

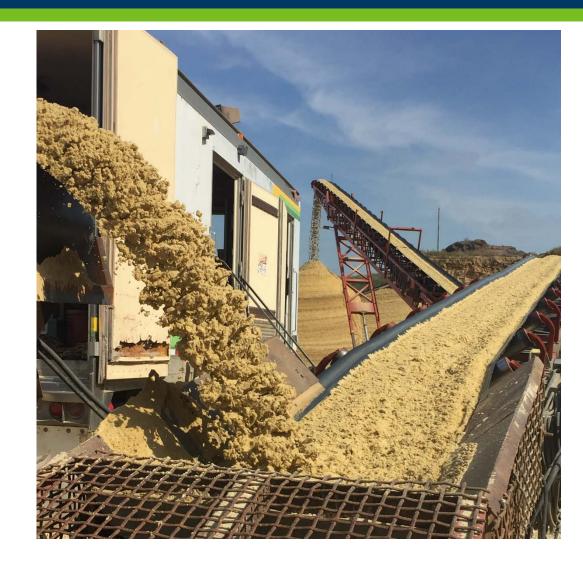
Overview of Silica Sand in Minnesota

Heather Arends

State Program Administrator Director

Overview of Silica Sand in Minnesota

- Regulatory framework
- Distribution of resources and mines
- Legislative actions
- Rulemaking update



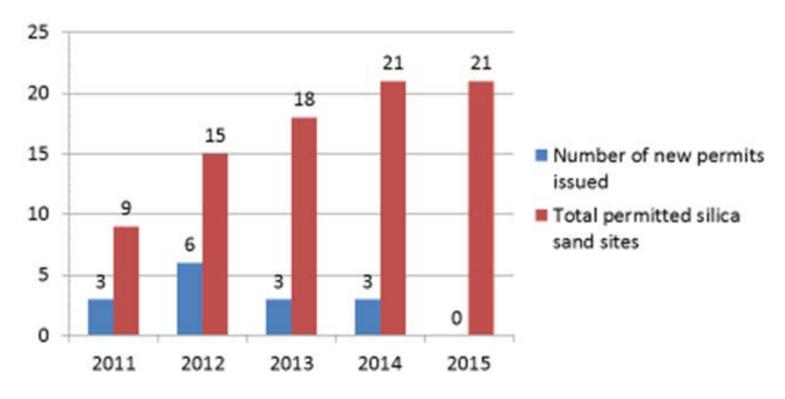
Regulatory oversight of silica sand

- Local governments (MN Stat. § 394.25)
 - Develop "forms of control" for nonmetallic reclamation
 - Permit to mine (CUP/IUP)
 - Ordinance
 - Environmental review
- State/Federal Permits
 - Minnesota Pollution Control Agency (MPCA): storm water and air permits
 - MN DNR: Water appropriation, dam safety, and endangered species takings, working in the bed of public waters
 - Army Corp of Engineers wetlands



Water Quality Permitted Facilities

Silica sand mines, processing, and/or transload sites



Note: 6 facilities permitted prior to 2011. These numbers are an estimate.

Silica Sand Mines in Minnesota DEPARTMENT OF Copyright 2016: Minnesota Department of Natural Resources - Division of Lands & Minerals - Jess Richards, Director Mora Production > 75,000 tons per year Production < 75,000 tons per year ldled Princeton Cambridge Saint Cloud Reclamation in progress Quartz-rich sandstone within 50 feet of land surface (MGS). Big Lake Monticello Counties with no to small areal extent of quartz-rich sandstone within 50 feet of land surface. Preffered Sands Black Diamond Quartz-rich sandstone GIS data compiled by the Minnesota Geological Survey (MGS) at a scale of 1:250,000 Map by Minnesota Department of Printed map scale 1:1,250,000 Fairmont Minerals Red Locator Minnesota Northfield O UNIMIN North Mine - Ottawa Plant South Mine - Kasota Plant Jordan Sands-Jefferson Quarry Mankato Owatonna Winona Waseca Griffen Quarry Albert Lea

