APPENDIX A TO CONSENT DECREE

WETLAND RESTORATION PLAN

FOR

NORTHSTAR MATERIALS
KELLIHER QUARRY
BELTRAMI COUNTY, MINNESOTA

Prepared for:

Northstar Materials, Inc.
P.O. Box 40
Bemidji , MN 56619

APRIL 18, 2011

WSN No. 260B1168.001

7804 Industrial Park Road
P.O. Box 2720
Baxter, MN 56425-2720
Phone: 218-829-5117
Fax: 218-829-2517

APPENDIX A TO CONSENT DECREE

NORTHSTAR MATERIALS, INC.
WETLAND RESTORATION PLAN

TABLE OF CONTENTS

FIGURES AND APPENDICES

FIGURES

APPENDICES

Appendix A Control Structure Photos

Appendix B BWSR Seed Mix

Appendix C SHPO Inventory Review

Appendix D DNR Natural Heritage Review Letter

I. Introduction and Purpose

Northstar Materials, Inc. (Northstar) purchased the Kelliher Quarry Property (the Property) in October 2002 to continue a hard rock mining operation of a basaltic bedrock material. Prior to mining, the Property was a mix of upland and wetland that had been severely altered by the clearing of vegetation and construction of dikes to facilitate wild rice production in the 1960s. In 2007, Northstar conducted exploratory activities that disturbed 10.7 acres of property that the United States Army Corps of Engineers (Corps) identified as wetland.

The purpose of this document is to describe measures to be taken to restore and improve wetland areas in the southern portion of the Property to create functioning and self-sustaining wetlands (see Figure 1 – Site Map). This plan has been prepared with the input, interim review, and guidance of Corps staff. This plan is also intended to comply with the requirements of the Wetland Conservation Act as administered by Beltrami County, the local government unit.

The areas shown on Figure 1 were agreed upon by the Corps and Northstar after review of available topographic information, aerial photos, and cropping history. The goal is to restore approximately 10.70 acres of the Property to a functioning wetland system as defined by the Performance Standards and Success Criteria detailed in this document. The restoration activities will improve the wetland areas by giving a functional lift to the vegetation and wildlife habitat functions. In addition, to account for temporal loss of wetland functions, another 3.10 acres of wetland, as defined by the Performance Standards and Success Criteria, will be created from upland areas.

II. Description of Wetland Restoration

The restoration effort at the Kelliher Quarry is designed to restore approximately 10.70 acres of land to a Type 2 wetland, specifically a Fresh (Wet) Meadow. The wetland area may eventually, through natural succession, convert to a Type 6 Shrub-Carr over time as has occurred on other portions of the Property. For the purposes of restoration and the Performance Standards and Success Criteria, however, the goal is to create a fully functional Fresh (Wet) Meadow wetland area.

The restoration of the wetlands will be accomplished in five steps.

1) Fill from onsite, overburden stockpiles will be placed to even elevations of borrow areas that are lower than surrounding areas. The fill areas will be leveled to blend with the surrounding topography adjacent to the restoration area. A general gradient to the southwest will be established across the restoration area.

2) The ditch spoil piles will be leveled and moved into the adjacent ditches in the restoration area (see Figure 2). These areas will also be leveled to blend with the surrounding topography adjacent to the ditches and restoration areas. Invasive woody

vegetation will be removed from the spoil piles prior to the leveling. No excess spoils are anticipated because the ditch spoil piles will be spread into lower areas as needed. As part of the leveling the ditch spoil piles, three water control structures will be removed (See Figure 2).

3) The third step will be placement of 4 to 6 inches of topsoil, similar to the thickness seen in the surrounding undisturbed soils. The plan is to utilize existing stockpiles of topsoil that are present on the Property. The existing stockpiles are along the southern boundary and along other margins of the restoration area. It is anticipated that the topsoil contains substantial reed canary rhizomes and seeds, but will also contain native rootstock and seeds; therefore, the topsoil piles will not be treated prior to spreading. The spreading will be completed with dozers, front end loaders, and trucks. Care will be taken to minimize compaction and rutting. The trucks will use haul routes that avoid areas where the topsoil has been spread and dozers will make as few as possible leveling passes over the topsoil. Some microtopography will be allowed to be present in the restoration areas. The restoration area will be lightly disked or raked prior to seeding. A general gradient to the southwest will be established across the restoration area.

4) The water control structure just southwest of the restoration area (see Figure 3) will be rehabilitated to assist in control of the hydrology in the restoration area. The control structure is a metal stop-log structure that can hold water at different elevations by added or removing stop logs (i.e., 2 inch by 6 inch boards). Photos of another similar structure on the property are included in Appendix A and a sketch of it is included in Figure 4. The rehabilitation will consist of fixing the structure to allow the adding of boards to hold ponded water in an area just west of the restoration area. This will facilitate generation of saturated soil hydrology throughout the restoration area. It may also allow the flooding of the area in an attempt to control invasive species, if needed.

5) Soils will then be seeded with a Minnesota Board of Water & Soil Resources (BWSR) approved seed mix, Emergent Wetland Mix, 34-371 (See Appendix B). Details of the seeding process are provided in the Seeding Specifications section of this plan.

All equipment shall be pressured washed prior to operating within and immediately adjacent to the restoration area. Equipment shall be cleaned to the extent that it is free of soil, seeds, and organic matter. This will be done to limit the further introduction of invasive and non-native species to the restoration area. This will require an onsite spray off area away from the restoration areas.

a. Wetland Restoration Goals and Objectives

The wetland restoration goal is to restore approximately 10.70 acres of land and create another 3.1 acres of what has been identified as upland into fully functioning Type 2 Fresh (Wet) Meadow wetland as defined by the Performance Standards and Success Criteria.

Details of the Performance Standards and Success Criteria are included in the Section IV – Performance Standards and Success Criteria. Secondary goals are to provide a more natural appearance in the restored area and to augment the hydrology, making the soils wetter than they have been since wild rice production ceased. These activities combined will give the wetland restoration areas a functional lift by improving wetland functions.

b. Wetland Creation

The wetland creation areas are areas identified as upland near the restoration area. The creation areas will be contiguous with the restoration area and will be created following the same steps described for the restoration areas. When completed the restoration areas and creation areas will be one continuous wetland complex. The wetland creation of 3.1 acres of wetland will be accomplished to account for the temporal loss of the wetlands in the restoration area. In actuality, only 2.68 acres of wetland creation are needed (0.25 times 10.7 acres of restoration), but an additional amount is planned to more than account for the temporal loss.

c. Contingency Plan

The contingency plan addresses the measures to be taken if the Performance Standards and Success Criteria are not being met. The contingency plan will be implemented with input from the Corps in consultation with the Beltrami County Technical Evaluation Panel (TEP). Details of the contingency plan are included in the Section IV – Performance Standards and Success Criteria.

d. Seeding Specifications

The seeding of the restoration area will follow Corps and BWSR guidelines and be implemented as follows. Seeding will occur in the year of restoration work on or before the Activity Completion Date set forth in Section VII. It is anticipated the presently stockpiled topsoil material will be spread over the restoration area and that it will contain a substantial amount of native plant seeds and root stock. To augment the existing seed bank, the restoration area will be seeded with an approved seed mix, such as BWSR 34-371 – Wet Meadow Northeast (included in Appendix B). The seedbed topsoil will be prepared by lightly disking or raking to smooth the surface, break up clods, and loosen packed areas. Seeding will be completed immediately after the topsoil material is leveled, using broadcast seeding. The seeded areas will be rolled to further level and pack the seeds into the topsoil. The seeds will remain at or near the surface to allow light to reach the seeds for germination. The soil will be brought to saturation at the surface right after seeding using the rehabilitated water control structure. Standard erosion control best management practices, consistent with Northstar's general NPDES permit (No. MNG490038) for the site, will be utilized in and around the restoration area to prevent washouts or flowing water.

