



US Army Corps
of Engineers
St Paul District

**APPLICANT: Northshore Mining
Company, owned and managed by
Cliffs Natural Resources, Inc.**

Public Notice

ISSUED: September 25, 2014

EXPIRES: October 27, 2014

REFER TO: 2014-01685-DWW

SECTION:404 - Clean Water Act

1. APPLICATION FOR PERMIT TO work in waters of the United States for mine progression at the Northshore Mining Company (NSM) taconite ore mine facility. The work would facilitate a portion of the southerly progression of the existing Peter Mitchell open-pit in the Block 5 - 12 review area. The project would result in the discharge of dredged and fill material in 12.09 acres of wetlands adjacent to Langley Creek. The purpose of the mine progression would be to mine taconite ore within the current State of Minnesota permit to mine limits, for the continuation of mining operations at the NSM facility. NSM would be able to provide a continual supply of high quality, low cost iron ore pellets to the North American steel mills. The existing infrastructure at the mine facility near the town of Babbitt would be sufficient to adequately accommodate the proposed open-pit progression.

2. SPECIFIC INFORMATION.

APPLICANT'S ADDRESS: Northshore Mining Company
1702 Scott Road
P.O. Box 207
Babbitt, Minnesota 55706

AGENT: Andrea Hayden Northshore Mining Company
10 Outer Drive
Silver Bay, Minnesota 55614

PROJECT LOCATION: The NSM taconite mine facility mines taconite ore from the Biwabik Iron Formation on the eastern side of the Mesabi Iron Range in northeastern Minnesota near the town of Babbitt. The project review area is located in Sec. 19, 20, and 30, T. 60N., R. 12W., St. Louis County, Minnesota.

DESCRIPTION OF PROJECT: NSM submitted a request for authorization under Section 404 of the Clean Water Act (CWA) for 12.09 acres of wetland impacts for the proposed southerly progression of the existing open-pit in the Block 5 – 12 review area.

The Corps previously reviewed and authorized NSM to impact approximately 51 acres of wetlands under DA permit 2005-01560-TWP dated August 9, 2006, and as amended under DA permit modification 2005-01560-TWP dated October 30, 2007 (Drawing 2014-01685-DWW 9 of 10). NSM is required to provide compensatory mitigation for the loss of wetlands authorized by this permit.

Operations - Regulatory (2014-01685-DWW)

SUBJECT: Notice of Application for Permit

APPLICANT: Northshore Mining Company

NSM is an open cut mine; therefore, surface overburden, low grade taconite, and waste rock must be stripped and stockpiled to expose the underlying taconite. The work for this mine progression would include stripping and stockpiling a layer of Type I and Type II Virginia Formation (VF) waste rock:

- a. The Type I VF would have blast patterns containing VF rock with whole rock sulfur content of less than 0.20 weight percent and Neutralization Potential Ratio (NPR) greater than or equal to 3 for the pattern averages.
- b. The Type II VF would have blast patterns containing VF rock with the whole rock sulfur content of greater than or equal to 0.2 weight percent and less than 1.0 weight percent sulfur, or with a NPR of less than 3.

The VF waste rock would be stockpiled in-pit of the Peter Mitchell open-pit within a proposed 154.0-acre stockpile area. A Stockpile Plan for the 154.0-acre stockpile area was completed for NSM in May 2013. The VF waste rock would be exposed in both the Block 5 – 12 review area and in the 154.0-acre stockpile area during the mine progression and stockpiling process, which is estimated to be between 5 and 10 years.

NSM would have adequate capacity in their existing stockpile areas for the surface overburden and low-grade taconite ore.

The taconite ore bodies are mined where the ore exists in economically mineable quantities. Extensive exploration programs are completed; utilizing diamond drill coring techniques to sample the ore body before mining takes place in order to provide information for proper planning and sequencing of the mining operation. The uncovering of the taconite ore by removing (stripping) the surface overburden, low grade taconite, and waste rock materials is expensive, and is avoided if the underlying taconite does not have the required quality and cost properties. These properties include adequate iron unit recovery, requisite iron, silica, and phosphorus contents, compatible plant processing attributes, and acceptable stripping ratios (tons of stripping material per tons of acceptable taconite), and are essential in guaranteeing acceptable costs of operating the mine and processing plant.

NSM states that they must continue to extract taconite ores from their active mining areas in order to remain a viable taconite mining and iron ore pellet producing facility. The geology of the taconite ore bodies, taconite ore quality, amount of stripping materials to be removed, operating efficiencies and economic conditions dictate the specific location and sequence of mining activities. NSM states that there are no practical or feasible alternatives for avoiding or minimizing the impacts to wetlands that occur within the limits of the economically mineable taconite ore reserves.

QUANTITY, TYPE, AND AREA OF FILL: The proposed mine progression activity would result in the discharge of dredged and fill materials into 12.09 acres of wetlands adjacent to Langley Creek. The wetlands proposed to be impacted by the project would be Wetland 1, Wetland 18, and Wetland 20. Wetland 1 is comprised of 10.15 acres of shallow marsh (Type 3), Wetland 18 is comprised of 1.21 acres of alder thicket (Type 6), and Wetland 20 is comprised of 0.73 acre of shrub-carr (Type 6).