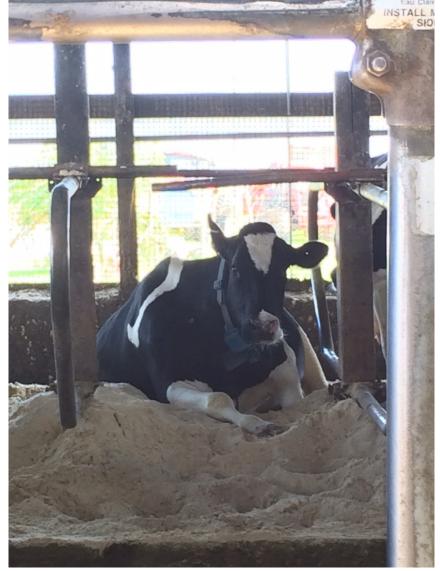
Distribution of silica sand in Minnesota

Types of silica sand mines – large producer



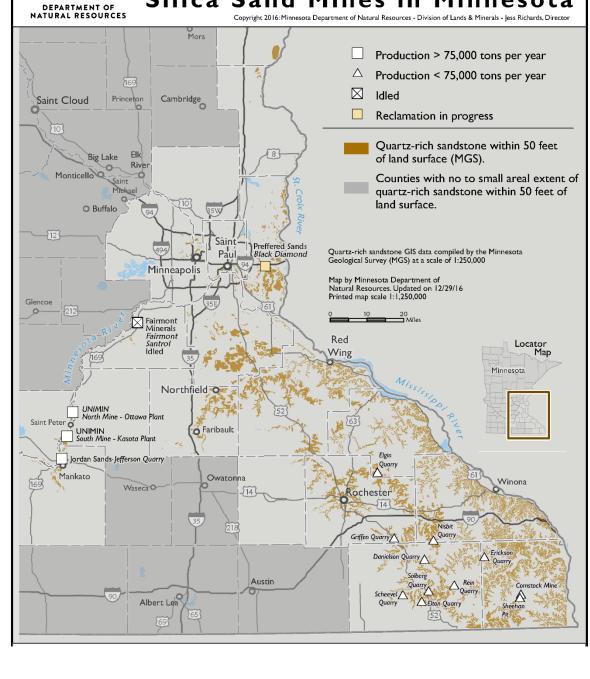
Types of silica sand mines – small producer





