

# Water Quality Impairment Data

Sources, Significance, Uses





# Tracking Dearborn Water Quality

1977-2010

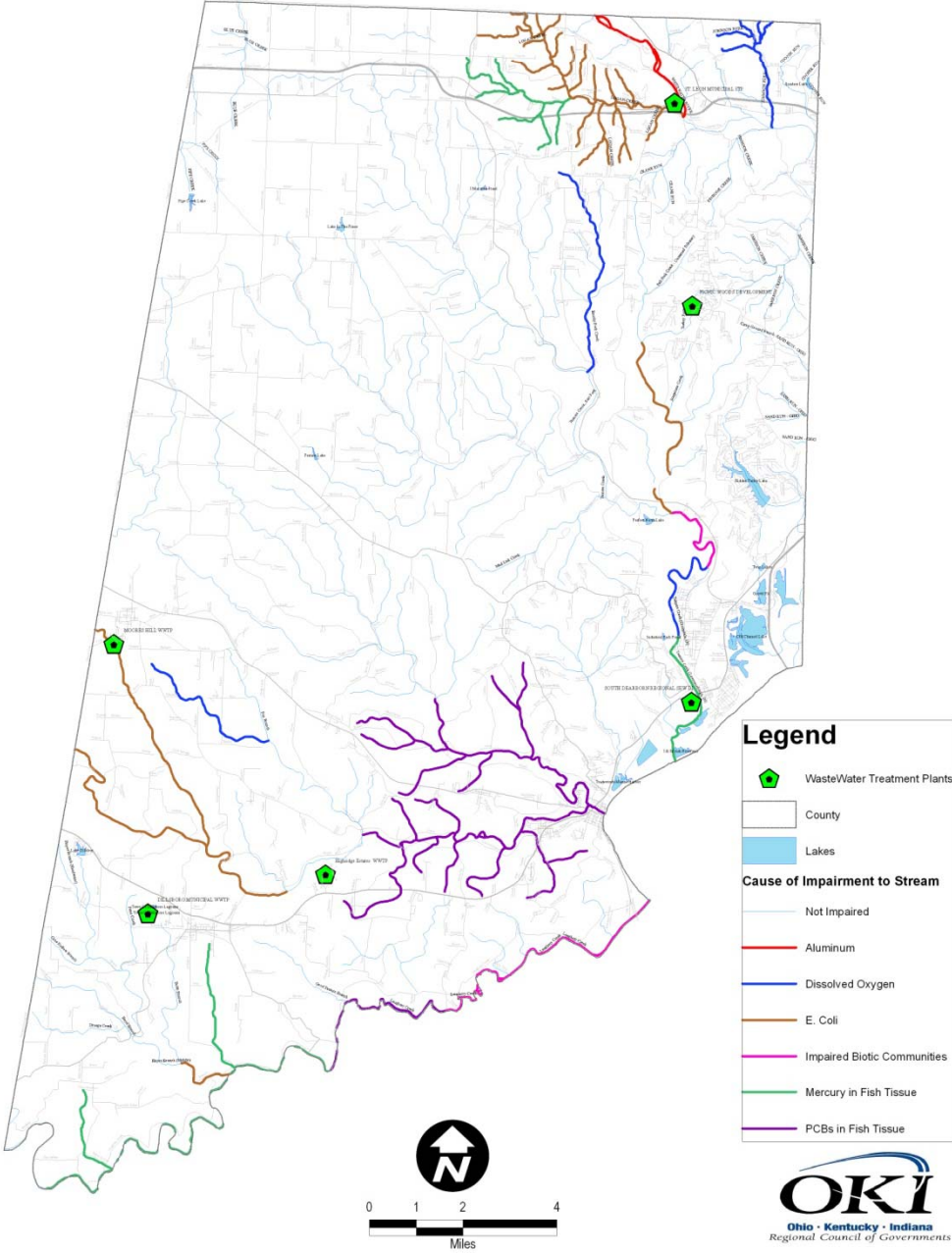


# Dearborn Water Quality 1977-2010

- Attempted to compare data from the original Regional Water Quality Management Plan to new monitoring data
- 70's data: Modeling of sediment loads to the Ohio River per Dearborn County watershed
  - Performed for the original plan
- 2010 data: Site specific monitoring performed by Indiana Department of Environmental Management (IDEM)
- No straight forward way of comparing data



