

Wisconsin County Code Administrators Spring Conference

Industrial Sand Mining
March 27, 2015





Non-metallic Mining in WI

- NMM has been in WI for more than 100 years
- ~2500 NMMs in WI
- Uses for NMM sand materials
 - Animal bedding
 - Building materials
 - Cranberry operations
 - Foundry sand
 - Glass
 - Transportation needs
 - Proppants

Which one is the Sand Mine?



A: The one on the Right



Industrial Sand Mining

Facility Type	Mine	Processing	Rail
Active Sites	63	45	27
Inactive Sites	58	29	7

WDNR Permitting & Compliance Authorities



- **Air**
- **High Capacity Wells / Groundwater**
- **Private / Public Drinking Water**
- **Exploratory Borehole Abandonment**
- **Stormwater/Wastewater**
- **Water Regulation / Water Resources**
- **Nonmetallic Mining Reclamation**
- **Enforcement**



Excluded from DNR's Regulatory Authority

- Noise
- Light Pollution
- Blasting
- Zoning
- Road Maintenance Issues
- Employee Safety on Site
 - **Mine Safety and Health Association (MSHA)**
 - Regulatory Authority
 - Dictates Monitoring Requirements for Mine Site Workers
 - **Occupational Safety and Health Association (OSHA)**
 - Industrial Operations such as Drying Facilities



Staff Resources

- Over 100 Staff Involved
- Air Management Program
 - 3.5 Dedicated Full Time Employees
- Water Program
 - 1 Dedicated Full Time Employee
 - Stormwater & Water Regulation / Zoning
- County Staff
 - County reclamation staff / Zoning - Land Management

Air Program





Air Permits

- **Construction Permit**

- Issued to cover new or modified pieces of equipment
- Dust Control Plans

- **Operations Permit**

- Issued to cover all significant emission units operations and activities at an entire facility