III. Baseline Conditions

a. Existing Topography

Much of the Property is comprised of former rice production fields surrounded by a network of ditches. Topography of the fields is relatively level with elevations ranging from 1255 feet above mean sea level (MSL) in the southwest corner of the Property to 1260 feet above MSL along the eastern boundary of the Property. The spoil piles along the ditches range from 2 to 8 feet in height. Several rock outcroppings exist in the central and northwest sections of the Property. Mining of the rock has resulted in a quarry located near its center.

A brief level survey was conducted on two of the fields during a reconnaissance visit by Widseth Smith Nolting staff on March 9, 2010. The survey identified a variation in topography ranging from one to three feet between the fields and the adjacent ditches. Locations of the field survey are shown in Figure 3 and the cross sections of the survey are presented in Figure 4. This information is provided to demonstrate the effects of the ditches and to provide some context for showing how filling in the ditches should augment wetland hydrology to the restoration area.

b. Summary of Historic and Current land Use

Review of available aerial photos shows the Property was converted from forested land to agricultural use sometime between 1949 and 1974, likely in the 1960s, when wild rice production became common in Minnesota. The Property likely continued to be continuously farmed from the 1960s to 1988. The 1974 photo indicates it is in agricultural use. Farm Service Agency (FSA) records establish that the Property was in agricultural production from at least 1988 until 2001. Mining operations are evident on the Property in the 1998 FSA aerial photo, which shows the access road and mining related disturbances. Northstar purchased the Property in October of 2002 and continued the mining operations.

c. Description of Adjacent Land Use

Lands adjacent to the site property to the south, southwest and southeast of the Property are primarily forested wetlands. The lands to the west, north and northeast are farm fields with a few single family residences and farmsteads. CSAH 36 borders the Property to the west and north.

d. Historic and Archaeological Resources

A request was made to the Minnesota State Historic Preservation Office (SHPO) for a review of the Minnesota Archaeological Inventory and Historic Structures Inventory (database) for sites in the area of the Property. No archaeological sites or historic structures were identified by SHPO in this search (see Appendix B). Based on aerial photos, the Property did not have any historic development on it prior to the diking and ditching completed in the 1960s for wild rice production. The Property is not immediately adjacent to a river or lake, and therefore, is very unlikely to have any archaeological sites located on it.

e. Assessment of Site Geology and Soils

The geology of the Property consists of zero to 100 feet or more of glacial sediments over bedrock. The glacial sediments consist of a thin (maximum of 10 feet thick) discontinuous layer of glacial lake, near-shore sand deposits above glacial till. The glacial till consists of an unsorted mix of clay, sand, and gravel that extends from near the surface to depths of 70 to 80 feet or less where bedrock is closer to the surface. Beneath the thicker areas of till, an 8-foot to 10-foot thick sand layer occurs just above the bedrock.

The bedrock consists of a diabase (basaltic) dike that traverses the Property from the southeast corner to the northwest corner. The dike is approximately 150 feet wide and forms the core of the resistant ridge of outcrops on the Property. The bedrock around the dike consists of metavolcanic greenstones, that are less resistant than the diabase, and form the country rock that the dike intruded. The contacts between the dike and country rock appear to be near vertical near the surface and probably continue vertically to considerable depth as the dike likely intruded into a vertical bedrock fracture. The bedrock occurs at the surface in the central and northwest portions of the Property, but is found at depths of around 30 feet in the southeast portion and at depths of 100 feet or more in the northeast and southwest portions of the Property.

The surface soils at the Property are generally loamy fine sands formed from the sandy near-shore lake deposits. Most of the soils mapped on the Property are listed as hydric soils, but a large area of non-hydric soils is mapped in its southern portion, near the area of the restoration. The organic topsoil portion of the soils is very thin, being only 4 to 8 inches thick, even in the hydric soils areas. The soils are generally poorly drained with a rapid permeability, at least in their upper portions.

f. Description of Hydrology and Groundwater

Regional hydrology flows northwest towards the Red Lake basin. The hydrology of the Property was altered by a network of ditches, terraces, and water control structures created for the production of wild rice. The interior ditches channel water towards the southern Property edge before exiting the southwest corner of the Property via a culvert under CSAH 36 to a road ditch and cedar swamp area.

The regional groundwater elevation in the area of the Property is at approximately 1245 feet with regional flow to the northwest. In contrast, local perched groundwater flows to the southwest and is influenced by local topography. The perched groundwater exists near the surface (within two to four feet) across most of the Property due the heavy clay till soils underlying the surficial sands. The perched watertable is not adequate for water supply wells and local water supply wells are 80 to 100 feet deep, tapping buried sand layers within or more commonly at the base of the clay till.

g. Description of Existing Vegetation

Vegetation on the Property is primarily willow (Salix sp.), speckled alder (Alnus incana ssp.), balsam poplar (Populus balsamifera L.) and a variety of ferns, sedges, grasses and forbs. There is considerable reed canary grass in historically farmed areas and along other disturbed areas such as the ditches and ditch spoil piles.

h. Description of Existing Wildlife

A wildlife survey has not been conducted on the Property, but it could be assumed this area would be home to wildlife typically found in the aspen-birch and coniferous forest biomes characteristic of the surrounding region. Such species may include white tail deer, black bears, black flies, mosquitoes, gray jays, wolves, beavers, pine siskins, crossbills, chipmunks, ruffed grouse, bald eagles, toads, frogs and snakes. Wetland areas are likely used by swamp sparrows, sandhill cranes, and marsh wrens. A request to the Minnesota Department of Natural Resources (DNR) Division of Ecological Services was made for a Minnesota Natural Heritage Information System (database) review. The DNR response indicated no known occurrences of rare features or protected species within one mile of the Property (included in Appendix C).

i. National Wetland Inventory Mapping

The National Wetland Inventory (NWI) map shows three areas totaling approximately 10 acres labeled as upland on the Property with the remaining area labeled as Lacustrine, Emergent, Nonpersistent, Artificially Flooded, Farmed (L2EM2Kf) (Figure 5). This reflects the wild rice production conditions present when the NWI was prepared. The map shows the Property is bounded by dikes for containing the flooded fields needed for growing wild rice.

j. Baseline Wetland Delineations

Rather than conducting a formal wetland delineation following the 1987 Corps Wetlands Delineation Manual, the Corps and Northstar used FSA crop slides, aerial photography, USDA soil mapping, USFWS NWI mapping, USGS topographic maps, and the Minnesota State Climatology Office: Wetland Delineation Precipitation Data to classify areas on the Property. The agreed upon classifications appear in Figure 1 – Site Map.

k. Minnesota Public Waters Inventory Mapping

The DNR Public Waters Inventory List shows only two nearby waters. The South Branch Battle River is located approximately one quarter mile to the northeast and Meadow Creek is located approximately one half mile to the south of the Property. Both of these watercourses flow west to the Red Lake basin.

l. 100 Year Floodplain.

The subject Property is listed as unmapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). The Property is 8 to 10 feet above the level of the South Branch Battle River floodplain and is likely above any 100-year floodplain for the river.