# Impaired Waters: Dearborn County



# Updates To Impairment Map

- Original map was constructed at a time when Indiana's Integrated Report was still being compiled
  - Removal of aluminum as an impairment
    - No clear Water Quality Standards (WQS) for aluminum
  - Multiple stream impairments
    - OKI now has finalized data





# Hogan Creek Watershed Impairments

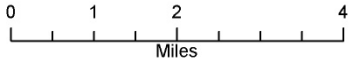
Example of Impairment Updates



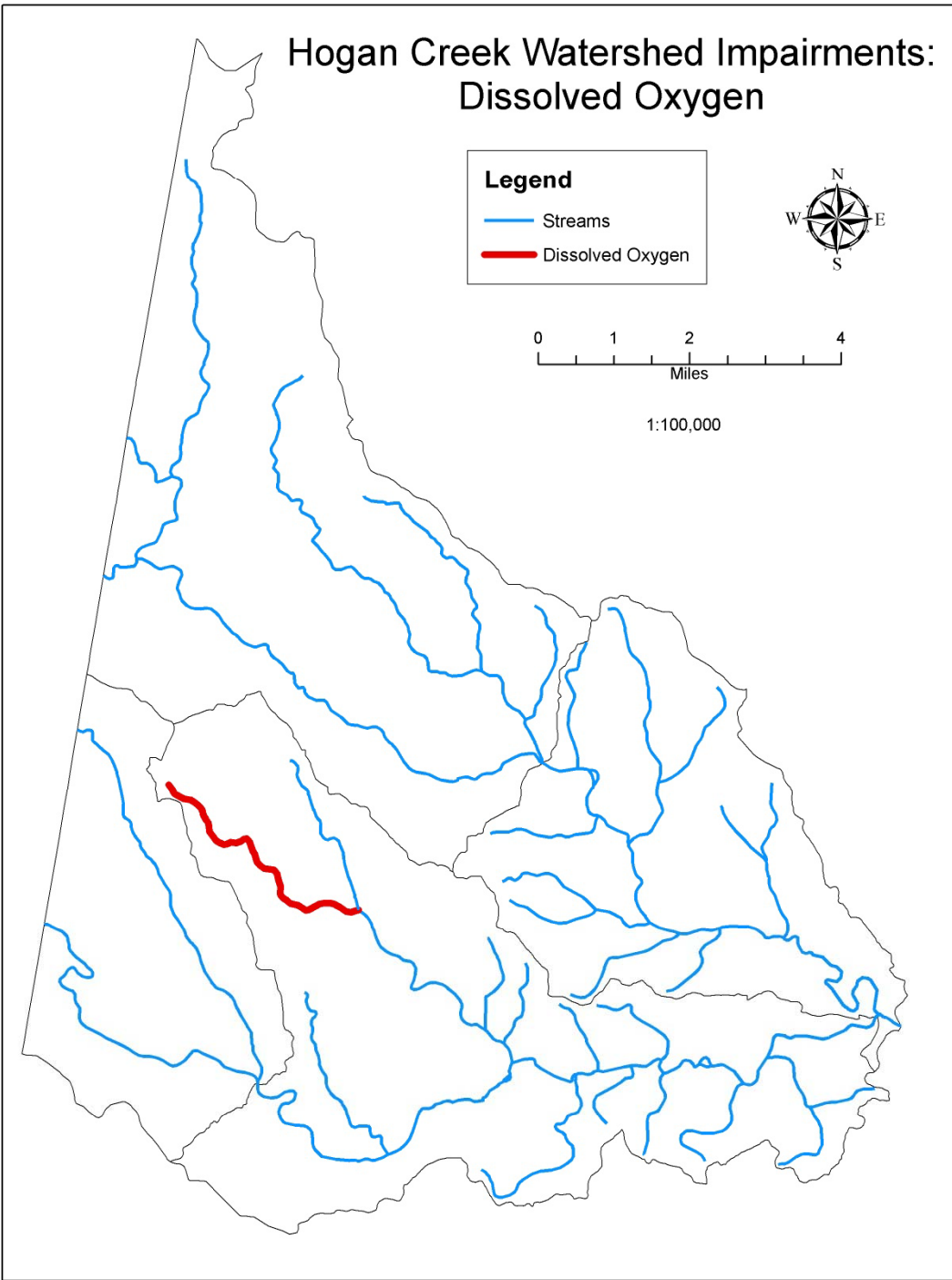
# Hogan Creek Watershed Impairments: Dissolved Oxygen

