0%		height.		
Тъ		= T	otal Cove				
		-		-			
					Hydrophytic		
					Vegetation Present? Yes ○ No ●		
Remarks: (Include photo numbers here or on a separate s	heet.)				1		

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 6-1

Profile Desci	ription: (Des	cribe to	the depth	needed to document	the indicator or cor	nfirm the a	absence of indicators.)	
Depth (inches)		Matrix			ox Features			
	Color (n		%	Color (moist)	% Type ¹	Loc²	Texture	Remarks
0-7	7.5YR	3/1	100%			-	Silt Loam	
7-14	7.5YR	2.5/3	100%			-	Silt Loam	
14-20+	7.5YR	4/4	100%			-	very fine sandy Im	
			- ———					
	-					-		
				·				
¹ Type: C=Con	ncentration. D=	=Depletio	n. RM=Red	luced Matrix, CS=Covered	d or Coated Sand Grai	ins ² Loca	ation: PL=Pore Lining. M=M	atrix
Hydric Soil	Indicators:						Indicators for Probl	ematic Hydric Soils : ³
Histosol ((A1)				Surface (S8) (LRR R,			(LRR K, L, MLRA 149B)
Histic Epi	pedon (A2)			MLRA 149B)				ox (A16) (LRR K, L, R)
☐ Black His	tic (A3)				ce (S9) (LRR R, MLRA	A 149B)		or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)				lineral (F1) LRR K, L)		Dark Surface (S7)	
☐ Stratified	Layers (A5)			Loamy Gleyed M				furface (S8) (LRR K, L)
Depleted	Below Dark S	urface (A	.11)	Depleted Matrix			Thin Dark Surface	
☐ Thick Dar	rk Surface (A1	2)		Redox Dark Surf	, ,			Masses (F12) (LRR K, L, R)
Sandy Mu	uck Mineral (S	1)		☐ Depleted Dark S			_	ain Soils (F19) (MLRA 149B)
Sandy Glo	eyed Matrix (S	4)		Redox Depression	ons (F8)			6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)						Red Parent Materi	
	Matrix (S6)						Very Shallow Dark	• •
Dark Surf	face (S7) (LRR	R, MLRA	\ 149B)				Other (Explain in I	
³ Indicators o	of hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturbe	ed or proble		•
Restrictive L					-	-		
Type:	ayer (ii oboc	i veu j.						
Depth (inc	shac).						Hydric Soil Present?	Yes ○ No •
	:nes):						-	
Remarks:								

Project/Site: Gogebic Taconite Bulk Sample Sites and A	Access Roads City/County: Town of Anders	son, Iron Co. Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite	s	State: WI Sampling Point: Wet 7-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR PAW	VD Section, Township, Range	e: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, convex,	, none): concave Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.3316464 Lo	ong.: 90.500425
Soil Map Unit Name: Michigamme-Schweitzer-Pesh	hekee-Rock Outcrop Complex, 18 to 35% slopes	NWI classification: PEM1
Are climatic/hydrologic conditions on the site typic	cal for this time of year? Yes No	(If no, explain in Remarks.)
Are Vegetation ✓ , Soil ✓ , or Hydrology		aal Circumstances" present? Yes No
Are Vegetation ☐ , Soil ✓ , or Hydrology		d, explain any answers in Remarks.)
	. — (ons, transects, important features, etc
	lo O	, , , , , , , , , , , , , , , , , , , ,
Hydric Soil Present? Yes No	Is the Sampled Area	Yes No
	within a Wetland?	103 ° 110 °
Remarks: (Explain alternative procedures here or		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; che		_ Surface Soil Cracks (B6)
Surface Water (A1) ✓ High Water Table (A2)	✓ Water-Stained Leaves (B9)☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
✓ Sparsely Vegetated Concave Surface (B8)		✓ FAC-neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No No	Depth (inches):	
Water Table Present? Yes No	Depth (inches): Wetland Hy	/drology Present? Yes ● No ○
Saturation Present? (includes capillary fringe) Yes No	Depth (inches): 0	diology Fresent: 103 C No C
Describe Recorded Data (stream gauge, monitorin	ng well, aerial photos, previous inspections), if av	railable:
Remarks:		

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of pl	ants	Dominant Species?			Sampling Point: Wet 7-1			
Tree Stratum (Plot size: 45' x 35')	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:			
1. Fraxinus nigra	5	V	50.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)			
2. Ulmus americana		✓	50.0%	FACW	That die obe, thou, or the			
3		\Box	0.0%		Total Number of Dominant			
4		\Box	0.0%		Species Across All Strata: 5 (B)			
5		\Box	0.0%		Percent of dominant Species			
6			0.0%		That Are OBL, FACW, or FAC:100.0% (A/B)			
7		П	0.0%		Prevalence Index worksheet:			
		_ T	otal Cove		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 15' radius)	10	- 1	otal Cove	Ī	$\begin{array}{cccccccccccccccccccccccccccccccccccc$			
1. Ulmus americana	15	~	75.0%	FACW	70			
2. Fraxinus nigra	5	V	25.0%	FACW				
3	0		0.0%		FAC species $0 \times 3 = 0$			
4			0.0%		FACU speci es $0 \times 4 = 0$			
5			0.0%		UPL speci es $0 \times 5 = 0$			
6			0.0%		Column Totals: 35 (A) 70 (B)			
7			0.0%		Prevalence Index = B/A = 2.000			
	20	= T	otal Cove	·				
Herb Stratum (Plot size: 5' radius)		_			Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation			
1. Carex intumescens	5	✓	100.0%	FACW	✓ Dominance Test is > 50%			
2	0		0.0%		✓ Prevalence Index is ≤3.0 ¹			
3	0		0.0%					
4			0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
5	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
6			0.0%					
7			0.0%		¹ Indicators of hydric soil and wetland hydrology must			
8			0.0%		be present, unless disturbed or problematic.			
9			0.0%		Definitions of Vegetation Strata:			
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter			
1			0.0%		at breast height (DBH), regardless of height.			
2.			0.0%					
		= T	otal Cove	·	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall			
Woody Vine Stratum (Plot size: 45' x 35')					greater triair 3.20 it (1111) tail			
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4	0		0.0%		height.			
	0	= T	otal Cove	r				
	0	= T	otal Cove	•	Hydrophytic Vegetation			
					Present? Yes No			

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 7-1

Profile Desci	ription: (Describe	to the depth	needed to document the in	dicator or confir	m the a	bsence of indicators.)	
Depth (inches)	Matri		Redox Fe			·	Baulia
	Color (moist)		Color (moist) %	Type 1	LOC ²	Texture	Remarks
0-2	N 2/0	100%				Muck	
2+						Rock	
							·
						-	
						P-	
						-	
						-	
						-	
						-	
¹ Type: C=Con	ncentration. D=Deple	etion. RM=Redu	ced Matrix, CS=Covered or Co	ated Sand Grains	² Loca	tion: PL=Pore Lining. M=M	1atrix
Hydric Soil	Indicators:					Indicators for Probl	ematic Hydric Soils: 3
✓ Histosol ((A1)		Polyvalue Below Surface	ce (S8) (LRR R,			
☐ Histic Epi	ipedon (A2)		MLRA 149B)				(LRR K, L, MLRA 149B)
☐ Black His	tic (A3)		☐ Thin Dark Surface (S9)	(LRR R, MLRA 14	49B)		ox (A16) (LRR K, L, R)
☐ Hydroger	n Sulfide (A4)		Loamy Mucky Mineral	(F1) LRR K, L)		Dark Surface (S7)	or Peat (S3) (LRR K, L, R)
Stratified	Layers (A5)		Loamy Gleyed Matrix ((F2)			Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surface	(A11)	Depleted Matrix (F3)			Thin Dark Surface	
☐ Thick Dar	rk Surface (A12)		Redox Dark Surface (F	•			Masses (F12) (LRR K, L, R)
Sandy Mu	uck Mineral (S1)		Depleted Dark Surface				ain Soils (F19) (MLRA 149B)
Sandy Glo	eyed Matrix (S4)		Redox Depressions (F8	3)			6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)					Red Parent Mater	
Stripped	Matrix (S6)					Very Shallow Dark	
☐ Dark Surf	face (S7) (LRR R, ML	_RA 149B)				Other (Explain in	
³ Indicators o	of hydrophytic vegeta	ation and wetlar	nd hydrology must be present,	unless disturbed o	or proble		
			ia nyarology mast be present,	unicss distarbed e	or proble	indic.	
	.ayer (if observed)):					
Type: _2						Hydric Soil Present?	Yes ● No ○
Depth (inc	ches):_Rock					nyune som rresent.	1es C 100 C
Remarks:							

Project/Site: Gogebic Taconite Bulk Sample Sites an	d Access Roads City/Co	ounty: Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		Stat	te: WI	Sampling Point: Up 7-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR P	AWD Sec	tion, Township, Range:	s. 33 t. 7	45N R. R1W
Landform (hillslope, terrace, etc.): Shoulder sle		elief (concave, convex, n		Slope: 5.0 % / 2.9 °
Subregion (LRR or MLRA): LRR K		592 Long	90.500504	Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-P				cation: Upland
Are climatic/hydrologic conditions on the site ty	pical for this time of year?	Yes No	(If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrole		rbed? Are "Normal	Circumstances" p	
Are Vegetation , Soil , or Hydrole			-	
Summary of Findings - Attach site		,	explain any answe	
	No •	ing point location	s, transects,	important reatures, etc
, , ,	No •	Is the Sampled Area		
V (No •	within a Wetland?	Yes O No •	
Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here				
Hydrology				
Wetland Hydrology Indicators:	shook all that apply)			rs (minimum of 2 required)
Primary Indicators (minimum of one required; Surface Water (A1)			Surface Soil Cr Drainage Patte	
High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)		Moss Trim Line	
Saturation (A3)	Marl Deposits (B15)			ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1))	Crayfish Burro	ws (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along	g Living Roots (C3)		ble on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (,		essed Plants (D1)
☐ Algal Mat or Crust (B4)☐ Iron Deposits (B5)	Recent Iron Reduction in Ti	illed Soils (C6)	Geomorphic Po	
Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)		Microtopograp	` '
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		FAC-neutral Te	
Field Observations: Surface Water Present? Yes No No	Depth (inches):			
Water Table Present? Yes No				
Saturation Present? (includes capillary fringe) Yes No	Depth (inches):	Wetland Hydr	ology Present?	Yes O No 💿
(Includes capillary Inrige)	Depth (inches):	aus inspections) if quali	abla	
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previ	ous inspections), ii avaii	able:	
Remarks:				

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of	piants		ominant pecies?		Sampling Point: Up 7-1
Tree Stratum (Plot size: 30' radius)	Absolute % Cover		el.Strat. over	Indicator Status	Dominance Test worksheet:
1. Acer saccharum	50	V	90.9%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2. Ulmus americana			9.1%	FACW	That are obe, thew, of the.
3			0.0%	171011	Total Number of Dominant
			0.0%		Species Across All Strata: 3 (B)
4			0.0%		Percent of dominant Species
5			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
6					
7			0.0%		Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15' radius)	55	= T	otal Cove	r	Total % Cover of: Multiply by:
1. Acer saccharum	25	V	83.3%	FACU	0BL speciles
2. Prunus serotina			16.7%	FACU	FACW species $5 \times 2 = 10$
3			0.0%		FAC speci es $5 \times 3 = 15$
4			0.0%		FACU speci es $\frac{135}{}$ x 4 = $\frac{540}{}$
5			0.0%		UPL speci es x 5 =0
			0.0%		Column Totals: 145 (A) 565 (B)
6 7			0.0%		Prevalence Index = B/A = 3.897
	30	 = T	otal Cove	 r	-
Herb Stratum (Plot size: 5' radius)		_ •	otal core	-	Hydrophytic Vegetation Indicators:
1 Acer saccharum	50	~	83.3%	FACU	Rapid Test for Hydrophytic Vegetation
2. Rubus Idaeus	5		8.3%	FACU	☐ Dominance Test is > 50%
3. Dryopteris intermedia			8.3%	FAC	Prevalence Index is ≤3.0 ¹
4			0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
6			0.0%		Problematic Hydrophytic Vegetation (Explain)
			0.0%		¹ Indicators of hydric soil and wetland hydrology must
7			0.0%		be present, unless disturbed or problematic.
8			0.0%		Definitions of Vegetation Strata:
9			0.0%		
0					Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1			0.0%		at bleast height (DBH), regardless of height.
2		_	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size: 30' radius)	60	= 1	otal Cove	r	greater than 3.28 ft (1m) tall
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of
2	0		0.0%		size, and woody plants less than 3.28 ft tall.
3			0.0%		
4	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in height.
4.,	0		otal Cove		Thoight.
		- 1	otal Cove	Γ	
					Hydrophytic
					Vegetation
					Present? Yes No •

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 7-1

Profile Descr	iption: (Des	cribe to	the depth	needed to docur	nent the indi	cator or co	nfirm the	absence of indicators.)	
Depth		Matrix	•		Redox Feat			•	
(inches)	Color (n	noist)	%	Color (moist	:) %	Type 1	Loc2	Texture	Remarks
0-6	7.5YR	3/1	100%	-		-	-	Silt Loam	
6-12	7.5YR	3/3	100%	-		-	-	Silt Loam	
12-20+	7.5YR	4/4	100%		<u> </u>		_	very fine sandy Im	
12 201	7.011	.,,,	10070					- Very fine sandy inf	
								·	
								·	
								-	
								-	
								-	
¹ Type: C=Cond	centration. D	=Depletio	n. RM=Red	uced Matrix, CS=C	overed or Coat	ed Sand Gra	ins ² Loca	ation: PL=Pore Lining. M=Ma	ntrix
Hydric Soil I	indicators:							Indicators for Proble	matic Hydric Soils: 3
Histosol (A	A1)				Below Surface	(S8) (LRR R	.,		LRR K, L, MLRA 149B)
	pedon (A2)			MLRA 149	Surface (S9)	(I DD D MID	A 140D)		(A16) (LRR K, L, R)
Black Hist	. ,								r Peat (S3) (LRR K, L, R)
	Sulfide (A4)				cky Mineral (F			Dark Surface (S7)	(LRR K, L, M)
	Layers (A5)				yed Matrix (F2 Natrix (F3)	<u>()</u>		Polyvalue Below Su	ırface (S8) (LRR K, L)
	Below Dark S		11)		k Surface (F6)			☐ Thin Dark Surface	(S9) (LRR K, L)
	k Surface (A1			_	Dark Surface (10)			☐ Iron-Manganese M	asses (F12) (LRR K, L, R)
	ick Mineral (S			_	oressions (F8)	"		Piedmont Floodplai	n Soils (F19) (MLRA 149B)
	eyed Matrix (S	54)		☐ Redox Be	7 (33)0113 (1 0)			Mesic Spodic (TA6)	(MLRA 144A, 145, 149B)
Sandy Red								Red Parent Materia	l (F21)
	Matrix (S6)		4.400)					Very Shallow Dark	Surface (TF12)
	ace (S7) (LRR		,					Other (Explain in R	emarks)
³ Indicators of	f hydrophytic	vegetatio	n and wetla	nd hydrology must	be present, u	nless disturb	ed or probl	lematic.	
Restrictive La	ayer (if obse	erved):							
Type:									
Depth (incl	hes):							Hydric Soil Present?	Yes O No 💿
Remarks:									
rtomarks.									

Project/Site: Gogebic Taconi	te Bulk Sample Sites ar	nd Access Roads	City/County:	Town of Anderson	, Iron Co.	Sampling Date: 11-Oct	:-13
Applicant/Owner: Gogebic T	aconite			Sta	te: WI	Sampling Point:	Wet 8-1
Investigator(s): Ann Michal	ski, PSS, PWS, WDNR F	PAWD	Section, To	ownship, Range:	s. 33 T.	T45N R. R1W	
Landform (hillslope, terrace	, etc.): Toeslope		Local relief (co	oncave, convex, n	one): concave	Slope: 0.0	0.0°
Subregion (LRR or MLRA):	I RR K		16.331638	Long	90.502109	Datum:	
					-	ication: PFO1/PEM1	
Soil Map Unit Name: Michig			· ·				
Are climatic/hydrologic con		pical for this time of ye	ar? Ye	s • No O	(If no, explain in	-	
Are Vegetation, Soi	il , or Hydrol	ogy Significantly	y disturbed?	Are "Normal	Circumstances" p	oresent? Yes 💿 N	lo O
Are Vegetation, Soi	il 🗌 , or Hydrol	ogy 🗌 naturally pr	oblematic?	(If needed, e	explain any answe	ers in Remarks.)	
Summary of Finding	js - Attach site	e map showing sa	ampling p	oint location	s, transects,	, important featu	res, etc
Hydrophytic Vegetation Pro		No O					
Hydric Soil Present?	Yes ●	No O		Sampled Area n a Wetland?	Yes 💿 No 🗆)	
Wetland Hydrology Present	t? Yes 💿	No O					
Hydrology							_
Wetland Hydrology Indicat	tors:				Cocondary Indicate	ors (minimum of 2 required)	
Primary Indicators (minim		check all that apply)			Surface Soil C	ors (minimum of 2 required)	
Surface Water (A1)		✓ Water-Stained Leav	es (B9)		Drainage Patte		
✓ High Water Table (A2)		Aquatic Fauna (B13			Moss Trim Lin		
Saturation (A3)		Marl Deposits (B15)			Dry Season W	ater Table (C2)	
Water Marks (B1)		Hydrogen Sulfide O	dor (C1)		Crayfish Burro	ows (C8)	
Sediment Deposits (B2)		Oxidized Rhizosphe	res along Living	Roots (C3)	Saturation Vis	ible on Aerial Imagery (C9)	
☐ Drift deposits (B3)		Presence of Reduce				ressed Plants (D1)	
Algal Mat or Crust (B4)		Recent Iron Reduct		s (C6)	✓ Geomorphic P	• ,	
☐ Iron Deposits (B5) ☐ Inundation Visible on Aeri	al Imagery (R7)	☐ Thin Muck Surface			Shallow Aquita	ard (D3) ohic Relief (D4)	
Sparsely Vegetated Conca		Other (Explain in Re	emarks)		FAC-neutral To		
Field Observations:							
Surface Water Present?	Yes No	Depth (inches):	2				
Water Table Present?	Yes ● No ○	Depth (inches):	0			Yes ● No ○	
Saturation Present? (includes capillary fringe)	Yes ● No ○	Depth (inches):			ology Present?	Yes ♥ NO ∪ ———	
Describe Recorded Data (s Remarks:	tream gauge, monit	oring well, aerial photos	s, previous ins	pections), if avail	able:		

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of p	iaiits		ominant pecies?		Sampling Point: Wet 8-1			
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:			
1 Fraxinus nigra	40	V	72.7%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)			
2. Betula alleghaniensis	15	V	27.3%	FAC				
3			0.0%		Total Number of Dominant Species Across All Strata: 7 (B)			
4			0.0%		Species Across All Strata: / (B)			
5			0.0%		Percent of dominant Species			
6			0.0%		That Are OBL, FACW, or FAC: 85.7% (A/B)			
7			0.0%		Prevalence Index worksheet:			
		= To	otal Cove	r	Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 15' radius)					0BL speci es 5 x 1 = 5			
1. Acer saccharum		✓	66.7%	FACU	FACW species 55 x 2 = 110			
2. Ulmus americana		✓	33.3%	FACW	FAC speciles 15 x 3 = 45			
3	0		0.0%		FACU species $10 \times 4 = 40$			
4	0		0.0%		1 Add Species x 4			
5	0		0.0%		UPL Species			
6			0.0%		Column Totals: <u>85</u> (A) <u>200</u> (B)			
7	0		0.0%		Prevalence Index = B/A = 2.353			
Herb Stratum (Plot size: 5' radius)	15	= To	otal Cove	r	Hydrophytic Vegetation Indicators:			
1. Impatiens capensis	5	~	33.3%	FACW	Rapid Test for Hydrophytic Vegetation			
2. Glyceria striata		~	33.3%	OBL	✓ Dominance Test is > 50%			
O Drugotoric carthuciana		✓	33.3%	FACW	✓ Prevalence Index is ≤3.0 ¹			
4.			0.0%		Morphological Adaptations ¹ (Provide supporting			
5		\Box	0.0%		data in Remarks or on a separate sheet)			
6		П	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
7		\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must			
8		\Box	0.0%		be present, unless disturbed or problematic.			
		\Box	0.0%		Definitions of Vegetation Strata:			
9		П	0.0%					
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
1		\Box	0.0%		at breast height (BBH), regardless of height.			
2		 = To	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall			
Woody Vine Stratum (Plot size: 30' radius)								
1			0.0%		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
2			0.0%		Size, and woody plants less than 5.25 it tall.			
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4		Ш	0.0%		height.			
	:	= To	otal Cove	r				
					Hydrophytic Vegetation Present? Yes No			

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 8-1

Profile Desci	ription: (Des	cribe to	the depth	needed to document the indic	ator or confir	m the a	absence of indicators.)	
Depth (inches)	. Calas (s	Matrix		Redox Featu				Barrella
	Color (r		%	Color (moist) %	Type 1 l	LOC ²	Texture	Remarks
0-6	N	2/0	100%				Peaty Muck	
6-20+	N	2/0	100%				Muck	
							-	
							<u>-</u>	
			-				-	
			-					
¹ Type: C=Con	ncentration. D	=Depletic	n. RM=Red	uced Matrix, CS=Covered or Coate	ed Sand Grains	² Loca	ition: PL=Pore Lining. M=N	latrix
Hydric Soil							Indicators for Probl	ematic Hydric Soils: ³
✓ Histosol ((A1)			Polyvalue Below Surface	(S8) (LRR R,			(LRR K, L, MLRA 149B)
	pedon (A2)			MLRA 149B)	IDD D MIDA 14	100)		ox (A16) (LRR K, L, R)
Black His				☐ Thin Dark Surface (S9) (196)		or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)			Loamy Mucky Mineral (F1			Dark Surface (S7)	
	Layers (A5)			Depleted Matrix (F3))		Polyvalue Below S	Surface (S8) (LRR K, L)
	Below Dark S		.11)	Redox Dark Surface (F6)			☐ Thin Dark Surface	(S9) (LRR K, L)
	rk Surface (A1	•		Depleted Dark Surface (F	7)		☐ Iron-Manganese N	Masses (F12) (LRR K, L, R)
	uck Mineral (S			Redox Depressions (F8)	1)		Piedmont Floodpla	ain Soils (F19) (MLRA 149B)
	eyed Matrix (S	54)		Redex Depressions (10)			Mesic Spodic (TA	b) (MLRA 144A, 145, 149B)
Sandy Re							Red Parent Mater	al (F21)
	Matrix (S6)		\ 4.40D\				Very Shallow Dark	Surface (TF12)
	face (S7) (LRF						Other (Explain in	Remarks)
³ Indicators o	f hydrophytic	vegetatio	n and wetla	and hydrology must be present, ur	nless disturbed o	r proble	ematic.	
Restrictive L	ayer (if obs	erved):						
Type:								
Depth (inc	ches):						Hydric Soil Present?	Yes $lacktriangle$ No $igcirc$
Remarks:								
rtomarito.								

Project/Site: Gogebic Taconite Bulk Sample Sites an	d Access Roads City/Co	ounty: Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		Sta	te: WI	Sampling Point: Up 8-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR P	AWD Sec	tion, Township, Range:	s. 33 t.	T45N R. R1W
Landform (hillslope, terrace, etc.): sideslope		elief (concave, convex, n		Slope: 3.0 % / 1.7°
Subregion (LRR or MLRA): LRR K	Lat.: 46.3317	734 Long	90.502164	Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-P			-	ication: Upland
Are climatic/hydrologic conditions on the site ty	· · ·	Yes No	— (If no, explain in	<u> </u>
Are Vegetation, Soil, or Hydrole		bed? Are "Normal	Circumstances" p	, , , , , , , , , , , , , , , , , , ,
Are Vegetation, Soil, or Hydrolo			explain any answe	
Summary of Findings - Attach site	· .		-	
Hydrophytic Vegetation Present? Yes	No •	9 F		
Hydric Soil Present? Yes	No •	Is the Sampled Area	Yes ○ No ●)
Wetland Hydrology Present?	No •	within a Wetland?	163 - 140 -	
Remarks: (Explain alternative procedures here				
Hydrology				
Wetland Hydrology Indicators:	-talcall that annly)			ors (minimum of 2 required)
Primary Indicators (minimum of one required; Surface Water (A1)	Water-Stained Leaves (B9)		Surface Soil C Drainage Patte	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lin	
Saturation (A3)	Marl Deposits (B15)			/ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1))	Crayfish Burro	
Sediment Deposits (B2)	Oxidized Rhizospheres along		Saturation Vis	ible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron ((C4)		ressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Ti	lled Soils (C6)	Geomorphic P	
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)		Shallow Aquita	
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		FAC-neutral To	ohic Relief (D4) est (D5)
			The neutral re	ost (50)
Field Observations: Surface Water Present? Yes No No	Depth (inches):			
	-			
	Depth (inches):	Wetland Hydr	ology Present?	Yes ○ No •
(includes capillary fringe) Yes V No V	Depth (inches):			
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previ	ous inspections), if avail	able:	
Remarks:				

VEGETATION - Use scientific names of plant	names of plants	scientific	VEGETATION -
--	-----------------	------------	---------------------

vegetation - ose scientific fiames of p		DominantSpecies?			Sampling Point: Up 8-1			
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:			
1 Acer saccharum	50	✓	83.3%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)			
Betula alleghaniensis		$\overline{\Box}$	16.7%	FAC	That are obe, thow, or the.			
3		П	0.0%		Total Number of Dominant			
			0.0%		Species Across All Strata: 4 (B)			
4		\exists	0.0%		Percent of dominant Species			
5		П	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)			
6			0.0%		Describer on Trades assessed to the			
7		_			Prevalence Index worksheet: Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 15' radius)	60	= 10	otal Cove	er				
1. Acer saccharum	15	V	75.0%	FACU	0BL speci es 0 x 1 = 0			
2. Ostrya virginiana		✓	25.0%	FACU	FACW species $0 \times 2 = 0$			
3		\Box	0.0%		FAC speciles $10 \times 3 = 30$			
4		\Box	0.0%		FACU speci es $\frac{125}{}$ x 4 = $\frac{500}{}$			
5		\Box	0.0%		UPL species $0 \times 5 = 0$			
6			0.0%		Column Totals: 135 (A) 530 (B)			
7.			0.0%		Prevalence Index = B/A = 3.926			
1					Prevalence Index = B/A = 3.926			
Herb Stratum (Plot size: 5' radius)		= 1	otal Cove	:F	Hydrophytic Vegetation Indicators:			
1. Acer saccharum	50	✓	90.9%	FACU	Rapid Test for Hydrophytic Vegetation			
2. Allium tricoccum	5		9.1%	FACU	☐ Dominance Test is > 50%			
3	0		0.0%		Prevalence Index is ≤3.0 ¹			
4			0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
6			0.0%		Problematic Hydrophytic Vegetation (Explain)			
7			0.0%		¹ Indicators of hydric soil and wetland hydrology must			
8			0.0%		be present, unless disturbed or problematic.			
9		\Box	0.0%		Definitions of Vegetation Strata:			
0		$\overline{\Box}$	0.0%		To a Mandaglada O'a (7.0 au) an ann 'a d'anatan			
1		\Box	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
2			0.0%		ar 2 react not give (2 2 m); regarances or morgini			
Woody Vine Stratum (Plot size: 30' radius)		= T	otal Cove	er	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall			
	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
1					size, and woody plants less than 3.28 ft tall.			
2			0.0%					
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4		_			height.			
	0	= T	otal Cove	r				
					Hydrophytic Vegetation Present? Yes ○ No ●			

