

NON-METALLIC MINING RECLAMATION PLAN NARRATIVE

Operator: Haas Sons, Inc.

Owner: Haas Sons Properties

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Summary

This reclamation plan has been developed to provide information about the existing site of the proposed mine, the proposed site operations, and how the mine will be reclaimed to the proposed post mining land use.

This reclamation plan is for a 60 acre field located north of 355th Street in the town of Eagle Point. The land is currently used and managed for agricultural row crop production.

The operator will mine sand and gravel deposit that is located on glacial outwash which is characterized as meltwater stream sediment from the Chippewa Lobe. Most of the site will be mined below the water table and reclaimed as a wildlife pond. Shore land areas surrounding the pond that are mined above the water table will be seeded to native grasses. There will also be a 4-5 acre area of the site that will be reclaimed with the intention of supporting a low density residential housing development.

(A.) Site Information

1. **Landowner:** Haas Sons Properties

Address: 203 E Birch St

City, State, ZIP: Thorp, WI 54771

Applicant: Haas Sons, Inc.

Address: 203 E Birch St

City, State, ZIP: Thorp WI 54771

2. **Lease:** See Attachment : Land Deed

3. Legal Description

Tax Parcel Number(s): See Attachment: Land Deed

Described as follows: See Attachment: Land Deed

4. Property Owners Within 660 Feet of Project Site

Thomas McCann	Haas Sons Properties	Thomas Revoir
Bruce and Leila Bernard	Torre and Kelly Mrozinski	Susan E. Beaudette

5. Soil Information

A horizon – 4”-6” of topsoil

B horizon – 24”-60” clay subsoil

Source of information: We dug test holes with a backhoe to determine the soil horizons. Also, the USDA soil survey indicates that there is approximately 6" of topsoil and 30" of subsoil at the site. See attached soils map.

There are no known utilities at this site.

(B) Site Operations

1. Description of Materials to be Extracted

Sand and gravel will be extracted and processed at the site.

2. Extraction and Processing to be Conducted at the Site

Sand and gravel will be mined crushed, washed and then removed from the site. A portable crushing and washing plant will be used to process the material and stockpile it on site. Materials within the mine will be excavated and transported using bulldozers, excavators, loaders and conveyers.

Sand and gravel will be excavated from the mine above the water table in one lift approx. 15 feet deep. An area in the floor of the mine will be excavated below the water table to create wash ponds. Water for sand gravel washing process will be pumped from these ponds. No high capacity wells will be installed or used to support sand and gravel processing.

No flocculants or other chemicals will be used to support sand and gravel processing. No waste materials that are generated off-site will be hauled to the mine, stockpiled or used in site reclamation.

3. Volumes of Materials

Sequences of mine cells are planned to systematically mine and reclaim the site. The anticipated area of disturbance and estimated volume of raw materials to be removed during

the life of the mine is as follows.

(Estimated Cubic Yards of Raw Material)

Cell	Area (acre), includes berms, roads, etc.	During 1 st two years	During Full Life of Operation
1	23 Acres	200,000 cubic yards	787,200 cubic yards
2	15.5 Acres	0 cubic yards	440,000 cubic yards
3	19.6 Acres	0 cubic yards	583,040 cubic yards
Total	58.1 Acres	200,000 cubic yards	1,810,240 cubic yards

4. Site Dewatering and Effluent Discharge

This will be an internally drained site. No site dewatering or effluent discharge will take place. It is anticipated that sand and gravel will be mined below the water table in all cells.

5. Stormwater Permits/Management

The operator will obtain a Wisconsin DNR Nonmetallic Mining stormwater permit and manage stormwater in accordance with the standards established in the permit. At a minimum stormwater will be contained within the mine boundaries for all rainfall events according to the 10 year 24 hour frequency storm (4.1 inches).

