



Overview of Silica Sand in Minnesota

Heather Arends

State Program Administrator Director

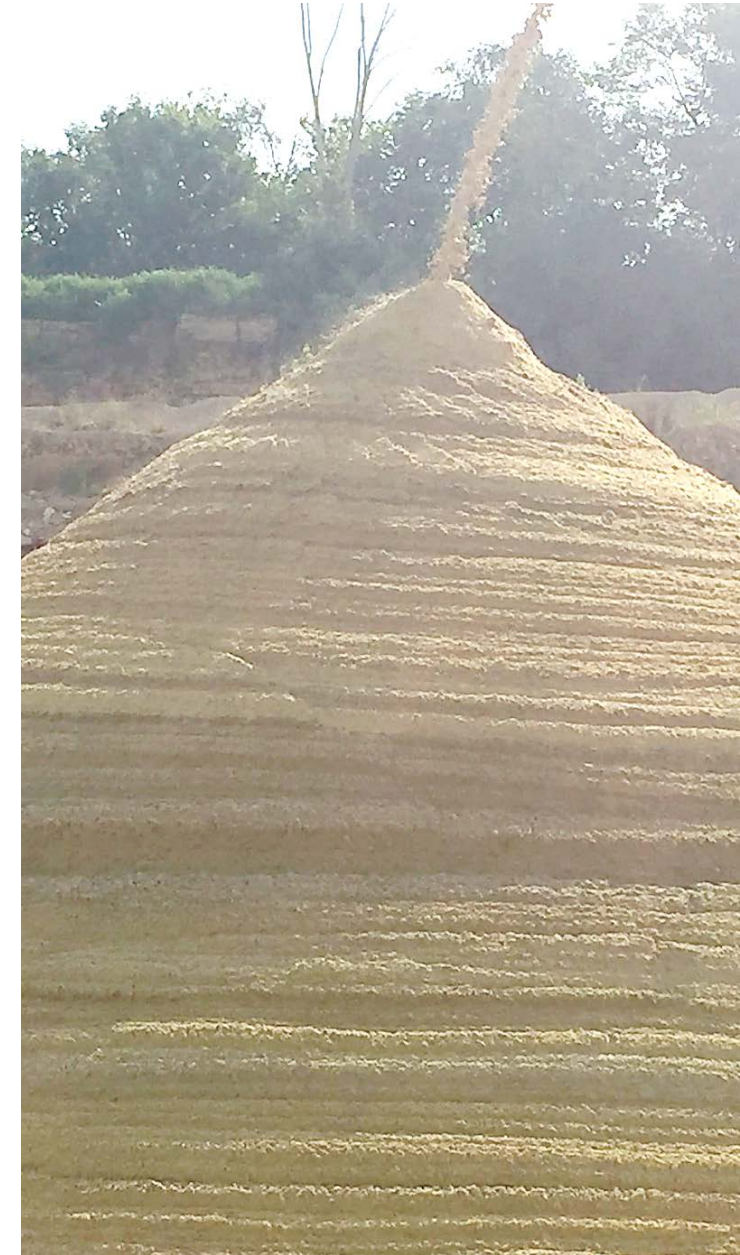
Overview of Silica Sand in Minnesota

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



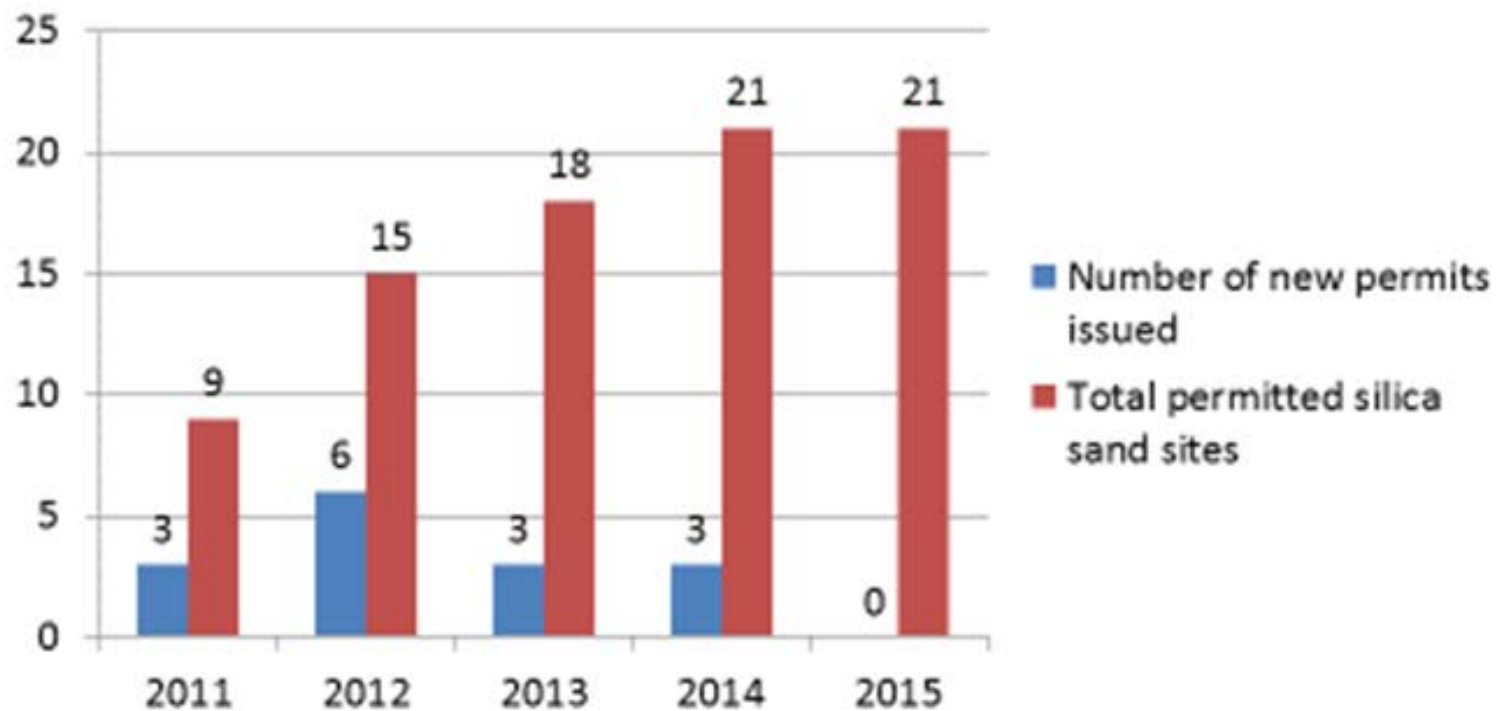
Regulatory oversight of silica sand