Operations - Regulatory (2014-01685-DWW)

SUBJECT: Notice of Application for Permit

APPLICANT: Northshore Mining Company

The proposed discharges would result in the permanent loss of these wetlands. The wetlands proposed for impacts are located in the Rainy River Basin.

VEGETATION IN AFFECTED AREA: Wetland 1 is dominated by 10.15 acres of red top (*Agrostis stolonifera*) with cattails (*Typha angustifolia*) and green bulrush (*Schoenoplectus tabernaemontani*); Wetland 18 is dominated by 1.21 acres of paper birch, balsam fir, speckled alder, jewelweed (*Impatiens capensis*), red raspberry, and lake sedge (*Carex lacustris*); and Wetland 20 is dominated by 0.73 acre of leatherleaf (*Chamaedaphne calyculata*) and Virginia strawberry (*Fragaria virginiana*) with pussy willow (*Salix discolor*), speckled alder, tamarack (*Larix laricina*), and red raspberry also present.

SOURCE OF FILL MATERIAL: All materials would be obtained on-site.

SURROUNDING LAND USE: The Block 5 – 12 review area is adjacent to an existing mine pit and stockpile areas, and disturbed upland forested communities. The drainage within and around the proposed project review area has been altered by past mining activities and road construction.

THE FOLLOWING POTENTIALLY TOXIC MATERIALS COULD BE USED AT THE PROJECT SITE: Use of heavy mining equipment could result in minor spills of gas, oil, fuel oil, or other petroleum products.

Blasting is done by drilling a pattern of holes and using ammonium nitrate (NH_4NO_3) and fuel oil as the blasting agent. However, the ammonium nitrate and fuel oil are consumed during the blast and should not be introduced into the groundwater or adjacent surface waters.

No other potentially toxic materials would be used at the project site.

THE FOLLOWING PRECAUTIONS TO PROTECT WATER QUALITY HAVE BEEN DESCRIBED BY THE APPLICANT: The proposed NSM project would require permits from the Minnesota Department of Natural Resources (MnDNR) and the Minnesota Pollution Control Agency (MPCA), which would contain provisions to protect water quality, including: reclamation guidelines for abandoned mine areas, contouring of benches to eliminate or reduce run-off and erosion, the use of settling basins to treat run-off before it leaves the site, and other standard mine practices.

MITIGATION: NSM is proposing compensatory wetland mitigation for the proposed 12.09 acres of wetland impacts with the purchase of wetland bank credits at a 1.0:1.0 mitigation ratio from the Embarrass River bank within the Lake Superior Basin. The wetland compensatory wetland mitigation would be in-advance and in-kind, therefore the 1:1 mitigation ratio would be satisfactory. Any indirect wetland impacts, for example hydrologic impacts, which are associated with a regulated discharge of dredged and/or fill material into waters of the U.S., would be evaluated and may also require wetland mitigation.

Operations - Regulatory (2014-01685-DWW)

SUBJECT: Notice of Application for Permit

APPLICANT: Northshore Mining Company

3. REPLIES/COMMENTS.

Interested parties are invited to submit to this office written facts, arguments, or objections within 30 days of the date of this notice. These statements should bear upon the suitability of the location and the adequacy of the project and should, if appropriate, suggest any changes believed to be desirable. Comments received may be forwarded to the applicant.

Replies may be addressed to Regulatory Branch, St. Paul District, Corps of Engineers, 180 Fifth Street East, Suite 700, Saint Paul, MN 55101-1678.

Or, IF YOU HAVE QUESTIONS ABOUT THE PROJECT, call Daryl W. Wierzbinski at the Duluth office of the Corps, telephone number (218) 720 – 5291 EXT 35401.

To receive Public Notices by e-mail, go to:

http://mvp-extstp.mvp.usace.army.mil/list_server/ and add your information in the New Registration Box.

4. FEDERALLY-LISTED THREATENED OR ENDANGERED WILDLIFE OR PLANTS OR THEIR CRITICAL HABITAT.

None were identified by the applicant or are known to exist in the permit area. However, St. Louis County is within the known or historic range of the following Federally-listed threatened (T) Canada Lynx species:

<u>Species</u>	<u>Habitat</u>
Canada Lynx (T)	Northern forested areas

This application is being coordinated with the U.S. Fish and Wildlife Service. Any comments it may have concerning Federally-listed threatened or endangered wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

5. JURISDICTION.

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Section 404 of the CWA identified in Regulatory Guidance Letter 08-02. We have made an initial determination that the 12.09 acres of wetlands that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the CWA. The Corps will prepare a preliminary Jurisdictional Determination (JD) prior to making a permit decision. NSM had agreed to the preliminary JD review process on September 15, 2014.

THE APPLICANT HAS STATED THAT THE FOLLOWING STATE, COUNTY, AND/OR LOCAL PERMITS HAVE BEEN APPLIED FOR/ISSUED: NSM has applied for permits from the MnDNR and the MPCA.