Types of silica sand mines – other



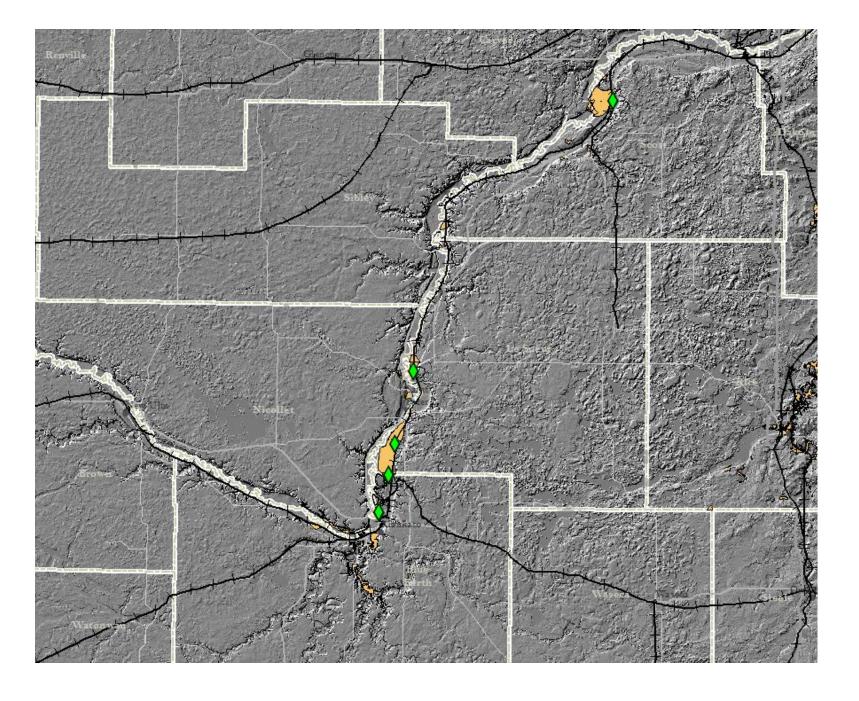


- In 2014 5 large producing mines
- In 2017 3 large producing mines
- ~ 11 small producing mines
- An unknown quantity of quarries/pits that also produce silica sand.

6/1/2017

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Distribution of silica sand in Minnesota

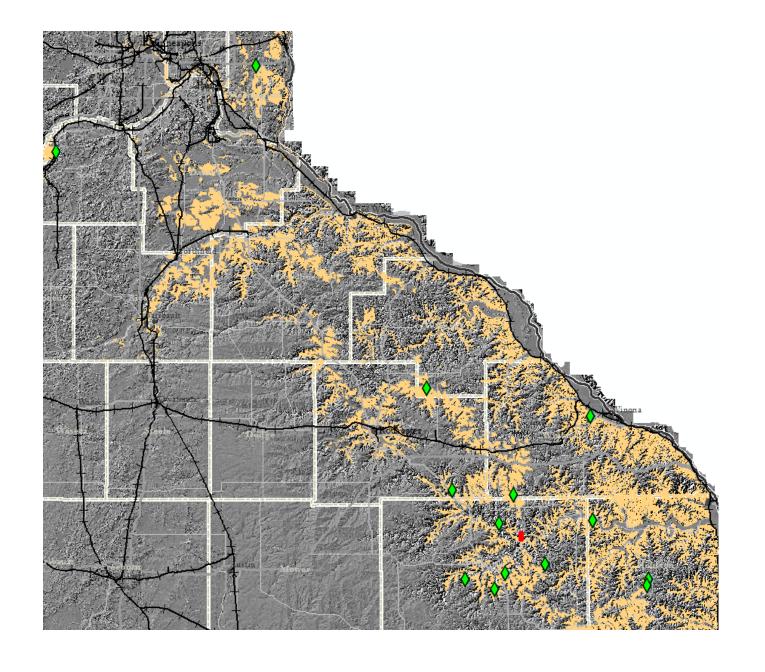


MN River Valley

- (1) Accessibility
- Deposit
- Transportation
- Community
- (2) History

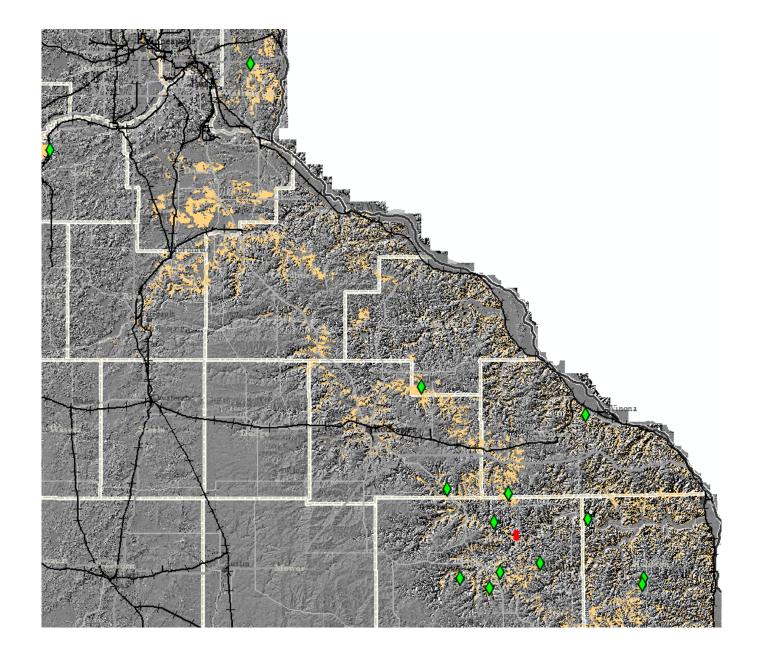
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Distribution of silica sand in Minnesota



