

Wild Rice Standards Study Open House

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Note that this slide contains preliminary information, which the MPCA is using to guide the collection of additional study data. It is not appropriate to draw conclusions from the information prior to study completion.



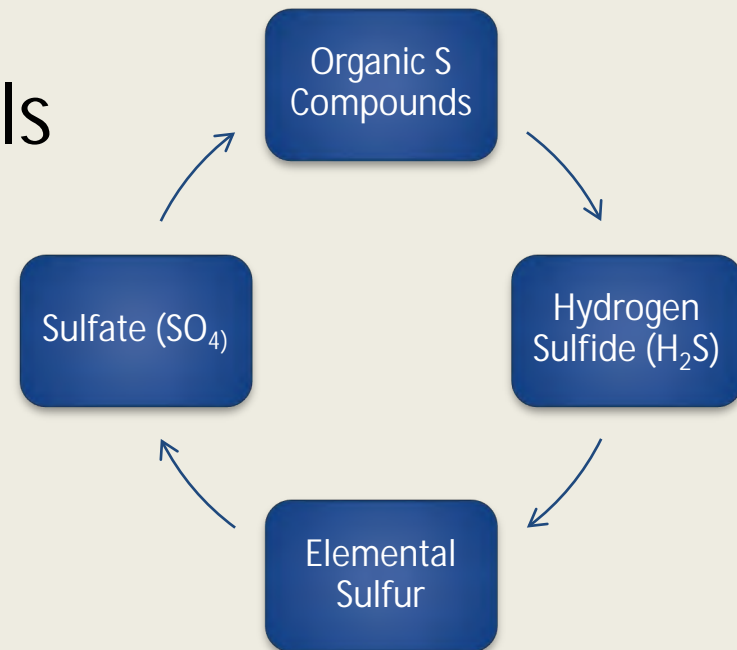


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Sulfate in the Environment

- q Commonly found in air and water
- q Created by sulfur reacting with oxygen
- q Micronutrient at low levels
- q Can cause impacts at elevated levels
 - § Wild rice more sensitive than humans



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Water Quality Standards

- q Fundamental tools of the Clean Water Act
- q Three components:

1. Beneficial use classifications for waterbodies

2. Numeric and narrative criteria that protect those beneficial uses

3. Nondegradation requirements to provide extra protection to high quality waters

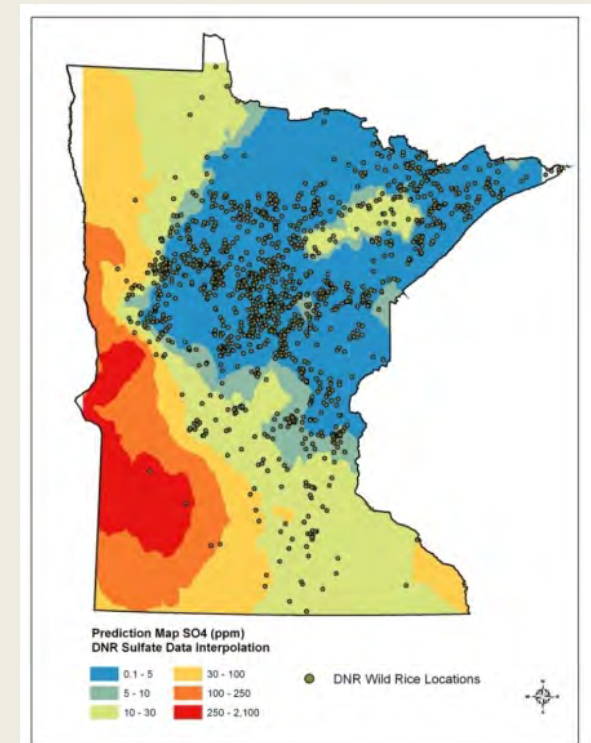
- q Clean Water Act directs states to establish standards; review every three years

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Wild Rice Sulfate Standard

- q Studies found correlation between lower sulfate and wild rice
- q Sulfate standard adopted in 1973 to protect wild rice production
 - § “10 mg/L, applicable to water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels”



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Implementing the Sulfate Standard