- 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

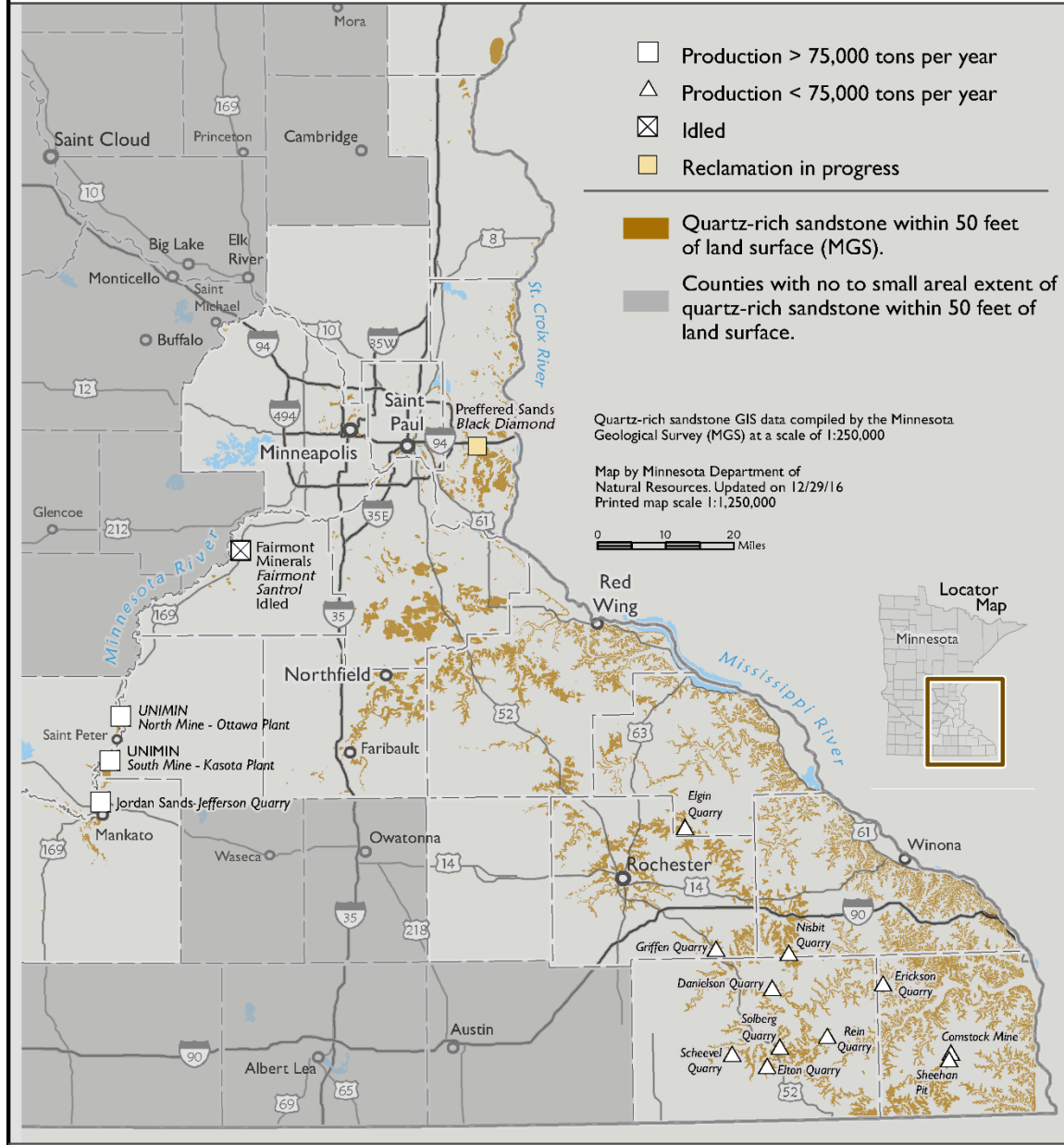
Silica sand mines, processing, and/or transload sites



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

Silica Sand Mines in Minnesota

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Distribution of silica sand in Minnesota