Operations - Regulatory (2014-01685-DWW)

SUBJECT: Notice of Application for Permit

APPLICANT: Northshore Mining Company

6. STATE SECTION 401 WATER QUALITY CERTIFICATION.

Valid Section 404 permits cannot be issued for any activity unless state water quality certification for the activity is granted or waived pursuant to Section 401 of the Clean Water Act. The state Section 401 authority in Minnesota is the MPCA. The St. Paul District has provided this public notice and a copy of the applicant's Section 404 permit application form to the MPCA. If MPCA needs any additional information in order for the Section 401 application to be considered complete by MPCA, the MPCA has indicated that it will request such information from the applicant. It is the permit applicant's responsibility to ensure that the MPCA has received a valid, complete application for state Section 401 certification and to obtain a final Section 401 action from the MPCA.

The MPCA has indicated that this public notice serves as its public notice of the application for Section 401 water quality certification under Minnesota Rules Part 7001. The MPCA has also indicated that the Section 401 process shall begin to commence upon the issuance date of this public notice unless the MPCA notifies both the St. Paul District and the permit applicant to the contrary, in writing, before the expiration date of this public notice.

Any comments relative to MPCA's Section 401 Certification for the activity proposed in this public notice may be sent to:

Minnesota Pollution Control Agency, Resource Management and Assistance Division,
Attention: 401 Certification, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

7. HISTORICAL/ARCHAEOLOGICAL.

This public notice is being sent to the State Archaeologist for their comments. The Corps will review information on known cultural resources and/or historic properties within and adjacent to the project area. The Corps will also consider the potential effects of the project on any properties that have yet to be identified. The results of this review and the Corps' determination of effect will be coordinated with the State Historic Preservation Officer independent of this public notice. Any adverse effects on historic properties will be resolved prior to the Corps authorization, or approval, of the work in connection with this project.

8. PUBLIC HEARING REQUESTS.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, in detail, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided or if there is otherwise no valid interest to be served.

9. PUBLIC INTEREST REVIEW.

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the

Operations - Regulatory (2014-01685-DWW)

SUBJECT: Notice of Application for Permit

APPLICANT: Northshore Mining Company

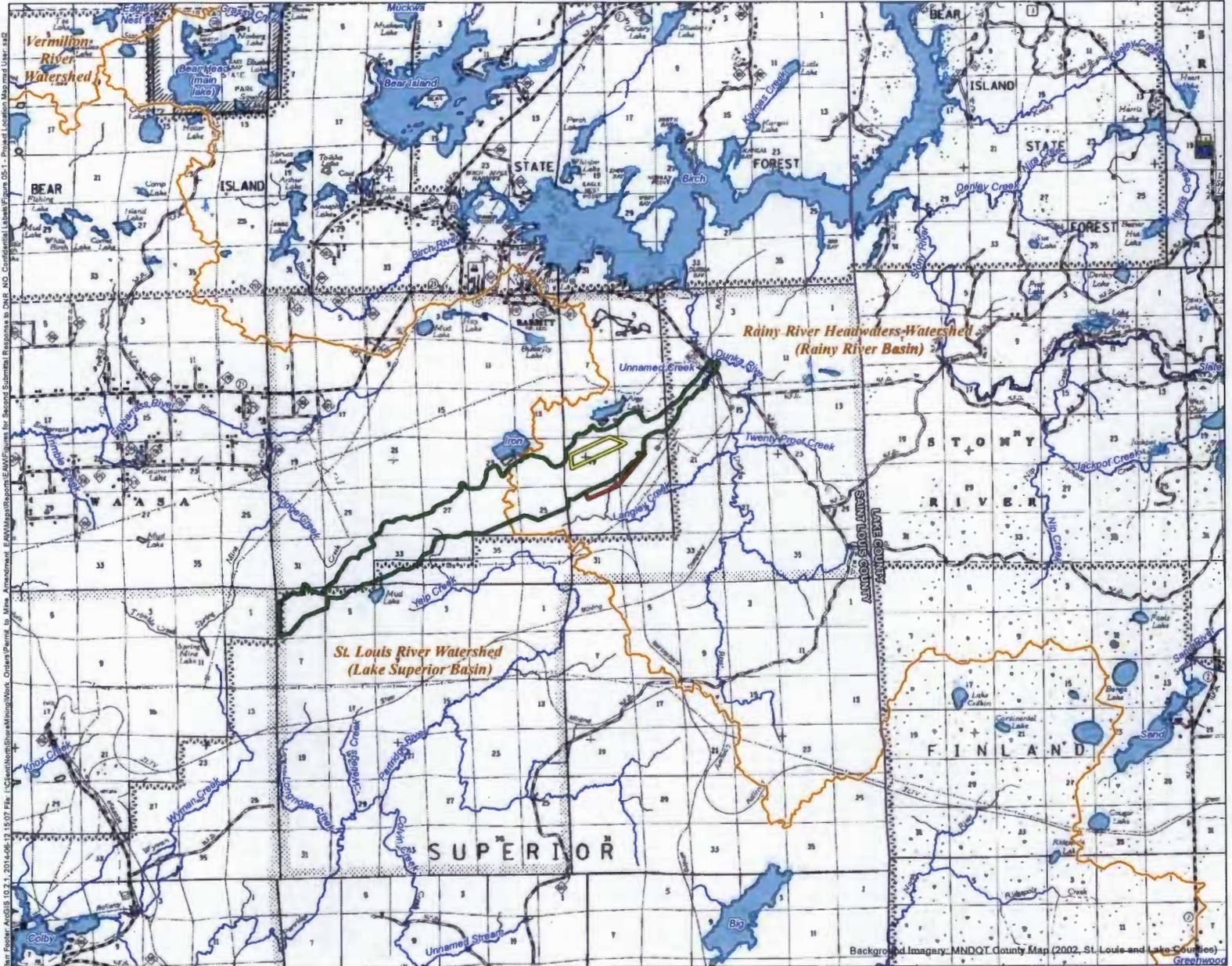
national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. Environmental and other documents will be available for review in the St. Paul District Office.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Benjamin Cox
Chief, Northwest Section

Enclosures

NOTICE TO EDITORS: This public notice is provided as background information and is not a request or contract for publication.