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 8-1

Profile Desci	ription: (De	scribe to	the depth	needed to documer	t the indic	ator or co	nfirm the	absence of indicators.)	
Depth	. `	Matrix	•		edox Featu			,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
0-3	7.5YR	3/1	100%		-	-	-	Fine Sandy Loam	
3-20+	7.5YR	3/4	100%		-	-	-	Sandy Loam	
1 Type: C=Con	econtration D		DM-Red	Jucod Matrix CS-Cove	rod or Coate	d Sand Gra	ine 21 oca	ation: PL=Pore Lining. M=N	
		=Debiere	JII. KIVI-KEG	Juceu Marrix, 03-00ve	Teu or coard	U Sanu Ora	III IS -LUCA		
Hydric Soil				Delegation Del	Comface (20) /I DD D		Indicators for Probl	ematic Hydric Soils: 3
Histosol (,			Polyvalue Belo MLRA 149B)	ow Surrace (S8) (LKK K	,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)
	pedon (A2)			Thin Dark Sur	face (S9) (L	RR R. MLR	Δ 149B)	Coast Prairie Red	ox (A16) (LRR K, L, R)
Black His				Loamy Mucky			A 11/2,	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			Loamy Gleyed				Dark Surface (S7)	(LRR K, L, M)
	Layers (A5)	/,		Depleted Mati				Polyvalue Below S	Surface (S8) (LRR K, L)
	Below Dark S		111)	Redox Dark S				Thin Dark Surface	e (S9) (LRR K, L)
	k Surface (A			Depleted Dark		7)		Iron-Manganese I	Masses (F12) (LRR K, L, R)
	uck Mineral (S			Redox Depres		')		Piedmont Floodpl	ain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		☐ Redux Doples	יס ו) בווטופ			Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)
Sandy Re								Red Parent Mater	ial (F21)
	Matrix (S6)							Very Shallow Darl	c Surface (TF12)
☐ Dark Surf	ace (S7) (LRI	R R, MLR	A 149B)					Other (Explain in	Remarks)
³ Indicators o	f hydrophytic	vegetatio	on and wetla	and hydrology must be	present, un	ess disturb	ed or proble		
Restrictive L					•				
	ayei (ii oba	erveuj.							
Type:	1 == 1 .							Hydric Soil Present?	Yes ○ No •
Depth (inc	hes):							•	100 - 110 -
Remarks:									

Project/Site: Gogebic Taconi	te Bulk Sample Sites and	d Access Roads	City/County:	Town of Anderson	, Iron Co.	Sampling Date: 11-0)ct-13
Applicant/Owner: Gogebic T	aconite			Stat	te: WI	Sampling Point:	Wet 9-1
Investigator(s): Ann Michal:	ski, PSS, PWS, WDNR P	AWD	Section, To	ownship, Range:	s. 33 t.	T45N R. R1V	V
Landform (hillslope, terrace	, etc.): Toeslope		Local relief (co	oncave, convex, n	one): concave	Slope:	1.0 % / 0.6 °
Subregion (LRR or MLRA):	LRR K		16.331691	Long	.: 90.501531	 Datum	: WGS84
Soil Map Unit Name: Michig	namme-Schweitzer-P					ication: PEM1	-
				<u> </u>			
Are climatic/hydrologic con					(If no, explain in		No O
	il 🗹 , or Hydrolo		y disturbed?	Are "Normal	Circumstances" p	oresent? 163 C	140 🗢
	il 🗹 , or Hydrolo	· .		,	explain any answe	•	
Summary of Finding			ampling p	oint location	s, transects,	, important feat	ures, etc
Hydrophytic Vegetation Pre		No O					
Hydric Soil Present?	Yes	No O		Sampled Area n a Wetland?	Yes No)	
Wetland Hydrology Present	_{t?} Yes 💿	No O					
Remarks: (Explain alterna	tive procedures here	or in a separate report	t.)				
Hydrology							
Wetland Hydrology Indicat	ors:				Secondary Indicate	ors (minimum of 2 require	ed)
Primary Indicators (minim	um of one required;	check all that apply)			Surface Soil C	racks (B6)	
Surface Water (A1)		Water-Stained Leave			Drainage Patte	• •	
✓ High Water Table (A2)✓ Saturation (A3)		Aquatic Fauna (B13)			Moss Trim Lin	, ,	
Water Marks (B1)		Marl Deposits (B15)				/ater Table (C2)	
Sediment Deposits (B2)		Hydrogen Sulfide O	` ,	D4- (C2)	Crayfish Burro	ows (C8) ible on Aerial Imagery (C	0)
Drift deposits (B3)		Oxidized Rhizospher Presence of Reduce	0 0	ROOIS (C3)		ressed Plants (D1)	7)
Algal Mat or Crust (B4)		Recent Iron Reducti		s (C6)	Geomorphic P	• •	
☐ Iron Deposits (B5)		Thin Muck Surface (3 (00)	Shallow Aquita	• •	
Inundation Visible on Aeri	al Imagery (B7)	Other (Explain in Re	` ,		_	ohic Relief (D4)	
Sparsely Vegetated Conca	ive Surface (B8)	Other (Explain in Re	anarks)		FAC-neutral T		
Field Observations: Surface Water Present?	Yes ○ No ●	Depth (inches):					
	Yes • No	-					
Water Table Present? Saturation Present?		Depth (inches):		Wetland Hydr	ology Present?	Yes No	
(includes capillary fringe)	Yes No	Depth (inches): _	0	_			
Describe Recorded Data (s	tream gauge, monito	oring well, aerial photos	s, previous ins	pections), if avail	able:		
Remarks:							
Remarks:							

VEGETATION - Use scientific names of plants

Dominant Sampling Point: Wet 9-1 Species? Absolute Rel.Strat. Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: 10' x 20') Status % Cover Cover **Number of Dominant Species** 0 0.0% That are OBL, FACW, or FAC: (A) 0 0.0% Total Number of Dominant 0 0.0% 3 (B) Species Across All Strata: 0 0.0% Percent of dominant Species 0 0.0% 66.7% (A/B) That Are OBL, FACW, or FAC: 0 0.0% 0 0.0% **Prevalence Index worksheet:** Total % Cover of: Multiply by: 0 = Total Cover Sapling/Shrub Stratum (Plot size: 10' x 20') OBL species x 1 = 50 10 66.7% **FACW** 1. Fraxinus nigra FACW species x 2 =2. Acer saccharum 5 33.3% FACU 10 30 FAC species x 3 =3. 0 0.0% 120 FACU species 0 0.0% 0 UPL species x 5 = 0 0.0% (B) Column Totals: 100 220 (A) 0 0.0% 0 0.0% Prevalence Index = B/A = 2.200 15 = Total Cover Herb Stratum (Plot size: 5' radius) **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 1 Carex crinita 50 58.8% OBL ✓ Dominance Test is > 50% 2. Rubus idaeus 10 11.8% **FACU** ✓ Prevalence Index is ≤3.0 ¹ 17.6% 3. Acer saccharum 15 FACU Morphological Adaptations 1 (Provide supporting 4 Dryopteris intermedia 10 11.8% FAC data in Remarks or on a separate sheet) 0 0.0% Problematic Hydrophytic Vegetation ¹ (Explain) 0 0.0% ¹ Indicators of hydric soil and wetland hydrology must 0 0.0% be present, unless disturbed or problematic. 0 0.0% **Definitions of Vegetation Strata:** 0 0.0% 0 0.0% Tree - Woody plants, 3 in. (7.6 cm) or more in diameter 11.____ 0 0.0% at breast height (DBH), regardless of height. 0 0.0% 12.____ Sapling/shrub - Woody plants less than 3 in. DBH and 85 = Total Cover greater than 3.28 ft (1m) tall... Woody Vine Stratum (Plot size: 10' x 20') 0.0% Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 0 0.0% 2.____ 0 0.0% Woody vine - All woody vines greater than 3.28 ft in 0 0.0% height. 0 = Total Cover Hydrophytic Vegetation No O Yes Present? Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 9-1

Profile Descrip	tion: (Describe to	the depth n	eeded to document	the indicator	or confirm the	absence of indicators.)	
Depth	Matrix		_	ox Features			
(inches)	Color (moist)	%	Color (moist)	% Ty	pe 1 Loc2	Texture	Remarks
0-7	7.5YR 2/1	100%		-		Silt Loam	
7+						Rock	
						-	
						-	
						-	
		·					
¹ Type: C=Conce	ntration. D=Depletio	n. RM=Redu	ced Matrix, CS=Covered	l or Coated Sar	nd Grains ² Loca	ation: PL=Pore Lining. M=M	atrix
Hydric Soil Inc	dicators:					Indicators for Proble	ematic Hydric Soils: 3
Histosol (A1	1)		Polyvalue Below	Surface (S8) (LRR R,		-
Histic Epipe	don (A2)		MLRA 149B)				(LRR K, L, MLRA 149B)
☐ Black Histic	(A3)		Thin Dark Surface	ce (S9) (LRR R	, MLRA 149B)		ox (A16) (LRR K, L, R)
☐ Hydrogen S	ulfide (A4)		Loamy Mucky M		K, L)	Dark Surface (S7)	or Peat (S3) (LRR K, L, R)
Stratified La	yers (A5)		Loamy Gleyed M				urface (S8) (LRR K, L)
Depleted Be	elow Dark Surface (A	11)	Depleted Matrix			Thin Dark Surface	
☐ Thick Dark	Surface (A12)		Redox Dark Surf				Masses (F12) (LRR K, L, R)
Sandy Muck	Mineral (S1)		Depleted Dark S			_	ain Soils (F19) (MLRA 149B)
Sandy Gleye	ed Matrix (S4)		Redox Depression	ons (F8)			o) (MLRA 144A, 145, 149B)
Sandy Redo	ox (S5)					Red Parent Materi	
Stripped Ma	atrix (S6)					Very Shallow Dark	, ,
☐ Dark Surfac	e (S7) (LRR R, MLRA	149B)				Other (Explain in F	
³ Indicators of h	ovdrophytic vegetatio	n and wetlan	d hydrology must be pr	esent, unless d	isturbed or prob		,
		Traile Wotter	a tijarologj maet 20 pr		.о.а. 204 от р. 02		
	ver (if observed):						
Type: Roc						Hydric Soil Present?	Yes ● No ○
Depth (inche	es):_/					,	105 - 110 -
Remarks:							
							based on wetland hydrology and
hydric vegetation uplands in this		and geomor	phic position. Also,	observations	of upland soils	s indicate that this dark s	urface layer is not typical of
upiarius iii tilis	aiea.						

Project/Site: Gogebic Taconite Bulk Sample Sites and Access Roads	City/County: Town of Anderso	n, Iron Co. Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite	St	ate: WI Sampling Point: Up 9-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR PAWD	Section, Township, Range	s. 33 t. T45N R. R1W
Landform (hillslope, terrace, etc.): Shoulder slope	Local relief (concave, convex,	
		g.: 90.501606 Datum: WGS84
		70.001.000
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock C		NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this tim	e of year? Yes No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology signi	ficantly disturbed? Are "Norma	ll Circumstances" present? Yes ● No ○
Are Vegetation 🔲 , Soil 🗌 , or Hydrology 🔲 natu	rally problematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Attach site map show	ing sampling point locatio	ns, transects, important features, etc
Hydrophytic Vegetation Present? Yes No •	To the Complet Aven	
Hydric Soil Present? Yes No •	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present? Yes ○ No •		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that ap	(vlac	Surface Soil Cracks (B6)
	ed Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	, ,	Moss Trim Lines (B16)
Saturation (A3) Marl Deposi	its (B15)	☐ Dry Season Water Table (C2)
Water Marks (B1) Hydrogen S	ulfide Odor (C1)	Crayfish Burrows (C8)
	izospheres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
	Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
	Surface (C7)	☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	ain in Remarks)	FAC-neutral Test (D5)
sparsery regetated conteave surface (55)		
Field Observations: Surface Water Present? Yes No Depth (inc	ches):	
Water Table Present? Yes No Depth (inc	ches): Wetland Hy	Irology Present? Yes O No 💿
Saturation Present? (includes capillary fringe) Yes No Depth (includes capillary fringe)	ches):	
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if ava	ilable:
Remarks:		

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific fiames of pr		Sampling Point: Up 9-1							
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:				
1. Acer saccharum	60	✓	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)				
2.	0		0.0%						
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)				
4			0.0%		Species Across Air Strata.				
5			0.0%		Percent of dominant Species				
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)				
7			0.0%		Prevalence Index worksheet:				
Sapling/Shrub Stratum (Plot size: 15' radius)	60	= To	otal Cove	r	Total % Cover of: Multiply by:				
4. Assessment	40	✓	100.0%	EACH	0BL speci es 0 x 1 = 0				
1 _Acer saccharum 2			0.0%	TACO	FACW species $0 \times 2 = 0$				
			0.0%		FAC species0 x 3 =0				
3			0.0%		FACU speci es $160 \times 4 = 640$				
4					UPL species $0 \times 5 = 0$				
5			0.0%		Column Totals: 160 (A) 640 (B)				
6			0.0%		Containing for the containing fo				
7		_	0.0%		Prevalence Index = B/A = 4.000				
Herb Stratum (Plot size: 5' radius)	40	= To	otal Cove	r	Hydrophytic Vegetation Indicators:				
Acer saccharum	40	✓	66.7%	FACU	Rapid Test for Hydrophytic Vegetation				
Adiantum pedatum		V	33.3%	FACU	Dominance Test is > 50%				
3			0.0%		Prevalence Index is ≤3.0 ¹				
1			0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
5		$\overline{\Box}$	0.0%		Problematic Hydrophytic Vegetation - (Explain)				
7		ī	0.0%		¹ Indicators of hydric soil and wetland hydrology must				
3		П	0.0%		be present, unless disturbed or problematic.				
9		П	0.0%		Definitions of Vegetation Strata:				
		П	0.0%						
)		\Box	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
l 2			0.0%		at broadt Holghi (BBH), rogaralood of Holghi.				
		= To	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall				
Voody Vine Stratum (Plot size: 30' radius)	0	П	0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
1 2			0.0%		size, and woody plants less than 3.28 ft tall.				
z		П	0.0%						
	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in height.				
4		 = To	otal Cove	r	noight.				
					Hydrophytic Vegetation Present? Yes No				

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 9-1

Profile Desc	ription: (Des	cribe to	the depth	needed to document	the indicator or cor	nfirm the	absence of indicators.)	
Depth (inches)		Matrix		. —	lox Features			
(inches)	Color (n		%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-6	7.5YR	3/2	100%			-	Silt Loam	
6-20+	7.5YR	3/4	100%			-	Silt Loam	
			-					
			- ———				-	
			-				-	
				·			-	
¹ Type: C=Cor	ncentration. D=	=Depletio	n. RM=Red	luced Matrix, CS=Covere	d or Coated Sand Grai	ins ² Loca	ation: PL=Pore Lining. M=N	latrix
Hydric Soil	Indicators:						Indicators for Probl	ematic Hydric Soils: ³
Histosol	(A1)				V Surface (S8) (LRR R,			(LRR K, L, MLRA 149B)
	ipedon (A2)			MLRA 149B)	oo (CO) (LDD D MLD)	1 1 1 0 D)		ox (A16) (LRR K, L, R)
Black His					ce (S9) (LRR R, MLR/ Mineral (F1) LRR K, L)	4 1496)		or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)			Loamy Gleyed N			Dark Surface (S7)	(LRR K, L, M)
	Layers (A5)			Depleted Matrix			Polyvalue Below S	Surface (S8) (LRR K, L)
	Below Dark Su		.11)	Redox Dark Sur			Thin Dark Surface	(S9) (LRR K, L)
	rk Surface (A1:	•		Depleted Dark S			☐ Iron-Manganese N	Masses (F12) (LRR K, L, R)
	uck Mineral (S1			Redox Depressi			Piedmont Floodpla	ain Soils (F19) (MLRA 149B)
	eyed Matrix (S	4)		Nodon Bop. c.s.	0113 (1 0 <i>)</i>		Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)
Sandy Re							Red Parent Mater	• •
	Matrix (S6)	ים ואים	1 40D)				Very Shallow Dark	
	face (S7) (LRR						Other (Explain in	Remarks)
³ Indicators of	of hydrophytic	vegetatio	n and wetla	and hydrology must be p	resent, unless disturbe	ed or proble	ematic.	
Restrictive L	ayer (if obse	erved):						
Туре:								\sim
Depth (inc	ches):						Hydric Soil Present?	Yes ○ No •
Remarks:							-	

Project/Site: Gogebic Taconite Bulk Sample Sites and A	Access Roads City/C	ounty: Town of Anderson	Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		Stat	e: WI	Sampling Point: Wet 10-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR PAV	ND Se r	ction, Township, Range:	s. 33 t.	Γ45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope	Local r	elief (concave, convex, n	one): concave	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.331	897 Long	.: 90.501678	
Soil Map Unit Name: Michigamme-Schweitzer-Pes				ication: PEM1
	· · ·			
Are climatic/hydrologic conditions on the site typic			(If no, explain in	· ,, (a) (
Are Vegetation , Soil , or Hydrolog	yy 🔲 significantly distu	rbed? Are "Normal	Circumstances" p	present? Yes S NO C
Are Vegetation , Soil , or Hydrolog	y 🗸 naturally problem	atic? (If needed, e	explain any answe	ers in Remarks.)
Summary of Findings - Attach site r		ing point location	s, transects,	important features, etc
	No O			
*	No O	Is the Sampled Area within a Wetland?	Yes ● No C)
Wetland Hydrology Present? Yes N	No O			
Remarks: (Explain alternative procedures here o	or in a separate report.)	I		
Hydrology				
Hydrology				
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch	ack all that apply)			ors (minimum of 2 required)
	✓ Water-Stained Leaves (B9)		Surface Soil C Drainage Patte	• •
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lin	
Saturation (A3)	Marl Deposits (B15)			ater Table (C2)
☐ Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burro	
Sediment Deposits (B2)	Oxidized Rhizospheres alor	ng Living Roots (C3)	Saturation Vis	ible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron	(C4)		essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in T	filled Soils (C6)	✓ Geomorphic P	` '
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquita	
☐ Inundation Visible on Aerial Imagery (B7) ✓ Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		✓ Microtopograp	phic Relief (D4)
Sparsery vegetated concave surface (bb)			FAC-Heutiai II	est (D5)
Field Observations:				
Surface Water Present? Yes No •	Depth (inches):			
Water Table Present? Yes No •	Depth (inches):	National Hodge	ology Present?	Yes ● No ○
Saturation Present? (includes capillary fringe) Yes No No	Depth (inches):	16	ology Present?	res 😊 NO 😊
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, prev	ious inspections), if availa	able:	
Remarks:				

VEGETATION - Use scientific names of plants

Dominant Sampling Point: Wet 10-1 Species? **Absolute** Rel.Strat. Indicator **Dominance Test worksheet:** (Plot size: 35' x 10' Tree Stratum) Status % Cover Cover **Number of Dominant Species** 5 ✓ 100.0% FACW 1. Ulmus americana That are OBL, FACW, or FAC: (A) 0 0.0% Total Number of Dominant 0 0.0% 3 (B) Species Across All Strata: 0 0.0% Percent of dominant Species 0 0.0% 100.0% (A/B) That Are OBL, FACW, or FAC: 0.0% 0 0 0.0% **Prevalence Index worksheet:** Total % Cover of: Multiply by: 5 = Total Cover Sapling/Shrub Stratum (Plot size: 35' x 10') OBL species x 1 = 1. Ulmus americana 15 **✓** 100.0% FACW FACW species x 2 =0 0.0% 5 15 FAC species x 3 =3._____ 0 0.0% FACU species 0 0.0% 0 UPL species x 5 = 0 0.0% (B) 25 55 Column Totals: (A) 0 0.0% 0 0.0% Prevalence Index = B/A = 2.200 = Total Cover 15 Herb Stratum (Plot size: 5' radius) **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation ✓ 100.0% FAC 1 Dryopteris intermedia 5 ✓ Dominance Test is > 50% 0 0.0% 2. ✓ Prevalence Index is ≤3.0 ¹ O 0.0% Morphological Adaptations 1 (Provide supporting 0 0.0% data in Remarks or on a separate sheet) 0 0.0% Problematic Hydrophytic Vegetation ¹ (Explain) 0 0.0% ¹ Indicators of hydric soil and wetland hydrology must 0.0% be present, unless disturbed or problematic. 0 0.0% **Definitions of Vegetation Strata:** 0 0.0% 0 0.0% Tree - Woody plants, 3 in. (7.6 cm) or more in diameter 11.____ 0 0.0% at breast height (DBH), regardless of height. 0.0% 12.____ Sapling/shrub - Woody plants less than 3 in. DBH and 5 = Total Cover greater than 3.28 ft (1m) tall... Woody Vine Stratum (Plot size: 35' x 10') 0.0% Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 2.____ 0 0.0% 0 0.0% Woody vine - All woody vines greater than 3.28 ft in 0 0.0% height. 0 = Total Cover Hydrophytic Vegetation No O Yes Present?

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 10-1

Profile Descr	ription: (Describe	to the depth	needed to document t	he indicator or cor	firm the a	absence of indicators.)	
Depth	Matri	x	Red	x Features		-	
(inches)	Color (moist)	%	Color (moist)	% Type 1	Loc ²	Texture	Remarks
0-2	7.5YR 2.5/	2 100%			-	Silt Loam	
2-20+	7.5YR 5/2	100%			_	Loam	
	-						
¹ Type: C=Con	centration. D=Deple	etion. RM=Redu	uced Matrix, CS=Covered	or Coated Sand Grai	ns ² Loca	tion: PL=Pore Lining. M=Ma	trix
Hydric Soil 1	Indicators:					Indicators for Proble	matic Hydric Soils: 3
Histosol ((A1)			Surface (S8) (LRR R,			-
Histic Epi	pedon (A2)		MLRA 149B)				LRR K, L, MLRA 149B)
☐ Black Hist			Thin Dark Surfac	e (S9) (LRR R, MLRA	A 149B)		(A16) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Loamy Mucky M	neral (F1) LRR K, L)			r Peat (S3) (LRR K, L, R)
	Layers (A5)		Loamy Gleyed M	atrix (F2)		Dark Surface (S7) (
	Below Dark Surface	(A11)	Depleted Matrix	(F3)		_	rface (S8) (LRR K, L)
	k Surface (A12)	` '	Redox Dark Surf	ace (F6)		☐ Thin Dark Surface (
	uck Mineral (S1)		Depleted Dark S	urface (F7)		_	asses (F12) (LRR K, L, R)
	eyed Matrix (S4)		Redox Depression	ns (F8)			n Soils (F19) (MLRA 149B)
Sandy Re							(MLRA 144A, 145, 149B)
_	Matrix (S6)					Red Parent Materia	, ,
	face (S7) (LRR R, ML	RA 149R)				Very Shallow Dark	
	. , .	,				✓ Other (Explain in Re	emarks)
³ Indicators o	f hydrophytic vegeta	ation and wetla	nd hydrology must be pro	esent, unless disturbe	d or proble	ematic.	
Restrictive L	ayer (if observed)):					
Type:							
Depth (inc	hes):					Hydric Soil Present?	Yes ● No ○
Remarks:	, ,						
Soils did not hydric vegeta		nt and geomo	rphic position. Also,				ased on wetland hydrology and rface layer and reduced soils
	31 1						

Project/Site: Gogebic Taconite Bulk Sample Sites and Access Ro	ads City/County: Town of Ar	nderson, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		State: WI	Sampling Point: Up 10-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR PAWD	Section, Township, R	ange: S. 33 T. 7	r45N R. R1W
Landform (hillslope, terrace, etc.): Shoulder slope	Local relief (concave, cor		Slope: 3.0 % / 1.7 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.331840	Long.: 90.501661	Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-R		<u>. </u>	ication: Upland
Are climatic/hydrologic conditions on the site typical for th	is time of year? Yes No	(If no, explain in	-
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "N	Normal Circumstances" p	present? Yes No
Are Vegetation , Soil , or Hydrology	naturally problematic? (If ne	eded, explain any answe	ers in Remarks.)
Summary of Findings - Attach site map sh	owing sampling point loca	ations, transects,	important features, etc
Hydrophytic Vegetation Present? Yes No •	To the Committee of	•	
Hydric Soil Present? Yes No •	Is the Sampled A within a Wetland		
Wetland Hydrology Present? Yes No •			
Hydrology			
Wetland Hydrology Indicators:		Secondary Indicate	urs (minimum of 2 required)
Primary Indicators (minimum of one required; check all the	nat apply)	Surface Soil Cr	rs (minimum of 2 required)
	-Stained Leaves (B9)	Drainage Patte	
	ic Fauna (B13)	Moss Trim Line	
Saturation (A3)	Deposits (B15)	Dry Season W	ater Table (C2)
Water Marks (B1)	gen Sulfide Odor (C1)	Crayfish Burro	ws (C8)
	red Rhizospheres along Living Roots (C3)	Saturation Visi	ble on Aerial Imagery (C9)
	nce of Reduced Iron (C4)		essed Plants (D1)
	It Iron Reduction in Tilled Soils (C6)	Geomorphic P	
	Muck Surface (C7)	Shallow Aquita	
Sparsely Vegetated Concave Surface (B8)	(Explain in Remarks)	✓ Microtopograp✓ FAC-neutral Te	
sparsery registance constant surface (20)		TAC-neutral Te	551 (DJ)
Field Observations: Surface Water Present? Yes No Dep	th (inches):		
	th (inches): Wetlan	nd Hydrology Present?	Yes ○ No ●
Saturation Present? (includes capillary fringe) Yes No Dep	th (inches):		
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections),	if available:	
Remarks:			