Types of silica sand mines – large producer

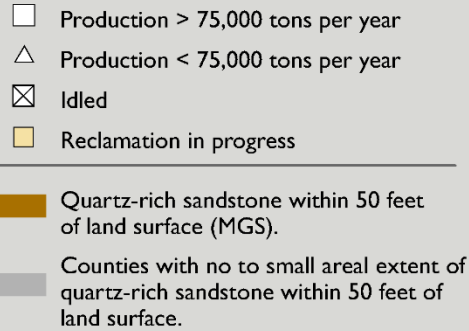


Types of silica sand mines – small producer



Types of silica sand mines – other





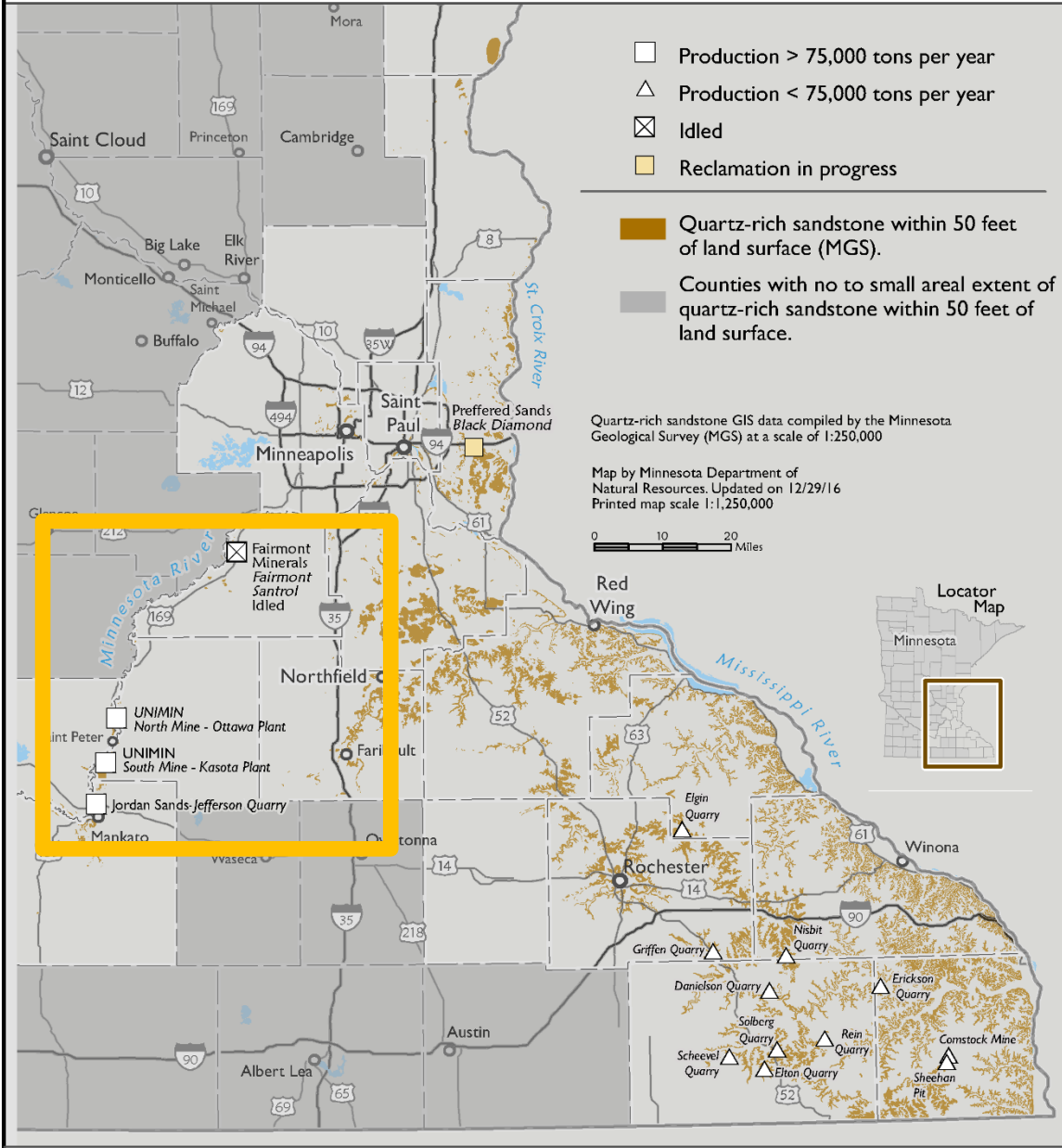
- Quartz-rich sandstone GIS data compiled by the Minnesota Geological Survey (MGS) at a scale of 1:250,000

Map by Minnesota Department of
Natural Resources. Updated on 12/29/16
Printed map scale 1:1,250,000