- Current Ultimate Pit Limit
- Proposed Ultimate Pit Limit
- Proposed Type II VF Stockpile
- County Boundary
- Lakes
- Streams
- Watershed Boundary (MN DNR Level 4)*

* The watershed divide through the pit has been removed. The current location of the sumps and their outfalls approximates the historical divide.



2014-01685-DWW
Drawing 1 of 10

St. Louis County, Minnesota

File: I:\Client\Work\Box\Mining\Work_Origan\Permit to Mine\Approved E:\Mines\Reports\EMAP\Reports for Second Submittal\Resonance 2.DWG NO Confidential\LEWAT\Figure 05-1 - Project Location Map.dwg User: ssp
 Date: Footer: A0618.D 7.1 - 2014.06.12 16:07 File: I:\Client\Work\Box\Mining\Work_Origan\Permit to Mine\Approved E:\Mines\Reports\EMAP\Reports for Second Submittal\Resonance 2.DWG NO Confidential\LEWAT\Figure 05-1 - Project Location Map.dwg User: ssp

Background Imagery: MNDOT County Map (2002, St. Louis and Lake Counties) - Greenwood



-  Current Ultimate Pit Limit
-  Proposed Ultimate Pit Limit
-  Proposed Type II VF Stockpile
-  Lakes
-  Streams



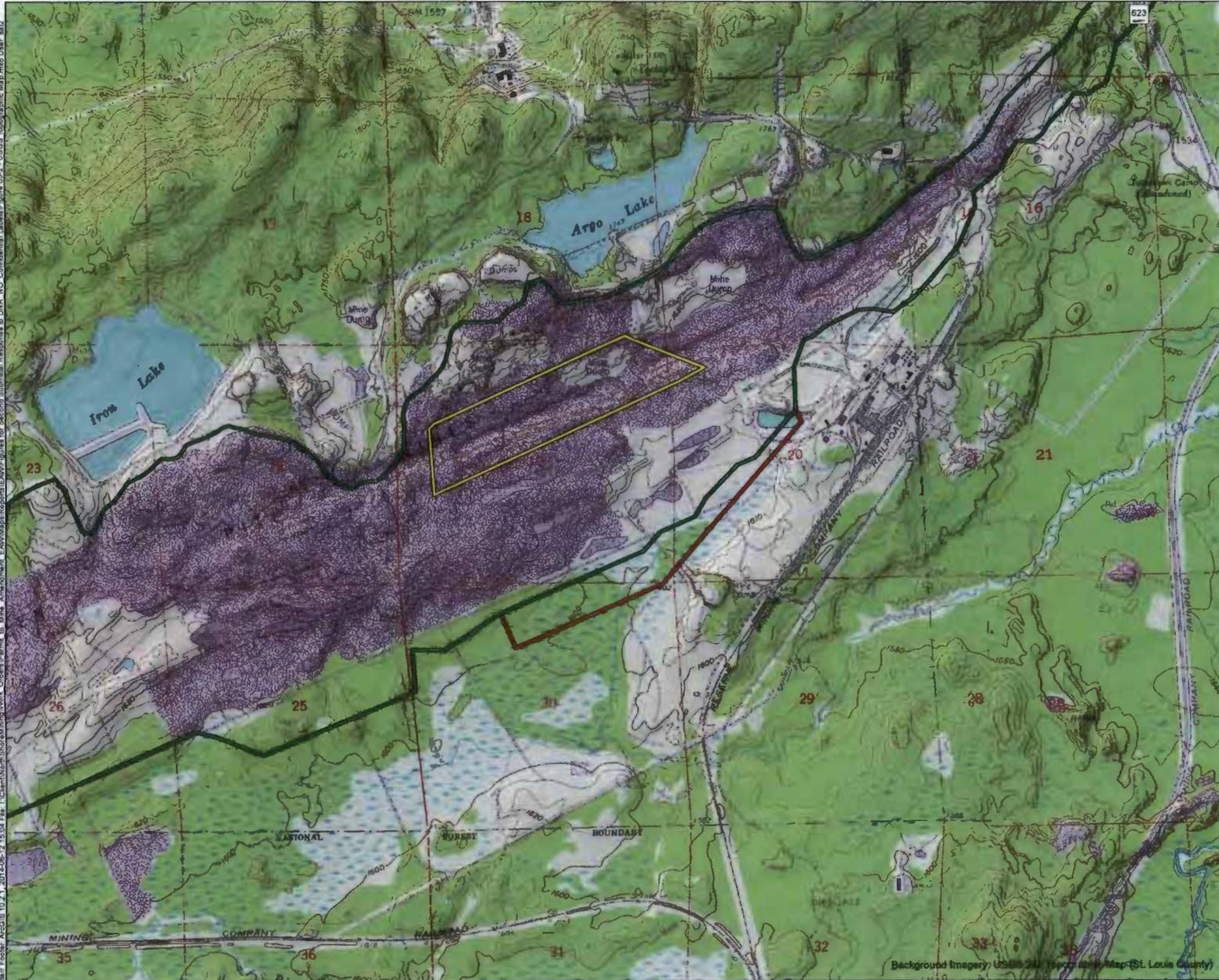
2014-01685-DWW
 Drawing 4 of 10

SITE PLAN
 Northshore Mining Company
 Progression of the Ultimate Pit Limit
 St. Louis County, Minnesota