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of p	lants		ominant pecies?		Sampling Point: Up 10-1				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover		el.Strat. over	Indicator Status	Dominance Test worksheet:				
A Ager agesharum	60	V	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)				
2.			0.0%	1700	That are obc, factor, of fac.				
			0.0%		Total Number of Dominant				
3			0.0%		Species Across All Strata: 3 (B)				
4			1		Percent of dominant Species				
5			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)				
6			0.0%						
7	0		0.0%		Prevalence Index worksheet:				
Sapling/Shrub Stratum (Plot size: 15' radius)	60	= T	otal Cove	r	Total % Cover of: Multiply by:				
1. Acer saccharum	25	✓	100.0%	FACU	OBL species 0 x 1 = 0				
2.			0.0%		FACW species $0 \times 2 = 0$				
3		$\overline{}$	0.0%		FAC speci es $0 \times 3 = 0$				
4			0.0%		FACU speci es 145 x 4 = 580				
			0.0%		UPL species $0 \times 5 = 0$				
5			0.0%		Column Totals: 145 (A) 580 (B)				
6		F	0.0%						
7		_ T	otal Cove		Prevalence Index = B/A = 4.000				
Herb Stratum (Plot size: 5' radius)	25	- '	otal Cove	:1	Hydrophytic Vegetation Indicators:				
1. Acer saccharum	60	V	100.0%	FACU	Rapid Test for Hydrophytic Vegetation				
2			0.0%		☐ ☐ Dominance Test is > 50%				
3	-		0.0%		Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
4			0.0%						
			0.0%						
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6			1		¹ Indicators of hydric soil and wetland hydrology must				
7			0.0%		be present, unless disturbed or problematic.				
8			0.0%		Definitions of Vegetation Strata:				
9			0.0%		Seminaria or a Specialism of attack				
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1			0.0%		at breast height (DBH), regardless of height.				
2	0		0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and				
Woody Vine Stratum (Plot size: 30' radius)	60	= T	otal Cove	r	greater than 3.28 ft (1m) tall				
<u> </u>	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
1			0.0%		size, and woody plants less than 3.28 ft tall.				
2			0.0%						
3			,		Woody vine - All woody vines greater than 3.28 ft in				
4			0.0%		height.				
	0	= T	otal Cove	r					
					Hadanahada				
					Hydrophytic Vegetation				
					Present? Yes No •				
Remarks: (Include photo numbers here or on a separate s	sheet.)				1				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 10-1

		-	needed to document the indicator or confirm th	e absence of indicators.)	
Depth (inches)	Mat Color (moist		Redox Features Color (moist) % Type 1 Loc2	Texture	Remarks
0-6		/2 100%		Silt Loam	
6-20+	7.5YR 3/	/4 100%		Silt Loam	
				_	
				_	
				_	
				_	
					_
1 Type: C=Coi	ncentration D=Den	letion RM=Red	uced Matrix, CS=Covered or Coated Sand Grains 2Lc	ocation: PL =Pore Lining M=	— Matrix
Hydric Soil	-		acca manin, co concret el coalca cama cramo		
Histosol			Polyvalue Below Surface (S8) (LRR R,		olematic Hydric Soils: 3
	ipedon (A2)		MLRA 149B)) (LRR K, L, MLRA 149B) dox (A16) (LRR K, L, R)
☐ Black His	stic (A3)		☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)		t or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Loamy Mucky Mineral (F1) LRR K, L)	Dark Surface (S	
Stratified	I Layers (A5)		Loamy Gleyed Matrix (F2)		Surface (S8) (LRR K, L)
	Below Dark Surfac	ce (A11)	☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6)		ce (S9) (LRR K, L)
	rk Surface (A12)		Depleted Dark Surface (F7)	☐ Iron-Manganese	Masses (F12) (LRR K, L, R)
	uck Mineral (S1)		Redox Depressions (F8)	Piedmont Floodp	olain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		redux pepressions (re)		A6) (MLRA 144A, 145, 149B)
	edox (S5) Matrix (S6)			Red Parent Mate	• •
	face (S7) (LRR R, N	/II RA 149R)			rk Surface (TF12)
				Other (Explain in	n Remarks)
			nd hydrology must be present, unless disturbed or pro	oblematic.	
	Layer (if observe	d):			
Type:				Hydric Soil Present?	Yes ○ No •
Depth (in	ches):			Tryune som i resente.	Tes C NO C
Remarks:					

Project/Site: Gogebic Taconite Bu	ulk Sample Sites an	d Access Roads	City/County:	Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Tacon	ite			Sta	te: WI	Sampling Point: Wet 11-1
Investigator(s): Ann Michalski, F	PSS, PWS, WDNR P	AWD	Section, To	ownship, Range:	s. 33 t.	T45N R. R1W
Landform (hillslope, terrace, etc	:.): Toeslope		_ ′	oncave, convex, n		Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LR	·R K	Lat.:	46.332130	Long	90.0501099	Datum: WGS84
Soil Map Unit Name: Michigam			-			ication: PEM1
				es No O		
Are climatic/hydrologic condition	_				(If no, explain in	, v. 🔊 v. 🔾
Are Vegetation, Soil	_ ,,	ogy	tly disturbed?	Are "Normal	Circumstances" p	present? Yes S NO C
Are Vegetation , Soil	, or Hydrolo	ogy 🗌 naturally p	problematic?	(If needed, e	explain any answe	ers in Remarks.)
Summary of Findings -			sampling p	oint location	s, transects,	, important features, etc
Hydrophytic Vegetation Presen		No O				
Hydric Soil Present?	Yes 💿	No O		e Sampled Area n a Wetland?	Yes ● No C)
Wetland Hydrology Present?	Yes	No O				
Remarks: (Explain alternative	procedures here	or in a separate repo	ort.)			
Hydrology						
Wetland Hydrology Indicators:					Secondary Indicate	ors (minimum of 2 required)
Primary Indicators (minimum	of one required;	check all that apply)		i	Surface Soil C	•
Surface Water (A1)		✓ Water-Stained Lea	aves (B9)		Drainage Patte	erns (B10)
✓ High Water Table (A2)		Aquatic Fauna (B1	13)		Moss Trim Lin	nes (B16)
Saturation (A3)		Marl Deposits (B1				/ater Table (C2)
Water Marks (B1)		Hydrogen Sulfide			Crayfish Burro	• •
Sediment Deposits (B2) Drift deposits (B3)		Oxidized Rhizosph		Roots (C3)		ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Presence of Reduce	` ,	lc (C4)	Geomorphic P	ressed Plants (D1)
Iron Deposits (B5)		Thin Muck Surface		is (Co)	Shallow Aquita	• ,
Inundation Visible on Aerial In	nagery (B7)	Other (Explain in I	,			phic Relief (D4)
✓ Sparsely Vegetated Concave S	urface (B8)		,		FAC-neutral T	est (D5)
Field Observations:						
	es O No 💿	Depth (inches):				
Water Table Present? Ye	es • No O	Depth (inches):	-6			
Saturation Present? (includes capillary fringe) Ye	s • No O	Depth (inches):	-	Wetland Hydr	ology Present?	Yes No
Describe Recorded Data (strea	m gauge, monito	oring well, aerial photo	os, previous ins	spections), if avail	able:	
Remarks:						

VEGETATION -	Use	scientific	names of	i plants
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	ants	Dominant _Species?			Sampling Point: Wet 11-1					
Tree Stratum (Plot size: 25' x 25')	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:					
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)					
		\Box	0.0%		That are obt., FACW, of FAC.					
2. 3.		П	0.0%		Total Number of Dominant					
4		П	0.0%		Species Across All Strata: 2 (B)					
5		П	0.0%		Percent of dominant Species					
6		\Box	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)					
7		П	0.0%		Prevalence Index worksheet:					
<i>i</i> .		 	-		Total % Cover of: Multiply by:					
Sapling/Shrub Stratum (Plot size: 25' x 25')	0	= 1	otal Cove	Г	0BL species 5 x 1 = 5					
1 Fraxinus nigra	5	V	100.0%	FACW						
2			0.0%		x 2					
3			0.0%		FAC speciles $0 \times 3 = 0$					
4			0.0%		FACU speci es $0 \times 4 = 0$					
5			0.0%		UPL speci es $0 \times 5 = 0$					
6			0.0%		Column Totals: 10 (A) 15 (B)					
7			0.0%		Prevalence Index = B/A = 1.500					
		= T	otal Cove	 r						
Herb Stratum (Plot size: 5' radius)					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation					
1. Scutellaria lateriflora	5	V	100.0%	OBL						
2	0		0.0%							
3	0		0.0%		✓ Prevalence Index is ≤3.0 ¹					
4			0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)					
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)					
6			0.0%		Troblematic Hydrophytic regetation (Explain)					
7			0.0%		$^{ m 1}$ Indicators of hydric soil and wetland hydrology must					
8			0.0%		be present, unless disturbed or problematic.					
9.			0.0%		Definitions of Vegetation Strata:					
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter					
1			0.0%		at breast height (DBH), regardless of height.					
2.			0.0%							
		= T	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall					
Woody Vine Stratum (Plot size: 25' x 25')					greater than 3.20 ft (1111) tall					
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of					
	0		0.0%		size, and woody plants less than 3.28 ft tall.					
2			0.0%		Woody vine - All woody vines greater than 3.28 ft in					
-	0									
2	0		0.0%		height.					

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 11-1

Profile Descr	ription: (De	scribe to	the depth	needed to docume	nt the indi	cator or co	nfirm the a	absence of indicators.)	
Depth (inches)	. Colon (Matrix	_ 0,	_	Redox Feati		- 12	- Tauduus	Remarks
	Color (I		1000/	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-2	7.5YR	2.5/2	100%					Silt Loam	
2-4	7.5YR	4/2	100%		-	-	-	Sandy Loam	
4+								Rock	
								-	
								-	
								-	
			-					-	
			-						
¹ Type: C=Con	centration. D	=Depletion	n. RM=Red	luced Matrix, CS=Cove	ered or Coat	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=N	Matrix
Hydric Soil 1								Indicators for Prob	lematic Hydric Soils: ³
Histosol (Polyvalue Be MLRA 149B)	low Surface	(S8) (LRR R		2 cm Muck (A10)	(LRR K, L, MLRA 149B)
	pedon (A2)			Thin Dark Su	ırface (S9) (IRRR MIR	Δ 149R)	Coast Prairie Red	ox (A16) (LRR K, L, R)
☐ Black Hist	• •			Loamy Muck			1 1470)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Sulfide (A4) Layers (A5)			Loamy Gleye	-			Dark Surface (S7)) (LRR K, L, M)
	Below Dark S	Surface (A1	11)	☐ Depleted Ma		•			Surface (S8) (LRR K, L)
	k Surface (A1	•	11)	Redox Dark				☐ Thin Dark Surface	• • • • • • • • • • • • • • • • • • • •
	ıck Mineral (S	•		Depleted Dar	rk Surface (F	7)			Masses (F12) (LRR K, L, R)
	eyed Matrix (Redox Depre	essions (F8)				ain Soils (F19) (MLRA 149B) 6) (MLRA 144A, 145, 149B)
☐ Sandy Re		·						Red Parent Mater	
Stripped I	Matrix (S6)							Very Shallow Dar	• •
Dark Surf	ace (S7) (LRI	R R, MLRA	149B)					✓ Other (Explain in	
³ Indicators of	f hydrophytic	vegetation	n and wetla	and hydrology must be	e present, ur	nless disturbe	ed or proble		
Restrictive L	aver (if obs	erved):							
Type: Ro									
Depth (inc								Hydric Soil Present?	Yes 💿 No 🔾
Remarks:									
	ation being	present a	nd geom	orphic position. Als					based on wetland hydrology and surface layer and reduced soils
ı									

Project/Site: Gogebic Taconite Bulk Sample Sites an	nd Access Roads City/Co	ounty: Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		Sta	te: WI	Sampling Point: Up 11-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR F	'AWD Sec '	tion, Township, Range:	s. 33 t. 7	
Landform (hillslope, terrace, etc.): sideslope		elief (concave, convex, n		Slope: 7.0 % / 4.0 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.3321	172 Long	90.501166	Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-F				cation: Upland
Are climatic/hydrologic conditions on the site ty	<u> </u>	Yes ● No ○	(If no, explain in	
Are Vegetation , Soil , or Hydrol			Circumstances" p	
Are Vegetation , Soil , or Hydrol			-	
Summary of Findings - Attach site		,	explain any answe	
	No •	ing point location	s, transects,	important reatures, etc
., . ,	No •	Is the Sampled Area		
V (No •	within a Wetland?	Yes O No 💿	
Remarks: (Explain alternative procedures here				
Hydrology				
Wetland Hydrology Indicators:		,	Secondary Indicato	rs (minimum of 2 required)
Primary Indicators (minimum of one required;			Surface Soil Cr	• •
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)		☑ Drainage Patte ☑ Moss Trim Line	
Saturation (A3)	Marl Deposits (B15)			ater Table (C2)
☐ Water Marks (B1)	Hydrogen Sulfide Odor (C1))	Crayfish Burro	
Sediment Deposits (B2)	Oxidized Rhizospheres along	g Living Roots (C3)	Saturation Visi	ble on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron ((C4)	Stunted or Stre	essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Ti	illed Soils (C6)	Geomorphic Po	• ,
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)		Shallow Aquita Microtopograp	` '
Sparsely Vegetated Concave Surface (B8)	U Other (Explain in Remarks)		FAC-neutral Te	
				•
Field Observations: Surface Water Present? Yes No No	Depth (inches):			
Surface Water Present? Yes No Water Table Present? Yes No	· · · · · · · · · · · · · · · · · · ·			
	Depth (inches):	Wetland Hydr	ology Present?	Yes O No 💿
(includes capillary fringe) Yes V No	Depth (inches):			
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previ	ous inspections), if avail	able:	
Remarks:				
iterial ks.				

VEGETATION - Use scientific names of plants

VEGETATION OSC Scientific fluines of pic	11103	Dominant Species?			Sampling Point: Up 11-1				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:				
1. Acer saccharum	50	V	83.3%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)				
2. Acer rubrum	10		16.7%	FAC	That are oblin from the control of t				
3		\Box	0.0%		Total Number of Dominant				
			0.0%		Species Across All Strata: 3 (B)				
4		\exists	0.0%		Percent of dominant Species				
5		\Box	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)				
6			0.0%		Prevalence Index worksheet:				
7			otal Cove		Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 15' radius)	60	= 10	otai Cove	ſ	$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
1Acer saccharum	10	✓	100.0%	FACU	FACW speciles 0 x 2 = 0				
2	0		0.0%						
3			0.0%		1770 Specifics x 0 =				
4	0		0.0%						
5	0		0.0%		UPL species x b =				
6			0.0%		Column Totals: 110 (A) 425 (B)				
7	0		0.0%		Prevalence Index = B/A = 3.864				
	10	= T	otal Cove	r	Hydrophytic Vegetation Indicators:				
Herb Stratum (Plot size: 5' radius)					Rapid Test for Hydrophytic Vegetation				
1. Acer saccharum	35	\	87.5%	FACU	☐ Dominance Test is > 50%				
2. Dryopteris Intermedia	5		12.5%	FAC	Prevalence Index is ≤3.0 ¹				
3	0	\sqcup	0.0%		Morphological Adaptations ¹ (Provide supporting				
4	0	\sqcup	0.0%		data in Remarks or on a separate sheet)				
5	0	Ш	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6	0		0.0%						
7	0	Ш	0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
8	0	Ш	0.0%						
9	0	Ш	0.0%		Definitions of Vegetation Strata:				
0	0	Ш	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1	0	Ш	0.0%		at breast height (DBH), regardless of height.				
2	0		0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and				
Woody Vine Stratum (Plot size: 30' radius)	40	= T	otal Cove	r	greater than 3.28 ft (1m) tall				
	0		0.0%		Llorb All borbossous (son woods) plants, regardless of				
1			-		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
2	0		0.0%						
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in				
4		_	0.0%		height.				
	0	= Te	otal Cove	r					
					Hydrophytic				
					Vegetation				
					Present? Yes V No V				
Remarks: (Include photo numbers here or on a separate sh	eet.)								

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 11-1

Depth (inches) Color (moist) % Color (moist) % Type Loc² Texture Remarks
0-5 7.5YR 3/2 100% Silt Loam
5-20+ 7.5YR 3/4 100% Silt Loam

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix
Hydric Soil Indicators: Indicators for Problematic Hydric Soils: 3
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) Black Histic (A3) Coast Prairie Redox (A16) (LRR K, L, R) Thin Dark Surface (S9) (LRR R, MLRA 149B)
Loamy Mucky Mineral (F1) LRR K, L)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Dalk Surface (S7) (LRR K, L, M) Polyuglus Polyus Surface (S9) (LRR K, L, M)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S0) (LRP K L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Muck Mineral (S1) Sendy Clayed Matrix (S4) Depleted Dark Surface (F7) Redox Depressions (F8) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Greyed Matrix (S4) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TE12)
Dark Curfoce (C7) (LDD D. MLDA 140D)
Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Remarks:
REHIDINS.

Project/Site: Gogebic Taconi	te Bulk Sample Sites and	d Access Roads	City/County:	Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic T	aconite			Sta	te: WI	Sampling Point: Wet 12-1
Investigator(s): Ann Michal	ski, PSS, PWS, WDNR PA	AWD	Section, To	ownship, Range:	s. 33 t.	T45N R. R1W
Landform (hillslope, terrace	, etc.): Toeslope		Local relief (co	oncave, convex, n	one): concave	Slope: 0.0 % / 0.0
Subregion (LRR or MLRA):	LRR K	Lat.:	46.331783	Long	90.501060	Datum: WGS84
Soil Map Unit Name: Michic					-	ication: PEM1
				s No		
Are climatic/hydrologic con			ear? Ye		(If no, explain in	·
Are Vegetation 🗹 , Soi	l ✓ , or Hydrold	ogy L significant	tly disturbed?	Are "Normal	Circumstances" p	present? Yes No
Are Vegetation $\ \ \ \ \ \ \ \ $, Soi	l 🗌 , or Hydrolo	ogy 🗌 naturally p	problematic?	(If needed, e	explain any answe	ers in Remarks.)
Summary of Finding			sampling p	oint location	s, transects,	important features, etc
Hydrophytic Vegetation Pre		No O				
Hydric Soil Present?	Yes 💿	No O		Sampled Area n a Wetland?	Yes No	
Wetland Hydrology Present	:? Yes 💿	No O				
Remarks: (Explain alterna	tive procedures here	or in a separate repo	ort.)			
Hydrology						
Wetland Hydrology Indicat	ors:				Secondary Indicato	ors (minimum of 2 required)
Primary Indicators (minim	um of one required;	check all that apply)			Surface Soil C	racks (B6)
Surface Water (A1)		✓ Water-Stained Lea	aves (B9)		Drainage Patte	erns (B10)
High Water Table (A2)		Aquatic Fauna (B1			Moss Trim Lin	• •
✓ Saturation (A3) Water Marks (B1)		Marl Deposits (B1				/ater Table (C2)
Sediment Deposits (B2)		Hydrogen SulfideOxidized Rhizosph	• •	Poots (C2)	Crayfish Burro	ible on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Reduc	0 0	ROOIS (CS)		ressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduc		s (C6)	✓ Geomorphic P	` '
Iron Deposits (B5)		Thin Muck Surface	e (C7)		Shallow Aquita	ard (D3)
Inundation Visible on Aeri		Other (Explain in I	Remarks)			phic Relief (D4)
Sparsely Vegetated Conca	ve Surface (B8)				✓ FAC-neutral T	est (D5)
Field Observations:						
Surface Water Present?	Yes O No 💿	Depth (inches):				
Water Table Present?	Yes No	Depth (inches):	-6			
Saturation Present? (includes capillary fringe)	Yes ● No ○	Depth (inches):	0	Wetland Hydr	ology Present?	Yes ● No ○
Describe Recorded Data (s	tream gauge, monito	ring well, aerial photo	os, previous ins	pections), if avail	able:	
Remarks:						

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of p	olants		ominant pecies?		Sampling Point: Wet 12-1
Tree Stratum (Plot size: 30' x 10')	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:
	0	$\overline{\Box}$	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
1			0.0%		That are OBL, FACW, or FAC: 2 (A)
2		\vdash	0.0%		Total Number of Dominant
3					Species Across All Strata: 2 (B)
4		Н	0.0%		Percent of dominant Species
5			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6		Н	0.0%		
7		Ш	0.0%		Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 30' x 10')	0	= T	otal Cove	er	Total % Cover of: Multiply by:
1 Fraxinus nigra	5	V	100.0%	FACW	OBL species $0 \times 1 = 0$ FACW species $15 \times 2 = 30$
2			0.0%		
3			0.0%		1 AC speci es
4			0.0%		FACU speci es $0 \times 4 = 0$
5			0.0%		UPL speci es $0 \times 5 = 0$
6			0.0%		Column Totals: 15 (A) 30 (B)
7			0.0%		Prevalence Index = B/A = 2.000
Herb Stratum (Plot size: 5' radius)		= T	otal Cove	er	Hydrophytic Vegetation Indicators:
<u> </u>					Rapid Test for Hydrophytic Vegetation
1. Onoclea sensibilis		✓	100.0%	FACW	✓ Dominance Test is > 50%
2	-		0.0%		✓ Prevalence Index is ≤3.0 ¹
3	0		0.0%		Morphological Adaptations ¹ (Provide supporting
4	0		0.0%		data in Remarks or on a separate sheet)
5	0	Ш	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
6	0		0.0%		
7	0		0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8			0.0%		
9	0		0.0%		Definitions of Vegetation Strata:
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
1	0		0.0%		at breast height (DBH), regardless of height.
2	0		0.0%		Sonling/obrub Woody plants loss than 2 in DPH and
Woody Vine Stratum (Plot size: 30' x 10')	10	= T	otal Cove	er	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of
2			0.0%		size, and woody plants less than 3.28 ft tall.
3			0.0%		
4			0.0%		Woody vine - All woody vines greater than 3.28 ft in height.
4		– т	otal Cove		Thoight.
		- '	otai CUVE		
					Hydrophytic Vegetation Vos No

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 12-1

Profile Descr	ription: (Des	cribe to	the depth	needed to	documen	t the indic	ator or co	nfirm the	absence of indicators.)	
Depth (inches)		Matrix		- Calou (dox Featu	ires	- 12		B yandan
	Color (n		%	Color (moist)	%	Туре	Loc ²	Texture	Remarks
0-7	7.5YR	3/2	100%	-	-	-	-	-	Silt Loam	
7-20+	7.5YR	5/2	75%	5YR	5/3	25%	C	M	Silty Clay Loam	
										_
									-	
	-							-		
1 Type: C. Con	econtration D	Donlotio	n DM Dod	used Matrix	CS Cover	od or Coata	od Sand Cr	nine 2l no	ation: PL=Pore Lining. M=N	
J.		=Depletio	iii. Rivi=Reu	uceu manix,	C3=C0Vei	eu or coate	eu Saliu Gra	all is -Luc		
Hydric Soil I				□ Doly	valua Pala	w Surface ((CO) (LDD E	1	Indicators for Prob	lematic Hydric Soils: 3
	pedon (A2)				value Beic (A 149B)	w Surface ((30) (LKK K	ι,		(LRR K, L, MLRA 149B)
Black Hist				Thir	Dark Surf	face (S9) (I	LRR R, MLR	RA 149B)		ox (A16) (LRR K, L, R)
_	Sulfide (A4)			Loa	my Mucky	Mineral (F1) LRR K, L)			or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loa	my Gleyed	Matrix (F2))		☐ Dark Surface (S7	
	Below Dark S	urface (A	.11)	✓ Dep	leted Matr	ix (F3)				Surface (S8) (LRR K, L)
	k Surface (A1		•	Red	ox Dark Su	urface (F6)			Thin Dark Surface	
Sandy Mu	uck Mineral (S	1)		Dep	leted Dark	Surface (F	7)			Masses (F12) (LRR K, L, R) ain Soils (F19) (MLRA 149B)
	eyed Matrix (S			Red	ox Depres	sions (F8)				6) (MLRA 144A, 145, 149B)
Sandy Re	dox (S5)								Red Parent Mater	
Stripped I	Matrix (S6)								☐ Very Shallow Dar	
☐ Dark Surf	ace (S7) (LRR	R R, MLRA	A 149B)						Other (Explain in	
³ Indicators of	f hydrophytic	vegetatio	n and wetla	nd hydrology	must be	present, un	less disturb	ed or prob		·
Restrictive L								·		
Type:	ayer (ii obse	ci vea j.								
Depth (inc	hes).								Hydric Soil Present?	Yes ● No ○
Remarks:										
Remarks.										

Project/Site: Gogebic Taconite Bulk Sample Sites an	d Access Roads City/Co	ounty: Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		Sta	te: WI	Sampling Point: Up 12-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR P	AWD Sec	tion, Township, Range:	s. 33 t. 7	
Landform (hillslope, terrace, etc.): sideslope		elief (concave, convex, n		Slope: 7.0 % / 4.0 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.3318	337 Long	90.501102	Datum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-P				cation: Upland
Are climatic/hydrologic conditions on the site ty		Yes ● No ○	(If no, explain in	
Are Vegetation , Soil , or Hydrole			Circumstances" p	
Are Vegetation , Soil , or Hydrole			-	
Summary of Findings - Attach site		,	explain any answe	
	No •	ing point location	s, transects,	important reatures, etc
, , ,	No •	Is the Sampled Area		
V (No •	within a Wetland?	Yes O No 💿	
Remarks: (Explain alternative procedures here				
Hydrology				
Wetland Hydrology Indicators:				rs (minimum of 2 required)
Primary Indicators (minimum of one required; Surface Water (A1)			Surface Soil Cr	
High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)		☑ Drainage Patte ☑ Moss Trim Line	
Saturation (A3)	Marl Deposits (B15)			ater Table (C2)
☐ Water Marks (B1)	Hydrogen Sulfide Odor (C1))	Crayfish Burro	ws (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along	g Living Roots (C3)	Saturation Visi	ble on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron ((C4)		essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Ti	illed Soils (C6)	Geomorphic Po	• ,
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)		Shallow Aquita Microtopograp	` '
Sparsely Vegetated Concave Surface (B8)	Uther (Explain in Remarks)		FAC-neutral Te	
Field Observations: Surface Water Present? Yes No No	Depth (inches):			
Water Table Present? Yes No •				
	Depth (inches):	Wetland Hydr	ology Present?	Yes O No 💿
(includes capillary fringe) Yes V No S	Depth (inches):			
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previ	ous inspections), if avail	able:	
Remarks:				
Remarks.				