**Legend**

- Streams
- Dissolved Oxygen



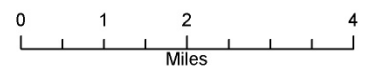
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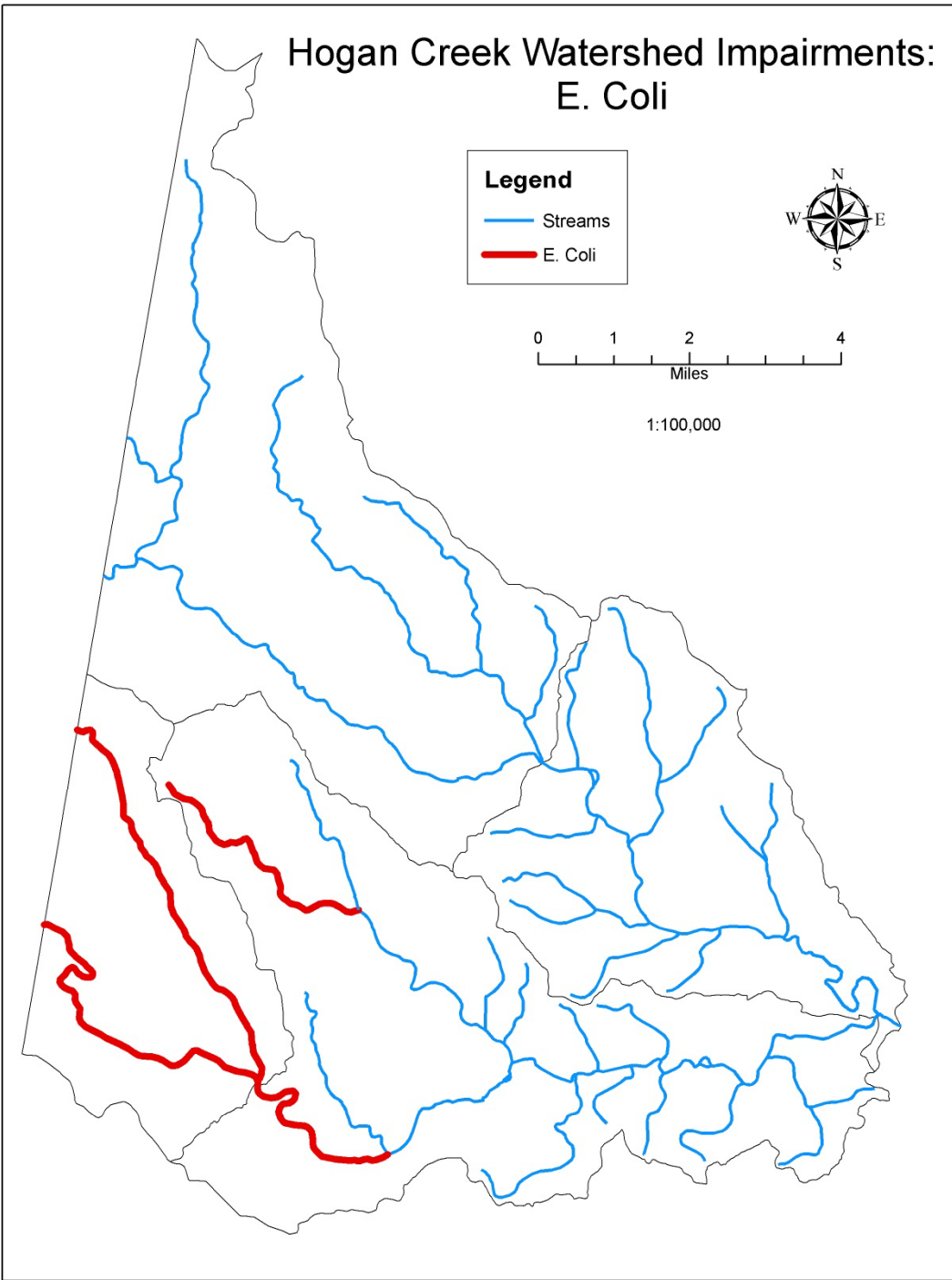
# Hogan Creek Watershed Impairments: E. Coli