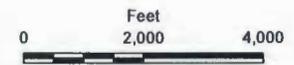
Date: 2014-08-21 10:04:13 AM
 File: I:\Projects\2014-01685-DWW\Drawings\Site Plan\2014-01685-DWW-Drawing 4 of 10.dwg
 User: jhansen
 Plot Device: HP DesignJet T1100e
 Plot Style: HP-Default.ctb
 Plot Date: 2014-08-21 10:04:13 AM
 Plot Time: 10:04:13 AM
 Plot User: jhansen

Imagery © 2013

File: L:\Client\Northshore\Work\Drawings\Drawings\2014\05\12\1504\1504.dwg, 12:15:04 PM, 5/12/2014, User: j...
Background Imagery: USGS 24' Topographic Map (St. Louis County)



-  Current Ultimate Pit Limit
-  Proposed Ultimate Pit Limit
-  Proposed Type II VF Stockpile



2014-01685-DWW
Drawing 5 of 10

USGS TOPOGRAPHIC MAP
Northshore Mining Company
Progression of the Ultimate Pit Limit
St. Louis County, Minnesota



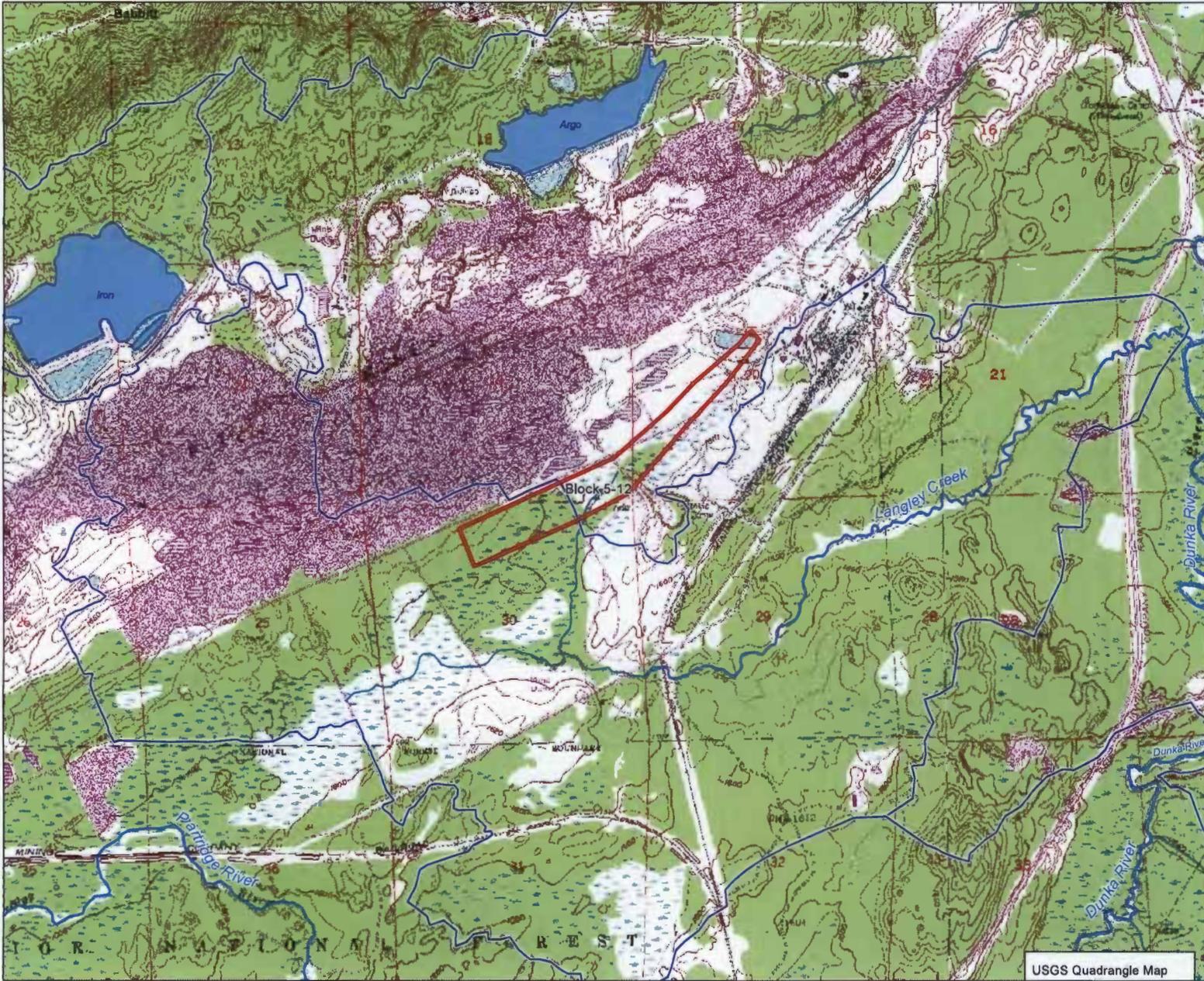
- Current Ultimate Pit Limit
 - Proposed Ultimate Pit Limit
 - Proposed Type II VF Stockpile
 - Cross Section A-A'
 - VFII Stockpile Pit Progression**
 - Year 1, Type I VF & BIF patterns
 - Year 2, Type II VF patterns
 - Year 3, Type II VF patterns
 - Year 4, Type II VF patterns
 - Year 5, Type II VF patterns
 - Year 6, Type II VF patterns
 - Year 7, Type II VF patterns *
 - Years 7 through Closure, Type I VF & BIF patterns
 - Years 7 through Closure, Type II VF patterns
 - Virginia Formation Metasediments
 - Duluth Gabbro
 - Lakes
 - Streams
- * In year 7 the pit progresses down instead of out.