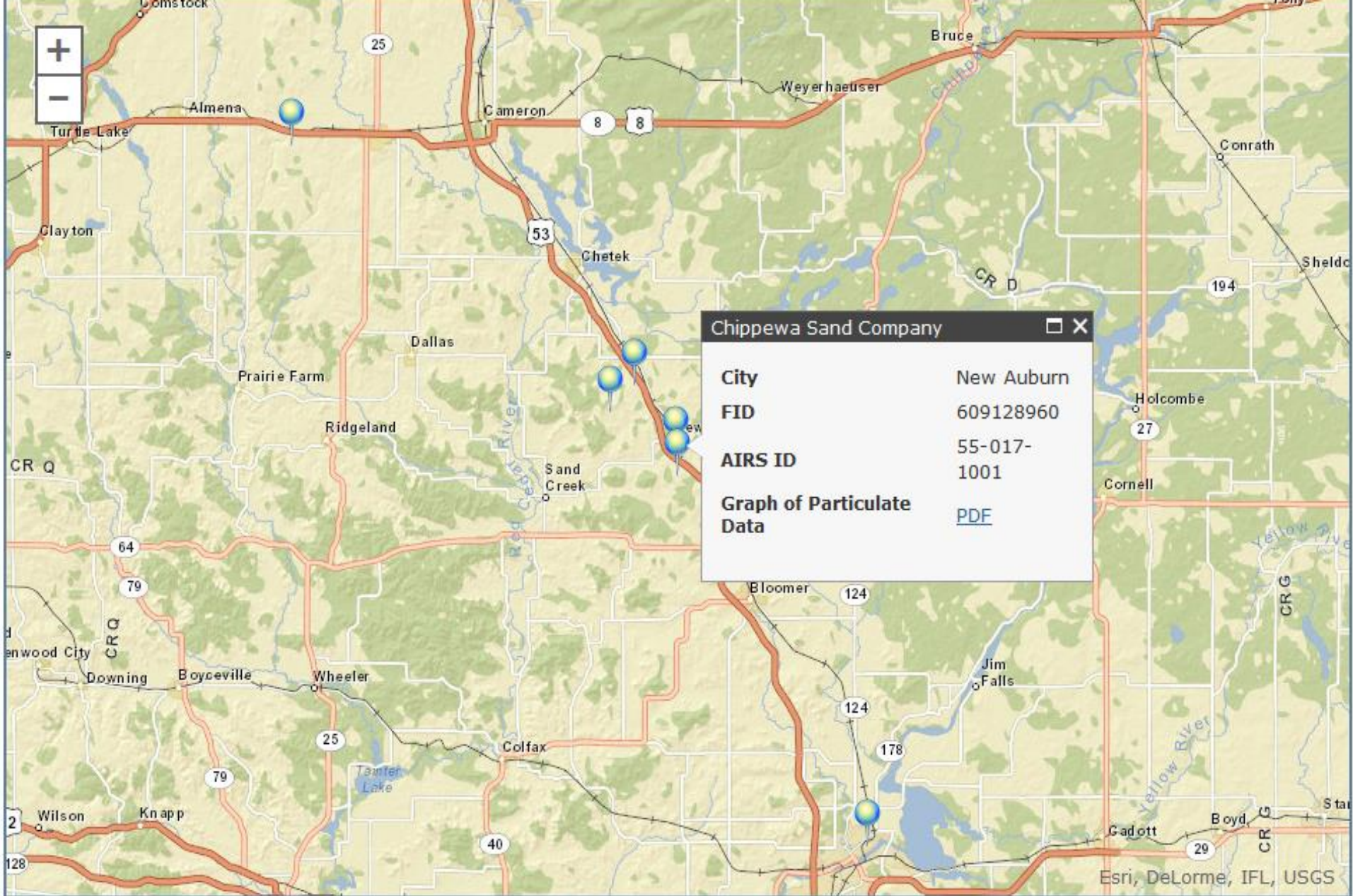
Site Inspections

- **Frac Sand Industrial Site Status**
 - 67 Active Sites for air monitoring
 - 82 Inactive Sites
- **Compliance Inspections Completed as of February 11, 2015**
 - 34 Full Inspections
 - 100 Partial Inspections
- **Inspection Goal through June 30, 2015**
 - Conduct full inspection at every active site.
 - At least two partial inspections at every active location
- **Continued Follow-Up of Inactive Sites**