IV. Performance Standards and Success Criteria

The area to be restored originally consisted of a mix of forested swamps and upland forests. The area was extensively altered by a number of activities that occurred over the years, including clearing the forest, grubbing out root masses, building dikes, constructing ditches, installing water control structures, wild rice production, farming upland crops, removal of overburden, and excavating sand borrow. The cessation of farming resulted in a mix of upland and wetland areas with a mix of upland and wetland plants and substantial reed canary grass. Collectively, the above activities resulted in considerable impairment of the wetland functions. The restoration will seek to restore wetland hydrology and increase native plant communities in areas that were formerly wetlands, improve the functions of degraded wetlands, and create additional wetland by establishing wetland hydrology and native plant communities. The goal is to create a Fresh (Wet) Meadow type wetland that is likely to convert to a Shrub-Carr over time.

The restoration site shall meet the following success criteria at the conclusion of the Monitoring Period (as defined below):

Hydrology. Wetland restoration, enhancement, and creation at the Property is designed to satisfy either the *Fresh (Wet) Meadows, Sedge Meadows and Wet Prairies (Mineral Soils)* standard, or the *Hardwood Swamps, Shrub-Carrs and Alder Thickets (Mineral Soils)* standard as described in the following paragraphs:

> (A) Fresh (Wet) Meadows, Sedge Meadows and Wet Prairies (Mineral Soils). Hydrology shall consist of saturation at or within 12 inches of the surface either for a minimum of 30 consecutive days, or for two periods of 15 consecutive days, during a growing season with normal to wetter than normal conditions (defined as 70 percent of years based on most recent 30-year record of precipitation). Inundation by more than 6 inches of water during the growing season shall not occur except following the 10-year frequency or greater storm/flood event or to control invasive species, including reed canary grass.
>
> (B) Hardwood Swamps, Shrub-Carrs and Alder Thickets (Mineral Soils). Hydrology shall consist of saturation within 6 inches of the surface, to inundation by up to 6 inches of water, for either a minimum of 30 consecutive days or for two periods of 15 consecutive days, during a growing season with normal to wetter than normal conditions (defined as 70 percent of years based on most recent 30-year record of precipitation). Inundation by more than 6 inches of water during the growing season

shall not occur except following the 10-year frequency or greater storm/flood event or to control invasive species, such as reed canary grass. Inundation greater than 6 inches of water shall have a duration of less than 15 days, except for invasive species control.

Failure to meet the hydrology criteria by the end of the Monitoring Period will trigger the Contingency Plan described below.

Vegetation. The restoration shall meet all the following vegetation criteria.

(A) Herbaceous: Herbaceous communities shall be dominated by four or more species of native grasses/ sedges/ rushes/ forbs and/or ferns and achieve approximately 75 percent or greater areal coverage of the total mitigation acreage by the end of the Monitoring Period.

(B) More than 50% of all plant species within the restoration area shall be facultative (FAC) or wetter as in facultative wet or obligate (FACW or OBL) species.

(C) Presence of Invasive and/or Non-Native Species: At the end of the third monitoring year, the vegetative community shall not contain greater than 15 percent areal coverage of invasive or non-native species, including reed canary grass (Phalaris arundinea), Canada thistle (Cirsium arvense), bull thistle (cirsium vulgare), smooth brome grass (Bromus inermis), giant ragweed (Amborsia trifida), common ragweed (Ambrosia artemisiifolia), quack grass (Elytrigia repens), black locust (Robina pseudoacacia), sweet clovers (Melitotus alba and M. officinalis), non-native honeysuckles (e.g., Lonicera x bella), and non-native buckthorns (Rhamus cathartica and R. frangula).

Control of invasive and/or non-native plant species during the Monitoring Period shall include, mowing, flooding, and herbicide treatments. By the end of the growing season two years after the initial seeding year, any areas one-quarter acre in size or larger that have greater than 50 percent areal cover of invasive or non-native species shall be treated by flooding or graded, disked, and reseeded.

Failure to meet the vegetation criteria for invasive species described above by the end of the growing season two years after the initial seeding year or to meet all vegetation criteria described above by the end of the Monitoring Period, shall trigger the Contingency Plan described below. The Corps will provide written notification to Northstar when the Contingency Plan requirement has been triggered for the restoration or creation areas.

Contingency Plan. When the Contingency Plan is triggered under the Performance Standards and Success Criteria provisions of the Plan, within sixty (60) days of written notification from the Corps, Northstar shall provide the Corps with its Contingency Plan proposal detailing corrective measures and/or maintenance actions proposed (if any) and an implementation schedule for those actions. After the Corps has reviewed and approved the Contingency Plan, Northstar shall implement the measures described in the plan according to

the schedule included therein. Upon completing the approved corrective measures, Northstar shall provide a written summary of the work to the Corps. The Corps may require additional corrective measures and extend the Monitoring Period if the Performance Standards and Success Criteria are not met by the end of the next growing season.

Northstar shall be responsible for completing the restoration work to meet the Performance Standards and Success Criteria and for any corrective measures required by the Corps if the restoration fails to meet the Performance Standards and Success Criteria established in the Plan.

Monitoring Period Defined. Northstar's responsibility to meet the Performance Standards and Success Criteria of this Plan shall extend for a period of five consecutive calendar years beginning upon completion of the initial seeding of the restoration area, unless Northstar proposes and the District Engineer accepts in consultation with the Beltrami County Technical Evaluation Panel (TEP), that the Performance Standards and Success Criteria have been met prior to that time (the Monitoring Period). If the Performance Standards and Success Criteria have not been achieved at the end of the five year monitoring period, additional annual monitoring reports shall be prepared and submitted to the Corps until the Corps has provided written confirmation that the Performance Standards and Success Criteria have been met and monitoring is no longer required.

V. Monitoring Plan

The objective to restore the project area to a fully functional wetland as defined by the Performance Standards and Success Criteria will be achieved and measured by evaluating the criteria discussed in the previous section during the Monitoring Period. Monitoring will be conducted to assess wetland restoration progress, document the progress, and identify maintenance actions, if needed. During the Monitoring Period, there may be a need to reseed, eradicate invasive species, or repaired disturbed areas. For example, control of invasive or non-native plant species during the Monitoring Period shall include mowing and herbicide treatments and, if deemed necessary, flooding.

Monitoring Reports. The restoration area will be monitored each growing season during the Monitoring Period and monitoring reports will be prepared to document the monitoring.

The success of the new growth will be qualitatively and quantitatively sampled each growing season. Photographs of the wetlands will be taken from fixed reference points at least once each year during the July through August period. It is anticipated that many wetland species commonly established in local wetlands will be growing from the native topsoil spread over the restoration area. Undesirable species such as reed canary grass commonly invade recently disturbed wetland areas. Measures to control unwanted weedy species and invasive non-native species will be implemented as appropriate to meet the Performance Standards and Success Criteria.

APPENDIX A TO CONSENT DECREE

An annual monitoring report will be submitted to the Corps of Engineers and Beltrami County Environmental Services by January 31 of the year after each year of the Monitoring Period. The initial monitoring report will be submitted by the Activity Completion Date set forth in Section VII. and will document the construction process including topsoil reapplication, earth moving, seeding, planting, mulching, and the dates when these activities occurred. Subsequent annual reports will discuss management issues, include monitoring data, document the vegetation cover, evaluate the hydrology, and summarize the progress of the reestablishment of the wetland.

