

# The Ohio Lake Erie Phosphorus Task Force

Western Lake Erie Basin Partnership

Gail Hesse, Ohio EPA

March 11, 2009



# Lyngbya Wollei



# Off-shore floating mat of *Lyngbya Wollei*



# Cladophora



# The Ohio Lake Erie Phosphorus Task Force

- Convened by Ohio EPA
- Purpose is to review data in relationship to current conditions in Lake Erie
- Analyze the correlations in increases in soluble reactive phosphorus levels and corresponding increases in algal blooms
- Both trends began to appear in the mid-1990s

# Ohio Phosphorus Task Force Members

- Composition

- State program personnel from OEPA, ODNR and ODA
- Academia
- Agricultural agencies and organizations at the federal, state and local level
- USEPA-Great Lakes National Program Office
- USGS
- Wastewater Treatment Plant

# P Task Force Approach

- Identify all possible sources of SRP
- Quantify what we can with existing data sources
- Consult with topical experts
- Consult peer-reviewed publications
- Identify *relative contributions* from possible sources
- Develop recommendations

# List of Possible Sources

- Point sources
  - POTWs, Industrial, CSOs, HSTS
- Agriculture
- Urban/residential
  - Lawn care fertilizers, storm water, orthophosphate in treated water, dishwasher detergent
- Other
  - In lake loads/recycling
  - Streambank erosion
  - Detroit River/upper lake loads
- Transport mechanisms
  - Subsurface drainage, surface runoff

# Ohio Lake Erie P Task Force *draft* Summary Conclusions



- SRP loadings are driven by runoff events & NPS
- *Dreissinids* are a factor
- Multiple contributors; agriculture is key
- Need to look at how we manage our P inputs

# Phosphorus Inputs Agriculture

- Biosolids
- Animal manure
- Commercial fertilizer



# Ohio Lake Erie P Task Force *draft* Recommendations

- Management options include:
  - Increase use of soil tests
  - Update screening tools that account for agronomic need and environmental risk
  - Align with application recommendations
- Manage P inputs
  - Timing, amount and incorporation

# Exploring Recent Changes in Agriculture

- Equipment has gotten larger
  - Larger equipment has multiple functions, potentially leading to changes in the timing of fertilizer applications
  - Larger, heavier equipment may be leading to soil compaction
- Changes in crop rotation resulting in changes to fertilizer application

*Timing, amount and incorporation*

# Next Steps

- Working with the Ohio Lake Erie Commission, coordinated the development of an RFP to fund Task Force recommendations
- Work through the remaining issues
- Develop a final report

[www.epa.state.oh.us/dsw](http://www.epa.state.oh.us/dsw)

Click: Phosphorus Task Force