VEGETATION -	Use scientific	names of	plants
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Re Re Re Re Re Re Re Re		FACU	Number of Dominant Species That are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of dominant Species That Are OBL, FACW, or FAC: 0 (A) (B)
	0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		That are OBL, FACW, or FAC: O (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 0 (A) (B)
✓	0.0% 0.0% 0.0% 0.0% 0.0%		Total Number of Dominant Species Across All Strata: Percent of dominant Species That Are OBL, FACW, or FAC: (B) (B)
✓	0.0% 0.0% 0.0% 0.0%		Species Across All Strata: 4 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
✓	0.0% 0.0% 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
✓	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
✓	0.0%		THAT ARE OBE, TAGW, OF TAG.
✓	0.0%		Barrel and Taller and Indian
✓	-		
			Prevalence Index worksheet: Total % Cover of: Multiply by:
	E0 00/	FACIL	0BL speci es 0 x 1 = 0
	50.0%	FACU	FACW species $0 \times 2 = 0$
	50.0%	FACU	FAC species $0 \times 3 = 0$
	0.0%		FACU speci es 145 x 4 = 580
	0.0%		
	0.0%		UPL species
Ш	0.0%		Column Totals: 150 (A) 605 (B)
	0.0%		Prevalence Index = $B/A = 4.033$
= T	otal Cover		Hydrophytic Vegetation Indicators:
V	85.7%	FACU	Rapid Test for Hydrophytic Vegetation
			☐ Dominance Test is > 50%
			Prevalence Index is ≤3.0 ¹
			☐ Morphological Adaptations ¹ (Provide supporting
			data in Remarks or on a separate sheet)
			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
			17.4
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0.0%		
Ш	0.0%		Definitions of Vegetation Strata:
	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
	0.0%		at breast height (DBH), regardless of height.
	0.0%		Conline (obsub Mondy plants less than 2 in DDI and
= T	otal Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
	0.0%		Herb - All herbaceous (non-woody) plants, regardless of
	0.0%		size, and woody plants less than 3.28 ft tall.
	0.0%		Was during All was during a greater than 2 20 ft in
	0.0%		Woody vine - All woody vines greater than 3.28 ft in height.
_ T			g
	∀	0.0% 0.0% 0.0% 0.0% ■ Total Cover ■ 85.7% □ 7.1% □ 0.0%	□ 0.0% □ 0.0% □ 0.0% = Total Cover ▼ 85.7% FACU □ 7.1% FACU □ 7.1% UPL □ 0.0%

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 12-1

Profile Desc	ription: (Des	cribe to	the depth	needed to document	the indicator or cor	nfirm the	absence of indicators.)	
Depth (inches)		Matrix		_	lox Features			
	Color (r		%	Color (moist)	% Type ¹	Loc²	Texture	Remarks
0-5	7.5YR	3/3	100%			-	very fine sandy Im	
5-20+	7.5YR	4/4	100%		<u> </u>	-	Sandy Loam	
							-	
-								
¹ Type: C=Cor	ncentration. D	=Depletio	n. RM=Red	uced Matrix, CS=Covere	d or Coated Sand Grai	ins ² Loca	ation: PL=Pore Lining. M=M	atrix
Hydric Soil	Indicators:						Indicators for Proble	ematic Hydric Soils: 3
Histosol ((A1)				v Surface (S8) (LRR R,			(LRR K, L, MLRA 149B)
Histic Epi	pedon (A2)			MLRA 149B)				ox (A16) (LRR K, L, R)
☐ Black His	tic (A3)				ace (S9) (LRR R, MLRA	A 149B)		or Peat (S3) (LRR K, L, R)
☐ Hydroger	n Sulfide (A4)				Mineral (F1) LRR K, L)		Dark Surface (S7)	
☐ Stratified	Layers (A5)			Loamy Gleyed I				furface (S8) (LRR K, L)
☐ Depleted	Below Dark S	urface (A	11)	Depleted Matrix			Thin Dark Surface	
☐ Thick Dai	rk Surface (A1	2)		Redox Dark Sur	• •			Masses (F12) (LRR K, L, R)
Sandy Mu	uck Mineral (S	1)		Depleted Dark			_	ain Soils (F19) (MLRA 149B)
Sandy Gl	eyed Matrix (S	64)		Redox Depressi	ions (F8)			b) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)						Red Parent Materi	
Stripped	Matrix (S6)						Very Shallow Dark	
☐ Dark Surf	face (S7) (LRF	R R, MLRA	A 149B)				Other (Explain in I	
³ Indicators o	f hydrophytic	vegetatio	n and wetla	nd hydrology must be p	resent, unless disturbe	ed or probl		·
Restrictive L				, ,,	<u> </u>			
	ayei (ii obse	erveu).						
Type: Depth (inc	-h						Hydric Soil Present?	Yes O No 💿
	nes):							
Remarks:								

Project/Site: Gogebic Taconite	Bulk Sample Sites and	d Access Roads	City/County:	Town of Anderson	Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Tac	conite			Stat	e: WI	Sampling Point: Wet 13-1
Investigator(s): Ann Michalsk	i, PSS, PWS, WDNR PA	AWD	Section, To	ownship, Range:	s. 33 t.	T45N R. R1W
Landform (hillslope, terrace,	etc.): Toeslope		Local relief (co	oncave, convex, n	one): concave	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA):	I RR K	 Lat.:	46.332304	Long	·· 90.500532	Datum: WGS84
Soil Map Unit Name: Michiga						ication: PEM1
				s No		
Are climatic/hydrologic condi			rear? Ye		(If no, explain in	, v 📵 n 🔾
Are Vegetation , Soil	, or Hydrolo	ogy L significant	tly disturbed?	Are "Normal	Circumstances" p	oresent? Yes No
Are Vegetation , Soil	, or Hydrold	ogy 🗌 naturally į	problematic?	(If needed, e	explain any answe	ers in Remarks.)
Summary of Findings			sampling p	oint location	s, transects,	, important features, etc
Hydrophytic Vegetation Pres		No O				
Hydric Soil Present?		No O		e Sampled Area n a Wetland?	Yes ● No C)
Wetland Hydrology Present?	Yes	No O				
Remarks: (Explain alternat	ve procedures here	or in a separate repo	ort.)			
Hydrology						
Wetland Hydrology Indicato					Secondary Indicato	ors (minimum of 2 required)
Primary Indicators (minimur	n of one required;	check all that apply)			Surface Soil C	• •
✓ Surface Water (A1)✓ High Water Table (A2)		✓ Water-Stained Lea			Drainage Patte	• •
✓ High Water Table (A2) ✓ Saturation (A3)		Aquatic Fauna (B1 Marl Deposits (B1	•		Moss Trim Lin	les (B16) /ater Table (C2)
Water Marks (B1)		Hydrogen Sulfide	•		Crayfish Burro	• •
Sediment Deposits (B2)		Oxidized Rhizosph	. ,	Roots (C3)		ible on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Redu		110013 (00)		ressed Plants (D1)
☐ Algal Mat or Crust (B4)		Recent Iron Redu		s (C6)	✓ Geomorphic P	Position (D2)
Iron Deposits (B5)		Thin Muck Surface	e (C7)		Shallow Aquita	ard (D3)
Inundation Visible on Aerial		Other (Explain in	Remarks)			phic Relief (D4)
Sparsely Vegetated Concav	e Surface (B8)				✓ FAC-neutral T	est (D5)
Field Observations:						
Surface Water Present?	Yes O No 💿	Depth (inches):				
Water Table Present?	Yes No	Depth (inches):	-2			
Saturation Present? (includes capillary fringe)	Yes • No O	Depth (inches):	0	Wetland Hydr	ology Present?	Yes No
Describe Recorded Data (str	eam gauge, monito	ring well, aerial photo	os, previous ins	pections), if avail	able:	
Remarks:						

VEGETATION -	Use scientific	names of	plants
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lants		ominant pecies?		Sampling Point: Wet 13-1
Absolute % Cover	R	el.Strat.	Indicator Status	Dominance Test worksheet:
	_			Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
			TAOW	That are OBE, FACW, OF FAC.
	П			Total Number of Dominant
	\Box			Species Across All Strata: 4 (B)
	П			Percent of dominant Species
	П			That Are OBL, FACW, or FAC: 75.0% (A/B)
	П			Prevalence Index worksheet:
	= T		r	Total % Cover of: Multiply by:
				OBL species 60 x 1 = 60
				FACW species 9 x 2 = 18
				FAC species 5 x 3 = 15
			FACW	FACU speci es 10 x 4 = 40
		0.0%		UPL species $0 \times 5 = 0$
		0.0%		ort species X 5 =
		0.0%		Column Totals: 84 (A) 133 (B)
	Ш	0.0%		Prevalence Index = B/A = 1.583
14	= T	otal Cove	r	Hydrophytic Vegetation Indicators:
20	V	30.8%	OBL	Rapid Test for Hydrophytic Vegetation
35	V	53.8%	OBL	✓ Dominance Test is > 50%
		7.7%	OBL	V Prevalence Index is ≤3.0 ¹
		7.7%	FAC	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
		0.0%		Problematic Trydrophytic Vegetation (Explain)
		0.0%		$^{ m 1}$ Indicators of hydric soil and wetland hydrology must
		0.0%		be present, unless disturbed or problematic.
		0.0%		Definitions of Vegetation Strata:
		0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
		0.0%		at breast height (DBH), regardless of height.
		0.0%		
65	= T	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
0	П	0.0%		Herb - All herbaceous (non-woody) plants, regardless of
0		0.0%		size, and woody plants less than 3.28 ft tall.
	\Box	0.0%		Manda de la Contraction de la
		-		Woody vine - All woody vines greater than 3.28 ft in
0		0.0%		height.
	S Cover	% Cover Cover 5 ✓ 0 □ 0 □ 0 □ 0 □ 0 □ 10 ✓ 2 □ 0 □	% Cover Cover 5 ✓ 100.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 5 = Total Cove 10 ✓ 71.4% 2 14.3% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 14 = Total Cove 20 ✓ 30.8% 35 ✓ 53.8% 5 7.7% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0	% Cover Cover Status 5 ✓ 100.0% FACW 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% FACU 2 14.3% FACW 0 0.0% FACW 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% 0.0% 0 0.0% <td< td=""></td<>

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 13-1

Profile Descr	iption: (Desc	ribe to	the depth	needed to document t	he indicator or cor	firm the a	absence of indicators.)	
Depth		Matrix			ox Features			
(inches)	Color (m	oist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-4	7.5YR	2.5/1	100%			-	Silt Loam	
4-7	7.5YR	5/2	100%			-	Silt Loam	
7+		-	-			-	Rock	
					 -			
1 Type: C=Cond	centration D=	Depletion	n RM=Red	uced Matrix, CS=Covered	or Coated Sand Grai	ns 2locat	tion: PL=Pore Lining. M=Ma	atrix
Hydric Soil I		Depiction	i. rawi–racu	adda Matrix, 05-00veree	Tor obdited baria Grai	113 2000		2
Histosol (/				Polyvalue Below	Surface (S8) (LRR R,		Indicators for Proble	anade Hyune Sons .
	pedon (A2)			MLRA 149B)	Surface (SO) (ERR R,			LRR K, L, MLRA 149B)
Black Hist				☐ Thin Dark Surfac	e (S9) (LRR R, MLRA	A 149B)		(A16) (LRR K, L, R)
	Sulfide (A4)			Loamy Mucky M	neral (F1) LRR K, L)			r Peat (S3) (LRR K, L, R)
	Layers (A5)			Loamy Gleyed M	atrix (F2)		Dark Surface (S7)	
	Below Dark Su	rface (A1	11)	Depleted Matrix	(F3)			urface (S8) (LRR K, L)
_	k Surface (A12		,	Redox Dark Surf	ace (F6)		Thin Dark Surface (
	ck Mineral (S1)			Depleted Dark S	urface (F7)		_	asses (F12) (LRR K, L, R)
	yed Matrix (S4			Redox Depression	ons (F8)			n Soils (F19) (MLRA 149B)
Sandy Red		• /						(MLRA 144A, 145, 149B)
	Matrix (S6)						Red Parent Materia	, ,
_	ace (S7) (LRR	R, MLRA	149B)				✓ Very Shallow Dark✓ Other (Explain in Remark)	
31	: h						· ·	emarks)
			i and wella	nd hydrology must be pr	esent, uniess disturbe	ed of proble	ematic.	
Restrictive La		rved):						
Type: Ro							Hydric Soil Present?	Yes ● No ○
Depth (inch	nes):_7						Tryunc Son Tresents	res C NO C
Remarks:								
						o shallow	rock. However, hydric s	oils were assumed based on
wetland hydro	ology and hy	dric vec	jetation b	eing present and geor	norphic position.			

Project/Site: Gogebic Taconite Bulk Sample Sites and Access R	oads City/County: Town of Ander	son, Iron Co. Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		State: WI Sampling Point: Up 13-1
Investigator(s): Ann Michalski, PSS, PWS, WDNR PAWD	Section, Township, Rang	e: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): sideslope	Local relief (concave, conve	
Subregion (LRR or MLRA): LRR K		ong.: 90.500687
		70.00000.
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-F		NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for t	his time of year? Yes No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norr	nal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology	naturally problematic? (If neede	d, explain any answers in Remarks.)
Summary of Findings - Attach site map s	howing sampling point locati	ons, transects, important features, etc
Hydrophytic Vegetation Present? Yes No •	To the Committed Association	
Hydric Soil Present? Yes No •	Is the Sampled Area within a Wetland?	Yes O No 💿
Wetland Hydrology Present? Yes No No		
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all	that apply)	Secondary Indicators (minimum of 2 required) Surface Soil Cracks (B6)
	er-Stained Leaves (B9)	Drainage Patterns (B10)
	atic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)	Deposits (B15)	☐ Dry Season Water Table (C2)
Water Marks (B1)	rogen Sulfide Odor (C1)	Crayfish Burrows (C8)
	lized Rhizospheres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
	ence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	ent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
	Muck Surface (C7)	Shallow Aquitard (D3)
Sparsely Vegetated Concave Surface (B8)	er (Explain in Remarks)	
sparsory registated contester surface (20)		TAG-neutral rest (D3)
Field Observations: Surface Water Present? Yes No • De	epth (inches):	
	epth (inches): Wetland H	ydrology Present? Yes O No 🗨
Saturation Present? Yes No De	epth (inches):	,,
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if a	vailable:
Remarks:		

VEGETATION - Use scientific names of plants

VEGETATION OSC SCICILITIE Humes of pi	uncs	Dominant Species?			Sampling Point: Up 13-1				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:				
1 Acer saccharum	50	V	76.9%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)				
C. Tille annual annual	15	✓	23.1%	FACU	That are obt, FAOW, of FAO.				
3.			0.0%	17100	Total Number of Dominant				
			0.0%		Species Across All Strata: 5 (B)				
4		H	0.0%		Percent of dominant Species				
5			0.0%		That Are OBL, FACW, or FAC: 20.0% (A/B)				
6		\Box	0.0%		Prevalence Index worksheet:				
<i>1</i>		_ T	otal Cove		Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 15' radius)		- 10	otal Cove	!	0BL speciles 0 x 1 = 0				
1Acer saccharum	30	~	100.0%	FACU					
2	0		0.0%						
3			0.0%		1770 Specifics				
4	0		0.0%		Theo species x 4				
5	0		0.0%		UPL species x 5 =				
6			0.0%		Column Totals: 140 (A) 550 (B)				
7			0.0%		Prevalence Index = B/A = 3.929				
		= Te	otal Cove	r	Hydrophytic Vegetation Indicators:				
Herb Stratum (Plot size: 5' radius)					Rapid Test for Hydrophytic Vegetation				
1. Acer saccharum	35	~	77.8%	FACU	Dominance Test is > 50%				
2. Dryopteris intermedia	10	✓	22.2%	FAC	Prevalence Index is ≤3.0 ¹				
3	0		0.0%		Morphological Adaptations ¹ (Provide supporting				
4	0		0.0%		data in Remarks or on a separate sheet)				
5	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6	0		0.0%						
7	0		0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
8			0.0%						
9			0.0%		Definitions of Vegetation Strata:				
0	0		0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1	0		0.0%		at breast height (DBH), regardless of height.				
2	0		0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and				
Woody Vine Stratum (Plot size: 30' radius)	45	= T	otal Cove	r	greater than 3.28 ft (1m) tall.				
			0.007		Hart All barbarasa (assumed barbara assumed barbara				
1			0.0%		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
2			0.0%		ones, and need, plante less than eneed it tain				
3			0.0%		Woody vine - All woody vines greater than 3.28 ft in				
4		_	0.0%		height.				
	0	= Te	otal Cove	r					
					Hydrophytic				
					Vegetation V				
					Present? Yes O No O				
Remarks: (Include photo numbers here or on a separate s	heet.)								

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 13-1

Profile Desci	ription: (Des	cribe to	the depth	needed to document	the indicator or con	firm the	absence of indicators.)	
Depth (inches)		Matrix			ox Features			
	Color (n		%	Color (moist)	% Type ¹	Loc²	Texture	Remarks
0-3	7.5YR	3/2	100%				very fine sandy Im	
3-20+	7.5YR	3/3	100%			-	fine sandy Im	
			-				-	
		=Depletio	on. RM=Red	luced Matrix, CS=Covered	d or Coated Sand Grai	ns ² Loca	ation: PL=Pore Lining. M=M	
Hydric Soil							Indicators for Proble	ematic Hydric Soils: ³
Histosol (☐ Polyvalue Below MLRA 149B)	Surface (S8) (LRR R,		2 cm Muck (A10)	(LRR K, L, MLRA 149B)
	ipedon (A2)				ce (S9) (LRR R, MLRA	149R)	Coast Prairie Redo	x (A16) (LRR K, L, R)
Black His					lineral (F1) LRR K, L)	(1476)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)			Loamy Gleyed M			Dark Surface (S7)	(LRR K, L, M)
	Layers (A5)		11)	Depleted Matrix			Polyvalue Below S	urface (S8) (LRR K, L)
	Below Dark Surk Surk Surface (A1:		111)	Redox Dark Surl			Thin Dark Surface	
	•	•		Depleted Dark S			_	Masses (F12) (LRR K, L, R)
	uck Mineral (S1 eyed Matrix (S			Redox Depression				nin Soils (F19) (MLRA 149B)
Sandy Re		4)) (MLRA 144A, 145, 149B)
	Matrix (S6)						Red Parent Materi	
	face (S7) (LRR	R. MLRA	\ 149B)				Very Shallow Dark	
							Other (Explain in F	Remarks)
			n and wetta	and hydrology must be pr	esent, uniess disturbe	a or probl	ematic.	
Restrictive L	ayer (if obse	erved):						
Type:							Hydric Soil Present?	Yes ○ No •
Depth (inc	ches):						nyunc son Presents	Yes Uno S
Remarks:								

Project/Site: Gogebic Taconite Bulk Samp	ple Sites and Access Roads	City/County: Town of Ande	rson, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite			State: WI	Sampling Point: Wet 14-1
Investigator(s): Ann Michalski, PSS, PWS	S, WDNR PAWD	Section, Township, Rang	ge: S . 33 T .	T45N R. R1W
Landform (hillslope, terrace, etc.): To	peslope	Local relief (concave, conve	ex, none): concave	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR K	Lat.:	46.332976 L	.ong.: 90.496605	Datum: WGS84
Soil Map Unit Name: Tula-Gogebic Co				fication: PEM1
-		ear? Yes No		
Are climatic/hydrologic conditions on t			(If no, explain i	, , , , , , , , , , , , , , , , , , ,
	or Hydrology significant	ly disturbed? Are "Nor	mal Circumstances"	present? Tes S NO C
Are Vegetation	or Hydrology naturally p	problematic? (If need	ed, explain any answ	ers in Remarks.)
Summary of Findings - Atta	<u> </u>	sampling point locat	ions, transects	, important features, etc
7 7	Yes No			
Hydric Soil Present?	Yes No	Is the Sampled Are within a Wetland?	a Yes 💿 No 🤇	
Wetland Hydrology Present?	Yes No			
Remarks: (Explain alternative proced	dures here or in a separate repo	rt.)		
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicat	ors (minimum of 2 required)
Primary Indicators (minimum of one	required; check all that apply)		Surface Soil (• •
✓ Surface Water (A1)✓ High Water Table (A2)	Water-Stained Lea	, ,	☐ Drainage Pat	, ,
✓ High Water Table (A2)✓ Saturation (A3)	Aquatic Fauna (B1		Moss Trim Li	• •
Water Marks (B1)	Marl Deposits (B15	•	Crayfish Burr	Vater Table (C2)
Sediment Deposits (B2)	☐ Hydrogen Sulfide (eres along Living Roots (C3)		sible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduc		=	ressed Plants (D1)
Algal Mat or Crust (B4)		ction in Tilled Soils (C6)	✓ Geomorphic	` '
☐ Iron Deposits (B5)	Thin Muck Surface	. ,	Shallow Aqui	tard (D3)
Inundation Visible on Aerial Imagery ((B7) Other (Explain in F	Remarks)	Microtopogra	phic Relief (D4)
Sparsely Vegetated Concave Surface ((B8)		✓ FAC-neutral	Test (D5)
Field Observations:				
Surface Water Present? Yes	No Depth (inches):			
Water Table Present? Yes	No O Depth (inches):	-2		
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):	Wetland H	lydrology Present?	Yes ● No ○
Describe Recorded Data (stream gaug	ge, monitoring well, aerial photo	os, previous inspections), if a	available:	
Remarks:				

VEGETATION -	Use scientific	names of	plants
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Tree Stratum (Plot size: 30' radius) 1. Betula alleghanlensis 2. 3. 4. 5.	Absolute % Cover 5 0 0	R	over	Indicator Status FAC	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 8 (A)
1. Betula alleghaniensis 2. 3. 4.	5 0 0		100.0%		
234	0			FAC	That are OBL, FACW, or FAC: 8 (A)
3 4	0	Ш			
4					Total Number of Dominant
	_		0.0%		Species Across All Strata: 10 (B)
5			0.0%		Percent of dominant Species
			0.0%		That Are OBL, FACW, or FAC: 80.0% (A/B)
6			0.0%		
7	0	Ш	0.0%		Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15' radius)	5	= T	otal Cove	r	Total % Cover of: Multiply by: OBL speciles 90 x 1 = 90
1 Acer saccharum	5	~	33.3%	FACU	FACW species $\frac{70}{55}$ x 2 = $\frac{70}{110}$
2. Betula alleghaniensis	5	✓	33.3%	FAC	
3. Carpinus caroliniana	5	✓	33.3%	FAC	20 00
4	0		0.0%		1 Aco speci es
5	0		0.0%		UPL Species x 5 =
6			0.0%		Column Totals: 180 (A) 325 (B)
7	0		0.0%		Prevalence Index = B/A = 1.806
Herb Stratum (Plot size: 5' radius)	15	= T	otal Cove	r	Hydrophytic Vegetation Indicators:
		✓	07.50/	OBL	Rapid Test for Hydrophytic Vegetation
1. Glyceria striata	60		37.5%	OBL	✓ Dominance Test is > 50%
2. Carex scoparia		✓	12.5%	FACW	✓ Prevalence Index is ≤3.0 ¹
3. Carex crinita	15	✓	9.4%	OBL	Morphological Adaptations ¹ (Provide supporting
4. Rubus idaeus ssp. strigosus	15	✓	9.4%	FACU	data in Remarks or on a separate sheet)
5. Scirpus cyperinus	15	V	9.4%	OBL	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
6. Symphyotrichum lateriflorum var. lateriflorum	15	✓	9.4%	FACW	¹ Indicators of hydric soil and wetland hydrology must
7. Solidago gigantea			6.3%	FACW	be present, unless disturbed or problematic.
8. Equisetum sylvaticum			6.3%	FACW	Definitions of Vegetation Strata:
9	0		0.0%		
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1			0.0%		at bleast fielght (DBH), fegaluless of fielght.
2		 = T/	otal Cove		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size: 30' radius)				-	greater than 3.28 ft (1m) tall
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of
2	0		0.0%		size, and woody plants less than 3.28 ft tall.
3	0_		0.0%		Woody vine - All woody vines greater than 3.28 ft in
4	0_		0.0%		height.
	0	= T	otal Cove	r	

Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Wet 14-1

Profile Desci	ription: (Des	cribe to	the depth	needed to document	the indic	ator or co	nfirm the a	absence of indicators.)			
Depth	_	Matrix	_	Rec	dox Featu			_			
(inches)	Color (r	noist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks		
0-10	7.5YR	3/1	100%			-	-	Silt Loam			
10+		-	-		-		-	Rock			
								-			
			-					-			
1											
		=Depletio	n. RM=Rec	luced Matrix, CS=Covere	ed or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=M	atrix		
Hydric Soil								Indicators for Proble	ematic Hydric Soils: ³		
Histosol (• ,			☐ Polyvalue Belov MLRA 149B)	v Surface	(S8) (LRR R	,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)		
	pedon (A2)			☐ Thin Dark Surfa	ace (S9) (IRR R. MIR.	A 149B)	Coast Prairie Redo	x (A16) (LRR K, L, R)		
☐ Black His				Loamy Mucky M				5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)		
	Sulfide (A4)			Loamy Gleyed I				Dark Surface (S7) (LRR K, L, M)			
	Layers (A5) Below Dark S	Curfoco (A	11\	Depleted Matrix		,		Polyvalue Below Surface (S8) (LRR K, L)			
	rk Surface (A1	•	11)	Redox Dark Sur				Thin Dark Surface (S9) (LRR K, L)			
	uck Mineral (S	•		Depleted Dark	, ,	7)		☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
	eyed Matrix (S			Redox Depress				Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy Re		54)						Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
	Matrix (S6)							Red Parent Materi	• •		
	face (S7) (LRF	R R, MLRA	149B)					Very Shallow Dark ✓ Other (Explain in F			
								_ ` '	Remarks)		
			n and wetta	and hydrology must be p	resent, un	iless disturbe	ea or proble	ematic.			
Restrictive L		erved):									
Type: R	ock							Hydric Soil Present?	Yes ● No ○		
Depth (inc	thes):_10							nyunc son Presents	Yes S NO C		
Remarks:											
	ology and h								soils were assumed based on location are not typical of upland		

Project/Site: Gogebic Taconite Bulk Sample Si	tes and Access Roads	City/County:	Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite			Sta	te: WI	Sampling Point: Up 14-1
Investigator(s): Ann Michalski, PSS, PWS, WI	ONR PAWD	Section, To	wnship, Range:	s. 33 t.	T45N R. R1W
Landform (hillslope, terrace, etc.): sideslo	ppe	Local relief (co	ncave, convex, n	one): convex	Slope: 3.0 % / 1.7 °
Subregion (LRR or MLRA): LRR K	Lat.:	46.333067	Long	90.496739	
Soil Map Unit Name: Gogebic Silt Loam, 6					fication: Upland
	1 7 3 3		. • No •	_	<u>.</u>
Are climatic/hydrologic conditions on the s	ite typical for this time of y	ear? Yes	No U	(If no, explain in	
Are Vegetation , Soil , or H	ydrology L significant	ly disturbed?	Are "Normal	Circumstances" ¡	present? Yes No
Are Vegetation \square , Soil \checkmark , or H	ydrology 🗌 naturally p	roblematic?	(If needed, e	explain any answ	ers in Remarks.)
Summary of Findings - Attach	site map showing s	ampling po	int location	s, transects	, important features, etc
Hydrophytic Vegetation Present? Yes					
Hydric Soil Present? Yes			Sampled Area a Wetland?	Yes ○ No ●	
Wetland Hydrology Present? Yes	O No 💿				
Hudralagy					
Hydrology					
Wetland Hydrology Indicators:					ors (minimum of 2 required)
Primary Indicators (minimum of one requ Surface Water (A1)		(DO)		Surface Soil C	
High Water Table (A2)	Water-Stained Lea☐ Aquatic Fauna (B1			☑ Drainage Patt☑ Moss Trim Lir	
Saturation (A3)	Marl Deposits (B15				Vater Table (C2)
Water Marks (B1)	Hydrogen Sulfide (Crayfish Burro	
Sediment Deposits (B2)	Oxidized Rhizosph		Roots (C3)	Saturation Vis	sible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduc	ed Iron (C4)		Stunted or Str	ressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduc	tion in Tilled Soils	(C6)	Geomorphic F	• •
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface	` ,		Shallow Aquit	
Sparsely Vegetated Concave Surface (B8)	Other (Explain in F	Remarks)		FAC-neutral T	phic Relief (D4)
Sparsery Vegetated contains Surface (20)				TAC-neutral 1	est (DJ)
Field Observations: Surface Water Present? Yes No	O Doodh (inches)				
Water Table Present? Yes No	, ,		Wetland Hvdr	ology Present?	Yes ○ No ●
Saturation Present? (includes capillary fringe) Yes No	Depth (inches):				
Describe Recorded Data (stream gauge, n	nonitoring well, aerial photo	os, previous insp	pections), if avail	able:	
Remarks:					

VEGETATION - Use scientific names of pia	ants	DominantSpecies?			Sampling Point: Up 14-1				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:				
1. Acer saccharum	25	V	38.5%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)				
2. Betula alleghaniensis	25	V	38.5%	FAC					
3. Fraxinus pennsylvanica	15	V	23.1%	FACW	Total Number of Dominant Species Across All Strata: 6 (B)				
4			0.0%		Species Across Air Strata.				
5	0		0.0%		Percent of dominant Species				
6			0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)				
7			0.0%		Prevalence Index worksheet:				
Sapling/Shrub Stratum (Plot size: 15' radius)		= T	otal Cove	r	Total % Cover of: Multiply by:				
1 Betula alleghaniensis	40	✓	100.0%	FAC	0BL species 0 x 1 = 0				
2.			0.0%		FACW species15				
3		\Box	0.0%		FAC species $70 \times 3 = 210$				
4			0.0%		FACU speci es 35 x 4 = 140				
5			0.0%		UPL species $0 \times 5 = 0$				
6			0.0%		Column Totals: 120 (A) 380 (B)				
7			0.0%		Prevalence Index = B/A = 3.167				
		 _ т.	otal Cove						
Herb Stratum (Plot size: 5' radius)	40	_	otal Cove	•	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation				
1. Acer saccharum	10	\	66.7%	FACU	✓ Dominance Test is > 50%				
2. Dryopteris intermedia	5	✓	33.3%	FAC	Prevalence Index is \$3.0 1				
3	0		0.0%						
4			0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
5	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6			0.0%						
7			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
8			0.0%						
9			0.0%		Definitions of Vegetation Strata:				
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1			0.0%		at breast height (DBH), regardless of height.				
2			0.0%		Capling/abruh Waady planta laga than 2 in DDII and				
Woody Vine Stratum (Plot size: 30' radius)	15	= T	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall				
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
2			0.0%		size, and woody plants less than 3.28 ft tall.				
3			0.0%						
4			0.0%		Woody vine - All woody vines greater than 3.28 ft in height.				
4.		 = T	otal Cove	 r	Troight.				
					Hydrophytic				
					Vegetation Present? Yes No No				

Remarks: (Include photo numbers here or on a separate sheet.)

