

PRELIMINARY DRAFT RULE LANGUAGE 8/28/2014

MNDNR SILICA SAND RECLAMATION

Reclamation Plan Requirements

PURPOSE OF THIS DOCUMENT: *This document contains preliminary draft language related to silica sand reclamation rules – reclamation plan requirements. This document is to be for discussion purposes only and presented at the Silica Sand Rulemaking Advisory Panel (SSRAP) at the October 1th, 2014 meeting. The formation of the draft rules is and will continue to be an iterative process. The goal is to work with the SSRAP members to produce draft rules for public comment.*

XXXX.0000 RECLAMATION PLAN REQUIREMENTS

Subpart 1. Reclamation plan approval. No person may engage in silica sand mining or silica sand mining reclamation without receiving permit from the regulatory authority, unless the activity is specifically exempted in XXXX.0000.

Subpart 2. Reclamation plan requirements. An operator who conducts or plans to conduct silica sand mining shall submit to the regulatory authority an application conforming to the following:

- A. Information required by sub. 3,
- B. A reclamation plan conforming to Subpart 4 through Subpart 8 and complies with the standards of XXXX.0000 (standards section),
- C. A certification that the operator will provide, as a condition of the reclamation permit, financial assurance as required by XXXX.0000 upon granting of the permit to mine before mining operations begin.

To avoid duplication, the permit application and submittals required by **subsection** A through C, may, by reference, incorporate existing plans or materials that meet the requirements of this chapter.

(Language based on WI NR [135.18](#) Section 2)

Subpart 3. Application contents. The operator for any silica sand mine shall submit a reclamation plan for approval by the regulatory authority. The operator shall submit all of the following:

- A. A brief description of the general location and nature of the nonmetallic mine.
- B. A legal description of the property on which the nonmetallic mine is located or proposed, including the parcel identification number.
- C. The names and addresses and telephone numbers of all persons or organizations who are owners or lessors of the property on which the silica sand mining site is located.
- D. The name, address, and telephone number of the person or organization who is the operator.
- E. A certification by the operator and landowner of his or her intent to comply with reclamation standards established by XXXX.0000 (standards chapter).

(Language from NR [135.18](#) Section 2)

(The structure of the following conditions was taken from [DNR Handbook for Reclaiming Gravel Pits](#) (1992) and [WI NR 135.19](#))

KH: Goal of plan reclamation stabilizing slopes vs ecological function?

JM: Due diligence – Ex: concrete dumping in mine. State needs to oversee due diligence.

TG: What information would be different.

LS: Show some historical context/plans/cups from previous mining.

KS: Non-conformities- look up

Subpart 4. Assessment of pre-mining conditions. The reclamation plan shall include information sufficient to describe the existing conditions of the site before mining begins, include but not limited to:

- A. Maps of the location of the project area including property boundaries, ownership within the site and 1/4 mile adjacent to site.
- B. Maps and description of current land use of project area and 1/4 mile adjacent to project area including location of all structures within and 1/4 mile adjacent to project area, the purpose for which each structure is used, including buildings, pipelines, cables, and power lines.
- C. Assessment of topsoil conditions within project area including maps indicating the type and thickness of topsoil with total calculated volume of disturbed topsoil.
- D. Geologic assessment of the deposit including but not limited to the areal extent of deposit, geologic composition and depth of the deposit, and thickness and characterization of overburden.
- E. Hydrogeological assessment of the project area including but not limited to the approximate elevation of ground water as determined by existing hydrogeological information or as specified by the regulating authority, the location of existing drainage patterns, lakes, and wetlands located within or adjacent to project area, the location of wells in the vicinity of the project area that could be impacted as a result of dewatering. In specific instances where the existing hydrogeological information is insufficient for purposes of the reclamation plan, the applicant may supplement the information with the opinion of a licensed professional geologist or hydrologist.
- F. Existing topography as shown on contour maps of the site at intervals specified by the regulatory authority.
- G. Maps of existing roads, railroads, and transportation infrastructure on the project sites as well as 1/4 mile of the site.
- H. For proposed project sites that include previously mined areas, a plan view drawing that shows the location and extent of land previously affected by surface mining, including the locations of piles, wash ponds and sediment basins.
- I. Information available to the mine operator on biological resources, known or inferred threatened or endangered species, plant communities at the proposed or existing project area.