- q Additional information needed
- q Study protocol developed
- q 2011 wild rice standards study legislation:
 - § \$1.5 million for wild rice standards study from the Clean Water, Land and Legacy Amendment
 - § Advisory committee to provide input on study protocol, research results and rulemaking
 - § MPCA to initiate rulemaking upon completing the study



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Wild Rice Standards Study Advisory Committee

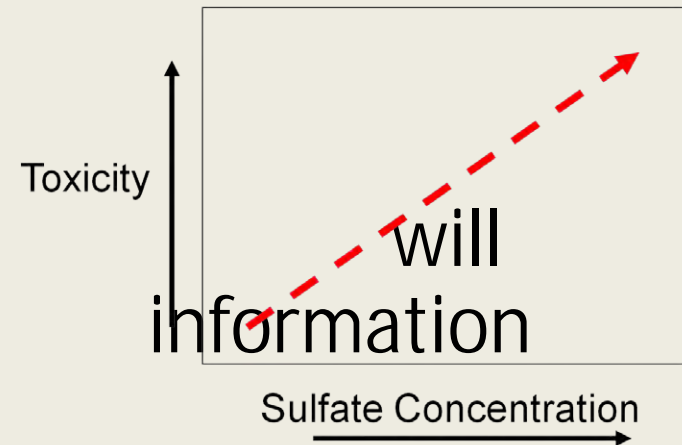
- q Kurt Anderson, Minnesota Power (ALLETE), wild rice harvester
- q Leonard Anderson, wild rice harvester, citizen
- q Sara Barsel, citizen
- q Mike Appelwick, Northeast Technical Services
- q David Biesboer, University of Minnesota
- q Jennifer Engstrom, Minnesota DNR
- q Tracy Ekola, Minnesota Environmental Science and Economic Review Board (MESERB)
- q Ann Geisen, Minnesota DNR
- q Craig Johnson, League of Minnesota Cities
- q David Hatchett, Mesabi Mining
- q Kathryn Hoffman, Minnesota Center for Environmental Advocacy
- q Peter Lee, Lakehead University
- q John P. Lenczewski, Minnesota Trout Unlimited
- q Paula Maccabee, WaterLegacy
- q Joe Mayasich, Western Lake Superior Sanitary District
- q Anne Nelson, wild rice harvester, Wetlands and Water Committee of the Sierra Club
- q Beth Nelson, Minnesota Cultivated Wild Rice Council
- q Frank Ongaro, MiningMinnesota
- q Timothy Peterkoski, ArcelorMittal USA, ArcelorMittal Minorca Mine, Hibbing Taconite
- q Robert Pillsbury, University of Wisconsin Oshkosh
- q Raymie Porter, University of Minnesota
- q Robin Richards, ENVIRON International Corporation
- q Mike Robertson, Minnesota Chamber of Commerce
- q Joel Rohde, Red Lake Nation Foods and Red Lake Department of Natural Resources
- q Jon Schneider, Ducks Unlimited
- q Nancy Schuldt, Fond du Lac Band of Chippewa
- q Robert Shimek, wild rice harvester, member of Red Lake Band
- q David Skolasinski, Cliffs Natural Resources
- q David Smiga, U.S. Steel
- q Rod Ustipak, Minnesota Wild Rice Company, wild rice harvester
- q Rachel Walker, Barr Engineering
- q Darren Vogt, 1854 Treaty Authority

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Wild Rice Standards Study

- q Goal: Enhance understanding of the effects of sulfate on wild rice; inform standards evaluation
- q Key avenues of investigation:
 - § Field survey
 - § Laboratory experiments
 - § Container experiments
- q Any standard modification be based on multiple sources



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Next Steps

- q Currently taking stock of 2012 study progress and planning 2013 activities
- q “Water Used for Production of Wild Rice”
- q Assessment methodology
- q Ongoing communication
 - § Quarterly Advisory Committee meetings
 - § Web and e-mail updates for interested stakeholders/groups/citizens
- q Study complete at end of 2013, standards review to follow

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Open House Format

- q Posters include:
 - § Current standard
 - § Standard development/revision process
 - § 2012 study activities
- q Very interested in your questions and input!



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**Questions?
Thank You!**

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Minnesota Pollution Control Agency