The monitoring reports will include the following components:

- A description of the project location, size, current wetland type, and desired wetland type;
- A comparison of the as-built specifications to the design specifications (first annual plan only) and a rationale for significant changes;
- Hydrology measurements: seasonal soil saturation or water depths will be measured in each observation well or test pit during the period May through October (the location and elevation of each hydrology measuring point will be surveyed or recorded with GPS and shown on a plan view);
- A summary of monthly precipitation for the site obtained from the closest weather monitoring station or the Minnesota Climatology Working Group website;
- A list of the dominant vegetation in the wetland, including common names of the vegetation exceeding 20 percent coverage and an estimate of coverage;
- All plant species, along with their percent cover, identified using standard plots and/or transects with at least one representative plot/transect in each plant community type for each area of the Property where restoration is being implemented;
- The presence, location and percent cover of invasive and/or nonnative species, such as purple loosestrife and reed canary grass, in any of plant communities will be documented and displayed on a map of the Property;
- Vegetation cover maps at an appropriate scale will be included for each reported growing season; and
- Photographs showing all representative areas of the mitigation site taken at least once each reported growing season during the period from July 1 to September 1 during each year of the Monitoring Period. Photographs shall be taken at eye level from at least one location per acre. Photos shall be taken from the same reference point and direction of view for each reporting year.

Hydrology measurements will include water saturation (where test pits are used) and water depth measurements at the observation well locations. Three observation wells will be installed at locations shown on Figure 3. The observation wells will be constructed in accordance with Corps' Technical Standard for Water-Table Monitoring or Potential Wetland Sites (ERDC TN-WRAP-05-2). Measurements will be taken in each well every day during the growing season with a calibrated transducer and data logger. To assure water level measurements correspond with desired saturation, each observation well will have an

adjacent test pit completed within two feet of the well at least once a year to document saturation relative to water level in the well.

At least three times during the growing season, site visits will be made to provide documentation of dominant vegetation. During these visits, color photographs and hydrology measurements will be taken. Vegetation cover types will be visually estimated and mapped for each annual report.

The annual monitoring reports will provide a basis for determining whether any maintenance measures (such as additional grading, seeding, planting, or weed control) are required to achieve the Performance Standards and Success Criteria.

VI. Management and Protection of Site

Management activities will mainly consist of the control of the invasive plants. Another management activity will be control of the hydrology for the site utilizing the rehabilitated water control structure located on Figure 2. Initially, stop-log boards will be added to the control structure to provide standing water one foot deep at the structure, which should result in saturation to the surface in most of the restoration area. If this results in continuous standing water in the restoration area, a six-inch board will be removed. If adequate saturation to meet the Performance Standards and Success Criteria is not occurring, additional stop logs may be added to increase water levels near the control structure. After two years of operation with average precipitation, the operation of the control structure will be reevaluated. Based on water level response, the control structure level may be made permanent at a level agreed upon with the Corps. Such a permanent fix would entail locking or otherwise vandal-proofing the boards to render the structure inoperable, and would only occur after the Corps has provided written confirmation that the Performance Standards and Success Criteria have been met.

The wetland restoration project is taking place on land owned and controlled by Northstar; so the project area can easily be protected. Access to the restoration project area can only be accomplished through Northstar's operation area; thus, access can be controlled by Northstar. The restoration project area can easily be viewed from Northstar's operation area so unauthorized access, if it were to occur, will be readily seen and stopped. Employees will be instructed to stay in the operations area where the quarry product is stockpiled.

VII. Implementation Plan and Schedule

Implementation Plan. Implementation of the restoration plan will be accomplished using Northstar's personnel and equipment with construction assistance provided by Widseth Smith Nolting (WSN). The seed mix will be purchased from a reputable source. Seeding may be done by a contractor to Northstar.

APPENDIX A TO CONSENT DECREE

Project Schedule. Wetland restoration and creation work is scheduled to commence within 30 days following entry of the Consent Decree in the United States District Court, District of Minnesota if the Consent Decree is entered on or prior to September 1, 2011. If the Consent Decree is not entered into on or prior to September 1, 2011, the work will commence by May 1, 2012 following the entry of the consent decree. Upon identification of site conditions suitable for commencing work, Northstar will provide 48 hours notification of its intent to begin work at the site. No work shall commence until the 48-hour notification period has elapsed.

The following activities are "required tasks" as that term is used in the "Notices and Other Submissions" section of the Consent Decree, and are to be completed and reported according to the following schedule depending on the date of entry of the Consent Decree as described above:

Activity	Activity Completion Date	
	If consent decree entered on or prior to September 1, 2011	If consent decree entered after September 1, 2011
Leveling, grading, filling of ditches, removal of water control structures, and addition of topsoil for the wetland restoration and creation areas (Sections II(1), II(2), and II(3) of the plan)	September 30, 2011	May 30, 2012
Rehabilitation of remaining water control structure (Sections II(4) of the plan)	September 30, 2011	May 15, 2012
Seeding of 10.7 acres wetland restoration area and 3.1 acres of creation area (Sections II(5) of the plan)	November 30, 2011	June 15, 2012
Submission of first annual monitoring report documenting the initial restoration and creation work	January 31, 2012	January 31, 2013
Submission of remaining annual monitoring reports	January 31 of each year for four calendar years after the first annual report, or as otherwise required by the Corps	January 31 of each year for four calendar years after the first annual report, or as otherwise required by the Corps
Contingency plan	Within 60 days of written notification that the requirement for a contingency plan has been triggered	Within 60 days of written notification that the requirement for a contingency plan has been triggered

Corrective measures	By the date specified in the approved contingency plan	By the date specified in the approved contingency plan

Any proposed deviations from the schedule shall be coordinated in advance with the Corps. Northstar must receive written approval from the Corps prior to implementing any changes in the schedule.

VIII. Erosion Control

Erosion control will be implemented by installation of silt fence around the area to be restored. To protect the restored area from erosion during future mining operations on the Property, a berm will be constructed on the perimeter of the active mining and aggregate preparation and storage work area. This berm will divert storm water to an engineered storm water pond allowing sediment to settle out before discharging to surrounding areas.

IX. Staff Qualifications

WSN has been performing environmental work including wetland delineation and permitting for more than twelve years. Descriptions of the qualifications of the principal wetland staff are provided below.

Ethan Harvey
Certified Wetland Delineator

Ethan Harvey has four years' experience in wetland delineation at WSN. He has worked on more than 100 delineation projects that have ranged in size from less than one acre to several hundred acres. The projects have included all of Minnesota's wetland and vegetation types, as well as agricultural lands and atypical situations. Project sites have been located throughout much of the state, from Carver County to Lake of the Woods County and from the western and prairie counties to St. Louis County. Mr. Harvey is experienced in GPS equipment and techniques. In addition to delineating wetlands, his responsibilities at WSN include soil and groundwater sampling and gathering field data for environmental investigations.