Hydric vegetation is present in this area but primarily due to FAC species which are common in the rocky areas of this site.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Up 14-1

Profile Desc	ription: (Describe t	o the depth	needed to document the in	ndicator or con	firm the	absence of indicators.)	
Depth (inches)	Matrix		Redox Fe				D yaulta
	Color (moist)	%	Color (moist) 9/	6 Type 1	LOC ²	Texture	Remarks
0-12	7.5YR 3/2	100%		-	-	Silt Loam	
12+					-	Rock	
						-	
						P	
						-	
						-	
						-	
¹ Type: C=Cor	ncentration. D=Deplet	ion. RM=Redu	iced Matrix, CS=Covered or C	oated Sand Grai	ns ² Loca	ation: PL=Pore Lining. M=N	
Hydric Soil	·		<u> </u>				lematic Hydric Soils: 3
Histosol (Polyvalue Below Surfa	ace (S8) (LRR R,			
	ipedon (A2)		MLRA 149B)				(LRR K, L, MLRA 149B)
☐ Black His			☐ Thin Dark Surface (S9		149B)		ox (A16) (LRR K, L, R) or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Mucky Mineral			Dark Surface (S7)	
☐ Stratified	Layers (A5)		Loamy Gleyed Matrix	(F2)			Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Matrix (F3)	F.()		Thin Dark Surface	
Thick Dai	rk Surface (A12)		Redox Dark Surface (•			Masses (F12) (LRR K, L, R)
	uck Mineral (S1)		☐ Depleted Dark Surface ☐ Redox Depressions (F			Piedmont Floodpl	ain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		☐ Redux Depressions (F	·o)		Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)
Sandy Re						Red Parent Mater	ial (F21)
	Matrix (S6)	DA 4.40D)				Very Shallow Dar	k Surface (TF12)
	face (S7) (LRR R, MLF					Other (Explain in	Remarks)
³ Indicators o	of hydrophytic vegetat	ion and wetla	nd hydrology must be present	, unless disturbe	d or probl	ematic.	
Restrictive L	ayer (if observed):	:					
Type: R	lock						
Depth (inc	ches): 12					Hydric Soil Present?	Yes ○ No •
Remarks:							

Project/Site: Gogebic Taconite Bulk Sample	e Sites	City/County: Town of Andersor	n, Iron Co.	Sampling Date: 24-May-13
Applicant/Owner: Gogebic Taconite		Sta	te: WI	Sampling Point: Site 1-1
Investigator(s): Ann Michalski, WDNR Pro	f. Assured	Section, Township, Range:	s. 33 T. 7	Γ45N R. R1W
Landform (hillslope, terrace, etc.): sun	nmit	Local relief (concave, convex, r	none): convex	Slope: 6.0 % / 3.4 °
Subregion (LRR or MLRA): LRR K	Lat.:	46.331281 Lon	90.501730	Datum: WGS84
Soil Map Unit Name: Michigamme-Schw			-	ication: Upland
	<u> </u>			<u> </u>
Are climatic/hydrologic conditions on th			(If no, explain in	, v
Are Vegetation, Soil, o	r Hydrology 🔲 significantl	ly disturbed? Are "Normal	Circumstances" p	resent? Yes No
Are Vegetation , Soil , o	r Hydrology 🔲 naturally p	roblematic? (If needed,	explain any answe	ers in Remarks.)
Summary of Findings - Attac		ampling point location	s, transects,	important features, etc
7 7	es O No O	To the Sampled Area	_	
l [*]	es O No O	Is the Sampled Area within a Wetland?	Yes 🔾 No 🗨	
Wetland Hydrology Present?	es O No 💿			
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicato	rs (minimum of 2 required)
Primary Indicators (minimum of one re	equired; check all that apply)		Surface Soil Cr	
Surface Water (A1)	Water-Stained Leav	ves (B9)	☐ Drainage Patte	• /
High Water Table (A2)	Aquatic Fauna (B13	• •	Moss Trim Line	es (B16)
Saturation (A3)	Marl Deposits (B15)		ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide C		Crayfish Burro	` '
Sediment Deposits (B2)		eres along Living Roots (C3)		ble on Aerial Imagery (C9)
Drift deposits (B3) Algal Mat or Crust (B4)	Presence of Reduce	• •		essed Plants (D1)
Iron Deposits (B5)		tion in Tilled Soils (C6)	Geomorphic Position Shallow Aquita	• •
Inundation Visible on Aerial Imagery (B'	Thin Muck Surface Other (Explain in R	` '	Microtopograp	
Sparsely Vegetated Concave Surface (B	U Other (Explain in K	erriarks)	FAC-neutral Te	
Field Observations: Surface Water Present? Yes	No Depth (inches):			
	1 , ,	Wetland Hyd	rology Present?	Yes ○ No •
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):			
Describe Recorded Data (stream gauge	e, monitoring well, aerial photo	s, previous inspections), if avai	lable:	
Domonto				
Remarks:				

VEGETATION -	Use	scientific	names	of	plants
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VEGETATION OSC Scientific flumes of p	, idiics	ominant pecies?		Sampling Point: Site 1-1				
Tree Stratum (Plot size: _30' radius)	Absolute % Cover	R		Indicator Status				
1 Acer saccharum	60	✓	80.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)			
2. Betula alleghaniensis	15	✓		FAC				
3		\Box	0.0%		Total Number of Dominant			
4		\Box	0.0%		Species Across All Strata: 6 (B)			
		\Box	0.0%		Percent of dominant Species			
5		П	0.0%		That Are OBL, FACW, or FAC: 33.3% (A/B)			
6		П	0.0%		Dunin law on Trades a control of the			
7					Prevalence Index worksheet: Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 15' radius)	75	= 1	otal Cove	er				
1 Acer saccharum	25	V	71.4%	FACU	0BL speci es 0 x 1 = 0			
2 Betula alleghaniensis	10	\checkmark	28.6%	FAC	FACW species $0 \times 2 = 0$			
3			0.0%		FAC speciles 25 x 3 = 75			
4			0.0%		FACU speci es $\frac{110}{}$ x 4 = $\frac{440}{}$			
		\Box	0.0%		UPL species $\frac{15}{}$ x 5 = $\frac{75}{}$			
5			0.0%		Column Totals: 150 (A) 590 (B)			
6			0.0%		2022			
7					Prevalence Index = B/A = 3.933			
Herb Stratum (Plot size: 5' radius)	35	= 1	otal Cove	er .	Hydrophytic Vegetation Indicators:			
1 Cardamine concatenata	15	V	37.5%	FACU	Rapid Test for Hydrophytic Vegetation			
Carex pensylvanica		✓		UPL	☐ Dominance Test is > 50%			
•			12.5%	FACU	Prevalence Index is ≤3.0 ¹			
0			12.5%	FACU	☐ Morphological Adaptations ¹ (Provide supporting			
4. Allium tricoccum			1	FACU	data in Remarks or on a separate sheet)			
5			0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)			
6		Н	0.0%		1 Tudiestone of budgie seil and wetland budgeless much			
7			0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
8			0.0%		Definitions of Vegetation Strata:			
9			0.0%		Definitions of Vegetation Strata.			
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter			
1		Ш	0.0%		at breast height (DBH), regardless of height.			
2			0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and			
Woody Vine Stratum (Plot size: 30 ' radius)	40	= T	otal Cove	er	greater than 3.28 ft (1m) tall			
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4	0		0.0%		height.			
	0	= T	otal Cove	er				
					Hudvanhutic			
					Hydrophytic Vegetation Present? Yes No No			
Remarks: (Include photo numbers here or on a separate	sheet.)							

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Site 1-1

	iption: (Des	cribe to	the depth	needed to document	the indicator or con	firm the a	absence of indicators.)		
Depth (inches)	" Color ("	Matrix			ox Features $\frac{1}{1}$. Tavduus	Remarks	
	Color (r			Color (moist)	% Type ¹	LOC2	Texture	Kemarks	
0-5	7.5YR	3/2	100%				Sandy Loam		
5-20+	7.5YR	3/4	100%		<u> </u>	-	Sandy Loam		
							-		
							-		
1 Type: C=Cond	contration D	-Depletio	n DM-Ded	uced Matrix CS-Covered	d or Coated Sand Grai	ns 21 oca	tion: PL=Pore Lining. M=M	atriv	
Hydric Soil I		-Depletion	II. KWI-KEO	uced Matrix, C3=Covered	d or coated Sand Oral	113 LOCA	-	2	
Histosol (Polyvaluo Polov	Surface (S8) (LRR R,		Indicators for Proble		
_ `	pedon (A2)			MLRA 149B)	Surface (30) (LIKICIK,			(LRR K, L, MLRA 149B)	
Black Hist				☐ Thin Dark Surfa	ce (S9) (LRR R, MLRA	149B)		x (A16) (LRR K, L, R)	
	Sulfide (A4)			Loamy Mucky M	ineral (F1) LRR K, L)			or Peat (S3) (LRR K, L, R)	
	Layers (A5)			Loamy Gleyed N	latrix (F2)		☐ Dark Surface (S7)		
	Below Dark S	Surface (A	11)	Depleted Matrix	(F3)			urface (S8) (LRR K, L)	
	k Surface (A1			Redox Dark Sur	face (F6)		Thin Dark Surface		
☐ Sandy Mu	ck Mineral (S	1)		Depleted Dark S			☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gle	eyed Matrix (S	64)		Redox Depression	ons (F8)) (MLRA 144A, 145, 149B)	
Sandy Red	dox (S5)						Red Parent Materia		
Stripped N	Matrix (S6)						Very Shallow Dark		
☐ Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in F		
³ Indicators of	hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturbe	d or proble			
Restrictive La						·			
Type:	ayer (ii obs	ci vcu j.							
Depth (incl	hes):						Hydric Soil Present?	Yes O No 💿	
Remarks:									
No redoximor	nhic footur	os absor	rod.						
NO TEGOXITIO	priic reature	es observ	/eu						

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County:	Town of Anderson,	Iron Co.	Sampling Date: 2	24-May-13
Applicant/Owner: Gogebic Taconite		Stat	e: WI	Sampling Point:	Site 2-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, To	wnship, Range: \$	s. 33 t.	T45N R.	R1W
Landform (hillslope, terrace, etc.): Toeslope	Local relief (co	ncave, convex, n	one): concave	Slope:	3.0 % / 1.7 °
Subregion (LRR or MLRA): LRR K Lat.:	46.333057	Long	.: 499220	Da	tum: WGS84
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop		55%, very stony	NWI classif	fication: Upland	-
Are climatic/hydrologic conditions on the site typical for this time of ye			— (If no, explain in		
	ly disturbed?		Circumstances" p		No O
	roblematic?		-		
			-	ers in Remarks.)	naturos etc
Summary of Findings - Attach site map showing s	ampling po	omi location	s, transects,	, important re	eatures, etc
Hydrophytic Vegetation Present? Yes No	Is the	Sampled Area			
Hydric Soil Present? Yes No •		a Wetland?	Yes ○ No •)	
Wetland Hydrology Present? Yes No					
Remarks: (Explain alternative procedures here or in a separate report Vegetation, soil and hydrology are significantly disturbed from the histone time. Soils are also disturbed from mining activities. Hydrology of location the lowest point in the landscape where water pools after he present, it was determined that this location is not a wetland based of during a follow up site visit and all indications of hydrology were abstronged problematic due to shallow rock preventing full soil profile observed to make a determination here. The site conditions are considered.	istoric bulk samp could also be co eavy precipitation on high chroma sent and some u e viewing but to	onsidered altered on. Although this soils and observ ipland herbaceou opographic position	due to a change s location has sta ations of referent s vegetation was on, vegetation ar	e in topography the anding water and F nce sites. This site s starting to emerg nd lack of hydrolog	at makes this FAC species was observed ge. Soils could be gy indicators were
Hydrology					
Wetland Hydrology Indicators:		-	Secondary Indicato	ors (minimum of 2 red	quired)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil C	• •	
✓ Surface Water (A1) Water-Stained Leav ✓ High Water Table (A2) Aquatic Fauna (B13			Drainage Patt		
✓ Saturation (A3)				/ater Table (C2)	
Water Marks (B1) Hydrogen Sulfide C			Crayfish Burro	, ,	
Sediment Deposits (B2) Oxidized Rhizosphe		Roots (C3)	Saturation Vis	ible on Aerial Imager	y (C9)
☐ Drift deposits (B3) ☐ Presence of Reduce		, ,	Stunted or Str	ressed Plants (D1)	
Algal Mat or Crust (B4) Recent Iron Reduct	tion in Tilled Soils	(C6)	✓ Geomorphic P	Position (D2)	
Iron Deposits (B5) Thin Muck Surface	(C7)		Shallow Aquita	ard (D3)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in R	temarks)			ohic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)			FAC-neutral T	est (D5)	
Field Observations: Surface Water Present? Water Table Present? Saturation Present? Yes No Depth (inches): Depth (inches): Yes No Depth (inches): Yes No Depth (inches):		Wetland Hydro	ology Present?	Yes No)
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous insp	pections), if availa	able:		
Remarks:					
Standing water was present at the time of the visit but precipitation h water is common over rock after a heavy rainfall event but typically in hydrology were observed.		0	,		•

VEGETATION - Use scientific names of plant
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VEGETATION OSC Scientific fidines of pla			ominant oecies?		Sampling Point: Site 2-1				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:				
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)				
2.			0.0%						
3	0		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)				
4			0.0%		Species Across Air Strata.				
5			0.0%		Percent of dominant Species				
6			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)				
7			0.0%		Prevalence Index worksheet:				
		= Te	otal Cove	r	Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 15' radius)					0BL species 0 x 1 = 0				
1. Abies balsamea				FAC	FACW species $0 \times 2 = 0$				
2		Ш	0.0%		FAC speciles 45 x 3 = 135				
3		\Box	0.0%		FACU speciles 0 x 4 = 0				
4	-		0.0%		UPL species $0 \times 5 = 0$				
5			0.0%		Column Totals: 45 (A) 135 (B)				
6		\Box	0.0%		Total Ci.				
7	0	_	0.0%		Prevalence Index = B/A = 3.000				
Herb Stratum (Plot size: 5' radius)	15=	= To	otal Cove	r	Hydrophytic Vegetation Indicators:				
1. Betula alleghaniensis	20	V	66.7%	FAC	Rapid Test for Hydrophytic Vegetation				
2. Ables balsamea		V	33.3%	FAC	✓ Dominance Test is > 50%				
3		\Box	0.0%		✓ Prevalence Index is ≤3.0 ¹				
4	-	\Box	0.0%		Morphological Adaptations ¹ (Provide supporting				
5		\Box	0.0%		data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)				
6			0.0%		Problematic Hydrophytic Vegetation (Explain)				
7		\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must				
8.			0.0%		be present, unless disturbed or problematic.				
9			0.0%		Definitions of Vegetation Strata:				
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1			0.0%		at breast height (DBH), regardless of height.				
2			0.0%						
Woody Vine Stratum (Plot size: 30 ' radius)		= To	otal Cove	r	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall				
	0	П	0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
1	0	П	0.0%		size, and woody plants less than 3.28 ft tall.				
3	- 0	П	0.0%						
4	0	\Box	0.0%		Woody vine - All woody vines greater than 3.28 ft in height.				
4		 = T/	otal Cove		- Norgani.				
		- ''	otal Cove	•					
					Hydrophytic Vegetation Present? Yes No				
Remarks: (Include photo numbers here or on a separate sh	eet)								

This location meets the dominance test only due to FAC species which can also occur in uplands.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Site 2-1

Profile Descr	iption: (Des	scribe to	the depth	needed to document	the indic	ator or co	nfirm the a	absence of indicators.)				
Depth	_	Matrix		_	dox Featu		_					
(inches)	Color (r	moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks			
0-11	7.5YR	3/4	100%		-	-	-	Sandy Loam				
11+			-		-	-	-	Rock				
								-				
		-						-				
1- 00												
7 1		=Depletio	n. RM=Red	luced Matrix, CS=Covere	ed or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=Ma				
Hydric Soil I					0.6	(00) (100 0		Indicators for Proble	ematic Hydric Soils: 3			
Histosol (A	•			☐ Polyvalue Belov MLRA 149B)	w Surface	(S8) (LRR R	,	2 cm Muck (A10) (LRR K, L, MLRA 149B)			
Black Hist	pedon (A2)			☐ Thin Dark Surfa	ace (S9) (I	LRR R, MLR	A 149B)	Coast Prairie Redo	x (A16) (LRR K, L, R)			
	Sulfide (A4)			Loamy Mucky I				_	or Peat (S3) (LRR K, L, R)			
	Layers (A5)			Loamy Gleyed				Dark Surface (S7) (LRR K, L, M)				
	Below Dark S	Surface (A	11)	Depleted Matri	x (F3)			Polyvalue Below Surface (S8) (LRR K, L)				
	k Surface (A1		,	Redox Dark Su	rface (F6)			Thin Dark Surface (S9) (LRR K, L)				
	ck Mineral (S	•		Depleted Dark	Surface (F	7)			lasses (F12) (LRR K, L, R)			
	yed Matrix (S			Redox Depress	ions (F8)			Piedmont Floodplain Soils (F19) (MLRA 149B)				
Sandy Red		,						☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Red Parent Material (F21)				
Stripped N								Very Shallow Dark	, ,			
☐ Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)					Other (Explain in R				
³ Indicators of	hvdronhvtic	vegetatio	n and wetla	and hydrology must be p	resent un	less disturh	ed or proble		ond is,			
			ir and well	and flydrology mast be p	reserit, un	iless distarb	cu or proble	indic.				
Restrictive La		ervea):										
Type: Ro								Hydric Soil Present?	Yes O No 💿			
	163)											
Remarks:												
								d a follow up site visit de features were observed.	etermined this area is upland,			
along with be	st brolessic	niai juug	mem and	concurrence from re	guiatory	agencies.	No redux	reatures were observed.				
•												

Subregion (LRR or MLRA): LRR K Lat.: 46.333310 Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verify the Are Climatic/hydrologic conditions on the site typical for this time of year? Are Vegetation , Soil , or Hydrology significantly disturbed? Are Vegetation , Soil , or Hydrology naturally problematic? (If	convex, none): convex Slope: 6.0 % / 3.4 ° Long.: 90.499084 Datum: WGS84 ery stony NWI classification: Upland (If no, explain in Remarks.)
Landform (hillslope, terrace, etc.): summit Local relief (concave, or Subregion (LRR or MLRA): LRR K Lat.: 46.333310 Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, vec. Are climatic/hydrologic conditions on the site typical for this time of year? Yes Are Vegetation , Soil , or Hydrology significantly disturbed? Are Vegetation , Soil , or Hydrology naturally problematic? (If	convex, none): convex Slope: 6.0 % / 3.4 ° Long.: 90.499084 Datum: WGS84 ery stony NWI classification: Upland (If no, explain in Remarks.)
Subregion (LRR or MLRA): LRR K Lat.: 46.333310 Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verify the Complex of Schweitzer-Peshekee-Rock Outcrop Complex of Schwei	Long.: 90.499084 Datum: WGS84 ery stony NWI classification: Upland (If no, explain in Remarks.)
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Are climatic/hydrologic conditions on the site typical for this time of year? Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex	ery stony NWI classification: Upland (If no, explain in Remarks.)
Soil Map Unit Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Are climatic/hydrologic conditions on the site typical for this time of year? Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigamme-Schweitzer-Peshekee-Rock Outcrop Complex, 35-55%, verification Yes Note that Name: Michigam	NWI classification: Upland (If no, explain in Remarks.)
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No. No. Are Vegetation , Soil , or Hydrology significantly disturbed? Are Vegetation , Soil , or Hydrology naturally problematic? (If	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are Vegetation , Soil , or Hydrology naturally problematic? (If	(<u></u> , <u></u>
Are Vegetation, Soil, or Hydrology naturally problematic? (If	" VAS (\$\sigma\) NO ()
	F
Cumman, of Findings - Attack site was about a casualter a select to	needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing sampling point lo	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No •	
Hydric Soil Present? Yes No No Within a Wetle	
Wetland Hydrology Present? Yes ○ No ●	
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13)	Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Saturation (A3) ☐ Marl Deposits (B15)	✓ Moss Trim Lines (B16)✓ Dry Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C	
Drift deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes O No O Depth (inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches): Wetl	cland Hydrology Present? Yes O No 💿
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections	s), if available:
Remarks:	

VEGETATION -	Use scientific	names of	plants
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vegetation - ose scientific fiames of p	idiics		ominant pecies?		Sampling Point: Site 2-2				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status					
1 Acer saccharum	60	V	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)				
2.	0		0.0%						
3			0.0%		Total Number of Dominant Species Across All Strata: 6 (B)				
4			0.0%		Species Across Air Strata.				
5			0.0%		Percent of dominant Species				
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)				
7			0.0%		Prevalence Index worksheet:				
		= T	otal Cove	r	Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 15' radius)					OBL species 0 x 1 = 0				
1. Acer saccharum			71.4%	FACU	FACW species $0 \times 2 = 0$				
2. Ostrya virginiana		✓	28.6%	FACU	FAC species0 x 3 =0				
3			0.0%		FACU species $\frac{145}{2}$ x 4 = $\frac{580}{2}$				
4			0.0%		TACO Species X 4				
5	0		0.0%		1.5 500 (D)				
6	0		0.0%		Column Totals: 145 (A) 580 (B)				
7	0		0.0%		Prevalence Index = B/A = 4.000				
Herb Stratum (Plot size: 5' radius)	35	= T	otal Cove	r	Hydrophytic Vegetation Indicators:				
1 Acer saccharum	30	V	60.0%	FACU	Rapid Test for Hydrophytic Vegetation				
1 . Acer saccharum 2 . Corylus americana		✓✓	20.0%	FACU	☐ Dominance Test is > 50%				
2. Colylus americana 3. Malanthemum canadense		✓	20.0%	FACU	Prevalence Index is ≤3.0 ¹				
			0.0%	FACU	☐ Morphological Adaptations ¹ (Provide supporting				
4					data in Remarks or on a separate sheet)				
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6			0.0%		¹ Indicators of hydric soil and wetland hydrology must				
7			0.0%		be present, unless disturbed or problematic.				
8			0.0%		Definitions of Vegetation Strata:				
9			0.0%		Definitions of Vegetation Strata.				
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1			0.0%		at breast height (DBH), regardless of height.				
2		Ш	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and				
Woody Vine Stratum (Plot size: 30 ' radius)	50	= T	otal Cove	r	greater than 3.28 ft (1m) tall				
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
2			0.0%		size, and woody plants less than 3.28 ft tall.				
3			0.0%		Mondaying All woods vines greater than 2.29 ft in				
4			0.0%		Woody vine - All woody vines greater than 3.28 ft in height.				
Т.,		= T	otal Cove		l				
		_ •		•					
					Hydrophytic Vegetation Present? Yes No No				
Remarks: (Include photo numbers here or on a separate	sheet.)								