2014-01685-DWW
 Drawing 6 of 10

VIRGINIA FORMATION
 TYPE II VF STOCKPILE
 PIT EXPANSION SCHEDULE
 Northshore Mining Company
 Progression of the Ultimate Pit Limit
 St. Louis County, Minnesota

Barr Footer: ArcGIS 10.0, 2013-11-25 16:40 File: C:\Users\Northshore\My Documents\Wetlands\Delin\2013 Wetland Delineation\Map Pit Block 5-12\Figure 1 Location Map 5-12.mxd User: nml



Legend

- Public Water Inventory Basins
- Public Waters Inventory Watercourse
- Streams
- 2013 Wetland Delineation Area
- Watersheds - DNR Level 8

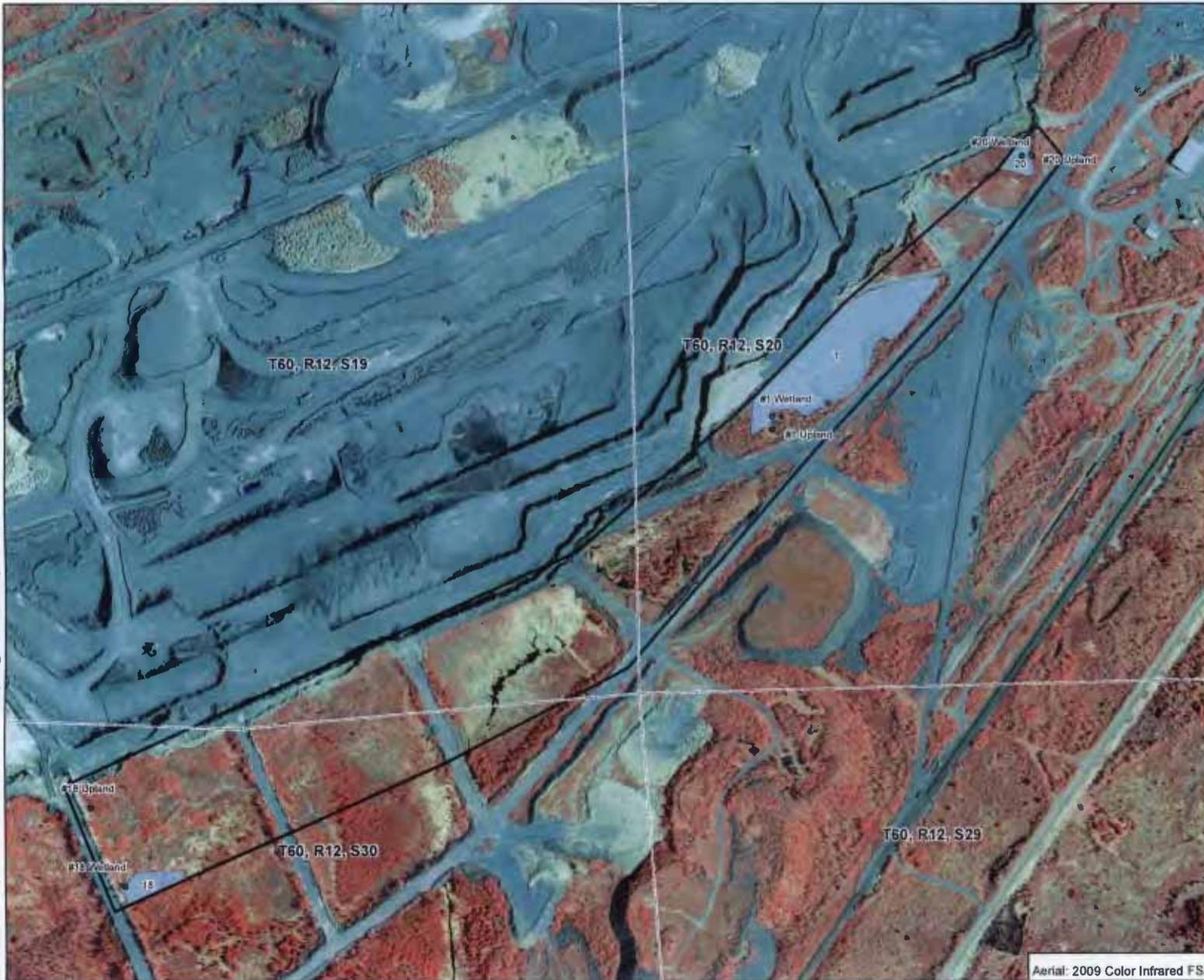


2014-01685-DWW
Drawing 7 of 10

LOCATION MAP AND HYDROLOGY
Block 5-12
Northshore Mining Company
St. Louis County, Minnesota