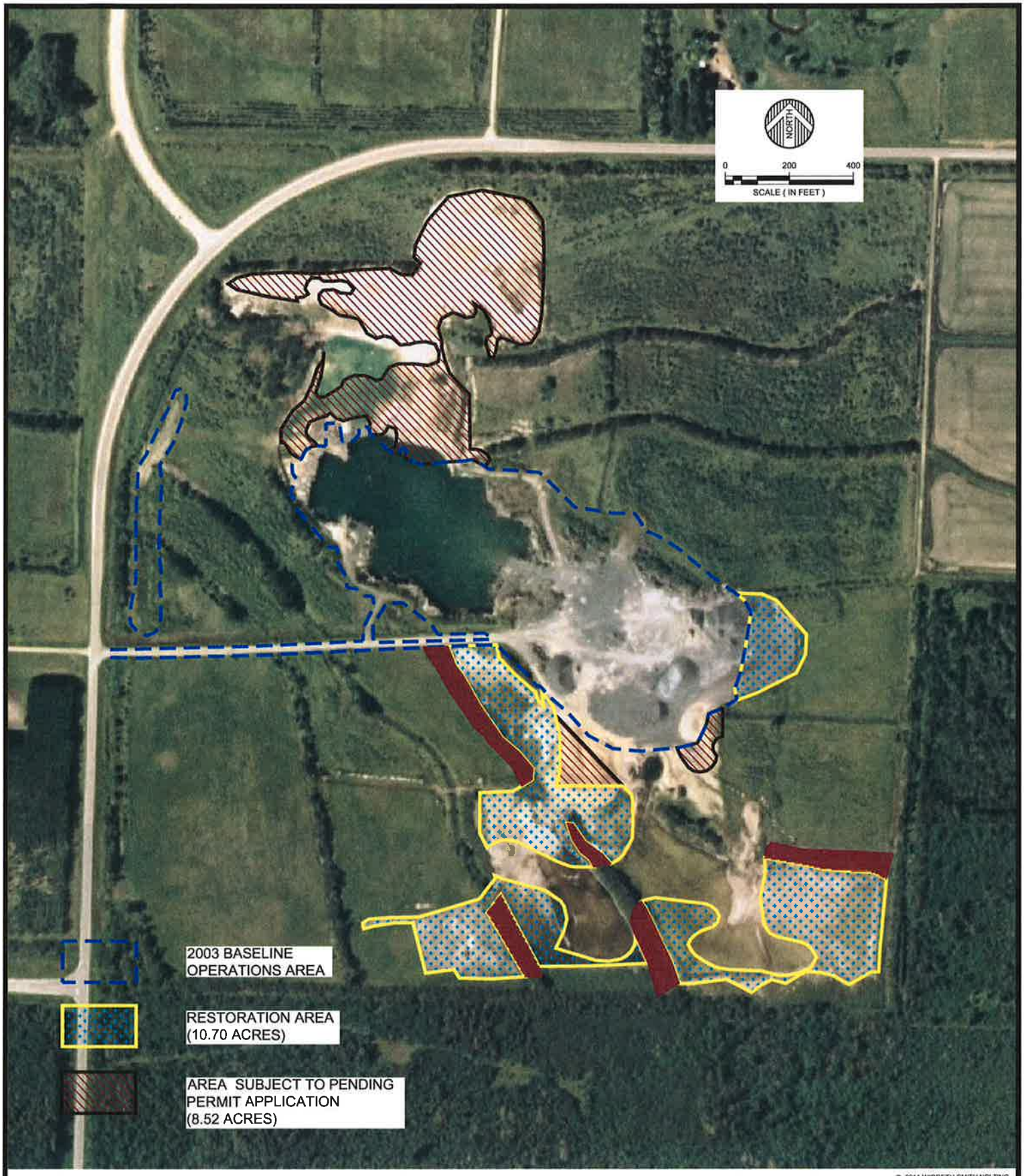
Brian A. Ross, P.G.
Director of Environmental Services

Mr. Ross has a B.A. in Earth Science and a M.S. in Geology from the University of Minnesota. He is a Registered Professional Geologist and a licensed monitoring well contractor. He has a strong computer background with experience in modeling groundwater flow.

Mr. Ross joined WSN in 1991, after six years with a Twin Cities environmental consulting firm. He has extensive experience in site investigation activities including sludge, sediment, soil, wetland, surface water and groundwater sampling as well as soil boring logging, monitoring well installation and aquifer testing.

Mr. Ross has experience as Project Manager for conducting hydrogeologic assessments at several landfills and wastewater ponds. One of these involved completing quarterly monitoring of groundwater as part of the closure of an industrial waste landfill. This project included development of a quality assurance plan and quarterly reports showing changes in groundwater flow and chemical concentrations. Another project involved assessing a county demolition landfill to determine if it impacted groundwater.

Mr. Ross has conducted more than 75 hydrogeologic investigations of underground storage tank (UST) releases for several major petroleum distributors. In addition, he has completed assessments, inspections, or investigations for the U.S. Environmental Protection Agency at more than three dozen hazardous waste sites all around the United States. He has also been involved in pesticide release studies, more than three dozen environmental property assessments, multiple wetland delineations, obtained several wetland impact permits, completed Environmental Assessment Worksheets (EAWs) and provided input into Environmental Impact Statements (EISs).