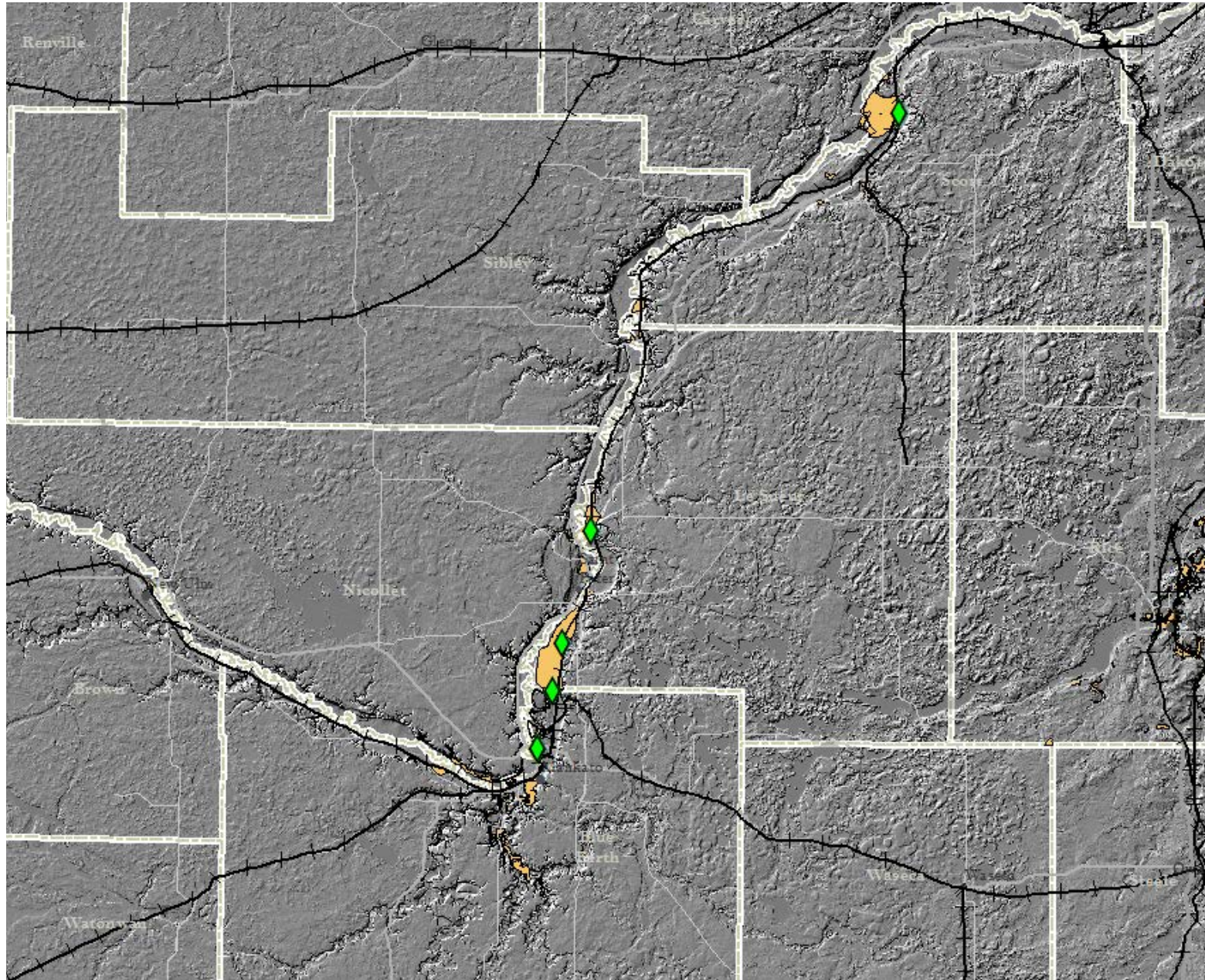
A locator map of the state of Minnesota, showing its county boundaries. The southeastern corner of the state is highlighted with a thick brown border, indicating the location of the study area.

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Distribution of silica sand in Minnesota