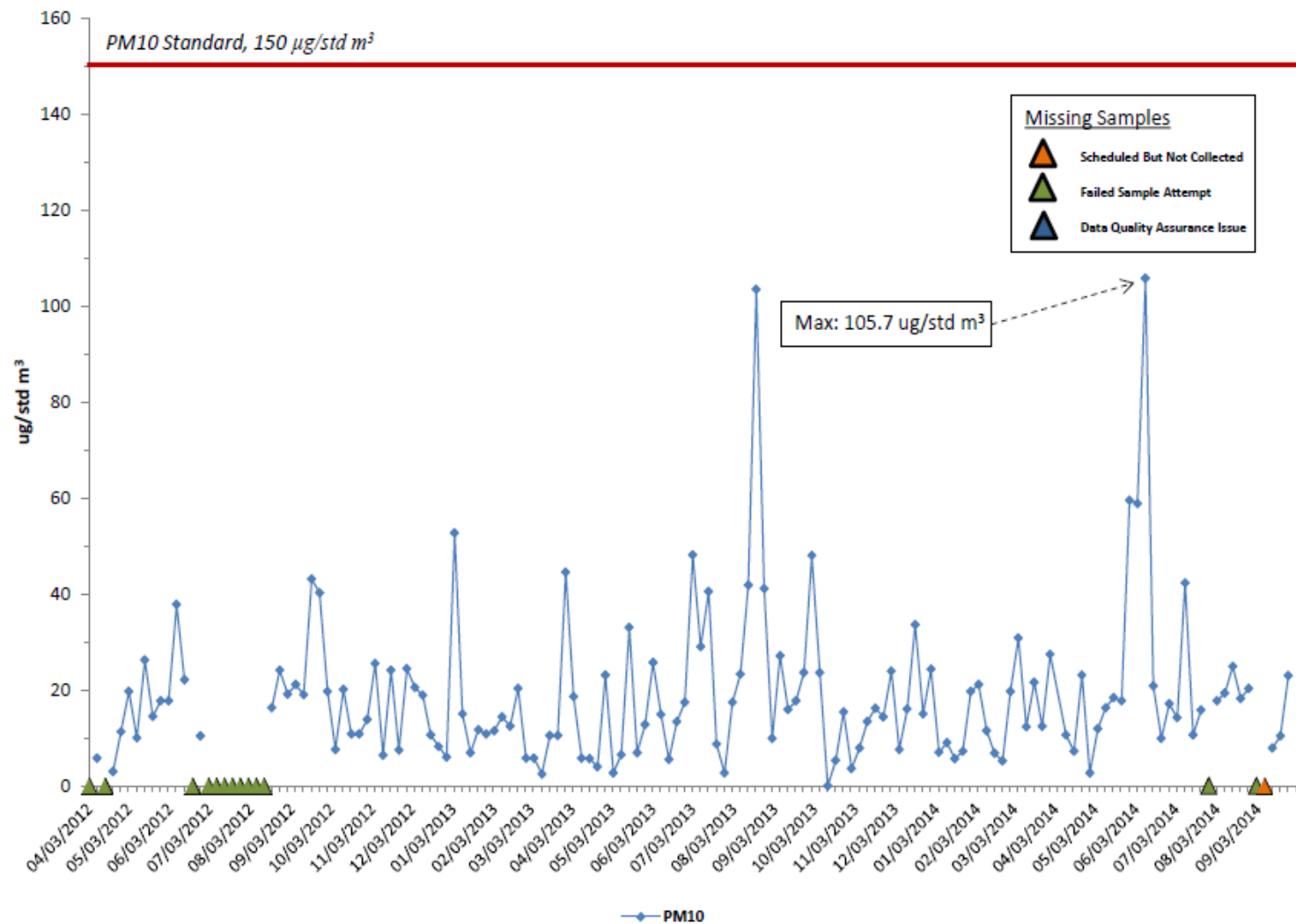
PM Monitoring Data

- **Sampling Days Completed At Mining Facilities**
 - Total of 1,408 valid samples through September 2014. **No samples have exceeded the applicable standard.**



The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. Users of these maps should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness or legality of the information depicted on this map.

PM10 at Chippewa Sand Company - New Auburn



Water Programs



High Capacity Wells / Groundwater

- **High Capacity Wells**

- Statutory Definition: Any well on a property with a cumulative capacity to withdraw more than 100,000 gpd (70gpm)

- **Water Use**

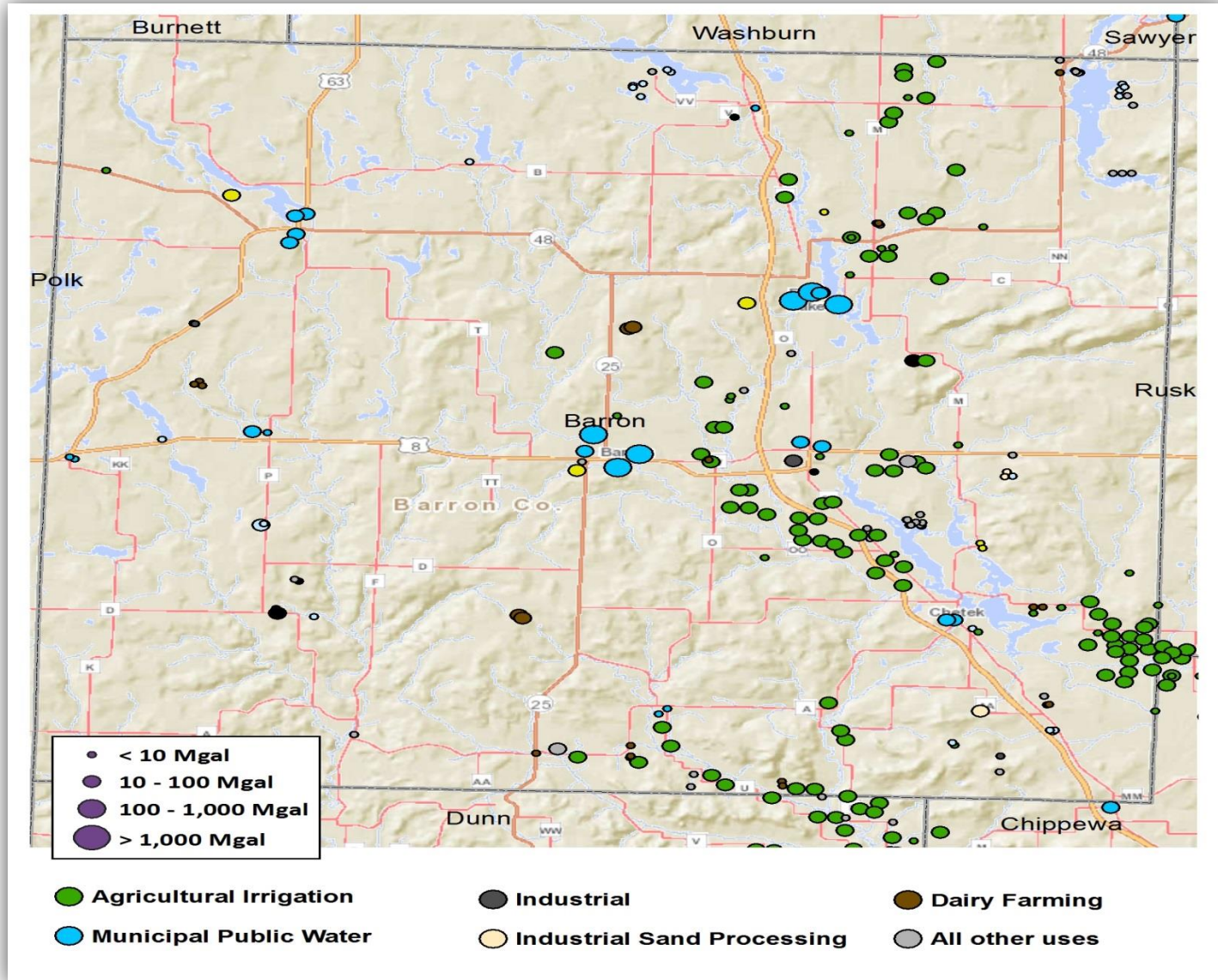
- Potential impacts to surface and groundwater resources.