Soil berms created during topsoil and subsoil stripping will be stabilized and used to contain and direct stormwater runoff towards the excavated floor of the mine where it will infiltrate. Stormwater will be managed this way over the entire life of the mine. A notice of intent will be sent to the DNR. See Appendix: Stormwater Permit

6. Erosion Control & Permits

Silt fence will be installed around topsoil pile and berms during site operation. All topsoil and subsoil piles will be graded to a slope of 3:1 or flatter and seeded to further control erosion during site operation.

Berms will be stabilized using best management practices including seeding, mulching, erosion control mat, hydro-seeding, etc. Erosion and sediment control best management practices will be installed as determined by the Wisconsin Erosion Control Product Acceptability List (PAL) Channel and Slope Erosion Control Matrices (Appendix G).

7. Reclamation Activities During Operations

A process of contemporaneous reclamation will be used to systematically mine and reclaim the site. Under this process the site will be reclaimed as soon as possible after materials have been extracted and processed using the planned Cell sequence.

Cell 1 will be partially restored as Cell 2 is being mined. Cell 2 will be partially as we enter into cell 3. Cell 3 will be completely restored as we work back out into cell 2 and cell 1.

At the beginning of the mining operations for each cell all of the topsoil (estimated 6 inches) will be stripped and stockpiled in berms. Following topsoil stripping operations all of the

subsoil (estimated 20 inches) will be stripped and stockpiled in berms that are separate from the topsoil berms. All berms will be shaped to a 3:1 slope or flatter and seeded with DOT Seed Mix 20. Mining operations will then excavate, process, and remove sand and gravel from the site.

Final grading of the bottom will occur as sand and gravel is mined.

When excavation of sand and gravel in a Cell is completed rough grading work will be performed to create slopes around the perimeter of the mine that are 3:1 or flatter and extend below the surface of the water. Subsoil will then be placed over the slopes (this includes a minimum of 2 feet vertically below the water line) and flat lying areas of mine to a depth of 10 inches or more.

Topsoil will then be placed over the subsoil to a depth of 6 inches or more. Upon completion of subsoil and topsoil re-application, soils testing will be performed following procedures established in the Wisconsin Nutrient Management Standard 590 to determine the organic matter, phosphorus, potassium and PH. Soil amendments (including lime and fertilizer) will be applied based on the soil test results to meet the fertility requirements needed to achieve the intended post mining land use.

The site will then be seeded. Areas with slopes steeper than 10:1 will have straw mulch applied. Areas flatter than 10:1 will not receive mulch.

Reclamation test plots will be established within the first two years of mining. Test plots will be established for each post mining land use. These test plots will be monitored and used to help determine success in future areas of mine reclamation.

8. Timetable/Sequence of Operations

Location Activity

Cell 1 Start mining at the starred point on the site operations map. Mine west and north through the cell at an elevation above groundwater (approx. 1110) to the north and west boundary.

After cells 2 and 3 are complete we will dig a pond approx. 10-15ft deep starting in the NW corner and moving SE until the south ½ of cell has a pond.

Cell 2 Mine just above the groundwater level from south to the north until reaching north and west boundary.

Cell 3 Start mining the south end moving west and north at elevation above ground water. When done we will dig a pond starting from the north moving south in cell 3 and end up in cell 2 ending pond excavation.

9. Timetable

Estimated period of operation/extraction for each cell:

Cell 1	6 years
Cell 2	3 years
Cell 3	3 years

(C) Site Reclamation

1. Disposition of Structures and Roads

A gravel driveway will come north off of 335th St. will be approximately 600 ft long. The driveway will provide access to the wildlife pond.

Structures such as the scale house, and scale will be removed prior to final reclamation. The ponds created in Cell 1 Cell 2 and Cell 3 will remain in place as shown on the Final Site Map (See Appendix A – Cross Sections). There are no areas of concentrated flow entering, leaving, or within the reclaimed mine site.

