Clean Water Act Requirements & Total Maximum Daily Loads (TMDLs)

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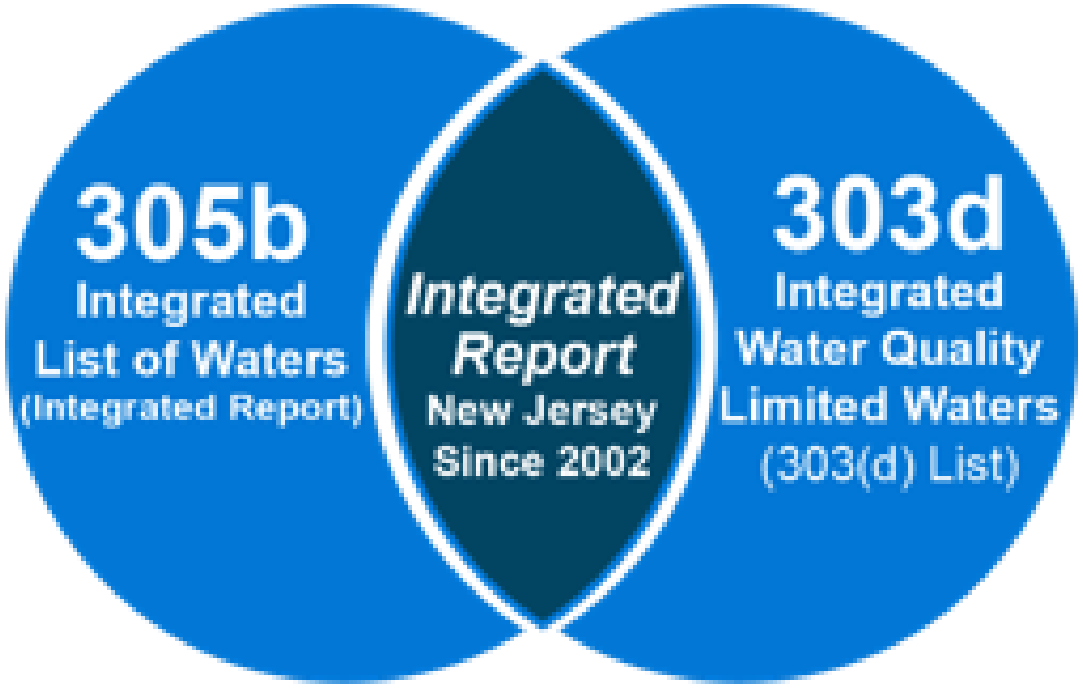
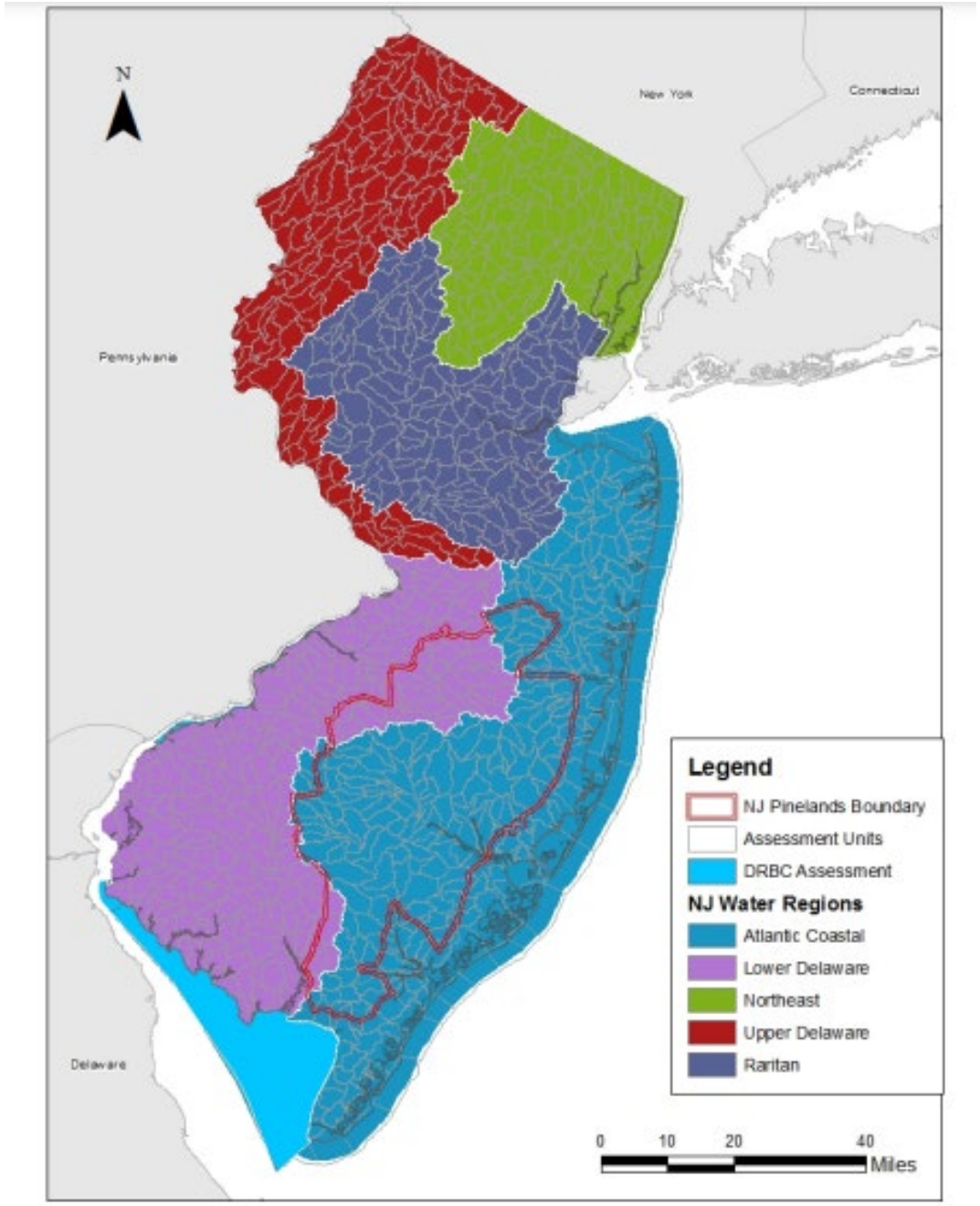
Outline

