DEQ Update

Jon Russell
Field Operations Section Manager
Water Resources Division - Michigan DEQ
DEQ Overview

- 1,100 Employees
- 9 Program Areas
- 11 Field Offices
2018 DEQ Priorities

- PROTECT PUBLIC HEALTH AND ENVIRONMENT
- ASSIST MICHIGAN COMMUNITIES WITH ADDRESSING INFRASTRUCTURE NEEDS
- BUILD EXTERNAL PARTNERSHIPS TO ADDRESS MICHIGAN’S ENVIRONMENTAL ISSUES
Focus for Today

- Lake Erie
- PFAS
- Biosolids Trends / Issues
LAKE ERIE

- What is the problem?
  - Too much algae
  - Toxins produced by blue-green algae

- What is the solution?
  - Reduce phosphorus
  - Comprehensive plan
  - Adaptive management
LAKE ERIE - PLAN

Key strategies
- Point source reductions
- Restore and improve wetlands
- Improve, update, and modernize farm operations
- Support research
- Adaptive management

Schedule
- Public comment – June 12 through July 14, 2017
- Final Michigan Domestic Action Plan – late summer/early fall, 2017
- Comprehensive U.S. and Canadian Plans – February 2018
LAKE ERIE - PROGRESS

Detroit Water and Sewerage Department Annual Total Phosphorus Load

River Raisin Total Phosphorus Concentration (flow weighted mean)
PFAS
Per- and Polyfluoroalkly Substances

▲ History
  ▲ Uses:
    ➢ Scotchgard and Stainmaster
    ➢ Fire fighting foams
    ➢ Metal plating, etc.
  ▲ U.S. production ceased in 2002
  ▲ Highly persistent and bioaccumulative
PFAS
Where are we finding elevated levels of PFAS in Michigan?

- Old disposal sites for industrial wastes and materials where PFAS were used in the manufacturing process
- Chrome Plating Operations
- Sites where PFAS containing firefighting foams were used for firefighting and/or training activities
- Wastewater Treatment Plants that receive industrial wastewater or landfill leachate containing PFAS
Water Resources Division (WRD) Strategy

- Monitor PFAS in surface waters and fish
- Monitor point sources (Direct Discharges)
- Industrial Pretreatment Program Initiative (Indirect Discharges)
- Biosolids Investigation and Literature Review
Ambient Monitoring

- 2018 up to 180 samples
- Source tracking
  St. Joseph, Kalamazoo, Clinton, Huron Rivers
- Source water near DW Critical Assessment Zones and the Great Lakes
- Recon waterbodies with potential sources
Fish

• 2017 - **385 fish samples** collected from 25 sites

• 2018 – Analysis of the 2017 fish samples

• Additional **132 fish samples** to be collected including caged fish studies in Flint, Rogue, and AuSable
Point Source Monitoring

- Identify/control sources through existing regulatory programs, including NPDES permits
  - Sample PFAS at select WWTPs with routine monitoring
  - Sample direct industrial dischargers with potential for PFAS
  - Sample point sources (wastewater/stormwater) related to source tracking activities
IPP Strategy

- **Screen** Potential Sources: desk evaluation
- Develop **Monitoring Plan** (get approval for alternate) to monitor probable sources
- **Sample** probable sources
- **Reduce/eliminate** if sources found
- **Sample** POTW effluent if sources verified
- **Interim** Report to DEQ WRD
IPP Strategy

- DEQ will provide **technical assistance**

- **Follow up monitoring** (effluent, biosolids) if required by DEQ

- If sources found, ongoing **reduction** efforts

- **Summary** Report to DEQ WRD
PFOS and POTWs
Biosolids

- Very soluble, heavy
- Passes through conventional POTW processes
- Accumulates in biosolids
- Still learning about what happens to PFAS in various environments
Michigan Trends in Biosolids
Trends in Biosolids - 2017

- 2017 land applied tonnage of 120,193 dry – Largest amount ever in Michigan!

- 2017 tonnage up nearly 60% since 2015

- 2017 Fees of $6.18 dry ton – Lowest amount in 18 years
  - While the increase in tonnage has reduced land application costs, it has impacted staffs ability to implement some program elements
MICHIGAN BIOSOLIDS LAND APPLICATION SUMMARY

**DRY TONS LAND APPLIED**

- 2007: 87324
- 2008: 97891
- 2009: 87321
- 2010: 72016
- 2011: 74139
- 2012: 91697
- 2013: 87186
- 2014: 81156
- 2015: 76589
- 2016: 106194.845
- 2017: 120193

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[Graph showing the data for each year.]
Michigan 10 year Residuals Management Summary

Dry Tons (dt) Reported vs Fiscal Year

- Land Applied (dt)
- Landfilled (dt)
- Incinerated (dt)
Biosolids Program Staffing

- Currently 3 ¼ FTEs supporting the program
- While increased tonnage reduces fees – Does increase workload on existing staff
- Intend to fill Biosolids position in the Jackson / Lansing DO position by this summer
Biosolids Program Staff

www.mi.gov/biosolids

Statewide Program Coordinator
Mike Person: 989-297-0779

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Saginaw Bay District Office
401 Ketchum Street, Suite B
Bay City 48708

Cindy Sneller: 616-401-2471
Grand Rapids District Office
5th Floor 350 Ottawa Ave NW
Grand Rapids 49503

Rob Wolfe: 906-250-1287
Upper Peninsula District Office
1504 West Washington Street
Marquette 49855

Xiaowei Zhang: 586-243-8508
Southeast Michigan District Office
27700 Donald Court
Warren 48092
GLWA / NEFCO - Michigan Land Application

- Increase in tonnage saw an increase in complaints / media / legislative interest
- Dust and odors
  - WRD working with GLWA and NEFCO to identify and resolve issues.
    - Revisions to operational components at the plant
    - Revisions to land application methods to minimize off site impacts

WRD participating in the EQ biosolids sub committee - working to guide EQ land application in the future
- Developed of guidance documents and fact sheet
Biosolids components of MiWaters

Submission of Biosolids Annual Reports –

- 2017 was the 3rd year of BS AR submission
  - WRD received and processed over 750 Annual Reports. Very few reported issues this year!!!

External submission / control of land application sites –

- Functionality still not available/ but in process. Anticipate rolling it out this calendar year.
Submission of Sites

- Eventually new and revised sites will be submitted via miwaters. will allow a delineation of site boundaries.
- Adv –
  - Will allow quicker /easier identification and tracking of all permitted sites.
  - Lessen potential of sites being dually permitted.
  - Should be easier to submit a complete site packet
Questions