**Legend**

- Streams
- E. Coli



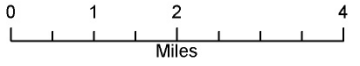
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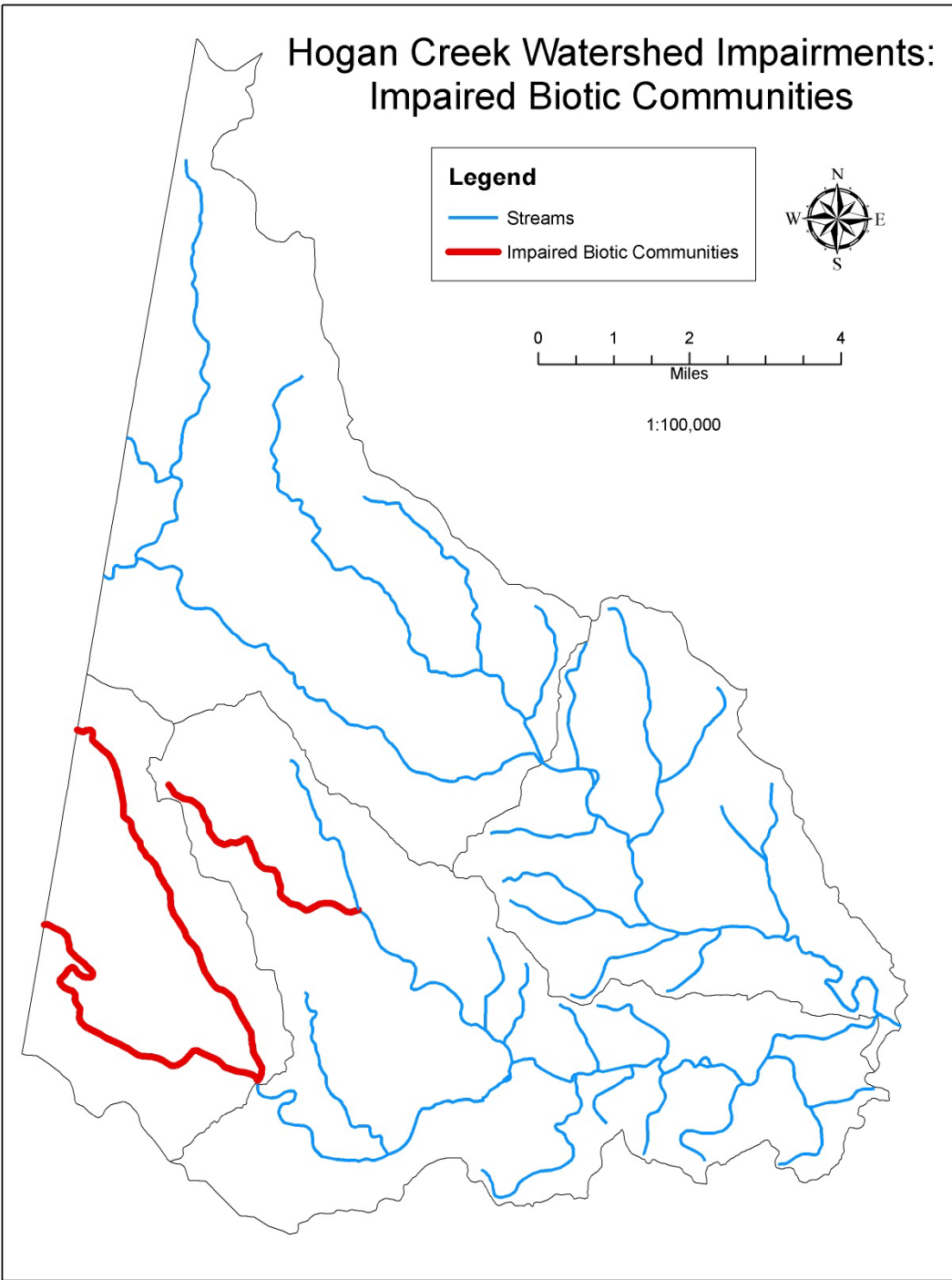
# Hogan Creek Watershed Impairments: Impaired Biotic Communities