2. Soil Reapplication

Overburden piles will be leveled off or used on slopes. This work will be done with scrapers or bulldozers. Slopes will be stabilized using best management practices including seeding, mulching, erosion control mat, hydro-seeding, etc. Erosion and sediment control best management practices will be installed as determined by the Wisconsin Erosion Control Product Acceptability List (PAL) Channel and Slope Erosion Control Matrices (Appendix G).

Subsoil material will then be removed from the berms with excavators or loaders and transported in dump trucks to the area in the mine to be reclaimed. Trucks will be routed to limit traffic over areas where subsoil has already been applied. Trucks will dump subsoil and bulldozers will spread the material to be 24 inches thick on the slopes and floor of the mine. The use of tracked equipment while spreading subsoil will limit soil compaction.

Topsoil material will then be removed from the berms with excavators or loaders and transported in dump trucks to the area in the mine to be reclaimed. Trucks will be routed to limit traffic over areas where subsoil or topsoil has already been applied. Trucks will dump topsoil and bulldozers will spread the material to be 6 inches thick on the slopes and floor of the mine. The use of tracked equipment while spreading topsoil will limit soil compaction.

In the event that rubber tire equipment cannot be routed to prevent subsoil and topsoil compaction deep tillage equipment will be used to alleviate compaction in the upper 12 to 14 inches of the soil profile.

Soils testing will be performed following procedures established in the Wisconsin Nutrient Management Standard 590 to determine the organic matter, phosphorus, potassium and PH. Soil amendments (including lime and fertilizer) will be applied based on the soil test results to meet the fertility requirements needed to achieve the intended post mining land use.

3. Safety Assurances

Given the slopes on the reclaimed mine site and the post mining land uses there are very limited safety concerns. The pond will have a 3:1 slope that extends 6 feet below the water line. Areas reclaimed as Wildlife habitat will have 3:1 slopes.

4. Seeding Plan

Seeding will be selected to achieve the post mining land use that is planned for each designated area. Areas that will be reclaimed to wildlife habitat will be seeded to native grasses. Seed will be broadcast seeded and rolled to improve seed – soil contact. DNR Seed Mix 2 will be used in these areas and applied at the rates listed (see Appendix C). The wildlife pond area will be allowed to vegetate below the water line using natural seed distribution without seeding by the operator.

5. Future Use

The mine site will be reclaimed to establish a post mining land use as wildlife pond habitat and low density residential housing as shown on the Final Site Map.

Low Density Residential Housing Development

A portion of the mine site located in the southeast corner of the permitted mine area, closest to highway 124, is to be reclaimed to support the development of one single family dwelling. This dwelling will be serviced by a private well and private water treatment system. The reclaimed development area will be accessible from highway 124 with the existing driveway and is to be sold along with the rest of the reclaimed site as a single lot. This will occur after the mine site has been fully reclaimed.

Wildlife Pond Habitat Post Mining Land Use

Areas of the mine that are below the water table will be reclaimed as a Wildlife Pond.

The proposed performance measures used to determine reclamation success are:

- a. The establishment of a mine soil profile with a minimum of 6 inches of topsoil and 24 inches of subsoil.
- b. The establishment of full plant rooting depth.
- c. The establishment of target soil chemistry and fertility to achieve and sustain the post mining land use.
- d. The establishment of the shore land seeding so that:
 - i. All species in the seeding are present.
 - ii. No more than 50% of the total vegetation is one species from the seed mix.
 - iii. Biomass shall be a minimum of one ton per acre per year.
- e. The establishment of irregular shorelines that vary in shape and slope.
- f. The establishment of shoreline slopes that vary from 3:1 to 10:1 and extend a minimum of 6 feet vertically below the water line.
- g. The establishment of a minimum of 6 inches of topsoil placed along the shoreline and

on the slope a minimum of two feet vertically below the water line to encourage vegetative growth.

Site monitoring will be conducted to assess the success of vegetation establishment and monitor the site for invasive or noxious plant species. Areas poor vegetation establishment shall be examined to determine the cause. Invasive or noxious species will be spot treated with herbicide according to the product label or hand removal and disposed of properly.