Paleozoic Plateau

- (1) Accessibility
- Deposit
- Transportation
- Community
- (2) History



Paleozoic Plateau

- (1) Accessibility
- Deposit
- Transportation
- Community
- (2) History

2013 Silica Sand Legislation

DNR

EQBOARD

Ordinance Library

Technical Assistance
Team

Standards and Criteria

SILICA SAND RULEMAKING – IN PROGRESS

MPCA

Base Value

Air Quality

MDH

Health

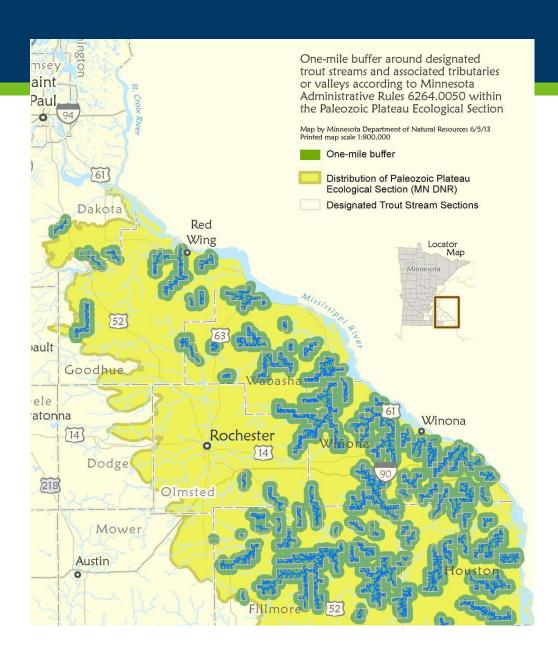
Health
Base Value and
New Testing
Methodology
Polyacrylamide

Trout Stream
Setback
Permit

Reclamation

Environmental Review

Particulate Emissions



DNR Trout Stream Setback Permit MN Statutes, 103G.217

Pertains to silica sand operations within 1 mile of a designated trout stream/class 2 A waters in the Paleozoic Plateau.