USGS Quadrangle Map

Barr Footer: ArcGIS 10.0, 2014-06-17 11:20 File: I:\Client\NorthShore\m\Work_Orders\Wetland\Map\Wetland_ Delineation\Report\2013 Wetland Delineations\Figure 8 Block 5-12 Wetland Delineation Map.mxd User:mj



Legend

- 2013 Wetland Data Points
- ▭ Public Land Survey Section
- ▭ 2013 Wetland Delineation Areas
- ▭ 2013 Wetland Delineations

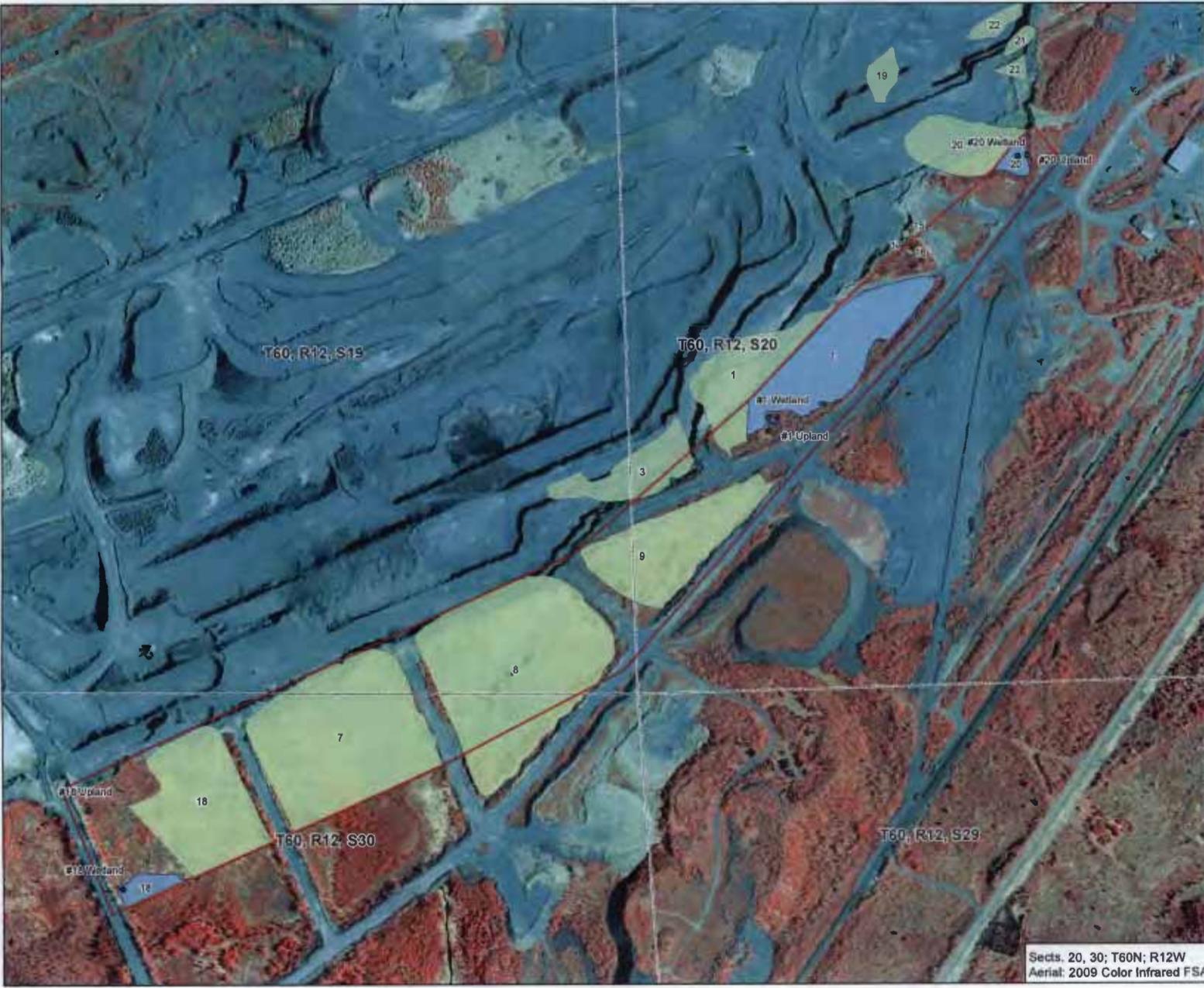


2014-01685-DWW
Drawing 8 of 10

BLOCK 5-12
2013 WETLAND DELINEATIONS
Northshore Mining Company
St. Louis County, Minnesota

Aerial: 2009 Color Infrared FSA

Barr Footer: ArcGIS 10.0.0.2013-10-11 00:20 File: I:\Collab\Northshore\Mining\Work_Chem\Wetland\Map\Wetlands_Delineation\Report\2013 Wetland Delineations\Block 5-12 Wetland Delineation Map.mxd User:mj