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Site 2-2

	iption: (Des	scribe to	the depth	needed to document	the indicator or co	nfirm the a	absence of indicators.)		
Depth (inches)	Color (r	Matrix	_%	Red Color (moist)	ox Features % Type 1	_ loc2 -	Texture	Remarks	
0-6	7.5YR	3/2	100%	Color (moist)	1ype		Loam	Kemarks	
6-20+	7.5YR	3/3	100%				Loam		
							-		
							-		
		-							
¹ Type: C=Cond	centration. D	=Depletio	n. RM=Rec	luced Matrix, CS=Covered	d or Coated Sand Gra	ins ² Locat	tion: PL=Pore Lining. M=M	atrix	
Hydric Soil I							Indicators for Proble	ematic Hydric Soils: ³	
Histosol (,			Polyvalue Below MLRA 149B)	Surface (S8) (LRR R	,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)	
_	pedon (A2)				ce (S9) (LRR R, MLR	A 149R)	Coast Prairie Redo	x (A16) (LRR K, L, R)	
☐ Black Hist					lineral (F1) LRR K, L)	(1 175)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)	
	Sulfide (A4) Layers (A5)			Loamy Gleyed N			Dark Surface (S7)		
	Below Dark S	Surface (A	11)	Depleted Matrix				urface (S8) (LRR K, L)	
	k Surface (A1		,	Redox Dark Sur	face (F6)		Thin Dark Surface		
	ck Mineral (S	•		Depleted Dark S	Surface (F7)		☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)		
	yed Matrix (S			Redox Depression	ons (F8)) (MLRA 144A, 145, 149B)	
Sandy Red							Red Parent Materi		
Stripped N	Matrix (S6)						Very Shallow Dark		
☐ Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in F		
³ Indicators of	hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturb	ed or proble			
Restrictive La									
Type:	., (
Depth (incl	hes):						Hydric Soil Present?	Yes O No 💿	
Remarks:	-								
No redoximor	phic feature	es observ	ved						
	P								

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County:	Town of Morse, Ashland Co.	Sampling Date: 24-May-13
Applicant/Owner: Gogebic Taconite		State: WI	Sampling Point: Site 3 -1
Investigator(s): Ann Michalski, WDNR Prof. Assur	red Section,	Fownship, Range: S. 1	T. T44N R. R2W
Landform (hillslope, terrace, etc.): summit	·	concave, convex, none): con	vex Slope: 6.0 % / 3.4 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.317317	Long.: 90.554	784 Datum: WGS84
Soil Map Unit Name: Dishno-Gogebic-Pesheke			classification: Upland
-			<u> </u>
Are climatic/hydrologic conditions on the site t	.,,,	es $lacktriangle$ No $lacktriangle$ (If no, exp	lain in Remarks.)
Are Vegetation \checkmark , Soil \checkmark , or Hydro	ology significantly disturbed?	Are "Normal Circumstar	nces" present? Yes No
Are Vegetation $igsqcup$, Soil $igsqcup$, or Hydro	ology	(If needed, explain any	answers in Remarks.)
Summary of Findings - Attach sit		ooint locations, trans	ects, important features, etc
Hydrophytic Vegetation Present? Yes	No •		
Hydric Soil Present? Yes		ne Sampled Area nin a Wetland? Yes	No ●
Wetland Hydrology Present? Yes	No •		
Remarks: (Explain alternative procedures he	re or in a separate report.)		
Hydrology			
Hydrology			
Wetland Hydrology Indicators:	, check all that apply)		Indicators (minimum of 2 required)
Primary Indicators (minimum of one required Surface Water (A1)			e Soil Cracks (B6) ge Patterns (B10)
High Water Table (A2)	Water-Stained Leaves (B9)☐ Aquatic Fauna (B13)		rim Lines (B16)
Saturation (A3)	Marl Deposits (B15)		ason Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		h Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along Livin	g Roots (C3) Satura	tion Visible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C4)	Stunte	d or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled So	oils (C6) Geomo	orphic Position (D2)
Iron Deposits (B5)	☐ Thin Muck Surface (C7)		v Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		opographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		∟ FAC-ne	eutral Test (D5)
Field Observations:			
Surface Water Present? Yes No •		_	
Water Table Present? Yes No •	Depth (inches):	_	v
Saturation Present? Yes No •	Depth (inches):	Wetland Hydrology Preso	ent? Yes No 💿
Describe Recorded Data (stream gauge, moni	toring well, aerial photos, previous ir	spections), if available:	
Remarks:			

VEGETATION - Use scientific names of plants

VEGETATION - Use scientific names of pia	ants		ominant pecies?		Sampling Point: Site 3 -1				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:				
1			0.0%	Julia	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)				
2			0.0%		That are OBE, FACW, OF FAC.				
3		П	0.0%		Total Number of Dominant				
4			0.0%		Species Across All Strata: 2 (B)				
5		\Box	0.0%		Percent of dominant Species				
6		$\overline{\Box}$	0.0%		That Are OBL, FACW, or FAC:(A/B)				
7		$\bar{\Box}$	0.0%		Prevalence Index worksheet:				
			otal Cove		Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 15' radius)		、	otal Cove	•	$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
1	0		0.0%		FACW species $0 \times 2 = 0$				
2	0		0.0%						
3			0.0%		15 (0				
4			0.0%		FACO Species X 4 =				
5	0		0.0%		UPL Species				
6			0.0%		Column Totals:				
7	0		0.0%		Prevalence Index = B/A = 4.643				
Herb Stratum (Plot size: 5' radius)		= T	otal Cove	r	Hydrophytic Vegetation Indicators:				
<u> </u>					Rapid Test for Hydrophytic Vegetation				
1. Hieracium aurantiacum		V	71.4%	UPL	☐ Dominance Test is > 50%				
2. Fragarla virginiana		✓	21.4%	FACU	Prevalence Index is ≤3.0 ¹				
3. Populus tremula	· -		7.1%	FAC	☐ Morphological Adaptations ¹ (Provide supporting				
4			0.0%		data in Remarks or on a separate sheet)				
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6			0.0%						
7			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
8			0.0%		Definitions of Vegetation Strata:				
9			0.0%		Definitions of Vegetation Strata.				
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1			0.0%		at breast height (DBH), regardless of height.				
2		Ш	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and				
Woody Vine Stratum (Plot size: _30 ' radius)	:	= To	otal Cove	r	greater than 3.28 ft (1m) tall				
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
2	0		0.0%		size, and woody plants less than 3.28 ft tall.				
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in				
4	0		0.0%		height.				
	0 :	= Te	otal Cove	r					
	-								
					Hydrophytic Vegetation				
					Present? Yes No •				
Remarks: (Include photo numbers here or on a separate sh	neet.)								
	/								

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Site 3 -1

Project/Site: Gogebic Taconite Bulk Sample Sites	City/Count	ty: Town of Morse, Ash	land Co.	Sampling Date: 24-May-13
Applicant/Owner: Gogebic Taconite		State	: WI	Sampling Point: Site 4-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section	n, Township, Range: S.		Γ44N R. R2W
Landform (hillslope, terrace, etc.): Shoulder slo	pe Local relie	f (concave, convex, no	ne): convex	Slope: 3.0 % / 1.7 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.319511	Long.:	90.554909	
Soil Map Unit Name: Dishno-Gogebic-Peshekee-F				ication: Upland
	<u> </u>		_	<u>.</u>
Are climatic/hydrologic conditions on the site typ	ical for this time of year?	Yes • No O	If no, explain in	· ·
Are Vegetation, Soil, or Hydrolog	gy L significantly disturbed	d? Are "Normal C	ircumstances" p	oresent? Yes No
Are Vegetation $\ \ \ \ \ \ \ \ \ \ \ \ $, Soil $\ \ \ \ \ \ \ \ \ \ \ \ \ $	gy 🔲 naturally problematic	? (If needed, ex	plain any answe	ers in Remarks.)
Summary of Findings - Attach site	map showing sampling	point locations	, transects,	important features, etc
	No •	Mrs Committed Asses		
,	NO 🥯 wi	the Sampled Area ithin a Wetland?	Yes ○ No ●	
Wetland Hydrology Present? Yes	No 💿			
location, upland vegetation and lack of hydrolog	jy along with best professional j	udgement was used to	o make a detern	nination here.
Hydrology				
Wetland Hydrology Indicators:			econdary Indicato	rs (minimum of 2 required)
Primary Indicators (minimum of one required; c			Surface Soil Ci	• •
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9)	l [Drainage Patte	, ,
Saturation (A3)	Aquatic Fauna (B13) Marl Deposits (B15)	[Moss Trim Lin	ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	[Crayfish Burro	• •
Sediment Deposits (B2)	Oxidized Rhizospheres along Liv	vina Roots (C3)	´	ible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C4)	[essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled	Soils (C6)	Geomorphic P	osition (D2)
Iron Deposits (B5)	☐ Thin Muck Surface (C7)	[Shallow Aquita	ard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Į	Microtopograp	
Sparsely Vegetated Concave Surface (B8)		Į	FAC-neutral To	est (D5)
Field Observations:				
Surface Water Present? Yes No •	Depth (inches):			
Water Table Present? Yes No •	Depth (inches):			Yes ○ No •
Saturation Present? (includes capillary fringe) Yes No •	Depth (inches):	Wetland Hydro	logy Present?	Yes ∪ No ♥
Describe Recorded Data (stream gauge, monitor Remarks:	ing well, aerial photos, previous	inspections), if availal	ole:	

VEGETATION -	Use sci	entific	names	of	plants
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VEGETATION - Use scientific names of pla			ominant pecies?		Sampling Point: Site 4-1				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:				
4 Acor cacebarum	30	V	37.5%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)				
2. Betula alleghanlensis	25	✓	31.3%	FAC	That are OBE, FACW, OF FAC.				
O Demuluo tramuila	15		18.8%	FAC	Total Number of Dominant				
4 Potulo popuriforo	10		12.5%	FACU	Species Across All Strata: 6 (B)				
5		\Box	0.0%	17100	Percent of dominant Species				
6		\Box	0.0%		That Are OBL, FACW, or FAC: 33.3% (A/B)				
7	0		0.0%		Prevalence Index worksheet:				
	80	= To	otal Cove		Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 15' radius)					0BL species 0 x 1 = 0				
1. Acer saccharum	30	✓	75.0%	FACU	FACW species $0 \times 2 = 0$				
2. Betula alleghaniensis	10	✓	25.0%	FAC	FAC speciles 50 x 3 = 150				
3	· =		0.0%		FACU species 100 x 4 = 400				
4			0.0%		UPL species $\frac{40}{200} \times 5 = \frac{200}{200}$				
5			0.0%						
6			0.0%		Column Totals: 190 (A) 750 (B)				
7	0	Ш	0.0%		Prevalence Index = B/A = 3.947				
Herb Stratum (Plot size: 5' radius)	40	= To	otal Cove	r	Hydrophytic Vegetation Indicators:				
1 Erythronium americanum	40	V	57.1%	UPL	Rapid Test for Hydrophytic Vegetation				
2. Malanthemum canadense	15	~	21.4%	FACU	Dominance Test is > 50%				
3. Allium tricoccum	10		14.3%	FACU	Prevalence Index is ≤3.0 ¹				
4. Ribes cynosbati	5		7.1%	FACU	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
5	-		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6			0.0%		Froblematic Hydrophytic Vegetation (Explain)				
7			0.0%		1 Indicators of hydric soil and wetland hydrology must				
8			0.0%		be present, unless disturbed or problematic.				
9			0.0%		Definitions of Vegetation Strata:				
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter				
1	0		0.0%		at breast height (DBH), regardless of height.				
2	0		0.0%						
Woody Vine Stratum (Plot size: 30 ' radius)	70	= To	otal Cove	,	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall				
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
2	0		0.0%		size, and woody plants less than 3.28 ft tall.				
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in				
4	0	Ш	0.0%		height.				
	0	= T	otal Cove	r					
					Hydrophytic Vegetation Present? Yes No No				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: Site 4-1

Profile Descr	iption: (Des	scribe to	the depth	needed to document	the indic	ator or co	nfirm the a	absence of indicators.)				
Depth		Matrix	_	_	dox Featu							
(inches)	Color (ı	moist)	%	Color (moist)	%	Type 1	Loc2	Texture	Remarks			
0-5	7.5YR	2.5/2	100%			-	-	Sandy Loam				
5+			-		-	-	-	Rock				
				· ———								
		-										
1 Turney C. Corne		Doplotio	n DM Dos	Lucad Matrix, CC, Covers	d or Coate	- Cand Cra		tion, DI Doro Lining M Ma	Actor			
		=Depletio	II. RIVI=Rec	duced Matrix, CS=Covere	ed of Coate	eu Sanu Gra	iiris -Loca	tion: PL=Pore Lining. M=Ma	2			
Hydric Soil I Histosol (A				Debugalya Palay	u Curfooo	(CO) (LDD D		Indicators for Proble	matic Hydric Soils: 3			
	pedon (A2)			Polyvalue Belov MLRA 149B)	v Surrace	(38) (LKK K	,		LRR K, L, MLRA 149B)			
Black Hist				Thin Dark Surfa	ace (S9) (LRR R, MLR	A 149B)		(A16) (LRR K, L, R)			
	Sulfide (A4)			Loamy Mucky N	Mineral (F1) LRR K, L)			r Peat (S3) (LRR K, L, R)			
	Layers (A5)			Loamy Gleyed	Matrix (F2))		Dark Surface (S7)	·			
	Below Dark S	Surface (A	11)	Depleted Matrix	(F3)				urface (S8) (LRR K, L)			
	k Surface (A1		,	Redox Dark Su	rface (F6)			Thin Dark Surface (S9) (LRR K, L)				
	ck Mineral (S	•		Depleted Dark	Surface (F	7)		☐ Iron-Manganese Masses (F12) (LRR K, L, R)				
_	eyed Matrix (Redox Depress	ions (F8)			Piedmont Floodplain Soils (F19) (MLRA 1498) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
Sandy Red		,						Red Parent Materia				
_	Matrix (S6)							Very Shallow Dark				
	ace (S7) (LRI	R R, MLRA	149B)					Other (Explain in R				
3 Indicators of	hydrophytic	vegetatio	n and wett	and hydrology must be p	resent un	lace dieturh	ed or proble		eniarks)			
			ir and wette	and flydrology mast be p	resent, un	iicaa diatdi b	ca or probit	Smalle.				
Restrictive La		erved):										
Type: Ro								Hydric Soil Present?	Yes ○ No •			
Depth (incl	nes): 5								103 0 110 0			
Remarks: Shallow rock was used to r				ving but observations	of topog	raphy, a d	lominance	of upland vegetation and	d lack of hydrology indicators			

Project/Site: Gogebic Taconite Bulk Sample Sites	City/County:	own of Anderson, Iron Co.	Sampling Date: 08-Jul-13
Applicant/Owner: Gogebic Taconite		State: WI	Sampling Point: SB-1
Investigator(s): Ann Michalski, WDNR Prof. Assured	Section, Tow	rnship, Range: S. 33	T. T45N R. R1W
Landform (hillslope, terrace, etc.): sideslope/drainag	geway Local relief (con	cave, convex, none): conca	ve Slope: 6.0 % / 3.4 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.333407	Long.: 90.497387	Datum: WGS84
Soil Map Unit Name: Gogebic Silt Loam, 18 to 35% s			ssification: Upland
-			<u>.</u>
Are climatic/hydrologic conditions on the site typical f		(=: ::-) -:-(=::-	n in Remarks.) s" present? Yes No
Are Vegetation , Soil , or Hydrology	significantly disturbed?	Are "Normal Circumstance	s" present? Tes C NO C
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any an	-
Summary of Findings - Attach site ma		nt locations, transec	ts, important features, etc
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No	within a	ampled Area a Wetland? Yes \bigcirc No	, •
Wetland Hydrology Present? Yes No	•		
Hydrology			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of 2 required)
Primary Indicators (minimum of one required; check			oil Cracks (B6)
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aguatic Fauna (B13)	✓ Drainage F	Patterns (B10) Lines (B16)
Saturation (A3)	Marl Deposits (B15)		n Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		urrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along Living R	oots (C3) Saturation	Visible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (C4)	Stunted or	Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils ((C6) Geomorph	ic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)		quitard (D3)
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		graphic Relief (D4)
Sparsery vegetated concave surface (bo)		FAC-neutr	al Test (D5)
Field Observations:			
Surface Water Present? Yes No No	Depth (inches):		
Water Table Present? Yes No •	Depth (inches):	Wetland Hydrology Present	? Yes ○ No ●
Saturation Present? (includes capillary fringe) Yes No •	Depth (inches):	wetiand Hydrology Present	? res O NO O
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, previous inspe	ections), if available:	
Remarks:			

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of pla	nts		ominant pecies?		Sampling Point: SB-1		
Tree Stratum (Plot size: 21' x 5')	Absolute % Cover	R	•	Indicator Status	Dominance Test worksheet:		
1		$\overline{\Box}$	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)		
2		\Box	0.0%		That are obe, thow, or the.		
		П	0.0%		Total Number of Dominant		
3			0.0%		Species Across All Strata: 1 (B)		
4		Н			Percent of dominant Species		
5		Н	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)		
6			0.0%				
7		Ш	0.0%		Prevalence Index worksheet:		
Sapling/Shrub Stratum (Plot size: 21' x 5')	:	= T	otal Cove	er	Total % Cover of: Multiply by: OBL speciles 0 x 1 = 0		
1 _ Acer saccharum	25	V	100.0%	FACU	FACW species $0 \times 2 = 0$		
2	0		0.0%				
3	0_		0.0%				
4			0.0%		FACU Species		
5			0.0%		UPL speciles0 x 5 =0		
6			0.0%		Column Totals: 25 (A) 100 (B)		
7	0		0.0%		Prevalence Index = B/A = 4.000		
	25	= T	otal Cove				
Herb Stratum (Plot size: 21' x 5')		_ •	ota. 0010		Hydrophytic Vegetation Indicators:		
1	0		0.0%		Rapid Test for Hydrophytic Vegetation		
2		П	0.0%		☐ Dominance Test is > 50%		
3		\Box	0.0%		Prevalence Index is ≤3.0 ¹		
		П	0.0%		Morphological Adaptations ¹ (Provide supporting		
4		\Box	0.0%		data in Remarks or on a separate sheet)		
5					Problematic Hydrophytic Vegetation ¹ (Explain)		
6		Н	0.0%		¹ Indicators of hydric soil and wetland hydrology must		
7			0.0%		be present, unless disturbed or problematic.		
8		Н	0.0%		Definitions of Vegetation Strata:		
9		Н	0.0%		Definitions of Vegetation Strata.		
10			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter		
l1			0.0%		at breast height (DBH), regardless of height.		
12	0	Ш	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and		
Woody Vine Stratum (Plot size: 21' x 5')		= T	otal Cove	er	greater than 3.28 ft (1m) tall		
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of		
2	0	\Box	0.0%		size, and woody plants less than 3.28 ft tall.		
3	0	$\overline{\Box}$	0.0%		Mandada Allandada and a sanada dha a 0.00 ft in		
4	0	\Box	0.0%		Woody vine - All woody vines greater than 3.28 ft in height.		
7		— = Т	otal Cove	er			
					Hydrophytic Vegetation Present? Yes No No		
Remarks: (Include photo numbers here or on a separate she	eet.)						

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Profile Descr Depth		be to the depti trix	n needed to document the indicator or confirm the Redox Features	absence of indicators.)	
(inches)	Color (moi		Color (moist) % Type 1 Loc2	Texture	Remarks
0-6	7.5YR	3/2 100%		Silt Loam	
6-12	7.5YR	3/4 100%		Silt Loam	
12+	-			Rock	
				_	
¹ Type: C=Con	centration. D=De	epletion. RM=Re	duced Matrix, CS=Covered or Coated Sand Grains ² Loc	cation: PL=Pore Lining. M=M	atrix
Hydric Soil 1	Indicators:			Indicators for Proble	ematic Hydric Soils: 3
Histosol (☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)		(LRR K, L, MLRA 149B)
	pedon (A2)		☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)	Coast Prairie Redo	x (A16) (LRR K, L, R)
Black Hist	tic (A3) n Sulfide (A4)		Loamy Mucky Mineral (F1) LRR K, L)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Layers (A5)		Loamy Gleyed Matrix (F2)	Dark Surface (S7)	
	Below Dark Surfa	ace (A11)	Depleted Matrix (F3)		urface (S8) (LRR K, L)
_	k Surface (A12)	, ,	Redox Dark Surface (F6)	Thin Dark Surface	(S9) (LRR K, L) Masses (F12) (LRR K, L, R)
Sandy Mu	uck Mineral (S1)		☐ Depleted Dark Surface (F7)	_	in Soils (F19) (MLRA 149B)
Sandy Gle	eyed Matrix (S4)		Redox Depressions (F8)) (MLRA 144A, 145, 149B)
Sandy Re				Red Parent Materi	
	Matrix (S6)			Very Shallow Dark	Surface (TF12)
	face (S7) (LRR R,			Other (Explain in I	Remarks)
³ Indicators o	f hydrophytic veg	getation and wet	land hydrology must be present, unless disturbed or prob	olematic.	
Restrictive L	ayer (if observ	ed):			
Type: R				Hydric Soil Present?	Yes ○ No ●
Depth (inc	hes): 12			nyuric son Present?	Yes Uno U
Remarks:					

Project/Site: Gogebic Taconite Bu	ılk Sample Sites and	d Access Roads	City/County:	Town of Anderson	, Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconi	ite			Stat	te: WI	Sampling Point: SB2
Investigator(s): Ann Michalski, P	SS, PWS, WDNR PA	AWD	Section, To	ownship, Range:	s. 33 T. 7	745N R. R1W
Landform (hillslope, terrace, etc	.): Toeslope		- '	oncave, convex, n		Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LR	-	Lat.:	46.332171		90.798816	Datum: WGS84
Soil Map Unit Name: Michigamr		-			-	ication: Upland
Are climatic/hydrologic conditio		<u>'</u>		<u> </u>	_	<u> </u>
Are Vegetation ✓ , Soil ✓	_	_	ly disturbed?		(If no, explain in	V 🔘 N 🔾
	7 -		•		Circumstances" p	. Coone:
Are Vegetation , Soil ,	_ , . ,		roblematic?	-	explain any answe	-
Summary of Findings -			ampling po	oint location	s, transects,	important features, etc
Hydrophytic Vegetation Present		No •	T . 11.	Committed Asses		
Hydric Soil Present?		No •		Sampled Area n a Wetland?	Yes \bigcirc No $lacktriangle$	
Wetland Hydrology Present?	Yes	No O				
Hydrology						
Hydrology						
Wetland Hydrology Indicators:	of and required.	ahaak all that annly)				rs (minimum of 2 required)
Primary Indicators (minimum of Surface Water (A1)	i one required; o		(DO)		Surface Soil Cr Drainage Patte	• •
High Water Table (A2)		Water-Stained Lea			Moss Trim Line	
Saturation (A3)		Marl Deposits (B15				ater Table (C2)
Water Marks (B1)		Hydrogen Sulfide C	Odor (C1)		Crayfish Burro	ws (C8)
Sediment Deposits (B2)		Oxidized Rhizosphe	eres along Living	Roots (C3)	Saturation Visi	ble on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Reduc	` ,			essed Plants (D1)
☐ Algal Mat or Crust (B4)☐ Iron Deposits (B5)		Recent Iron Reduc		s (C6)	✓ Geomorphic Po	` ,
Inundation Visible on Aerial Im	agery (B7)	☐ Thin Muck Surface☐ Other (Explain in R			Microtopograp	` '
Sparsely Vegetated Concave Si		Utilei (Explain in R	terriarks)		FAC-neutral Te	
Field Observations: Surface Water Present? Ye	s • No O	Depth (inches):	2			
	s • No ·					
		Depth (inches):		Wetland Hydr	ology Present?	Yes No
(includes capillary fringe) Yes	s O No O	Depth (inches):				
Describe Recorded Data (stream	n gauge, monito	ring well, aerial photo	is, previous ins	pections), if availa	able:	
Remarks:						
	ocation but appa	rently only for short p	eriods of time	after precipitatior	n events. Soils die	d not meet hydric soil criteria and

VEGETATION -	Use scientific	names of	plants
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VEGETATION - Use scientific names of pi	ants		ominant pecies?		Sampling Point: SB2			
Tree Stratum (Plot size: 5' x 7')	Absolute % Cover	R	el.Strat.	Indicator Status	Dominance Test worksheet:			
1			0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)			
2.			0.0%		That are obt., facw, or fac.			
			0.0%		Total Number of Dominant			
3					Species Across All Strata: 2 (B)			
4			0.0%		Percent of dominant Species			
5		Н	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)			
6			0.0%					
7		Ш	0.0%		Prevalence Index worksheet:			
Sapling/Shrub Stratum (Plot size: 5' x 7')	0	= T	otal Cover	•	Total % Cover of: Multiply by: OBL species 0 x 1 = 0			
1. Acer saccharum	10	V	100.0%	FACU	· — —			
2	0		0.0%		x			
3			0.0%		FAC species $0 \times 3 = 0$			
4.			0.0%		FACU speci es $\frac{15}{2}$ x 4 = $\frac{60}{2}$			
5			0.0%		UPL speci es $0 \times 5 = 0$			
6			0.0%		Column Totals: 15 (A) 60 (B)			
7			0.0%		Prevalence Index = B/A = 4.000			
		= T	otal Cover					
Herb Stratum (Plot size: 5' x 7')					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation			
1. Acer saccharum	5	✓	100.0%	FACU	Dominance Test is > 50%			
2	0		0.0%		Prevalence Index is ≤3.0 ¹			
3	0		0.0%					
4			0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
6			0.0%					
7			0.0%		¹ Indicators of hydric soil and wetland hydrology must			
8			0.0%		be present, unless disturbed or problematic.			
9			0.0%		Definitions of Vegetation Strata:			
0		П	0.0%		Tana Manda dia 2 in 77 Camba and an diameter			
1		\Box	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
2.		\Box	0.0%					
		= T	otal Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall			
Woody Vine Stratum (Plot size: 5' x 7')								
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4	0		0.0%		height.			
	0	= T	otal Cover	•				
					Hydrophytic Vegetation			
					Present? Yes No •			
Remarks: (Include photo numbers here or on a separate sl	heet.)							