KH- List of 18 bullet points (will send). The post mining land use impacts tax base.

VR: Locations of wells – maps he has seen of the two sections – two wells listed – some mechanism of counting every well. Currently under estimated.

LS: Watershed needs to be included. Add basin/ sub shed and

JB: Call on water balance, watershed-

CN: list has similarities as 404 cert/ guidelines.

TG – very similar to Chippewa ordinance.

BP: Section E needs to be expanded. Definitions are important.

Subpart 5. Description of mining activities. The reclamation plan shall include information that describes the proposed mining activities to be conducted at the project area and the logical sequencing of a mine and complies with the standards of XXXX.0000 (standards).

- A. Description the projected life of the operations including beginning and ending of operations and any phases or stages.
- B. Description of methods and equipment used to mine and process the deposit.
- C. Description of how the material will be transported from the site; the proposed haul route on roads and expected range of the rate of transport; location of proposed access roads, railroad spurs to be built on the proposed site.
- D. Map of the proposed areas to be permitted to mine, including boundaries of the areas to be disturbed by mining, setback boundaries that apply to the project site, all permanent boundary markers, location of buffers, berms, fences, and gated mine entrance.
- E. Description of methods that will be used to retain and preserve topsoil.
- F. Location of water wells, operation plants, processing areas, settling ponds, transload sites, and related infrastructure within project area.
- G. Description of lowest mined elevation of the pit floor.
- H. Description of how invasive species and weeds will be managed on the entire site including stockpiles, berms, and road shoulders.
- I. Description of the methods used to control dust on haul roads and tracked out sediment from mine site.

JB- map of proposed areas, include phased areas, location of avoidance – water resource, plant communities, w/ explanation of purpose of avoidance,

KH: G to vague – send comments.

Subpart 6. Intermittent mining. Intermittent mining may be conducted provided that the possibility of intermittent cessation of operations is addressed in an operator's reclamation plan, no environmental pollution or erosion of sediments is occurring, and the financial assurance for reclamation pursuant to XXXX.0000 is maintained covering all remaining portions of the site that have been affected by mining and that have not been reclaimed.

BP: Time frame should be described.

Subpart 7. Post-mining land use. The reclamation plan shall specify a proposed post-mining land use for the mine site. The proposed post-mining land use shall be consistent with local land use plans and local zoning the time the plan is submitted, unless a change to the land use plan or zoning is proposed. The proposed post-mining land use shall also be consistent with any applicable state, local, or federal laws in effect at the time the plan is submitted.

(Following note is taken from [WI NR 135.19](#) and may be possibly used for SONAR language pertaining to the above paragraph- A proposed post-mining land use is necessary to determine the type and degree of reclamation needed to correspond with that land use. The post mining land use will be an important factor in determining the reclamation plan. Final slopes, drainage patters, site hydrology, seed mixes and the degree of removal of mining-related structures, drainage structures, and sediment control structures will be dictated by the approved post-mining land use.)

The reclamation plan shall include a description of the proposed reclamation, including methods and procedures to be used and a proposed schedule and sequence for the completion of reclamation activities for various stages of reclamation activities for various stages of reclamation of the mine site. The following shall be included:

- A. A description of the proposed earthwork and reclamation, including final slope angels, high wall reduction, benching, terracing, and other structural slope stabilization measures and if necessary a site-specific engineering analysis performed by a registered professional engineer as provided by XXXX.0000
- B. The methods of topsoil or topsoil substitute material removal, storage, stabilization and conservation that will be used during reclamation.
- C. A plan or map which shows anticipated topography of the reclaimed site and any water impoundments or artificial lakes needed to support the anticipated future land use of the site.
- D. A plan or map which shows surface structures, roads, and related facilities after the cessation of mining.
- E. The estimated cost of reclamation for each stage of the project or the entire site if reclamation staging is not planned.
- F. A revegetation plan which shall include timing and methods of seed bed preparation, rates and kinds of soil amendments, seed application timing, methods and rates, mulching, netting and any other techniques needed to accomplish soil and slope stabilization.
- G. Quantifiable standards for revegetation adequate to show that a sustainable stand of vegetation has been established which will support the approved post-mining land use. Standards for revegetation may be based on the percent vegetative cover, productivity, plant density, diversity or other applicable measures.
- H. A plan and, if necessary, a narrative showing erosion control measures to be employed during reclamation activities. These shall address how reclamation activities will be conducted to minimize erosion and pollution of surface and groundwater.

- I. A description of any areas which will be reclaimed on an interim basis sufficient to qualify for the waiver pursuant to XXXX.0000 and which will be subsequently disturbed prior to final reclamation. Description shall include an identification of the proposed areas involved, methods of reclamation to comply with the standards in XXXX.0000 and timing of interim and final reclamation
- J. A description of how the reclamation plan addresses the long-term safety of the reclaimed mining site. The description shall include a discussion of site-specific safety measures to be implemented at the site and include measures that address public safety with regard to adjacent land use.

(Note WI NR 135.19(4)/SONAR LANGUAGE: Safety measures include visual warnings, physical barriers, slope modifications such as reclamation blasting, scaling of the rock face, or creation of benches. Other measures may be employed if found to be equivalent by a registered professional engineer.

- K. The criteria for assuring successful reclamation in accordance with Subpart 8.

(Note WI NR 135.19(4)/SONAR LANGUAGE: Some of the information required by this subsection may be combined; i.e., a single map may show anticipated post-mining topography required by par. (c) as well as structures and roads as required by par. (d).)

LS: Indexed estimation of future cost of inflation for stages.

MK: CUP needs to be re estimated every five years.

KH: Reclamation plan should be submitted by both qualified landscape expert as well as engineer.

BP: Explanation of fill material, subsurface fill in aquifers, what are you putting topsoil on. What is geologic material being used above and below aquifer. Depth to aquifers.

JB: Source location, quantity, type of fill. F- adding what seed mix used. G- performance standard for productivity?? Add invasive to performance standards.

Subpart 8. Criteria for assessing the completion of successful reclamation. The criteria for assessing when reclamation is complete and, therefore, when the financial assurance may be released shall be specified in the reclamation plan. Criteria to evaluate reclamation success shall be quantifiable.

- A. Compliance with the revegetation success standards in the approved reclamation plan shall be determined by:
 - a. On-site inspections by the regulatory or its agent;
 - b. Reports presenting results obtained during reclamation evaluations including summarized data on revegetation, photo documentation or other evidence that the criteria approved in the reclamation plan to ascertain success have been met; or

- c. A combination of inspections and reports.
- B. In those cases where the post mining land use specified in the reclamation plan requires a return of the mining site to a pre-mining condition, the operation shall obtain baseline data on the existing plant community for the use in the evaluation of reclamation success pursuant to this section.
- C. Revegetation success may be determined by:
 - a. Comparison to an appropriate reference area;
 - b. Comparison to baseline data acquired at the mining site prior to its being affected by mining; or
 - c. Comparison to an approved alternate technical standard.
- D. Revegetation using a variety of plants indigenous to the area is favored.

KH: Needs to have a default – that are ecologically sustainable. Big out some type of minimum standard for ecological sustainability.

JB: Have success criteria clear and ahead of times – more clarity for new mines.

KH: Methodology should also be included in existing condition assessment. Agree with Jill – method should be specified ahead of time, and consistent with methodology used in determining vegetative cover of existing vegetation maps – should accepted industry methodology.

Subpart 9. Maintenance. During the period of the site reclamation, after the operator has state that reclamation is complete by prior to release of finance assurance, the operator shall perform any maintenance necessary to prevent erosion, sedimentation or environmental pollution, comply with the standards of XXXX.0000, or to meet the goals specified in the reclamation plan.