- Legend**
- 2013 Wetland Data Points
 - 2013 Wetland Delineation Areas
 - 2013 Wetland Delineations
 - Previously Permitted Wetlands
 - Public Land Survey Section

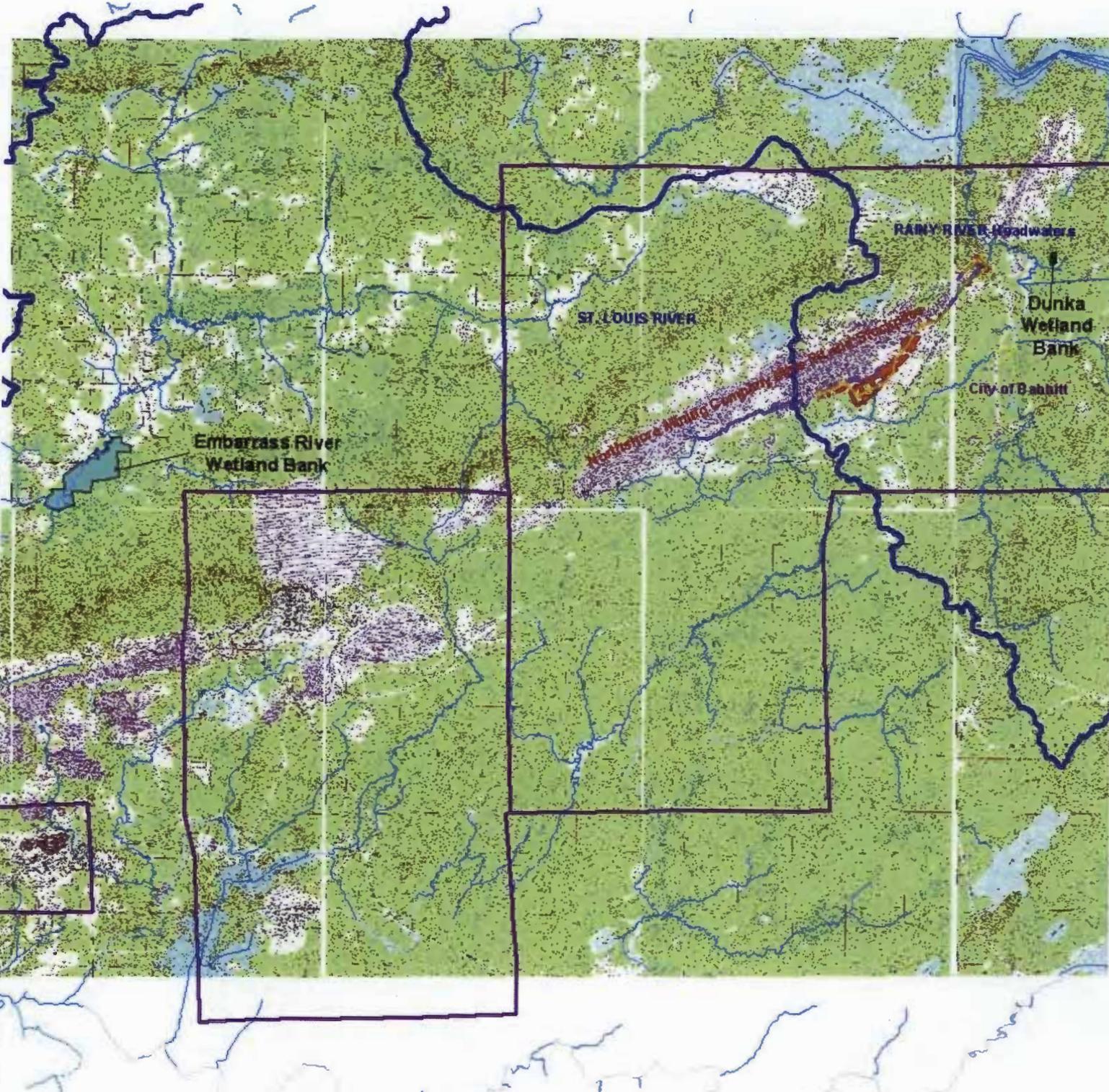


2014-01685-DWW
Drawing 9 of 10

BLOCK 5-12
2013 WETLAND DELINEATIONS
Northshore Mining Company
St. Louis County, Minnesota

Sects. 20, 30; T60N; R12W
Aerial: 2009 Color Infrared FSA

Barr: Arcview 3.1, D:\PT2653, I:\Project\23060921\GIS\Project\m\northshore.apr, Layout: Layout_MitigationBanks.mxd, Thu Apr 14 10:00:05 2005



1 0 1 Miles



LEGEND

-  Streams and Rivers
-  Dunka Bank Type 3/4 Wetlands
-  Dunka Bank Type 2/6 Wetlands
-  Embarass River Wetland Bank
-  Municipal Boundaries
-  County Boundaries
-  Major Watersheds
-  Mine Expansion Areas
-  Delineated Wetlands
-  Current Mine Extent

2014-01685-DWW
Drawing 10 of 10

**WETLAND MITIGATION
BANKS**
Northshore Mining
Babbitt, MN