MN River Valley

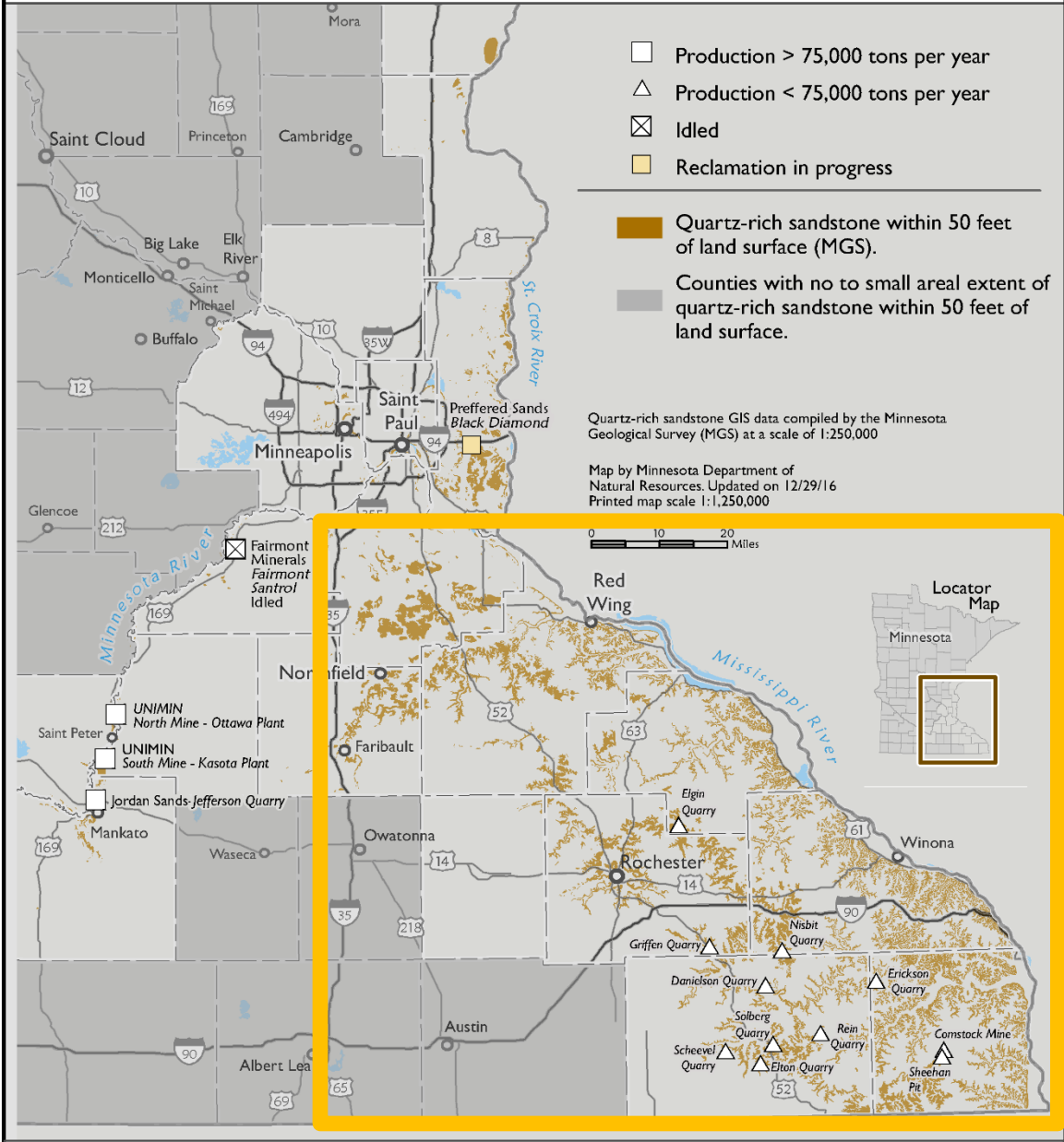
(1) Accessibility

- Deposit
- Transportation
- Community

(2) History

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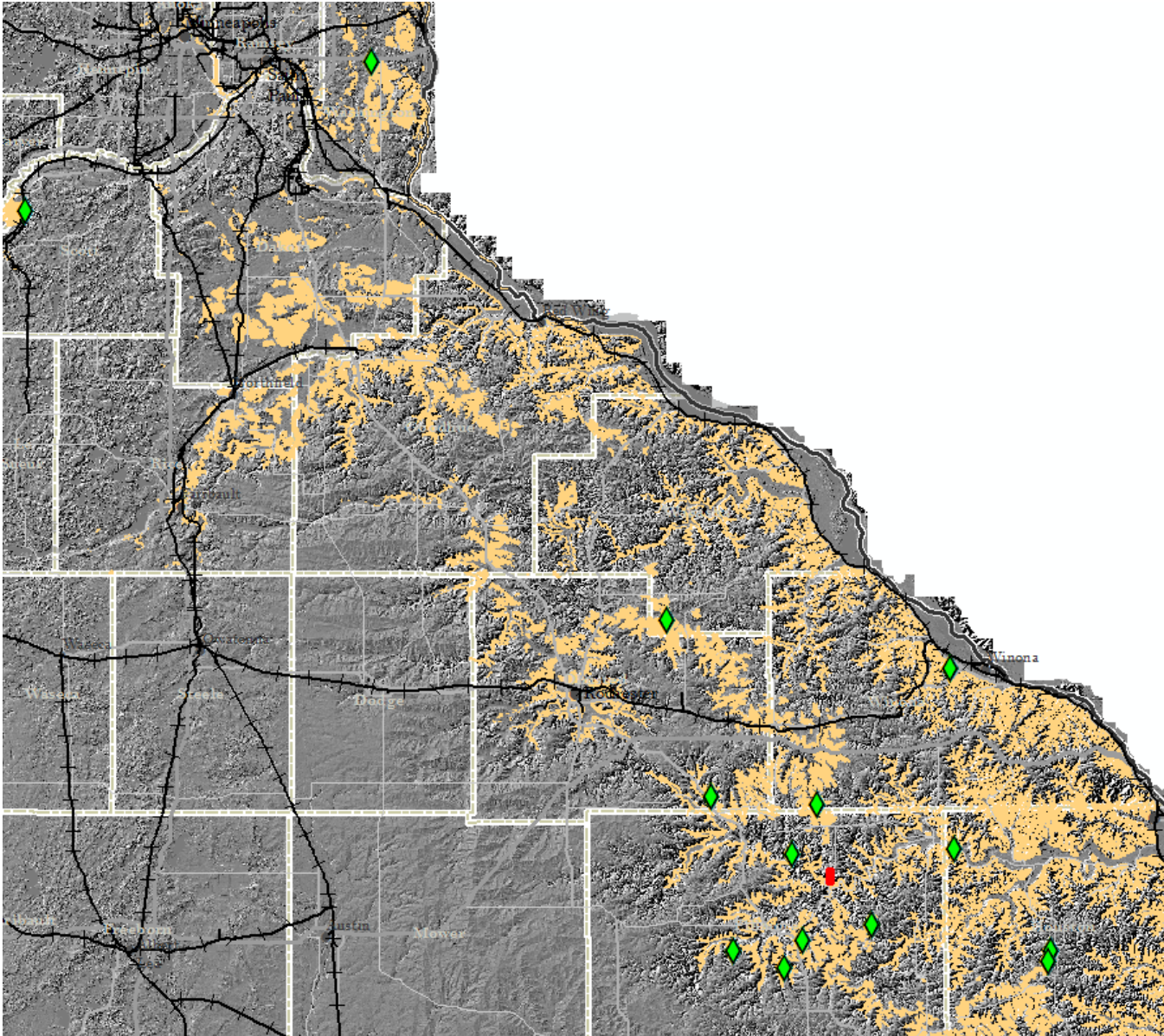
Distribution of silica sand in Minnesota

Paleozoic Plateau

(1) Accessibility

- Deposit
- Transportation
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(2) History