**Legend**

- Streams
- Impaired Biotic Communities



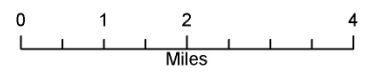
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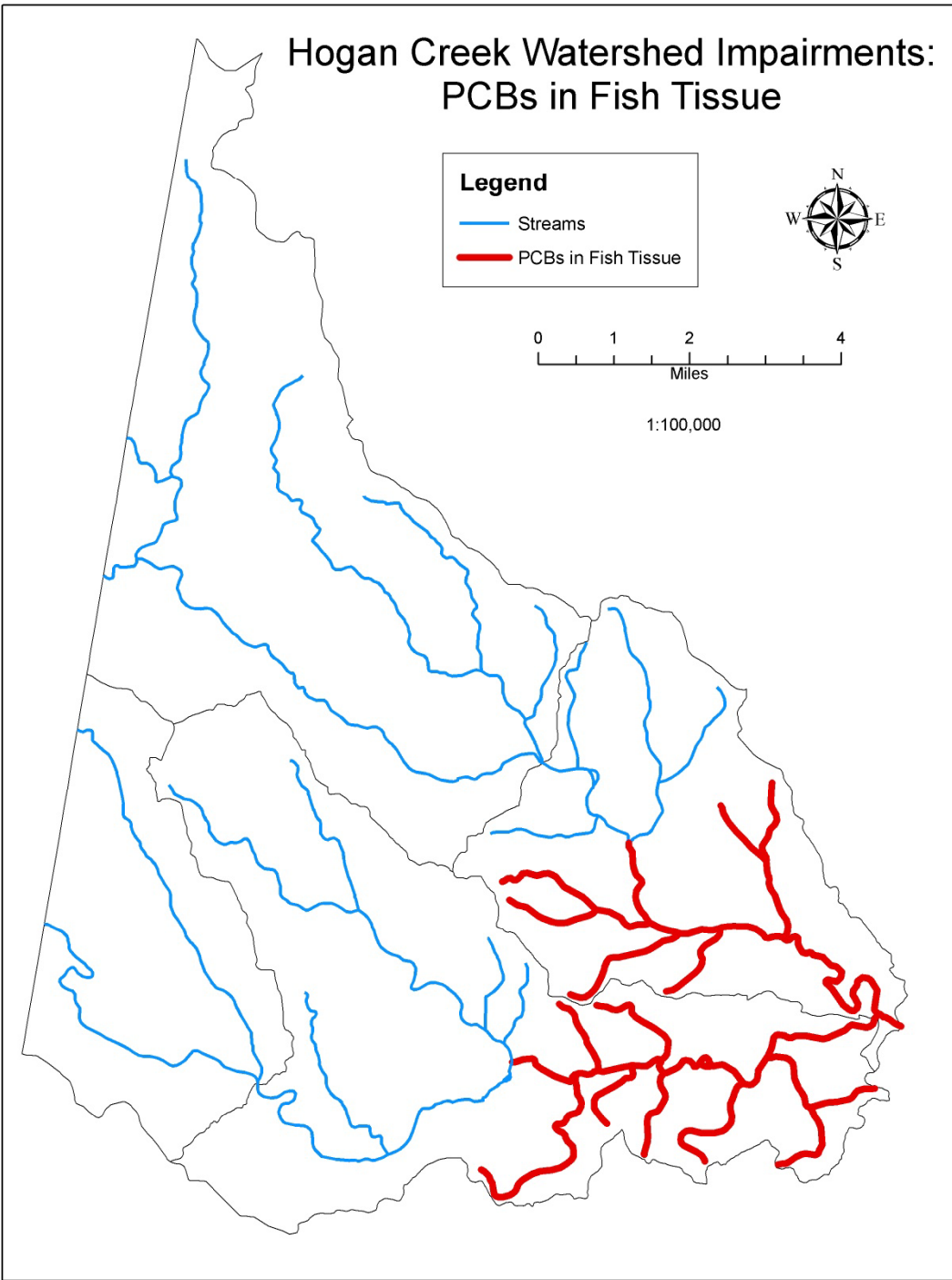
# Hogan Creek Watershed Impairments: PCBs in Fish Tissue