WWW.WSN.US.COM

WIDSETH SMITH NOLTING

ENGINEERS
ARCHITECTS
LAND SURVEYORS
ENVIRONMENTAL SERVICES

ALEXANDRIA, MN
BEMIDJI, MN
BRAINERD, MN
CROOKSTON, MN
GRAND FORKS, ND
RED WING, MN
ROCHESTER, MN
SIOUX FALLS, SD

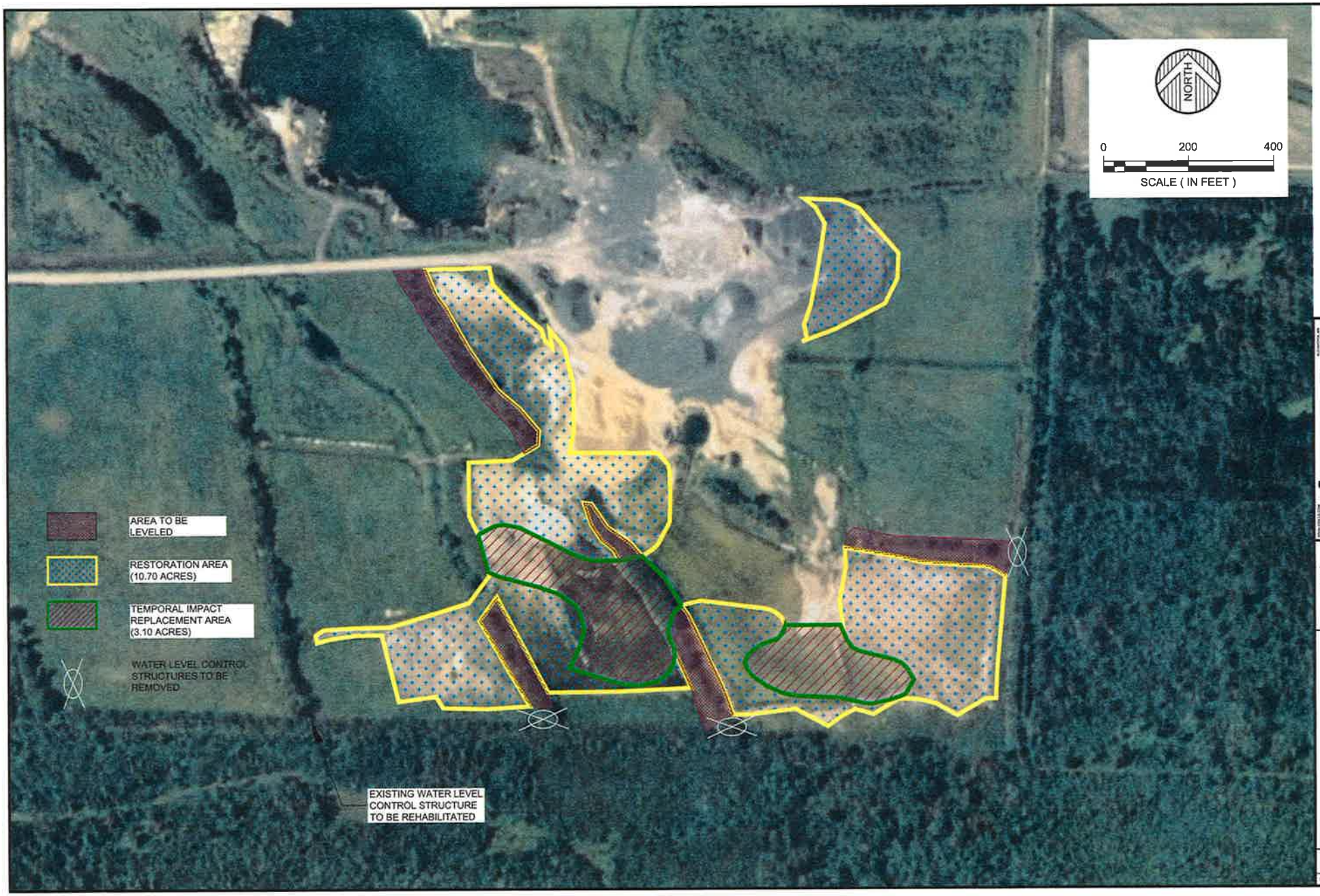
NORTHSTAR MATERIALS
KELLIHER QUARRY
BELTRAMI COUNTY

SITE MAP

DATE: March 2011

JOB NUMBER: 0260B1168

FIGURE 1

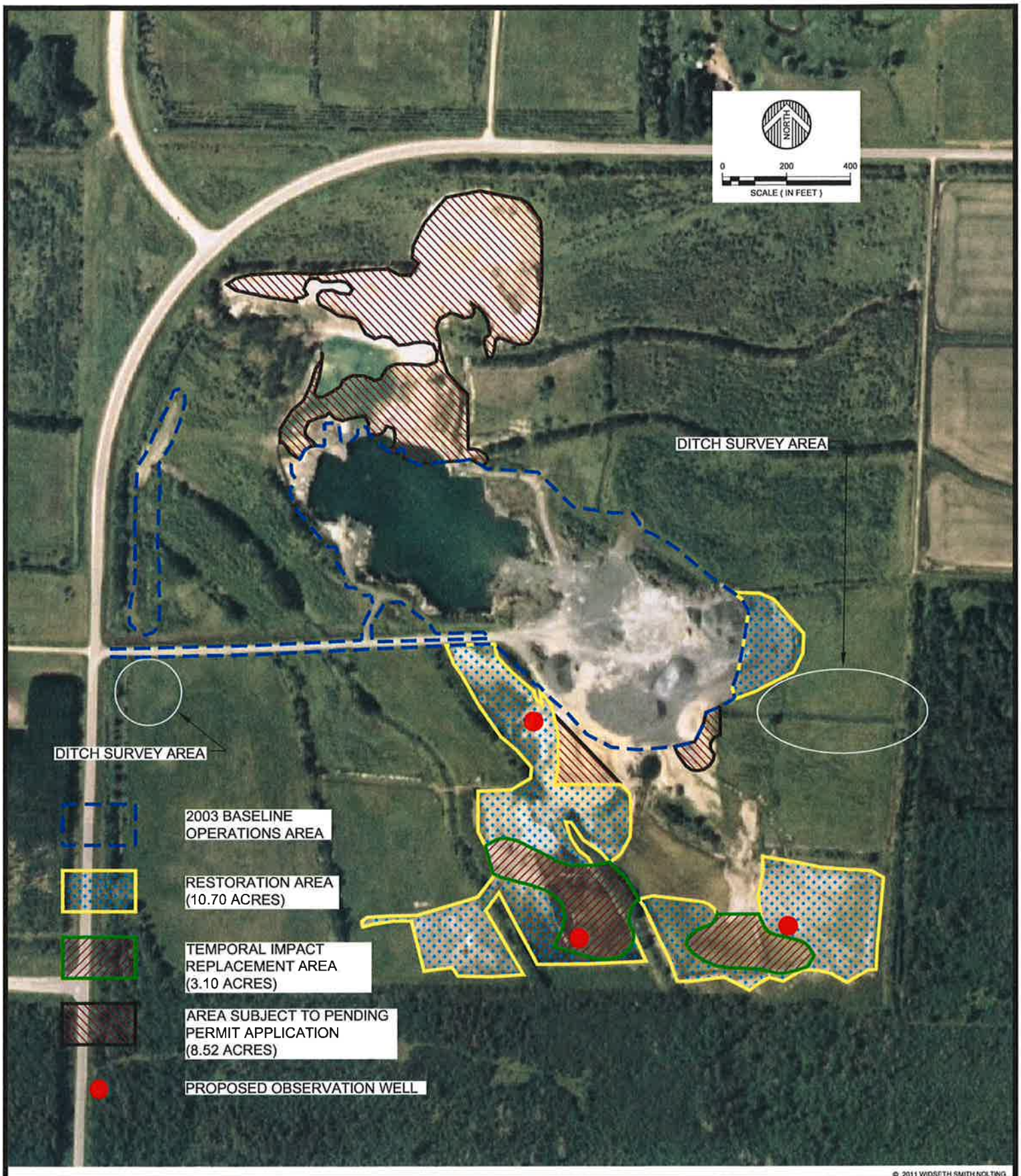


ENGINEERS
ARCHITECTS
LAND SURVEYORS
ENVIRONMENTAL SERVICES

NORTHSTAR MATERIALS
KELLIHER QUARRY
BELTRAMI COUNTY

DITCH/BERM ALTERATIONS

FIG. 2



WWW.WSN.US.COM

WIDSETH SMITH NOLTING

ENGINEERS
ARCHITECTS
LAND SURVEYORS
ENVIRONMENTAL SERVICES

ALEXANDRIA, MN
BEMIDJI, MN
BRAINERD, MN
CROOKSTON, MN
GRAND FORKS, ND
RED WING, MN
ROCHESTER, MN
SIOUX FALLS, SD

NORTHSTAR MATERIALS
KELLIHER QUARRY
BELTRAMI COUNTY

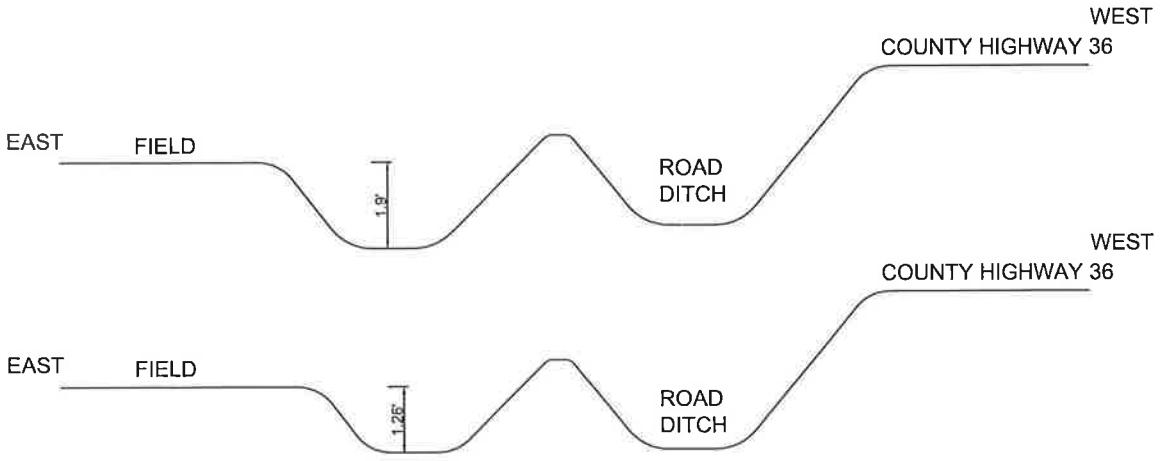
DITCH SURVEY AREAS/ OBSERVATION WELL LOC.