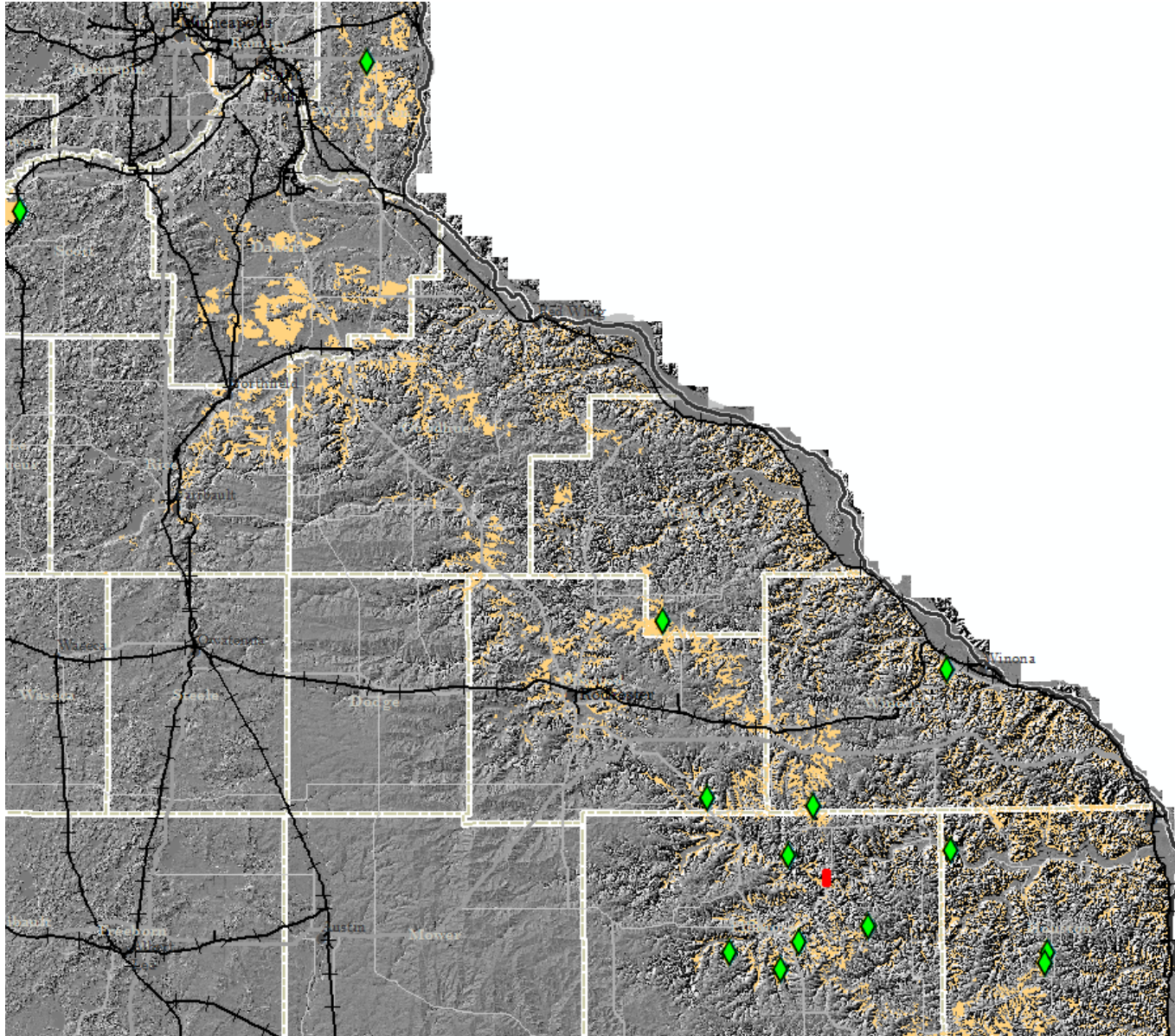


Paleozoic Plateau

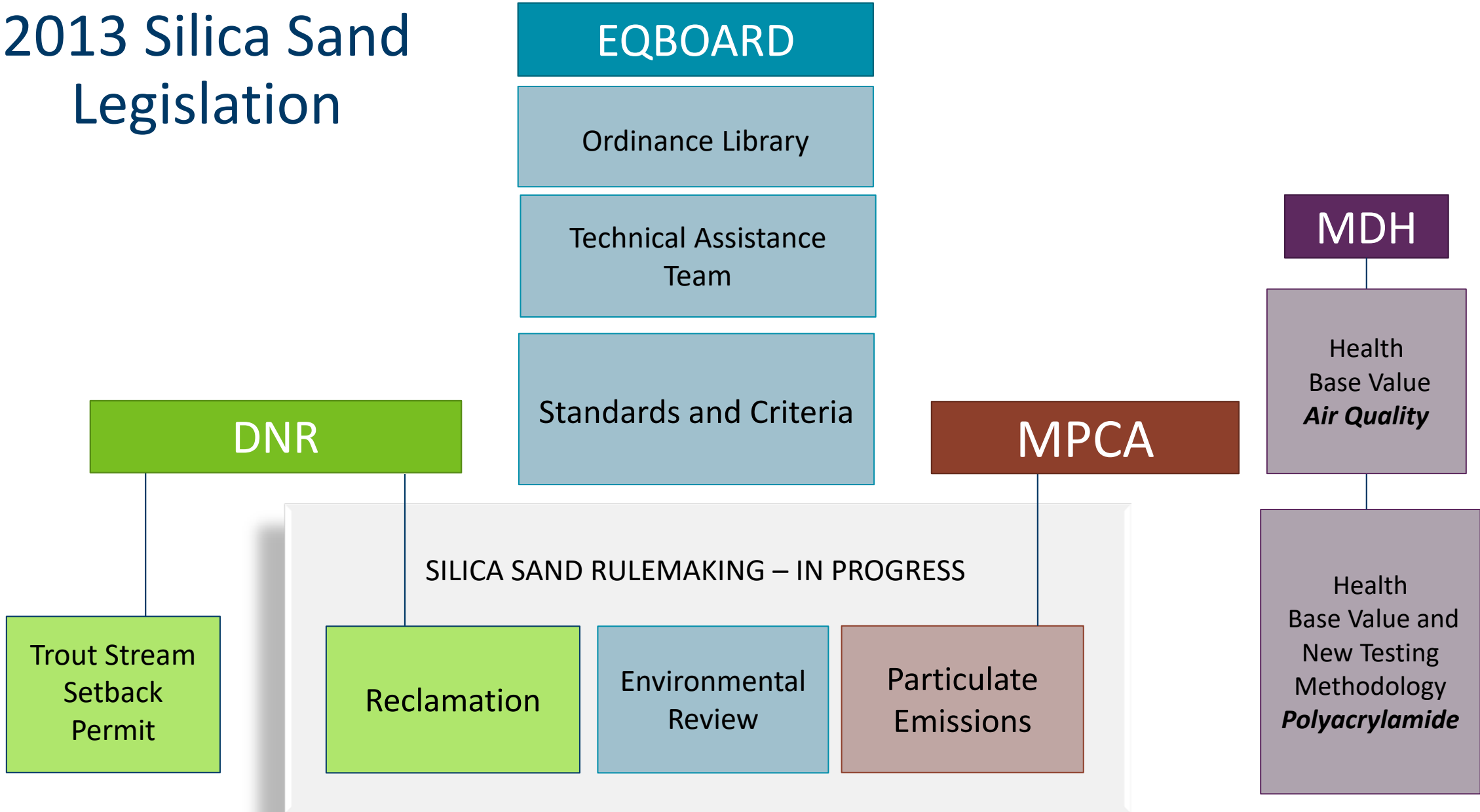
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