- **ISM specific concerns**

- Borehole abandonment
- Secondary impacts



Barron County 2013 Groundwater Withdrawals





Private / Public Drinking Water

- **Water Supply**
 - Quantity and Quality
- **On-Site Wells**
 - Public vs Private



Additional Information

- **What are the well restrictions?**

Agricultural and industrial restrictions are considered on a case-by-case basis.

- **What is the hydrology for aquifer replenishment?**

Recharge estimates range from 3 inches to 12 inches per year.

- **Monitoring efforts?**

A review of monitoring needs will be addressed as part of the strategic analysis process.

- **Who pays when a prior existing well goes dry?**

This is dependent upon case specifics based on if there is solid proof that it was caused by a nearby operation. The DNR may or may not have regulatory authority depending on the case specifics.



Stormwater / Wastewater

- **General Permit**
 - Addresses stormwater and wastewater.
 - Project review for impacts to Threatened and Endangered Species, Cultural Resources, and Water resources
- **Internal vs External Drainage**
- **Stormwater Pollution Prevention Plan**
 - Required
- **Washing Operations**
 - Co-mingling of stormwater / wastewater
- **Excessive Run-off**
 - Impacts to surface waters



Water Regulation and Wetlands

- **Project Identification**
 - Proximity to Navigable Waters
- **Wetland Mitigation**
 - Practicable Alternatives
- **Wetland Delineation**
 - Must be completed and verified during growing season
- **Discharges to Wetlands**
 - Surface Waters

Environmental Compliance





Enforcement Considerations

- **Enforcement Process – Stepped Approach**
 - Notice of Noncompliance (NON)
 - Notice of Violation (NOV)
 - Enforcement Conference (EC)
 - Citation
 - Referral to the Department of Justice
- **Potential Ramification of a Violation**
 - Dependent Upon Violation and Severity



Enforcement Action Data

- **Advanced Enforcement Actions**

Actions to Date

- 28 – Notice of Violation / Enforcement Conference
- 5 – Received Citations
- 6 – Referrals to DOJ
 - Forfeitures Range from \$16,000 to \$200,000
- 7 – Remain Open



Nonmetallic Mining Reclamation

- **Reclamation**

- County Programs
- Annexation and Local Programs

- **Types of Proposed Reclamation**

- Large (1,000+ Acre) Open Sites
- Contemporaneous Reclamation



ISM Strategic Analysis

- **NRB Directive**

- Revisit 2012 impact study
- Update study based most current information
- This is **NOT** a decision document
- Public scoping process now through April 20th
- Information about the study and the Online Public Input Form:

<http://dnr.wi.gov/topic/EIA/ISMMSA.html>