**Legend**

- Streams
- PCBs in Fish Tissue



1:100,000





# Data Sources

## IDEM Water Monitoring and Assessment



# Water Monitoring and Assessment

- The Clean Water Act requires a biannual report from each state on the status of surface water quality
- Monitoring for this report is performed by many federal, state, and local agencies
- Monitoring includes parameters that affect:
  - Aquatic Life
  - Recreation
  - Human Health (via fish consumption)
- Data is collected, analyzed, and reported by IDEM



# Water Monitoring and Assessment

- Result: Indiana Integrated Water Monitoring and Assessment Report
- Includes:
  - Assessments (analyses) for every major and most minor streams and lakes
  - A list of every stream in Indiana that is considered impaired (303 (d) list)



# Monitoring and Assessment Implications

- The Integrated Report (IR) only provides a database of water quality conditions
- The IR does not include:
  - Assessments of every possible impairment
  - Water quality data that does not meet the requirements of Indiana's Water Quality Standards
  - Proven sources or causes of impairment
- All streams listed as impaired are required to be thoroughly investigated at a later date
  - Total Maximum Daily Load Report (TMDL)



# Total Maximum Daily Load Reports

- A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards -- EPA definition
- Requires a full investigation into the causes and sources of each impairment of each stream
- Also provides a framework for restoring stream integrity
- Currently no TMDL's for Dearborn County Streams



# Submitting Data

Type of Organization	Number that Submitted Data
Cities and Towns	14
Soil and Water Conservation Districts (SWCD)	8
Watershed Groups and Environmental Organizations	6
County Health Departments	5
Colleges and Universities	2
Private Drinking Water Utilities	1
Resource Conservation and Development Areas (RC&D)	1
Regional Planning Commissions	1
Parks and Recreation Departments	1
Other State Agencies	1

Summary of results from IDEM's external data solicitation, conducted in 2007.

In Order to submit external data go to <http://www.in.gov/idem/4679.htm> for further instructions



# Questions ?