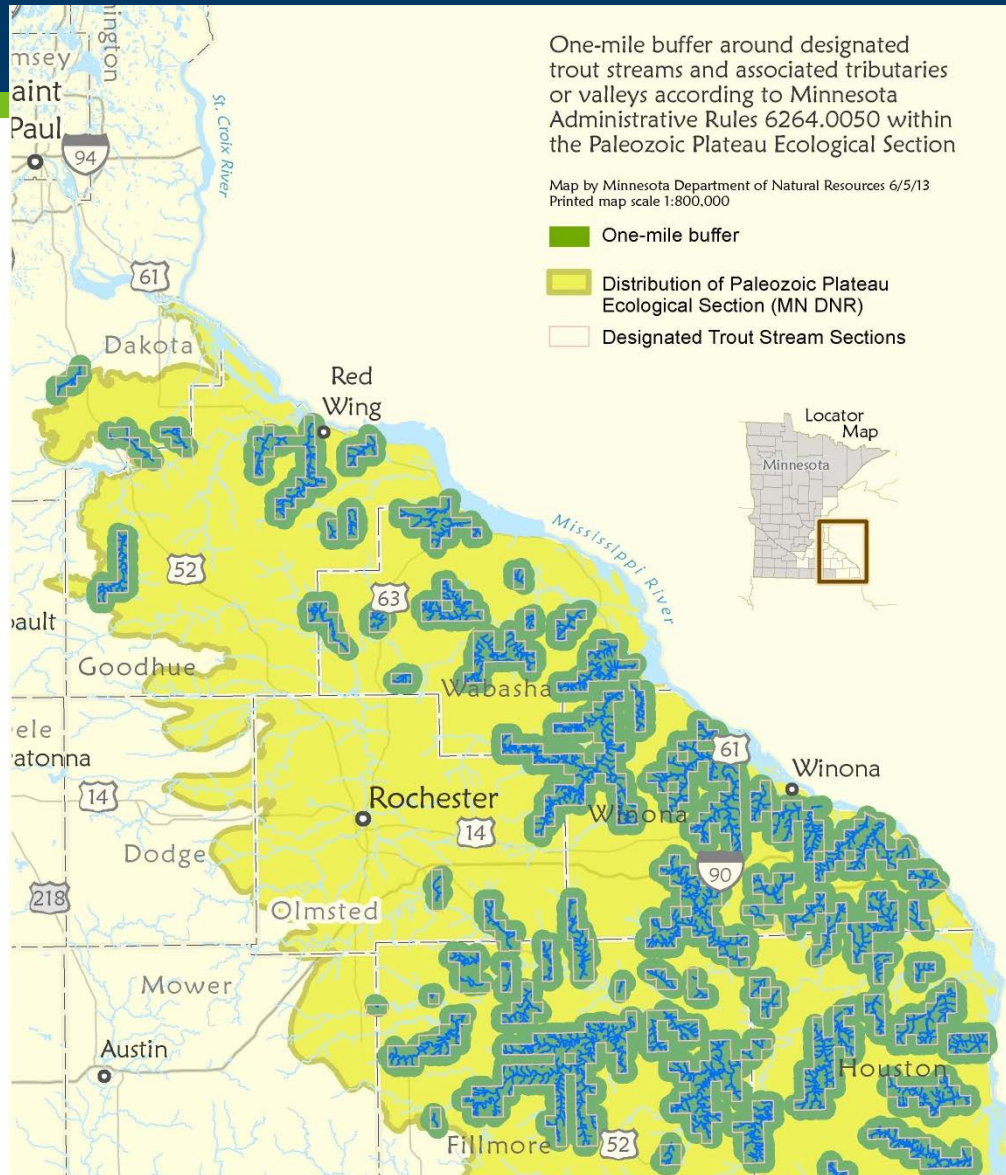


2013 Silica Sand Legislation



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.