DATE:
MARCH 2011

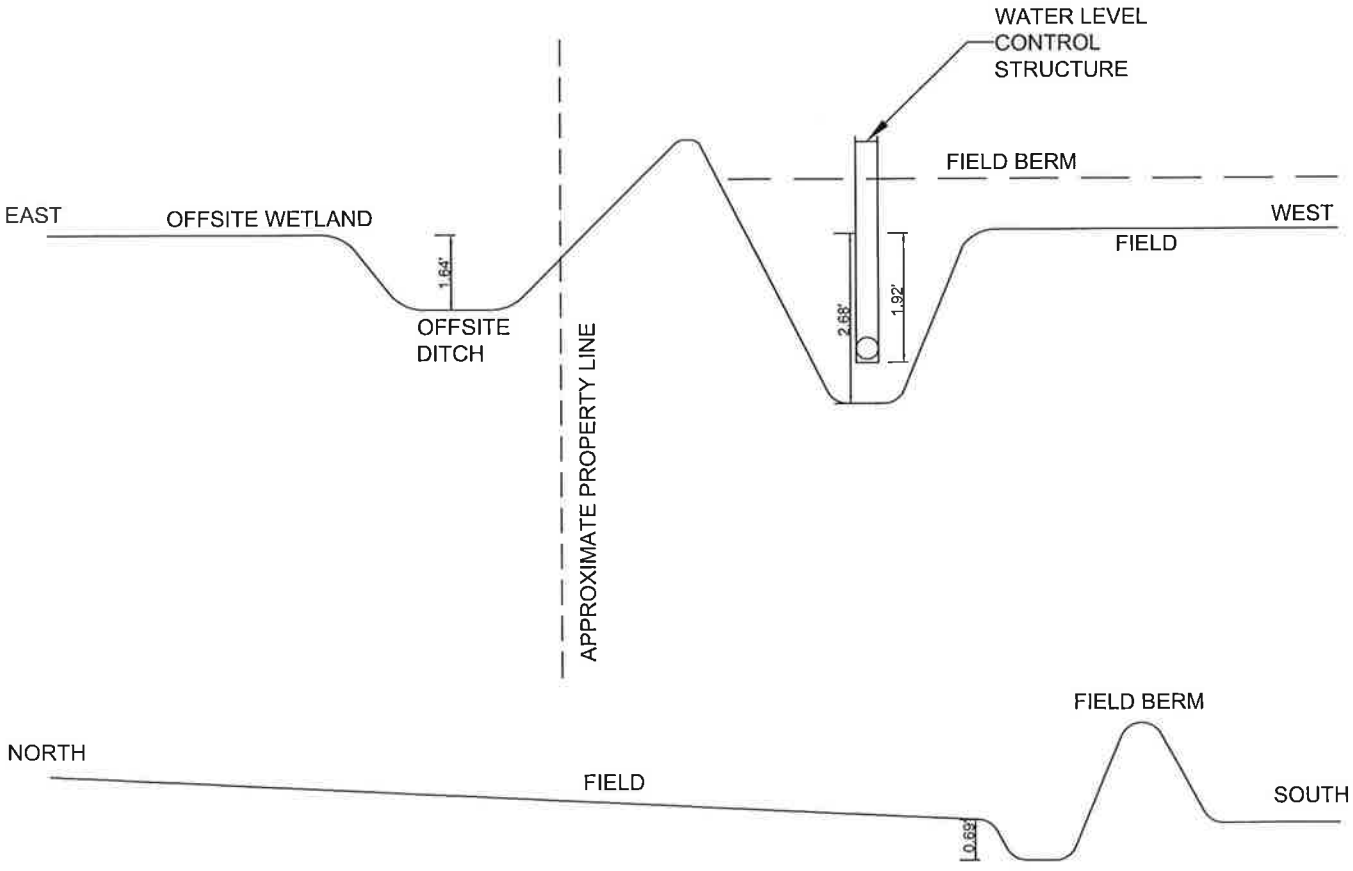
JOB NUMBER: 0260B1168

FIGURE 3

CROSS SECTIONS - WEST AREA



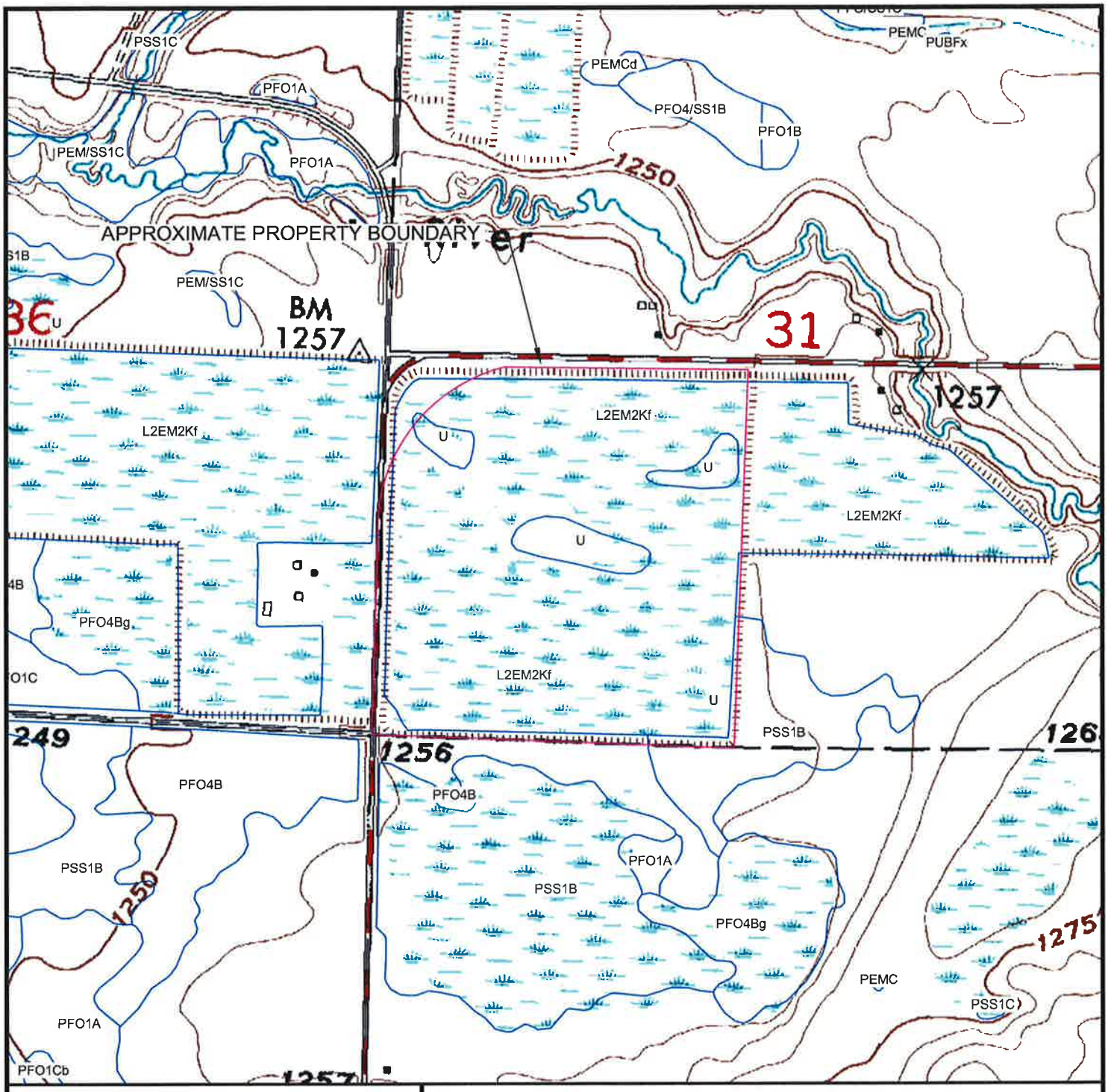
CROSS SECTIONS - EAST AREA



WWW.WSN.US.COM
WIDSETH SMITH NOLTING
ENGINEERS
ARCHITECTS
LAND SURVEYORS
ENVIRONMENTAL SERVICES
ALEXANDRIA, MN
BEMIDJI, MN
BRAINERD, MN
CROOKSTON, MN
GRAND FORKS, ND
RED WING, MN
ROCHESTER, MN

