The Total Maximum Daily Load (TMDL) Program in Illinois

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Illinois EPA TMDL Program

- 303(d) List
- What is a TMDL
- The TMDL Process
Section 303(d) Requires States to:

- Identify waters which are not meeting applicable water quality standards/designated uses
- Establish priority ranking for those waters taking into account the severity of pollution and the uses to be made of such waters
- Target waters for the development of TMDLs
303(d) List Prioritization

- Priority based on:
  - Public Water Supply Use
  - Total number of impairments per watershed

- Watersheds then ranked into High, Medium, and Low Priority
303(d) List

- Draft "Illinois Integrated Water Quality Report and 303(d) List" available for public review
- Hearing held at the Agency
- Responsiveness Summary prepared
- 303(d) List must be approved by USEPA
What does it mean to be on the 303(d) List?

- Development of TMDLs and Implementation Plans—Strategy to meet W.Q. Standards
- High Priority watersheds scheduled for early TMDL development
- All waters scheduled within 8 to 15 year timeframe
- No additional loadings are to be permitted until the waterbody is delisted (Full Support)
What is a TMDL?

• “TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards and support designated uses.”
Total Maximum Daily Load

• 1. It is the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards
• 2. It is a specific report that contains data and information about your specific watershed
• 3. It is a process that involves public participation
TMDL Calculation

\[ \text{TMDL} = \text{WLA} + \text{LA} + \text{MOS} \ [+ \text{RC}] \]

- Wasteload allocation—point sources
- Load Allocation—nonpoint sources
- Margin of Safety—uncertainty
- Optional Reserve Capacity for point sources
- Seasonal Effects and Future Growth
Consultants hired to develop TMDLs

Public meetings held in the watersheds throughout TMDL process to inform stakeholders on TMDL developments.
TMDL PROCESS IN ILLINOIS

- TMDLs currently being developed in Three Stages

- Currently, IEPA only developing TMDLs for pollutants with numeric standards

- Once the TMDL report is complete, it is sent to USEPA for approval

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Stage 1 TMDL Development

• **Watershed Characterization, Data Analysis, Methodology Selection**
  - Description of the watershed
  - Collection/analysis of available data
  - ID methodologies, procedures and models to be used to determine load reductions/allocations
  - Identifies what additional data is needed
Watershed Characterization

- Watershed/subwatershed delineations
- Land Use data
- Soils data
- Water body description
- Precipitation
- Flow
- Point sources-DMR data
- Activities in watershed-mining, agriculture
- Water Quality data
Stage 2 TMDL Development

• **Stage 2: Data Collection**
  - Optional Stage

• Evaluate Stage 1 data and attempt to collect additional data as needed.

• The Agency or a contractor will collect data
Stage 3 TMDL Development

- **Stage 3: Model Calibration, Calculate Loads, Implementation Plan**
  - Develop TMDLs with data from Stages 1 and 2
  - Calculate Loads for each pollutant
  - Load Allocations (WLA and LA), determine pollutant reduction needs.
  - Develop an Implementation Plan
Implementation Plans

- Recommendations and suggestions for restoring water quality so that designated uses and water quality standards are attained for an impaired water body.
- Previously *Not* required by USEPA. Under new Guidance, TMDL implementation plans must meet 9 minimum elements for a watershed plan.
- Illinois EPA has always included implementation plans with TMDL development, but they have been general in nature.
- Watershed planning committees are encouraged to participate.
Implementation Plan

- Wasteload Allocations for Individual Point Source can be regulated through NPDES permits.

- Implementation of Load Allocations (Nonpoint Source) is strictly VOLUNTARY!
  - Row Crop Agriculture
  - Livestock operations (non-CAFOs)
  - Home owners
Approved TMDLs to Date

- **STREAMS**
  - 148 Stream segments; 333 pollutants

- **LAKES**
  - 100 Lakes; 228 pollutants

- **Lake Michigan Beaches**
  - 51 beaches; 51 pollutants
Illinois State Water Survey
TMDL Development

- Used a different approach
- Realized a lack of data upfront
- Conducted “Stage 2” monitoring during Stage 1 Watershed Characterization development
- Monitoring scheme more robust than conventional Stage 2 monitoring
Illinois State Water Survey
TMDL Development

• Stage 3 to include watershed models

• Illinois EPA has only relied on water quality models for TMDL development for the last 10 years
  – Recommendation from TMDL Science Advisory Committee
Using watershed models enables targeted implementation plans, prioritize subwatersheds.

Previous TMDL implementation plans relied on general practices based on known land uses.
For more information on Illinois TMDLs

- Illinois EPA TMDL web site: [www.epa.state.il.us/tmdl](http://www.epa.state.il.us/tmdl)
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