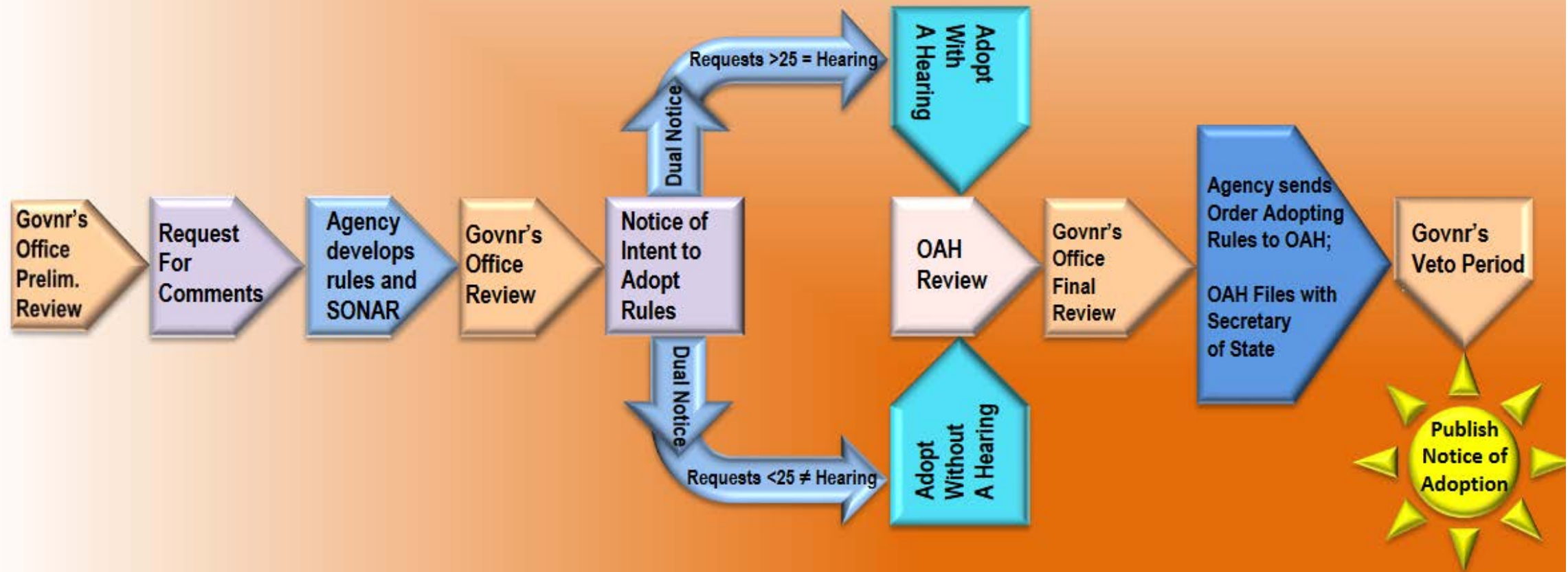
3 Agency Rulemaking

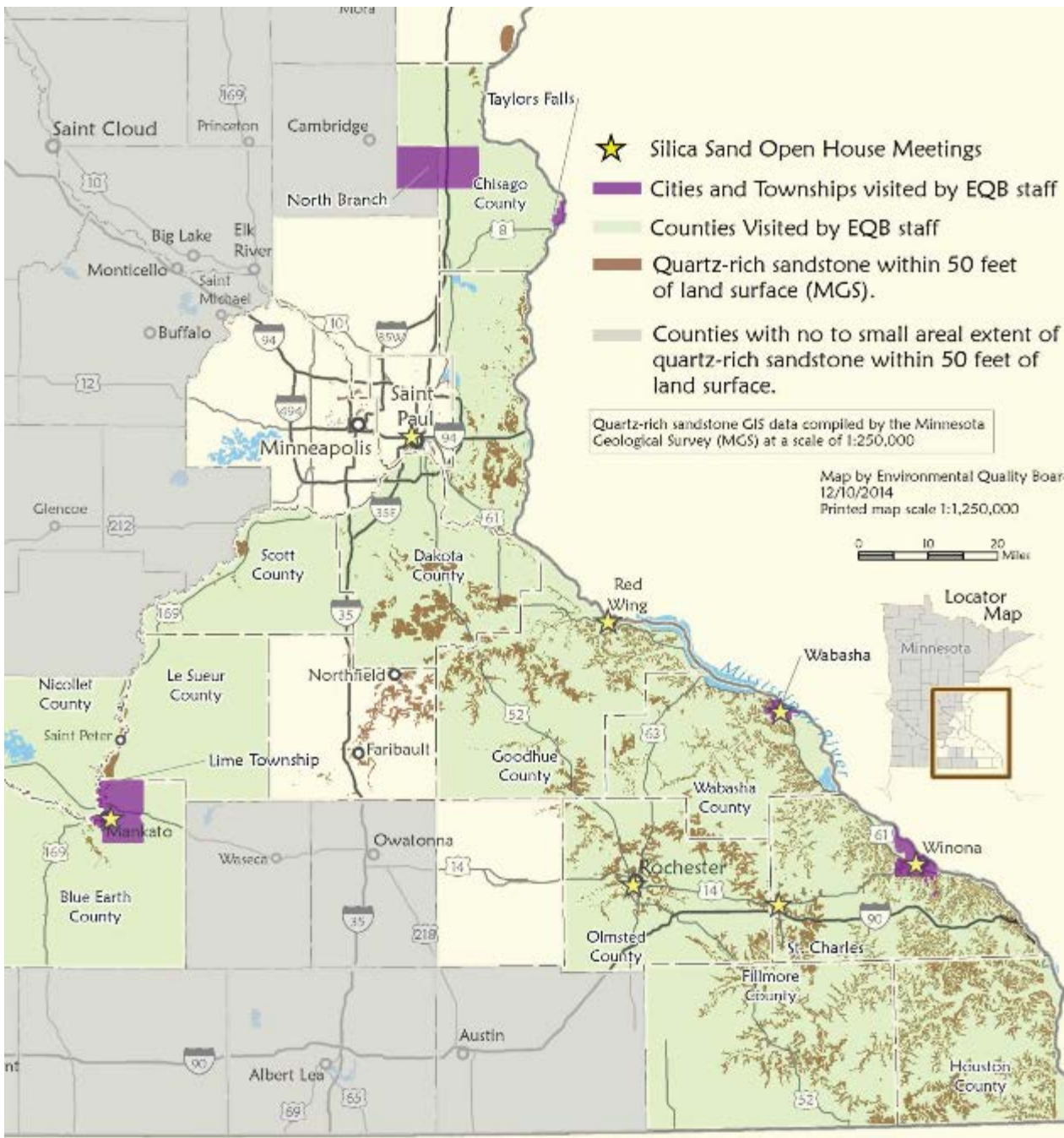
Mn Law 2013, Chapter 114, Article 4; Sec. 105

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

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