NORTHSTAR MATERIALS
KELLIHER QUARRY
BELTRAMI COUNTY
CROSS SECTIONS

DATE: SEPT. 2010
JOB NUMBER: 260B1186
FIGURE 4



AREA LOCATION

TN
MN DEGREE

UMT Grid & Magnetic
North Declination at

U.S.G.S. QUADRANGLE MAPS:
SAUM NE, MN

PUBLISHED: 1972
PHOTOREVISED: NA

0 2000 4000
(IN FEET)

WWW.WSN.US.COM
WIDSETH SMITH NOLTING
ENGINEERS ALEXANDRIA, MN
ARCHITECTS BEMIDJI, MN
LAND SURVEYORS BRAINERD, MN
ENVIRONMENTAL SERVICES CROOKSTON, MN
GRAND FORKS, ND
RED WING, MN
ROCHESTER, MN

NWI OVERLAY MAP

NORTHSTAR MATERIALS
KELLIHER QUARRY

FIGURE 5

SEPT. 2010

APPENDIX A
CONTROL STRUCTURE PHOTOS


03/09/2010


03/09/2010


03/09/2010

APPENDIX B
BWSR SEED MIX

34-371 **Wet Meadow Northeast**

Common Name	Scientific Name	Rate (kg/ha)	Rate (lb/ac)	% of Mix (% by wt)	Seeds/ sq ft
fringed brome	*Bromus ciliatus*	2.24	2.00	16.04%	8.10
bluejoint	*Calamagrostis canadensis*	0.11	0.10	0.78%	10.00
Virginia wild rye	*Elymus virginicus*	1.68	1.50	11.99%	2.31
tall manna grass	*Glyceria grandis*	0.28	0.25	1.96%	6.30
fowl bluegrass	*Poa palustris*	0.73	0.65	5.19%	31.00
	Total Grasses	**5.04**	**4.50**	**35.96%**	**57.71**
tussock sedge	*Carex stricta*	0.04	0.04	0.35%	0.85
pointed broom sedge	*Carex scoparia*	0.06	0.05	0.39%	1.50
dark green bulrush	*Scirpus atrovirens*	0.22	0.20	1.56%	33.00
woolgrass	*Scirpus cyperinus*	0.07	0.06	0.51%	40.00
	Total Sedges and Rushes	**0.39**	**0.35**	**2.81%**	**75.35**
Canada anemone	*Anemone canadensis*	0.11	0.10	0.82%	0.30
marsh milkweed	*Asclepias incarnata*	0.27	0.24	1.95%	0.43
flat-topped aster	*Doellingeria umbellata*	0.11	0.10	0.81%	2.50
common boneset	*Eupatorium perfoliatum*	0.10	0.09	0.68%	5.00
grass-leaved goldenrod	*Euthamia graminifolia*	0.04	0.04	0.31%	5.00
spotted Joe pye weed	*Eutrochium maculatum*	0.16	0.14	1.15%	5.00
blue monkey flower	*Mimulus ringens*	0.03	0.03	0.24%	25.00
giant goldenrod	*Solidago gigantea*	0.03	0.03	0.20%	2.30
eastern panicled aster	*Symphyotrichum lanceolatum*	0.03	0.03	0.28%	2.00
	Total Forbs	**0.09**	**0.80**	**6.44%**	**47.53**
Oats	*Avena sativa*	7.68	6.85	54.79%	3.05
	Total Cover Crop	**7.68**	**6.85**	**54.79%**	**3.05**
	Totals:	**14.01**	**12.50**	**100.00%**	**183.64**
Purpose:	Wet meadow / Sedge meadow reconstruction for wetland mitigation or ecological restoration.				
Planting Area:	Laurentian Mixed Forest Province. Mn/DOT Districts 1, 2(east) and 3A.				

APPENDIX C
SHPO INVENTORY REVIEW

Brian Ross

From: Cinadr, Thomas [Thomas.Cinadr@MNHS.ORG]
Sent: Wednesday, July 07, 2010 7:59 AM
To: Brian Ross
Subject: RE: Request for Data Base Review for Property in Beltrami County

THIS EMAIL IS NOT A PROJECT CLEARANCE.

This message simply reports the results of the cultural resources database search you requested. The database search produced results for only previously known archaeological sites and historic properties. Please read the note below carefully.

No archaeological sites or historic structures were identified in a search of the Minnesota Archaeological Inventory and Historic Structures Inventory for the search area requested.

The result of this database search provides a listing of recorded archaeological sites and historic architectural properties that are included in the current SHPO databases. Because the majority of archaeological sites in the state and many historic architectural properties have not been recorded, important sites or structures may exist within the search area and may be affected by development projects within that area. Additional research, including field survey, may be necessary to adequately assess the area's potential to contain historic properties.

If you require a comprehensive assessment of a project's potential to impact archaeological sites or historic architectural properties, you may need to hire a qualified archaeologist and/or historian. If you need assistance with a project review, please contact Kelly Gragg-Johnson in Review and Compliance @ 651-259-3455 or by email at kelly.graggjohnson@mnhs.org.

The Minnesota SHPO Survey Manuals and Database Metadata and Contractor Lists can be found at **http://www.mnhs.org/shpo/survey/inventories.htm**

Tom Cinadr
Survey and Information Management Coordinator
Minnesota State Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd. West
St. Paul, MN 55102

651-259-3453

From: Brian Ross [mailto:Brian.Ross@wsn.us.com]
Sent: Friday, July 02, 2010 5:07 PM

APPENDIX D
DNR NATURAL HERITAGE REVIEW LETTER

Minnesota Department of Natural Resources

Division of Ecological Resources, Box 25
500 Lafayette Road
St. Paul, Minnesota 55155-4025
Phone: (651) 259-5107 Fax: (651) 296-1811 E-mail: heidi.cyr@state.mn.us

August 4, 2010 **Correspondence # ERDB 20110030**

Mr. Brian Ross
Widseth Smith Nolting and Associates
7804 Industrial Park Road
Baxter, MN 56425

RE: Natural Heritage information in the vicinity of the proposed Knife River Quarry, T152N R30W Section 31, Beltrami County

Dear Mr. Ross,

As requested, the Minnesota Natural Heritage Information System has been queried to determine if any rare species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, there are no known occurrences of rare features in the area searched.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Department of Natural Resources, Division of Ecological Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area.

This letter does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. Additional rare features for which we have no data may be present in the project area, or there may be other natural resource concerns associated with the proposed project. For these concerns, please contact your DNR Regional Environmental Assessment Ecologist, Nathan Kestner at 218-308-2672. Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,

Heidi Cyr
Endangered Species Environmental Review Specialist