

# Lower Little Miami River TMDL Process

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# Clean Water Act: What

- Federal Water Pollution Control Act of 1972, amended in 1977, 1981, 1987
- First comprehensive national clean water legislation
- Response to growing public concern about serious and widespread water pollution
- Primary federal law that protects our nation's waters

# Clean Water Act: Why

- Main objective is to restore and maintain the "chemical, physical, and biological integrity of the Nation's waters."
- Two fundamental national goals:
  - eliminate the discharge of pollutants into the nation's waters
  - achieve water quality levels that are fishable and swimmable

# Clean Water Act: WQS Provisions

- States must establish standards for waters to protect, maintain and improve the quality of the nation's surface waters.
- Standards represent a level of water quality that will support the "swimmable/fishable" goal.
- Defined as ambient standards, as opposed to discharge-type standards.
- Antidegradation: can't allow water quality to "slide backward"

# Ohio's Water Quality Standards

- Administrative rules
- OAC 3745-1
- Four major components:
  - beneficial use designations
  - narrative "free froms"
  - numeric criteria
  - antidegradation provisions

# Beneficial Uses

- Describe existing or potential uses of waterbodies
- Consider the use and value of water for various purposes: public water supplies, protection and propagation of aquatic life, recreation, agricultural, industrial and other purposes.
- A waterbody may be assigned more than one use designation

# Examples of Beneficial Uses

- Water supply: maintain or improve potable water supplies
- Recreation: protect swimmers, waders, boaters, from exposure to fecal material
- Aquatic life: protect aquatic life; measure community health (fish/bugs)
  - Ohio has defined a range of uses
  - Warmwater Habitat is baseline for CWA

# Antidegradation

- Existing beneficial uses must be maintained and protected.
- Water quality better than that needed to protect existing beneficial uses must be maintained unless lower quality is deemed necessary to allow important economic or social development (existing beneficial uses must still be protected).

# Clean Water Act: The Significance of Section 303(d)

- 1972 Act was first appearance of a permitting system, joining the standards approach
- 303(d) is safety net for when the technological controls don't work
- 303(d) requires States to
  - List and prioritize impaired waters
  - Evaluate what action is needed to fix the problems

# What Is a TMDL?

**Total Maximum Daily Load:**

The maximum amount of a pollutant a waterbody can contain and still maintain water quality standards

- background load
- + point source load
- + nonpoint source load
- + margin of safety

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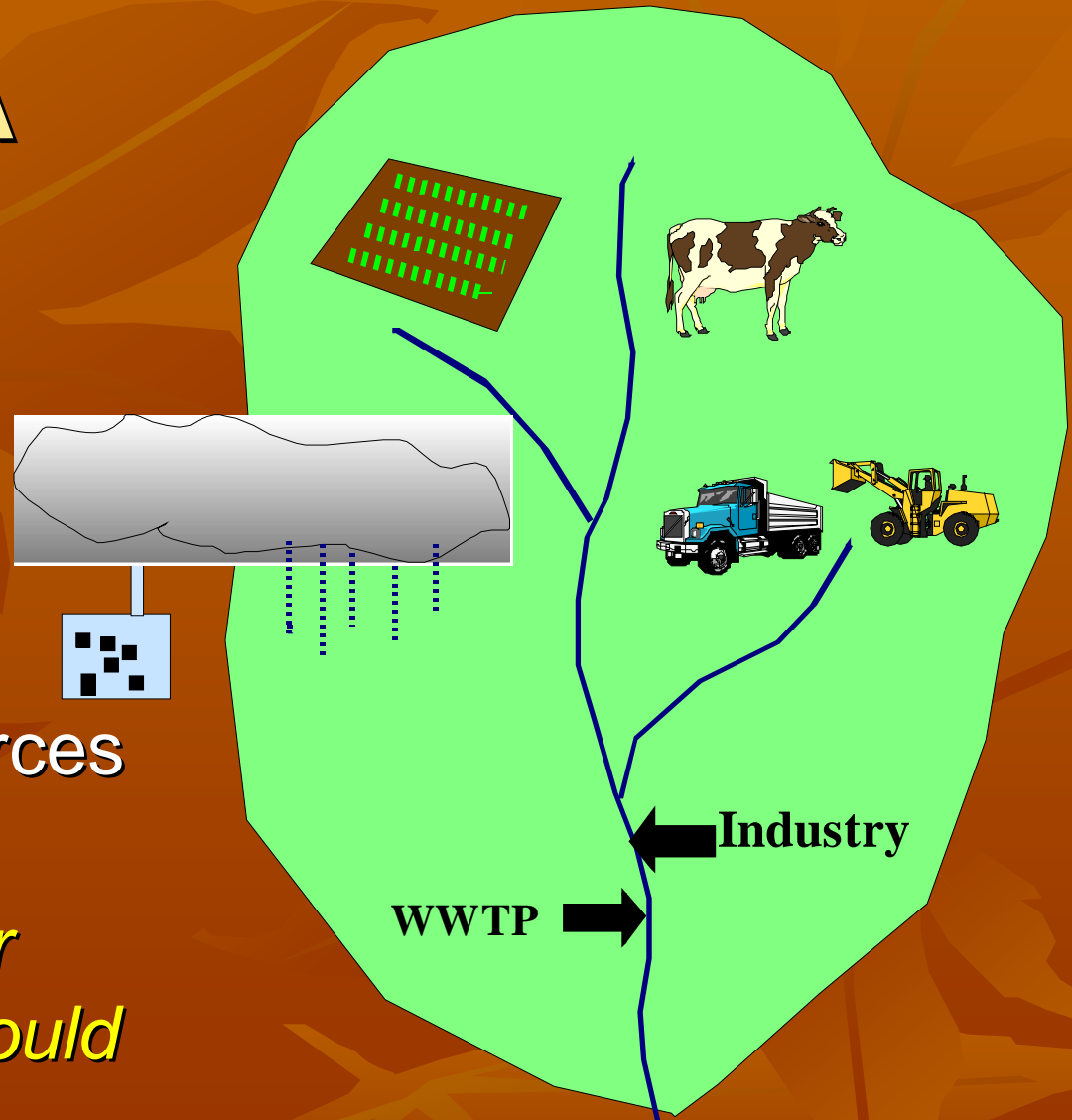
***TMDL***