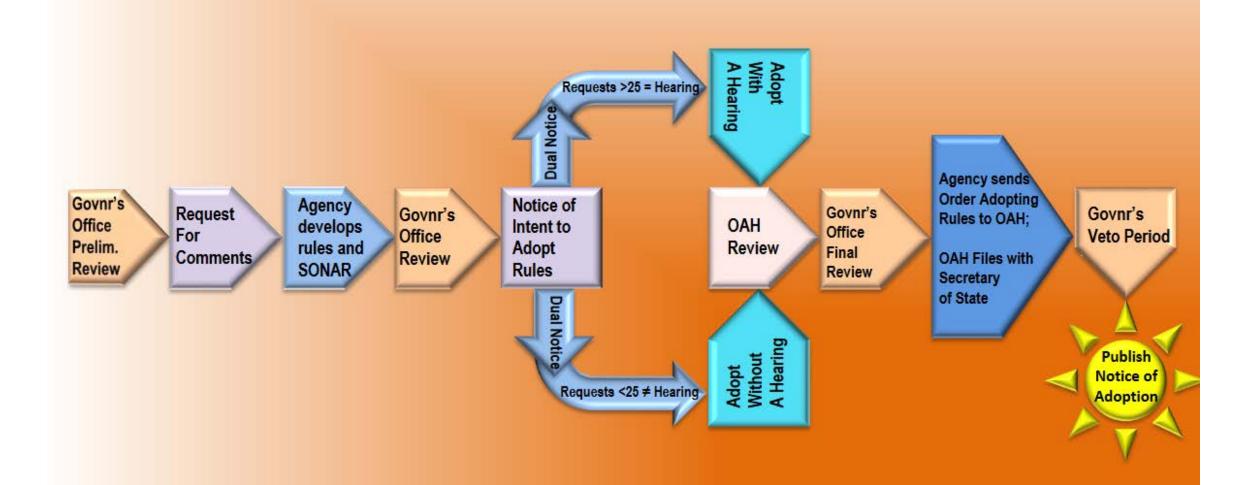
3 Agency Rulemaking

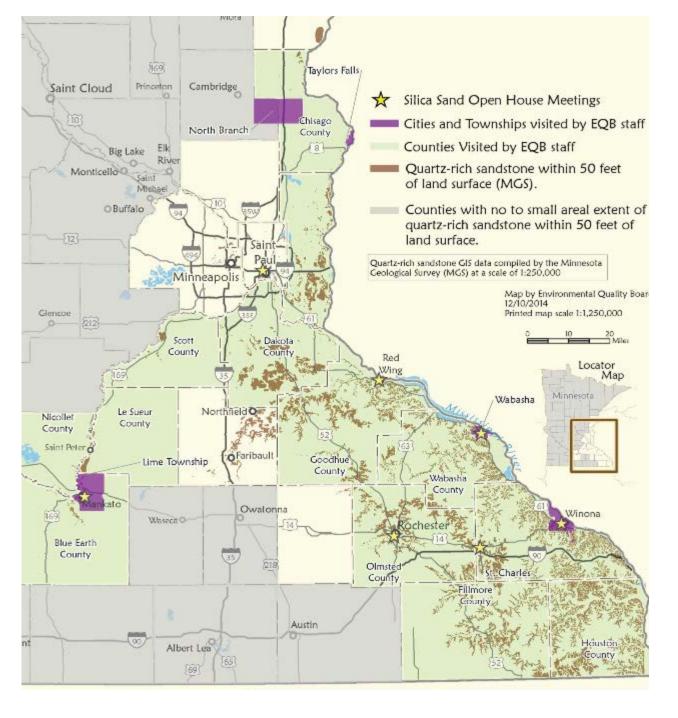
Mn Law 2013, Chapter 114, Article 4; Sec. 105

RULES SILICA SAND

- MPCA "shall adopt rules pertaining to the control of particulate emissions from silica sand projects"
- DNR "shall adopt rules pertaining to reclamation of silica sand mines"
- EQB "shall amend its rules for environmental review...and whether they should be different for different geographic regions of the state"

Rulemaking Progress Chart





Public Input is Important

- Fall of 2013 Advisory panel request
- 2014 2015: Joint Silica Sand Rulemaking Advisory Panel (SSRAP)
- Summer of 2014: EQB and DNR toured and met with LGUs
- June 2016: Feedback period
- Fall 2016: More LGU outreach
- SONAR: Statement of Need and Reasonableness
- Going to submit to the Gov. Office in July.

High Points of Reclamation Rulemaking

- Definition of reclamation looked to Federal (SMCRA) and MN Mineland Reclamation Policy
- WI NR 135 as a guide and platform of discussion with SSRAP
- What is different in preliminary draft of the MN reclamation rule
 - Temporary shutdowns
 - Included blasting provisions looked to Federal (SMCRA) and MN Mineland Reclamation Policy
 - No DNR oversight of LGUs



UPDATE - 3 Agency Rulemaking

Mn Law 2013, Chapter 114, Article 4; Sec. 105

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MN Agency Silica Sand Websites

Googling "MN Silica Sand"

DNR: www.dnr.state.mn.us/silicasand/index.html

MPCA: www.pca.state.mn.us/air/silica-sand-mining

EQB: www.eqb.state.mn.us/content/silica-sand-projects

MHD: www.health.state.mn.us/divs/eh/hazardous/topics/silica/index.html



Heather Arends

State Program Administrator Director

651-259-5376

heather.arends@state.mn.us