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

	iption: (Des	scribe to	the depth	needed to document	the indicator or cor	nfirm the a	absence of indicators.)	
Depth (inches)	Color (r	Matrix	_ _%	Red_ Color (moist)	ox Features % Type 1	Loc²	Texture	Remarks
0-4	5YR	3/2	100%	Color (Illoist)		LUC	Sandy Clay Loam	Remarks
4-20+	5YR	3/3	100%			-	Sandy Clay Loam	
							-	
							-	
							-	
¹ Type: C=Cond	centration. D	=Depletio	n. RM=Red	uced Matrix, CS=Covered	d or Coated Sand Grai	ns ² Loca	tion: PL=Pore Lining. M=M	atrix
Hydric Soil I	ndicators:						Indicators for Proble	ematic Hydric Soils: 3
Histosol (A	,			Polyvalue Below MLRA 149B)	Surface (S8) (LRR R,		2 cm Muck (A10)	(LRR K, L, MLRA 149B)
	pedon (A2)			_	ce (S9) (LRR R, MLR/	\ 149R\		x (A16) (LRR K, L, R)
☐ Black Hist					lineral (F1) LRR K, L)	(1476)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Sulfide (A4) Layers (A5)			Loamy Gleyed N			Dark Surface (S7)	(LRR K, L, M)
	Below Dark S	Surface (A	11)	Depleted Matrix				urface (S8) (LRR K, L)
	k Surface (A1		11)	Redox Dark Sur			Thin Dark Surface	
	ck Mineral (S	•		☐ Depleted Dark S	Surface (F7)			Masses (F12) (LRR K, L, R)
	yed Matrix (S			Redox Depression	ons (F8)			iin Soils (F19) (MLRA 149B)) (MLRA 144A, 145, 149B)
Sandy Red							Red Parent Materia	
Stripped N	Matrix (S6)						Very Shallow Dark	
☐ Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in F	
³ Indicators of	hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturbe	ed or proble		
Restrictive La	aver (if obs	erved):						
Type:	., (,.						
Depth (inch	nes):						Hydric Soil Present?	Yes O No 💿
Remarks:								
No redox feat	ures observ	ved						

Project/Site: Gogebic Tacon	te Bulk Sample Sites ar	nd Access Roads	City/County:	Town of Anderson	, Iron Co.	Sampling Date: 11-	Oct-13
Applicant/Owner: Gogebic T	aconite			Sta	te: WI	Sampling Point:	SB3
Investigator(s): Ann Michal	ski, PSS, PWS, WDNR P	'AWD	Section, To	ownship, Range:	s. 33 T.	T45N R. R1	W
Landform (hillslope, terrace	, etc.): Toeslope		Local relief (co	oncave, convex, n	one): concave	Slope:	1.0 % / 0.6 °
Subregion (LRR or MLRA):	I RR K	Lat.:	46.332659	Long	90.499136	Datur	m: WGS84
Soil Map Unit Name: Michie		-				fication: Upland	-
<u></u>				s No		<u>.</u>	
Are climatic/hydrologic con			ear? Ye		(If no, explain in	, (a)	
Are Vegetation 🗹 , So	il 🗹 , or Hydrol	ogy 🗹 significant	tly disturbed?	Are "Normal	Circumstances" p	present? Yes	No O
Are Vegetation \Box , So	il 🗌 , or Hydrol	ogy 🗌 naturally p	problematic?	(If needed, e	explain any answ	ers in Remarks.)	
Summary of Finding			sampling p	oint location	s, transects,	, important fea	tures, etc
Hydrophytic Vegetation Pro		No •					
Hydric Soil Present?	Yes 🔾	No •		Sampled Area n a Wetland?	Yes O No 🖲)	
Wetland Hydrology Presen	t? Yes ⊙	No O					
Soils, vegetation and hydr uplands. However, this is			because this lo	cation is a histori	c borrow pit that	was obviously excav	ated out of
Hydrology Wetland Hydrology Indicat Primary Indicators (minim		check all that apply)			Secondary Indicate Surface Soil C	ors (minimum of 2 requi cracks (B6)	red)
Surface Water (A1)		Water-Stained Lea	aves (B9)		☐ Drainage Patte	erns (B10)	
✓ High Water Table (A2)		Aquatic Fauna (B1			Moss Trim Lin	• •	
Saturation (A3)		Marl Deposits (B15				/ater Table (C2)	
Water Marks (B1)		Hydrogen Sulfide			Crayfish Burro	, ,	00)
Sediment Deposits (B2) Drift deposits (B3)		Oxidized Rhizosph	0 0	Roots (C3)		sible on Aerial Imagery (ressed Plants (D1)	C9)
Algal Mat or Crust (B4)		Presence of Reduce		c (C4)	Geomorphic P	` ,	
Iron Deposits (B5)		Thin Muck Surface		s (CO)	Shallow Aquita	` '	
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in F	` ,			ohic Relief (D4)	
✓ Sparsely Vegetated Conca	ive Surface (B8)	Other (Explain in t	Kemarksy		FAC-neutral T		
Field Observations:							
Surface Water Present?	Yes No •	Depth (inches):					
Water Table Present?	Yes ● No ○	Depth (inches):	3			Yes ● No ○	
Saturation Present? (includes capillary fringe)	Yes ● No ○	Depth (inches):			ology Present?	Yes © NO C	
Describe Recorded Data (s Remarks: Hydrology was present in t this location is not wetland	this location but appa					id not meet hydric so	il criteria and

VEGETATION - Use scientific names of plant	names of plants	scientific	VEGETATION -
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Dominant Sampling Point: SB3 Species? **Absolute** Rel.Strat. Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: 5' x 10') % Cover Status Cover **Number of Dominant Species** 0 0.0% That are OBL, FACW, or FAC: (A) 0 0.0% Total Number of Dominant 0 0.0% 0 (B) Species Across All Strata: 0 0.0% Percent of dominant Species 0 0.0% 0.0% (A/B) That Are OBL, FACW, or FAC: 0 0.0% 0 0.0% Prevalence Index worksheet: Total % Cover of: Multiply by: 0 = Total Cover Sapling/Shrub Stratum (Plot size: 5' x 10') OBL species x 1 = 0.0% FACW species x 2 =0.0% 0 FAC species x 3 =3._____ 0 0.0% FACU species 0 0.0% 0 UPL species x 5 = 0 0.0% (B) 0 0 Column Totals: (A) 0 0.0% 0 0.0% Prevalence Index = B/A = 4.000 0 = Total Cover Herb Stratum (Plot size: 5' x 10') **Hydrophytic Vegetation Indicators:** Rapid Test for Hydrophytic Vegetation 0 0.0% ☐ Dominance Test is > 50% 0 0.0% Prevalence Index is ≤3.0 ¹ O 0.0% Morphological Adaptations 1 (Provide supporting 0 0.0% data in Remarks or on a separate sheet) 0 0.0% Problematic Hydrophytic Vegetation ¹ (Explain) 0 0.0% ¹ Indicators of hydric soil and wetland hydrology must 0 0.0% be present, unless disturbed or problematic. 0 0.0% **Definitions of Vegetation Strata:** 0 0.0% 0 0.0% Tree - Woody plants, 3 in. (7.6 cm) or more in diameter 11.____ 0 0.0% at breast height (DBH), regardless of height. 0.0% 12.____ Sapling/shrub - Woody plants less than 3 in. DBH and 0 = Total Cover greater than 3.28 ft (1m) tall... Woody Vine Stratum (Plot size: 5' x 7') 0.0% Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 0 0.0% 2.____ 0 0.0% Woody vine - All woody vines greater than 3.28 ft in 0 0.0% height. 0 = Total Cover Hydrophytic Vegetation No 💿 Yes 🔾 Present? Remarks: (Include photo numbers here or on a separate sheet.)

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

	iption: (Des	scribe to	the depth	needed to document	the indicator or cor	firm the a	absence of indicators.)	
Depth (inches)	Color (ı	Matrix	_%	Color (moist)	ox Features % Type 1	Loc²	Texture	Remarks
0-5	5YR	3/3	100%	Color (Illoist)		LUC-	Sandy Loam	Kemarks
5-20+	5YR	4/3	100%			-	Sandy Loam	
							-	
							-	
							-	
							-	
		-						
¹ Type: C=Cond	centration. D	=Depletio	n. RM=Red	uced Matrix, CS=Covered	d or Coated Sand Grai	ns ² Loca	tion: PL=Pore Lining. M=M	atrix
Hydric Soil I	ndicators:						Indicators for Proble	ematic Hydric Soils:
Histosol (A	•			Polyvalue Below MLRA 149B)	Surface (S8) (LRR R,		2 cm Muck (A10)	(LRR K, L, MLRA 149B)
	pedon (A2)			_	ce (S9) (LRR R, MLRA	149R)	Coast Prairie Redo	x (A16) (LRR K, L, R)
☐ Black Histi					lineral (F1) LRR K, L)	(1 1 7 5)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Sulfide (A4) Layers (A5)			Loamy Gleyed N			Dark Surface (S7)	
	Below Dark S	Surface (A	11)	Depleted Matrix				urface (S8) (LRR K, L)
	k Surface (A1		,	Redox Dark Sur	face (F6)		☐ Thin Dark Surface	
	ck Mineral (S	•		Depleted Dark S	Surface (F7)			lasses (F12) (LRR K, L, R)
	yed Matrix (Redox Depressi	ons (F8)			in Soils (F19) (MLRA 149B)) (MLRA 144A, 145, 149B)
Sandy Red	dox (S5)						Red Parent Materia	
Stripped N	Matrix (S6)						☐ Very Shallow Dark	
☐ Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in F	
³ Indicators of	hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturbe	d or proble		
Restrictive La								
Type:	., (
Depth (inch	nes):						Hydric Soil Present?	Yes O No 💿
Remarks:	-							
No redox feat	ures obser	ved						

Project/Site: Gogebic Taconite	Bulk Sample Sites and	Access Roads City/C	County: Town of Anderson	n, Iron Co.	Sampling Date: 11-0	ct-13
Applicant/Owner: Gogebic Tacc	onite		Sta	ite: WI	Sampling Point:	SB4
Investigator(s): Ann Michalski,	PSS, PWS, WDNR PA	.WD Se	ection, Township, Range:	s. 33 t.	T45N R. R1W	1
Landform (hillslope, terrace, e	tc.): Toeslope	Local	relief (concave, convex, ı	none): concave	Slope: 1	.0 % / 0.6 °
Subregion (LRR or MLRA):	.RR K	Lat.: 46.333	3029 Lon	90.499153	Datum:	WGS84
Soil Map Unit Name: Michigar	nme-Schweitzer-Pe	eshekee-Rock Outcrop Comp	olex, 18 to 35% slopes	NWI classif	fication: Upland	
Are climatic/hydrologic condit	ions on the site typ	oical for this time of year?	Yes ● No ○	(If no, explain in	Remarks.)	
Are Vegetation , Soil			urbed? Are "Norma	l Circumstances" ¡	, (a)	No O
Are Vegetation, Soil					•	
Summary of Findings	-		(=: :::::::::::::::::::::::::::::::::::	explain any answ ns. transects	•	ures. etc
Hydrophytic Vegetation Prese		No O			,	
Hydric Soil Present?		No •	Is the Sampled Area	Yes ○ No •)	
Wetland Hydrology Present?		No O	within a Wetland?	103 0 110 0		
Remarks: (Explain alternativ						
Hydrology						
Wetland Hydrology Indicator				Secondary Indicate	ors (minimum of 2 require	d)
Primary Indicators (minimum	of one required; o	check all that apply)		Surface Soil C	• •	
Surface Water (A1)		Water-Stained Leaves (B9))	☐ Drainage Patt	• •	
☐ High Water Table (A2)☐ Saturation (A3)		Aquatic Fauna (B13) Marl Deposits (B15)		Moss Trim Lin	nes (B16) /ater Table (C2)	
Water Marks (B1)		Hydrogen Sulfide Odor (C	1)	Crayfish Burro	• •	
Sediment Deposits (B2)		Oxidized Rhizospheres alo	•		sible on Aerial Imagery (C9))
Drift deposits (B3)		Presence of Reduced Iron	0 0 . ,		ressed Plants (D1)	,
☐ Algal Mat or Crust (B4)		Recent Iron Reduction in	• •	✓ Geomorphic F	Position (D2)	
☐ Iron Deposits (B5)		☐ Thin Muck Surface (C7)		Shallow Aquit	ard (D3)	
Inundation Visible on Aerial	Imagery (B7)	Other (Explain in Remarks	s)	Microtopogra	ohic Relief (D4)	
✓ Sparsely Vegetated Concave	Surface (B8)			FAC-neutral T	est (D5)	
Field Observations:						
	res ○ No •	Depth (inches):				
Water Table Present?	res ○ No ●	Depth (inches):			Yes ● No ○	
Saturation Present? (includes capillary fringe)	′es ○ No •	Depth (inches):	Wetland Hyd	rology Present?	res ⊕ No ∪	
Describe Recorded Data (stre	am gauge, monito	ring well, aerial photos, pre	vious inspections), if avai	lable:		
Remarks:						
The sparsely vegetated concagrow a lot of vegetation beca				s here which left a	a depressional area tha	it does not

VEGETATION -	Use scient	tific names	of plants
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VEGETATION - Use scientific names of pi	ants		ominant pecies?		Sampling Point: SB4			
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:			
1 Betula alleghaniensis	20	V	50.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)			
2. Ables balsamea	20	V	50.0%	FAC				
3	0		0.0%		Total Number of Dominant Species Across All Strata: 5 (B)			
4			0.0%		Species Across Air Strata.			
5			0.0%		Percent of dominant Species That Arc ORL FACW, or FAC: 80.0% (A/B)			
6			0.0%		That Are OBL, FACW, or FAC: 80.0% (A/B)			
7			0.0%		Prevalence Index worksheet:			
Sapling/Shrub Stratum (Plot size: 15' radius)	40	= T	otal Cove	r	Total % Cover of: Multiply by:			
1. Ables balsamea	15	✓	50.0%	FAC	0BL speci es 0 x 1 = 0			
2 Betula alleghaniensis	15	✓	50.0%	FAC	FACW species $0 \times 2 = 0$			
3	0		0.0%		FAC speci es x 3 =210			
4			0.0%		FACU speci es $30 \times 4 = 120$			
5			0.0%		UPL species0 x 5 =0			
6			0.0%		Column Totals: 100 (A) 330 (B)			
7			0.0%		Prevalence Index = B/A = 3.300			
Herb Stratum (Plot size: 5' radius)		= T	otal Cove	r	Hydrophytic Vegetation Indicators:			
					Rapid Test for Hydrophytic Vegetation			
1. Acer saccharum				FACU	✓ Dominance Test is > 50%			
2			0.0%		Prevalence Index is ≤3.0 ¹			
3			0.0%		Morphological Adaptations ¹ (Provide supporting			
4			0.0%		data in Remarks or on a separate sheet)			
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
6			0.0%		17.25.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.			
7			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
8			0.0%		Definitions of Vegetation Strata:			
9			0.0%		Definitions of Vegetation Strata.			
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter			
1			0.0%		at breast height (DBH), regardless of height.			
2		Ш	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and			
Woody Vine Stratum (Plot size: 30' radius)	30	= T	otal Cove	er	greater than 3.28 ft (1m) tall			
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4	0		0.0%		height.			
	0	= T	otal Cove	er				
					Hydrophytic Vegetation Present? Yes No			
Pamarke: (Include nhoto numbers here or on a senarate s	hoot \							

This location meets vegetation criteria only due to FAC species. Soils are upland soils and hydrology was not present other than geomorphic position and sparsely vegetated concave surface. This is due to blast rock making up the substrate.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

	iption: (Des	scribe to	the depth	needed to document	the indicator or con	firm the a	absence of indicators.)	
Depth (inches)	. Color (ı	Matrix		Red Color (moist)	ox Features % Type 1	Loc²	Texture	Remarks
0-3	5YR	3/3	100%	Color (moist)			sand	Remarks
3-9	5YR	4/3	100%			-	sand	
9+						-	Rock	
							-	
							-	
							-	
-							-	
		-					-	
1							-	
• •		=Depletio	n. RM=Rec	luced Matrix, CS=Covere	d or Coated Sand Grai	ns ² Loca	tion: PL=Pore Lining. M=Ma	
Hydric Soil I							Indicators for Proble	ematic Hydric Soils: 3
Histosol (•			☐ Polyvalue Below MLRA 149B)	Surface (S8) (LRR R,		2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Hist	pedon (A2)				ce (S9) (LRR R, MLRA	A 149B)	Coast Prairie Redo	x (A16) (LRR K, L, R)
	Sulfide (A4)			Loamy Mucky M	lineral (F1) LRR K, L)			or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loamy Gleyed N	Matrix (F2)		Dark Surface (S7)	
	Below Dark S	Surface (A	11)	Depleted Matrix	(F3)			urface (S8) (LRR K, L)
_	k Surface (A1			Redox Dark Sur			Thin Dark Surface	(S9) (LRR K, L) lasses (F12) (LRR K, L, R)
Sandy Mu	ck Mineral (S	51)		Depleted Dark S			_	in Soils (F19) (MLRA 149B)
Sandy Gle	eyed Matrix (S	S4)		Redox Depressi	ons (F8)) (MLRA 144A, 145, 149B)
Sandy Red							Red Parent Materia	
	Matrix (S6)						Very Shallow Dark	Surface (TF12)
Dark Surfa	ace (S7) (LRF	R R, MLRA	. 149B)				Other (Explain in R	Remarks)
³ Indicators of	hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturbe	d or proble	ematic.	
Restrictive La	ayer (if obs	erved):						
Type: Ro	ock							
Depth (incl	hes): <u>9</u>						Hydric Soil Present?	Yes ○ No •
Remarks:								
No redox feat	tures observ	ved						

Project/Site: Gogebic Tacon	te Bulk Sample Sites and	d Access Roads City/Cou	unty: Town of Anderson	, Iron Co.	Sampling Date: 11-0	ct-13
Applicant/Owner: Gogebic T	aconite		Sta	te: WI	Sampling Point:	SB5
Investigator(s): Ann Michal	ski, PSS, PWS, WDNR PA	AWD Secti	ion, Township, Range:	s. 33 t.	T45N R. R1W	
Landform (hillslope, terrace	, etc.): Toeslope	Local rel	lief (concave, convex, n	one): concave	Slope: 1	.0 % / 0.6 °
Subregion (LRR or MLRA):	LRR K	Lat.: 46.33293	38 Long	90.498618	Datum:	WGS84
Soil Map Unit Name: Michig	gamme-Schweitzer-Pe	eshekee-Rock Outcrop Comple	x, 18 to 35% slopes	NWI classif	fication: Upland	
Are climatic/hydrologic con	ditions on the site tyr	pical for this time of year?	Yes No	(If no, explain in	Remarks.)	
Are Vegetation 🗸 , So	il 🗹 , or Hydrolo	gy 🗹 significantly disturb	ped? Are "Normal	Circumstances"	present? Yes	No O
Are Vegetation , So	il 🗹 , or Hydrolo	gy naturally problemat	tic? (If needed.	explain any answ	ers in Remarks.)	
	-	map showing sampling	(== ===================================		•	ıres, etc
Hydrophytic Vegetation Pr	esent? Yes	No •				
Hydric Soil Present?	Yes 🔾	No •	Is the Sampled Area within a Wetland?	Yes O No 🖲)	
Wetland Hydrology Presen	_{t?} Yes 💿	No O				
Remarks: (Explain alterna	itive procedures here	or in a separate report.)				
Hudralogy.						
Hydrology						
Wetland Hydrology Indicators (minim		chack all that apply)			ors (minimum of 2 required	<u>d)</u>
Primary Indicators (minim Surface Water (A1)	ani or one required, c			Surface Soil C Drainage Patt		
High Water Table (A2)				Moss Trim Lin		
Saturation (A3)		Marl Deposits (B15)			/ater Table (C2)	
Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burro	ows (C8)	
Sediment Deposits (B2)		Oxidized Rhizospheres along	Living Roots (C3)	Saturation Vis	sible on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Reduced Iron (C	24)		ressed Plants (D1)	
Algal Mat or Crust (B4)		Recent Iron Reduction in Till	ed Soils (C6)	✓ Geomorphic P	Position (D2)	
☐ Iron Deposits (B5)	(07)	Thin Muck Surface (C7)		Shallow Aquit	, ,	
✓ Inundation Visible on Aer✓ Sparsely Vegetated Conca	0 3 . ,	U Other (Explain in Remarks)		FAC-neutral T	ohic Relief (D4)	
Sparsery vegetated conca	ive surface (bo)			FAC-neutral I	est (D5)	
Field Observations:	Yes ○ No •	D # (* 1 .)				
Surface Water Present?		Depth (inches):				
Water Table Present?	Yes No •	Depth (inches):	Wetland Hydi	ology Present?	Yes ● No ○	
Saturation Present? (includes capillary fringe)	Yes O No •	Depth (inches):				
Describe Recorded Data (s	tream gauge, monito	ring well, aerial photos, previo	us inspections), if avail	able:		
Remarks:						
The sparsely vegetated cogrow a lot of vegetation.	ncave surface and ge	omorphic position are due to h	nistoric mining activities	here which left a	a depressional area tha	t does not
1						

VEGETATION - Use scientific names of plants

VEGETATION - Use scientific names of pla	nts	Dominant _Species?			Sampling Point: SB5			
Tree Stratum (Plot size: 5' x 5')	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:			
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:1(A)			
2			0.0%					
3			0.0%		Total Number of Dominant Species Across All Strata: 2 (B)			
4			0.0%		(,			
5			0.0%		Percent of dominant Species That Are ORL FACW or FAC: 50.0% (A/B)			
6			0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)			
7			0.0%		Prevalence Index worksheet:			
Sapling/Shrub Stratum (Plot size: 5' x 5')	0 :	= T	otal Cove	er	Total % Cover of: Multiply by:			
4. Ager geecherum	5	✓	100.0%	FACU	0BL speci es 0 x 1 = 0			
2.			0.0%	17100	FACW species $0 \times 2 = 0$			
			0.0%		FAC speciles $5 \times 3 = 15$			
3			0.0%		FACU speci es $5 \times 4 = 20$			
4			0.0%		UPL species0 x 5 =0			
5					Column Totals: 10 (A) 35 (B)			
6	0 0		0.0%		Containing to care.			
7		— - т	otal Cove		Prevalence Index = B/A = 3.500			
Herb Stratum (Plot size: 5' x 5')	5	- '	otal Cove	:1	Hydrophytic Vegetation Indicators:			
1 Dryopteris intermedia	5	V	100.0%	FAC	Rapid Test for Hydrophytic Vegetation			
2		\Box	0.0%		☐ Dominance Test is > 50%			
	-		0.0%		Prevalence Index is ≤3.0 ¹			
3			0.0%		Morphological Adaptations ¹ (Provide supporting			
4			0.0%		data in Remarks or on a separate sheet)			
5					Problematic Hydrophytic Vegetation ¹ (Explain)			
6			0.0%		¹ Indicators of hydric soil and wetland hydrology must			
7			0.0%		be present, unless disturbed or problematic.			
8			0.0%		Definitions of Vegetation Strata:			
9			0.0%		benintions of Vegetation strata.			
10	0		0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter			
11			0.0%		at breast height (DBH), regardless of height.			
12	0	Ш	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and			
Woody Vine Stratum (Plot size: 5' x 5')	5:	= T	otal Cove	er	greater than 3.28 ft (1m) tall			
1	0_		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4	0		0.0%		height.			
	0 :	= T	otal Cove	er				
					Hydrophytic			
					Vegetation Present? Yes No No			
					Tressile.			
Domayles (Tuelvide photo combine have been as a combine of					1			
Remarks: (Include photo numbers here or on a separate she	ect.)							

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Color (r	Matrix		Red Color (moist)	lox Features % Type 1	Loc²	Texture Remarks		
0-7	7.5YR	3/1	100%	Color (moist)		LUC	Silt Loam		
7-14	7.5YR	4/4	100%				Very Fine Sandy Loam		
14+		-	-			-	Rock		
			-						
1									
• •		=Depletio	n. RM=Rec	luced Matrix, CS=Covere	d or Coated Sand Grai	ns ² Loca	ation: PL=Pore Lining. M=Matrix		
Hydric Soil I					0 ((00) (100 0		Indicators for Problematic Hydric Soils : 3		
Histosol (A1) pedon (A2)			☐ Polyvalue Below MLRA 149B)	/ Surface (S8) (LRR R,		2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Black Hist				Thin Dark Surfa	ce (S9) (LRR R, MLRA	\ 149B)	Coast Prairie Redox (A16) (LRR K, L, R)		
	Sulfide (A4)			Loamy Mucky N	lineral (F1) LRR K, L)		5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	Layers (A5)			Loamy Gleyed N	Matrix (F2)		Dark Surface (S7) (LRR K, L, M)		
	Below Dark S	Surface (A	11)	Depleted Matrix	(F3)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)		
☐ Thick Dar	k Surface (A1	2)		Redox Dark Sur	, ,		Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy Mu	ıck Mineral (S	51)		Depleted Dark S			Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy Gle	eyed Matrix (S	54)		Redox Depressi	ons (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Sandy Re							Red Parent Material (F21)		
	Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark Surf	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in Remarks)		
³ Indicators of	f hydrophytic	vegetatio	n and wetla	and hydrology must be p	resent, unless disturbe	ed or proble	ematic.		
Restrictive L	ayer (if obs	erved):							
Type: Ro	ock								
Depth (incl	hes): <u>7</u>						Hydric Soil Present? Yes ○ No ●		
Remarks:									
No redox feat	tures observ	ved							

Project/Site: Gogebic Taconite Bulk	Sample Sites an	d Access Roads	City/County:	Town of Anderson	Iron Co.	Sampling Date: 11-	Oct-13
Applicant/Owner: Gogebic Taconite				Stat	te: WI	Sampling Point:	SB6
Investigator(s): Ann Michalski, PSS	, PWS, WDNR P	AWD	Section, To	ownship, Range:	s. 33 t.	T45N R. R1	W
Landform (hillslope, terrace, etc.):	Toeslope		 Local relief (c	oncave, convex, n	one): concave	Slope:	1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR	 K	Lat.:	46.332896	Long	.: 90.498299	 Datur	m: WGS84
Soil Map Unit Name: Michigamme						fication: Upland	-
				s No		<u>.</u>	
Are climatic/hydrologic conditions	on the site ty		rear? Ye	s • No ·	(If no, explain in	•	
Are Vegetation , Soil	, or Hydrol	ogy 🗹 significan	tly disturbed?	Are "Normal	Circumstances"	present? Yes	No O
Are Vegetation, Soil 🗸	, or Hydrol	ogy 🗌 naturally	problematic?	(If needed, e	explain any answ	ers in Remarks.)	
Summary of Findings - A			sampling p	oint location	s, transects	, important fea	tures, etc
Hydrophytic Vegetation Present?	Yes 🔾	No •					
Hydric Soil Present?	Yes 🔾	No •		e Sampled Area n a Wetland?	Yes O No 🖲		
Wetland Hydrology Present?	Yes 💿	No O					
Remarks: (Explain alternative p	ocedures here	e or in a separate repo	ort.)				
Hydrology							
Wetland Hydrology Indicators:					Secondary Indicate	ors (minimum of 2 requi	red)
Primary Indicators (minimum of	one required;				Surface Soil C	• •	
Surface Water (A1) High Water Table (A2)		Water-Stained Lea			Drainage Patt		
Saturation (A3)		Aquatic Fauna (B ² Marl Deposits (B1			Moss Trim Lin	les (BT6) Vater Table (C2)	
Water Marks (B1)		Hydrogen Sulfide	·		Crayfish Burro	• ,	
Sediment Deposits (B2)		Oxidized Rhizosph		Roots (C3)		sible on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Redu				ressed Plants (D1)	
☐ Algal Mat or Crust (B4)		Recent Iron Redu		s (C6)	✓ Geomorphic F	Position (D2)	
Iron Deposits (B5)		Thin Muck Surface	e (C7)		Shallow Aquit	ard (D3)	
Inundation Visible on Aerial Imag		Other (Explain in	Remarks)			phic Relief (D4)	
Sparsely Vegetated Concave Surf	ace (B8)				FAC-neutral T	est (D5)	
Field Observations:							
Surface Water Present? Yes		Depth (inches):					
Water Table Present? Yes	O No ●	Depth (inches):					
Saturation Present? (includes capillary fringe) Yes	○ No ●	Depth (inches):		Wetland Hydr	ology Present?	Yes ● No ○	
Describe Recorded Data (stream	gauge, monito	oring well, aerial phot	os, previous ins	pections), if avail	able:		
Remarks:							
The sparsely vegetated concave grow a lot of vegetation.	urface and ge	eomorphic position ar	e due to historio	c mining activities	here which left a	a depressional area th	hat does not

VEGETATION -	Use scientific	names of	plants
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regeration - ose scientific fiames of	P 1011100	Dominant Species?			Sampling Point: SB6			
Tree Stratum (Plot size: 20' x 15')	Absolute % Cover	Rel	.Strat.	Indicator Status	Dominance Test worksheet:			
 1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)			
2.			0.0%					
3			0.0%		Total Number of Dominant Species Across All Strata: 5 (B)			
4		$\overline{\Box}$	0.0%		Species Across All Strata: 5 (B)			
		<u> </u>	0.0%		Percent of dominant Species			
			0.0%		That Are OBL, FACW, or FAC: 40.0% (A/B)			
6		H-	0.0%		Boundary To down date at			
7		<u>-</u> -			Prevalence Index worksheet:			
Sapling/Shrub Stratum (Plot size: 20' x 15')	:	= Tot	al Cove	r	Total % Cover of: Multiply by: OBL speciles 0 x 1 = 0			
1 Acer saccharum	15	✓ _	75.0%	FACU	FACW species $5 \times 2 = 10$			
2. Fraxinus nigra	5	_	25.0%	FACW				
3	0		0.0%		1776 Species x 6			
4			0.0%		FACU speci es $30 \times 4 = 120$			
5			0.0%		UPL speci es $0 \times 5 = 0$			
6			0.0%		Col umn Total s: 45 (A) 160 (B)			
7.		$\overline{\Box}$	0.0%		Prevalence Index = B/A = 3.556			
·		 _ Tot	al Cove	-	Prevalence index = B/A = 3.330			
lerb Stratum (Plot size: 5' radius)		_ 100	ai Cove		Hydrophytic Vegetation Indicators:			
1 Dryopteris intermedia	10	~	40.0%	FAC	Rapid Test for Hydrophytic Vegetation			
Acer saccharum		~	40.0%	FACU	Dominance Test is > 50%			
3. Tilla americana		<u> </u>	20.0%	FACU	Prevalence Index is ≤3.0 ¹			
1			0.0%		Morphological Adaptations ¹ (Provide supporting			
			0.0%		data in Remarks or on a separate sheet)			
5		H-	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)			
5		H-			¹ Indicators of hydric soil and wetland hydrology must			
7		H-	0.0%		be present, unless disturbed or problematic.			
3		H-	0.0%		Definitions of Vegetation Strata:			
9		Н_	0.0%		benincions of vegetation strata.			
)		H-	0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter			
l		Ц_	0.0%		at breast height (DBH), regardless of height.			
2		\square_{-}	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and			
Woody Vine Stratum (Plot size: 20' x 15')	25 :	= Tot	al Cove	r	greater than 3.28 ft (1m) tall			
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2.			0.0%		size, and woody plants less than 3.28 ft tall.			
3			0.0%		Mankada Allandaka ing pangkanthan 2 20 ft in			
4			0.0%		Woody vine - All woody vines greater than 3.28 ft in height.			
t			al Cove		Thought.			
		- 100	ai Cove	ı				
					Hydrophytic Vegetation			
					Present? Yes No No			
Remarks: (Include photo numbers here or on a separat	e sheet.)							