# In Other Words...

- A “pollution budget”
- A “watershed diet”
- A cleanup plan
- A plan to bring waters into attainment with water quality standards

# TMDLs: A Picture

- Holistic approach
- Watershed focus
- Pollutant specific
- Account for all sources
- *If waters reach attainment by other means, a TMDL would not be necessary*





# **What's Ohio Doing about the Requirements?**

# Ohio TMDL Process

*Meet the  
federal  
requirement  
... but do what  
makes sense  
for Ohio*



# What Makes Sense for Ohio

- Make the work count
- Build on our strengths; integrate internally
- Build support and alignment by focusing on resource and goal
  - We can't do this alone
  - Need best decisions and sustainable solutions
  - Other organizations have money, experts, field presence to address problems
  - Involve local stakeholders: decision-making, resources, authority, follow-through

# How Is a TMDL Prepared?

- 12 steps form a problem-solving process:  
Assessment → Development → Implementation → Validation
- Major elements of the process
  - Conduct intense water quality survey
  - Identify problem (causes & sources) based on results
  - Establish targets and load reductions, frequently based on a watershed model
  - Determine actions that will move resource to attainment
  - Implement actions
  - Evaluate success of actions through follow-up survey then take further actions if needed

# Ohio TMDL Process Overview

1. Design survey
2. Collect data
3. Assess data
4. Define goal
5. Develop targets
6. Select scenario
7. Prepare plan
8. Submit report
9. Implement internally
10. Implement externally
11. Annual validation
12. Check status

*Assess*

*Develop*

*Implement*

*Validate*

# Where WQS Intersect with TMDLs

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Data collection to

- determine beneficial uses
- is the use being attained?

Designated uses are changed through a rulemaking process

If the use is being attained, no TMDL is necessary

# Assessment Phase

- Data collection and analysis
- Biological and Water Quality Study
- Determine where TMDL is needed
- Identify causes and sources of non-attainment

# Development Phase

- In cooperation with local partners (stakeholders)
  - Define Goals – eliminate non-attainment
  - Develop Targets – restoration and load targets with restoration scenarios
  - Select Scenario – generate other options
    - Screen scenarios to select best option

# Implementation Phase

- Prepare Plan
  - Describe actions
  - Identify legal authorities
  - Develop list of reasonable assurances
  - Establish measurable milestones
- Submit Plan
  - Internal reviews
  - Public notice & meetings
  - Submit plan to USEPA

# Implementation Phase (continued)

- Implement within Ohio EPA
  - Identify resources for action
    - Permits & Enforcement
    - Incentives (DEFA & Section 319 funding)
  - Incorporate implementation plans into other agency priorities
- Implement outside Ohio EPA
  - Identify implementing parties
  - Work with partners willing to proceed

# Validation Phase

- Validation Activities
  - Verify monitoring plan
  - Validate control actions taken
  - Validate stressor reduction
- Check status
  - Have WQS been achieved

# Monitoring: Who Can Do

- Keep in mind the different types of monitoring
- Have used monitoring from outside Ohio EPA in listing and TMDLs
- New Credible Data Law limits the data that can be used in TMDLs

# Credible Data Law

- Enacted 2003 (ORC 6111.50-.56) by HB 43
- Proposed administrative rules to implement
- Defines “qualified data collectors”
- 3 levels of data
  - Educational, demonstration, regulatory
- Only highest-level data can be used in TMDLs, impaired waters listing, use attainment decisions
- More info:  
<http://www.epa.state.oh.us/dsw/credibledata/index.html>

I envision TMDLs to be a kind of information-based strategy which, if done properly, can inform, empower, and energize citizens, local communities, and States to improve water quality at the local, watershed level. The basic information derived from a sound TMDL could liberate the creative energies of those most likely to benefit from reduced pollutant loadings to their own waters.

-- G. Tracy Mehan

Assistant Administrator for Water, U.S. EPA

in subcommittee testimony before U.S. House of Representatives

Nov 15, 2001