Dominant

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Color (r	Matrix		Color (moist)	ox Features % Type 1	Loc²	Texture Remarks			
0-2	7.5YR	3/2	100%	Color (moist)		LUC	Silt Loam			
2-13	7.5YR	4/6	100%			-	Very Fine Sandy Loam			
13+		-	-			-	Rock			
			-							
1										
• •		=Depletio	n. RM=Rec	uced Matrix, CS=Covere	d or Coated Sand Grai	ns ² Locat	ation: PL=Pore Lining. M=Matrix			
Hydric Soil I					0 ((00) (100 0		Indicators for Problematic Hydric Soils : 3			
Histosol (A1) oedon (A2)			☐ Polyvalue Below MLRA 149B)	Surface (S8) (LRR R,		2 cm Muck (A10) (LRR K, L, MLRA 149B)			
Black Hist				☐ Thin Dark Surfa	ce (S9) (LRR R, MLRA	\ 149B)	Coast Prairie Redox (A16) (LRR K, L, R)			
	Sulfide (A4)			Loamy Mucky M	lineral (F1) LRR K, L)		5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
	Layers (A5)			Loamy Gleyed N	Matrix (F2)		Dark Surface (S7) (LRR K, L, M)			
	Below Dark S	Surface (A	11)	Depleted Matrix	(F3)		☐ Polyvalue Below Surface (S8) (LRR K, L) ☐ Thin Dark Surface (S9) (LRR K, L)			
☐ Thick Dar	k Surface (A1	2)		Redox Dark Sur			Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Sandy Mu	ıck Mineral (S	51)		Depleted Dark S			Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy Gle	eyed Matrix (S	54)		Redox Depressi	ons (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy Red							Red Parent Material (F21)			
	Matrix (S6)						☐ Very Shallow Dark Surface (TF12)			
Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in Remarks)			
³ Indicators of	f hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturbe	ed or proble	ematic.			
Restrictive La	ayer (if obs	erved):								
Type: Ro	ock									
Depth (incl	hes):_7						Hydric Soil Present? Yes ○ No ●			
Remarks:										
No redox feat	tures observ	ved								

Project/Site: Gogebic Taconite Bulk Sample Sites and Access Roads	City/County: Town of Anderson, Iron Co. Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite	State: WI Sampling Point: SB7
Investigator(s): Ann Michalski, PSS, PWS, WDNR PAWD	Section, Township, Range: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, convex, none): concave Slope: 1.0 % / 0.6
Subregion (LRR or MLRA): LRR K Lat.:	46.334441 Long.: 90.493608 Datum: WGS84
	761.79888
Soil Map Unit Name: Dishno-Gogebic-Peshekee-Rock Outcrop, 18 to	<u> </u>
Are climatic/hydrologic conditions on the site typical for this time of	. , . , ,
Are Vegetation $lacksquare$, Soil $lacksquare$, or Hydrology $lacksquare$ significan	ntly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation $\ \ \ \ \ \ \ \ \ \ $, Soil $\ \ \ \ \ \ \ \ \ $, or Hydrology $\ \ \ \ \ \ \ \ \ \ $ naturally	problematic? (If needed, explain any answers in Remarks.)
	sampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes ○ No •	Is the Sampled Area within a Wetland? Yes O No •
Wetland Hydrology Present? Yes ● No ○	
Remarks: (Explain alternative procedures here or in a separate rep	ort.)
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1) Water-Stained Le	
☐ High Water Table (A2) ☐ Aquatic Fauna (B ☐ Saturation (A3) ☐ Marl Deposits (B	
✓ Saturation (A3) ✓ Marl Deposits (B¹ ✓ Water Marks (B1) Hydrogen Sulfide	
The second secon	chaylish Burrows (cs) bheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift deposits (B3) ☐ Presence of Redu	5 3 1 1
	uction in Tilled Soils (C6)
☐ Iron Deposits (B5) ☐ Thin Muck Surfac	ce (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	
✓ Sparsely Vegetated Concave Surface (B8)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	:
Water Table Present? Yes O No O Depth (inches):	·
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No O
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if available:
Remarks:	
The sparsely vegetated concave surface and geomorphic position argrow a lot of vegetation. Watermarks were present on the west en	re due to historic mining activities here which left a depressional area that does not id of this site but are not normal and are from a very large rain event that occurred substrate but it does not remain present long enough to create hydric conditions.

VEGETATION - Use scientific names of plants Dominant

VEGETATION - USE SCIENCING Hames of pr	iaiits	Domii Speci			Sampling Point: SB7				
Tree Stratum (Plot size: 30' x 60')	Absolute % Cover	Rel.Strat.		Indicator Status	Dominance Test worksheet:				
1 Fraxinus pennsylvanica	20	V	50.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)				
2. Tsuga canadensis		<u>✓</u>	25.0%	FACU	That are obe, thow, or the				
3. Betula alleghaniensis		<u>✓</u>	25.0%	FAC	Total Number of Dominant				
4			0.0%		Species Across All Strata: 5 (B)				
5		\Box	0.0%		Percent of dominant Species				
6		\Box	0.0%		That Are OBL, FACW, or FAC: 80.0% (A/B)				
7			0.0%		Prevalence Index worksheet:				
		 = T	otal Cove	r	Total % Cover of: Multiply by:				
Sapling/Shrub Stratum (Plot size: 30' x 60')			F0 00/	E4 0)4/	0BL species 0 x 1 = 0				
1 Fraxinus pennsylvanica		✓	50.0%	FACW	FACW species $40 \times 2 = 80$				
2. Ulmus americana			50.0%	FACW	FAC speciles10 x 3 =30				
3			0.0%		FACU speci es 10 x 4 = 40				
4			0.0%	-	UPL speci es				
5			0.0%		Col umn Total s: 60 (A) 150 (B)				
6			0.0%		Containing to the containing t				
7		Ш	0.0%		Prevalence Index = B/A = 2.500				
Herb Stratum (Plot size: 5' radius)	20	= T	otal Cove	r	Hydrophytic Vegetation Indicators:				
4	0	П	0.0%		Rapid Test for Hydrophytic Vegetation				
1			0.0%		✓ Dominance Test is > 50%				
2			0.0%		✓ Prevalence Index is ≤3.0 ¹				
3			0.0%	-	☐ Morphological Adaptations ¹ (Provide supporting				
4			0.0%	-	data in Remarks or on a separate sheet)				
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
6		Н	0.0%		¹ Indicators of hydric soil and wetland hydrology must				
7		П	0.0%		be present, unless disturbed or problematic.				
8		Н			Definitions of Vegetation Strata:				
9			0.0%						
0					Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
1			0.0%		at bleast fielght (DBH), regardless of fielght.				
2		_	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and				
Woody Vine Stratum (Plot size: 30' x 60')	0	= 10	otal Cove	r	greater than 3.28 ft (1m) tall				
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of				
2	0	\Box	0.0%		size, and woody plants less than 3.28 ft tall.				
3			0.0%		Monday sing. All woods vines greater than 2.29 ft in				
4			0.0%		Woody vine - All woody vines greater than 3.28 ft in height.				
т.		= T	otal Cove	•					
					Hydrophytic Vegetation Present? Yes No				

Remarks: (Include photo numbers here or on a separate sheet.)

Hydric vegetation is present in this area but common in disturbed areas on this property. Soils were not hydric and no hydrology was observed other than geomorphic position and sparsely vegetated concave surface which are both from historic activities.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	. Color (Matrix	_%		ox Features $\frac{1}{2}$ % Type $\frac{1}{2}$		Tourbure	Remarks		
	Color (ı			Color (moist)	% Type ¹	LOC2	Texture	кетагкѕ		
0-5	7.5YR	3/3	100%				Sandy Loam			
5-20+	5YR	4/4	100%		<u> </u>		Loamy Sand			
							-			
							-			
		-								
1 Type: C=Cond	centration D	-Depletio	n DM-Ded	ucad Matrix CS-Covered	I or Coated Sand Grai	ns 21 oca	tion: PL=Pore Lining. M=M	atriv		
Hydric Soil I		- Depletio	II. KWI–KEO	uced Matrix, 65–60vered	Tor coated Sand Oran	iis Loca				
Histosol (A				Polyvaluo Polova	Surface (S8) (LRR R,			ematic Hydric Soils: 3		
	pedon (A2)			MLRA 149B)	Surface (36) (LKK K,			(LRR K, L, MLRA 149B)		
Black Hist				☐ Thin Dark Surface	ce (S9) (LRR R, MLRA	149B)		x (A16) (LRR K, L, R)		
	Sulfide (A4)			Loamy Mucky M	ineral (F1) LRR K, L)			or Peat (S3) (LRR K, L, R)		
	Layers (A5)			Loamy Gleyed M	latrix (F2)		☐ Dark Surface (S7)			
	Below Dark S	Surface (A	11)	Depleted Matrix	(F3)		Polyvalue Below Surface (S8) (LRR K, L)			
	k Surface (A1			Redox Dark Surf	ace (F6)		Thin Dark Surface			
☐ Sandy Mu	ck Mineral (S	61)		Depleted Dark S			☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy Gle	eyed Matrix (S	S4)		Redox Depression	ons (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy Red	dox (S5)						Red Parent Materi			
Stripped N	Matrix (S6)						Very Shallow Dark			
☐ Dark Surfa	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in F			
³ Indicators of	hydrophytic	vegetatio	n and wetla	and hydrology must be pr	esent, unless disturbe	d or proble				
Restrictive La										
Type:	ayer (ii obs	ci vea).								
Depth (inch	hes):						Hydric Soil Present?	Yes O No 💿		
Remarks:										
No redox feat	turas ahsar	ved								
NO TEGOX TEGI	iui es obsei	veu								

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Gogebic Taconite Bulk Sample Sites and Access Roads	City/County: Town of Anders	son, Iron Co. Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite	s	State: WI Sampling Point: SB8
Investigator(s): Ann Michalski, PSS, PWS, WDNR PAWD	Section, Township, Range	e: S. 33 T. T45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, convex	s, none): concave Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.334797 Lo	ong.: 90.493138
Soil Map Unit Name: Dishno-Gogebic-Peshekee-Rock Outcrop,		NWI classification: Upland
-		
Are climatic/hydrologic conditions on the site typical for this tin		(If no, explain in Remarks.)
, , , , , ,	nificantly disturbed? Are "Norm	nal Circumstances" present? Yes S NO
Are Vegetation \square , Soil \checkmark , or Hydrology \square nat	curally problematic? (If needed	d, explain any answers in Remarks.)
Summary of Findings - Attach site map show	ing sampling point location	ons, transects, important features, etc
Hydrophytic Vegetation Present? Yes • No •		
Hydric Soil Present? Yes ○ No ●	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present? Yes No •		
Remarks: (Explain alternative procedures here or in a separa Soils, vegetation and hydrology are considered significantly d		
was former a railbed. However, this is the new normal circun appears that the historic disturbance led to FACW species be shallow rock that prevents full soil profile viewing. However, of wetland conditions.	ing present, which is common in this	area. Soils are also considered problematic due to
Hydrology		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that a		_ Surface Soil Cracks (B6)
	ined Leaves (B9) auna (B13)	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
Saturation (A3) Marl Depo		Dry Season Water Table (C2)
	Sulfide Odor (C1)	Crayfish Burrows (C8)
	Rhizospheres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
☐ Drift deposits (B3) ☐ Presence (of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	on Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
_	Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Exp	plain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No Depth (ii	nches):	
Water Table Present? Yes No Depth (ii	nches):	
Saturation Present? (includes capillary fringe) Yes No Depth (in	Wetland Hy	ydrology Present? Yes O No 🖲
Describe Recorded Data (stream gauge, monitoring well, aeria	al photos, previous inspections), if av	vailable:
Remarks:		

VEGETATION -	Use	scientific	names of	plants
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					Sampling Point: SB8			
Tree Stratum (Plot size: <u>30' x 60'</u>)	Absolute % Cover	R	pecies? el.Strat. over	Indicator Status				
1 Thuja occidentalis	25	✓	38.5%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)			
2 Betula alleghaniensis	25	✓	38.5%	FAC				
3. Abies balsamea	15	✓	23.1%	FAC	Total Number of Dominant Species Across All Strata: 7 (B)			
4		$\overline{\Box}$	0.0%		Species Across All Strata: 7 (B)			
5		$\overline{\Box}$	0.0%		Percent of dominant Species			
6		$\overline{\Box}$	0.0%		That Are OBL, FACW, or FAC: 71.4% (A/B)			
		П	0.0%		Prevalence Index worksheet:			
7			-		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 30' x 60')	65	- 1	otal Cove	Γ	0BL species 0 x 1 = 0			
1. Acer saccharum	10	~	50.0%	FACU	· — —			
2. Abies balsamea	10	V	50.0%	FAC				
3			0.0%		FAC speciles $57 \times 3 = 171$			
4	-		0.0%		FACU speci es25			
5			0.0%		UPL speci es0 x 5 =0			
6			0.0%		Column Totals: 107 (A) 321 (B)			
7	0	\Box	0.0%		Prevalence Index = B/A = 3.000			
			otal Cove					
Herb Stratum (Plot size: 5' radius)		- '	otal Cove		Hydrophytic Vegetation Indicators:			
1. Acer saccharum	15	✓	68.2%	FACU	Rapid Test for Hydrophytic Vegetation			
2. Dryopteris intermedia		✓	22.7%	FAC	✓ Dominance Test is > 50%			
3. Ables balsamea			9.1%	FAC	✓ Prevalence Index is \leq 3.0 ¹			
-			0.0%	- 1710	Morphological Adaptations ¹ (Provide supporting			
4		\Box	0.0%		data in Remarks or on a separate sheet)			
		П	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
6		Н			¹ Indicators of hydric soil and wetland hydrology must			
7		Н	0.0%		be present, unless disturbed or problematic.			
8		Н	0.0%		Definitions of Vegetation Strata:			
9		Н	0.0%		Seminorio de la Seminorio de altar			
0			0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter			
1			0.0%		at breast height (DBH), regardless of height.			
2	0	Ш	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and			
Woody Vine Stratum (Plot size: 30' x 60')		= T	otal Cove	r	greater than 3.28 ft (1m) tall			
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3	0		0.0%		Woody vine - All woody vines greater than 3.28 ft in			
4	0		0.0%		height.			
	0	= T	otal Cove	r				
					Hydrophytic Vegetation Present? Yes No			
Remarks: (Include photo numbers here or on a separate sh	•		a thic mar	oorty Call	Is were not hydric and no hydrology was observed other			

Hydric vegetation is present in this area but common in disturbed areas on this property. Soils were not hydric and no hydrology was observed other than geomorphic position from historic activities.

 $^{{}^{\}star}\text{Indicator suffix} = \text{National status or professional decision assigned because Regional status not defined by FWS}.$

Soil Sampling Point: SB8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)						
Depth Matrix Redox Feature (inches) Color (moist) % Color (moist) %	s Type ¹ Loc ² Texture Remarks					
0-7 7.5YR 3/3 100%	Sandy Loam					
7+	Rock					
$^{\rm 1}$ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated	Sand Grains ² Location: PL=Pore Lining. M=Matrix					
Hydric Soil Indicators:	Indicators for Problematic Hydric Soils: 3					
Histosol (A1) Polyvalue Below Surface (S8) (LRR R,					
Histic Epipedon (A2) MLRA 149B) This Ports Surface (S0) (LB)	Coast Prairie Paday (A1() (LDD K. L. D)					
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LR ☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) L	5 cm Musky Post or Post (S2) (LDD K. L. D)					
Trydrogen suinde (A4)	Dark Surface (S7) (LRR K, L, M)					
Stratified Edyers (AS)	Polyvalue Below Surface (S8) (LRR K, L)					
☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6)	Thin Dark Surface (S9) (LRR K, L)					
Sandy Muck Mineral (S1) Depleted Dark Surface (F7)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)					
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	Piedmont Floodplain Soils (F19) (MLRA 149B)					
Sandy Redox (S5)	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)					
Stripped Matrix (S6)	Red Parent Material (F21)					
Dark Surface (S7) (LRR R, MLRA 149B)	✓ Very Shallow Dark Surface (TF12)✓ Other (Explain in Remarks)					
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unles	•					
	s disturbed of problematic.					
Restrictive Layer (if observed):						
Type: Rock	Hydric Soil Present? Yes O No •					
Depth (inches): 7	, , , , , , , , , , , , , , , , , , , ,					
Remarks:						
No redox features observed						

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Gogebic Taconite Bulk Sample Sites and	d Access Roads City/Co	ounty: Town of Anderson	Iron Co.	Sampling Date: 11-Oct-13
Applicant/Owner: Gogebic Taconite		Stat	e: WI	Sampling Point: SB9
Investigator(s): Ann Michalski, PSS, PWS, WDNR PA	AWD Sec	tion, Township, Range:	s. 33 t. T	45N R. R1W
Landform (hillslope, terrace, etc.): Toeslope		elief (concave, convex, n		Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR K	Lat.: 46.3351		· 90.492696	Datum: WGS84
Soil Map Unit Name: Dishno-Gogebic-Peshekee-			-	cation: Upland
	• •	· · · · · · · · · · · · · · · · · · ·	_	
Are climatic/hydrologic conditions on the site type	_		(If no, explain in	V
Are Vegetation \checkmark , Soil \checkmark , or Hydrold	ogy 🗹 significantly distur	bed? Are "Normal	Circumstances" p	resent? Yes S NO C
Are Vegetation \square , Soil \square , or Hydrolo	ogy	ntic? (If needed, e	xplain any answe	rs in Remarks.)
Summary of Findings - Attach site	map showing sampli	ng point location	s, transects,	important features, etc
Hydrophytic Vegetation Present? Yes •	No O			
Hydric Soil Present? Yes	No •	Is the Sampled Area within a Wetland?	Yes O No 💿	
Wetland Hydrology Present? Yes	No •			
Remarks: (Explain alternative procedures here	or in a separate report.)			
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicator	rs (minimum of 2 required)
Primary Indicators (minimum of one required;			Surface Soil Cr	• •
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9)		Drainage Patte	, ,
Saturation (A3)	Aquatic Fauna (B13) Marl Deposits (B15)		☐ Moss Trim Line ☐ Dry Season Wa	• •
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		Crayfish Burrov	• •
Sediment Deposits (B2)	Oxidized Rhizospheres alone			ble on Aerial Imagery (C9)
☐ Drift deposits (B3)	Presence of Reduced Iron (Stunted or Stre	essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Ti	lled Soils (C6)	✓ Geomorphic Po	osition (D2)
Iron Deposits (B5)	☐ Thin Muck Surface (C7)		Shallow Aquita	` '
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		Microtopograp	
Sparsely Vegetated Concave Surface (B8)			FAC-neutral Te	est (D5)
Field Observations:				
Surface Water Present? Yes No •	Depth (inches):			
Water Table Present? Yes O No •	Depth (inches):			
Saturation Present? (includes capillary fringe) Yes No •	Depth (inches):	Wetland Hydr	ology Present?	Yes ○ No ●
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previ	ous inspections), if availa	able:	
Remarks:				

VEGETATION - Use scientific names of p	lants		ominant pecies?		Sampling Point: SB9			
Tree Stratum (Plot size: 30' x 60')	Absolute % Cover	R		Indicator Status	Dominance Test worksheet:			
4. Abica balaamaa	60	✓	85.7%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)			
0. A			14.3%	FACU	That are OBL, FACW, OF FAC.			
3. Acer saccnarum			0.0%	TACO	Total Number of Dominant			
			0.0%		Species Across All Strata: 5 (B)			
4					Percent of dominant Species			
5			0.0%		That Are OBL, FACW, or FAC: 60.0% (A/B)			
6			0.0%					
7		 _ T.	0.0% otal Cove		Prevalence Index worksheet: Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 30' x 60')		= 10	otai Cove	: F	0BL species 20 x 1 = 20			
1Acer saccharum	10	✓	50.0%	FACU	FACW species $0 \times 2 = 0$			
2. Abies balsamea	10	V	50.0%	FAC	- X 2			
3	0		0.0%		FAC speciles $\frac{70}{25}$ x 3 = $\frac{210}{100}$			
4			0.0%		FACU speci es $\frac{25}{2}$ x 4 = $\frac{100}{2}$			
5			0.0%		UPL species $0 \times 5 = 0$			
6			0.0%		Column Totals: 115 (A) 330 (B)			
7.			0.0%		Prevalence Index = B/A = 2.870			
Herb Stratum (Plot size: 5' radius)	20	= T	otal Cove	er	Hydrophytic Vegetation Indicators:			
	20	✓	00.00/	OBL	Rapid Test for Hydrophytic Vegetation			
1 Sphagnum magellanicum		▼	80.0%	OBL	✓ Dominance Test is > 50%			
2. Carex gracillima			20.0%	FACU	✓ Prevalence Index is ≤3.0 ¹			
3			0.0%		Morphological Adaptations ¹ (Provide supporting			
4			0.0%		data in Remarks or on a separate sheet)			
5			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
6			0.0%		1 To distance of bodies and another distance and			
7		Н	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
8		Ш	0.0%					
9		Ш	0.0%		Definitions of Vegetation Strata:			
0	0		0.0%		Tree - Woody plants, 3 in. (7.6 cm) or more in diameter			
1	0		0.0%		at breast height (DBH), regardless of height.			
2	0	Ш	0.0%		Sapling/shrub - Woody plants less than 3 in. DBH and			
Woody Vine Stratum (Plot size: 30' x 60')	25	= T	otal Cove	er	greater than 3.28 ft (1m) tall			
1	0		0.0%		Herb - All herbaceous (non-woody) plants, regardless of			
2	0		0.0%		size, and woody plants less than 3.28 ft tall.			
3		$\overline{\Box}$	0.0%					
4	0	\Box	0.0%		Woody vine - All woody vines greater than 3.28 ft in height.			
4		 = T	otal Cove		l noight.			
		•	- 3 0070					
					Hydrophytic Vegetation Present? Yes No			

Remarks: (Include photo numbers here or on a separate sheet.)

Hydric vegetation is present in this area but common in disturbed areas on this property. Soils were not hydric and no hydrology was observed other than geomorphic position from historic activities. A small patch of sphagnum is also present. Although most often seen in bogs, there are 120+ species of sphagnum and it will grow in shady, acidic upland areas.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: SB9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Color (ı	Matrix		Color (moist)	ox Features % Type 1	Loc²	Texture	Remarks	
0-9	5YR	3/2	100%	Color (Illoist)	-70 Type	LUC-	Sandy Loam	Kemarks	
9-20+	5YR	3/3	100%			-	Sandy Loam		
							-		
							-		
							-		
							-		
		-					-		
¹ Type: C=Cond	centration. D	=Depletio	n. RM=Red	uced Matrix, CS=Covered	d or Coated Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=M	atrix	
Hydric Soil I	ndicators:						Indicators for Proble	ematic Hydric Soils:	
Histosol (A	A1)				Surface (S8) (LRR R			(LRR K, L, MLRA 149B)	
Histic Epip	pedon (A2)			MLRA 149B)	(CO) (LDD D MLD	1 1 1 0 D)		x (A16) (LRR K, L, R)	
Black Hist					ce (S9) (LRR R, MLR	4 149B)		or Peat (S3) (LRR K, L, R)	
	Sulfide (A4)			Loamy Gleyed N	ineral (F1) LRR K, L)		Dark Surface (S7)	(LRR K, L, M)	
	Layers (A5)			Depleted Matrix			Polyvalue Below Surface (S8) (LRR K, L)		
	Below Dark S k Surface (A1		11)	Redox Dark Sur			Thin Dark Surface (S9) (LRR K, L)		
	ck Mineral (S	•		Depleted Dark S	, ,		Iron-Manganese Masses (F12) (LRR K, L, R)		
	eyed Matrix (S			Redox Depression				in Soils (F19) (MLRA 149B)	
Sandy Red		54)) (MLRA 144A, 145, 149B)	
	Matrix (S6)						Red Parent Material (F21) Very Shallow Dark Surface (TF12)		
	ace (S7) (LRF	R R, MLRA	149B)				Other (Explain in F		
				and hydrology must be pr	ocont unloce dicturbe	od or proble		Remarks)	
			ii and wette	ina nyarology mast be pr	esent, unless disturbe	ed of proble	ematic.		
Restrictive La	ayer (if obs	erved):							
Type:							Hydric Soil Present?	Yes ○ No •	
Depth (inch	nes):						•	100 - 110 -	
Remarks:									
No redox feat	ures obser	ved							



APPENDIX B – SITE PHOTOGRAPHS



Bulk Sample Site 1



Bulk Sample Site 1



Bulk Sample Site 1 - Wetland 1-1



Bulk Sample Site 1 - Upland 1-1



Bulk Sample Site 1 - Wetland 1 Crossing Road



Bulk Sample Site 1 - Wetland 1 Drainageway



Wetland 2 - Looking South



Wetland 2 - Looking West



Wetland 2 - Looking West



Wetland 3 - Looking South



Wetland 4 - Drainageway



Wetland 4 - Looking East



Wetland 4 - Looking South



Wetland 4 - Looking West



Drainage at Wetland 4



Wetland 5 - Looking North



Wetland 5 - Looking South



Wetland 5 - Looking South



Bulk Sample Site 2



Bulk Sample Site 2



Bulk Sample Site 2



Bulk Sample Site 3



Bulk Sample Site 3



Bulk Sample Site 3



Bulk Sample Site 4



Bulk Sample Site 4



Bulk Sample Site 5



Bulk Sample Site 5





Wetland 6 Wetland 6





Upland 6 Wetland 7







Wetland 8



Upland 8



Wetland 9





Upland 9 Wetland 10





Upland 10 Wetland 11





Upland 11 Wetland 12





Upland 12 Wetland 13







Wetland 14







SB2





SB3 SB4





SB5 SB6





SB7 SB8