- When is the TMDL required?
- What is the TMDL?
- How is the TMDL developed ?
- General procedure
- How is the TMDL implemented?
- How to find a TMDL
- Ongoing TMDL Efforts

The Federal Clean Water Act mandates that states submit biennial reports to the U.S. Environmental Protection Agency (USEPA) describing the quality of their waters.

The Integrated Report (IR) serves as an effective tool for enhancing, maintaining, and restoring water quality in all surface waters of the State to support their use for aquatic life, recreation, water supply, fish consumption, and shellfish harvest for consumption.





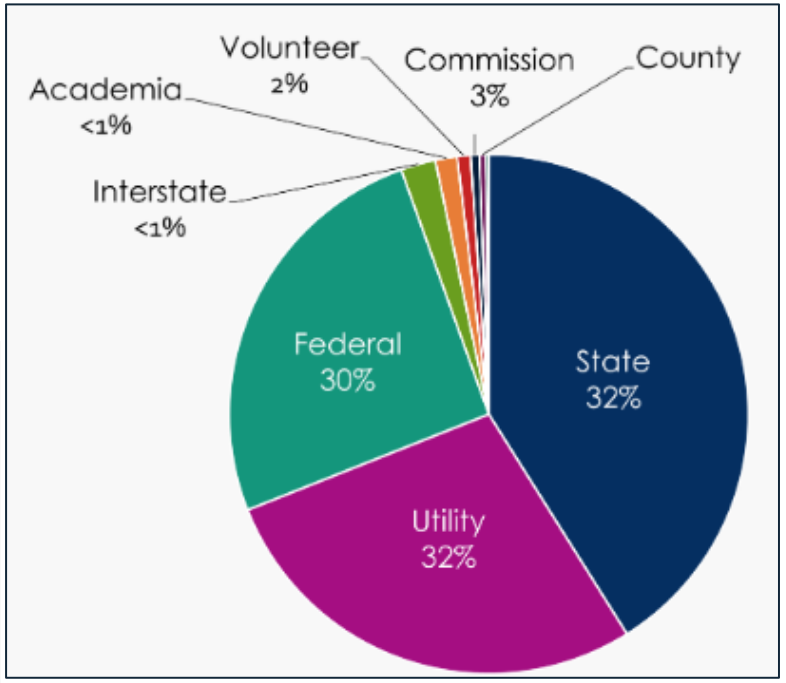
2022 WQ Integrated Report

- 958 AUs (HUC14)
- >5.1 million data samples
- >10,000 monitoring stations
- >90 parameters
- 303(d) List of Impaired Waters

Data Contributing to the IR

All existing and readily available data is evaluated to ensure that it meets established data quality requirements.

Data Web Site	Description
The Water Quality Portal (WQP)	Primary water quality data portal. All data collected by the DEP and other monitoring organizations is accessed through the WQP. Does not include continuous data.
DEP Continuous Data Monitoring	Access continuous data collected by the DEP
USGS Continuous Data Monitoring	Access continuous data collected by the USGS
Recreational Beach Conditions	Find current beach status, water quality sample results, reports of beach advisories and beach closings, and information on other events that affect beaches.
Shellfish Harvesting Conditions	Find current shellfish harvesting classification including data from monitoring stations.
EcoSHEDS	Find current continuous stream temperature data collected by NJ stakeholders.



NJDEP's water quality standards (NJAC 7:9B), monitoring, and assessment programs provide the objective and scientific foundation to evaluate waterbody health.

Assessment is based on multiple designated uses, stream classifications, and water quality standards for pollutants at many stations in each Assessment Unit (AU/HUC14).

AUs/HUC14s are placed into 5 Sublist Categories:

305(b) Report

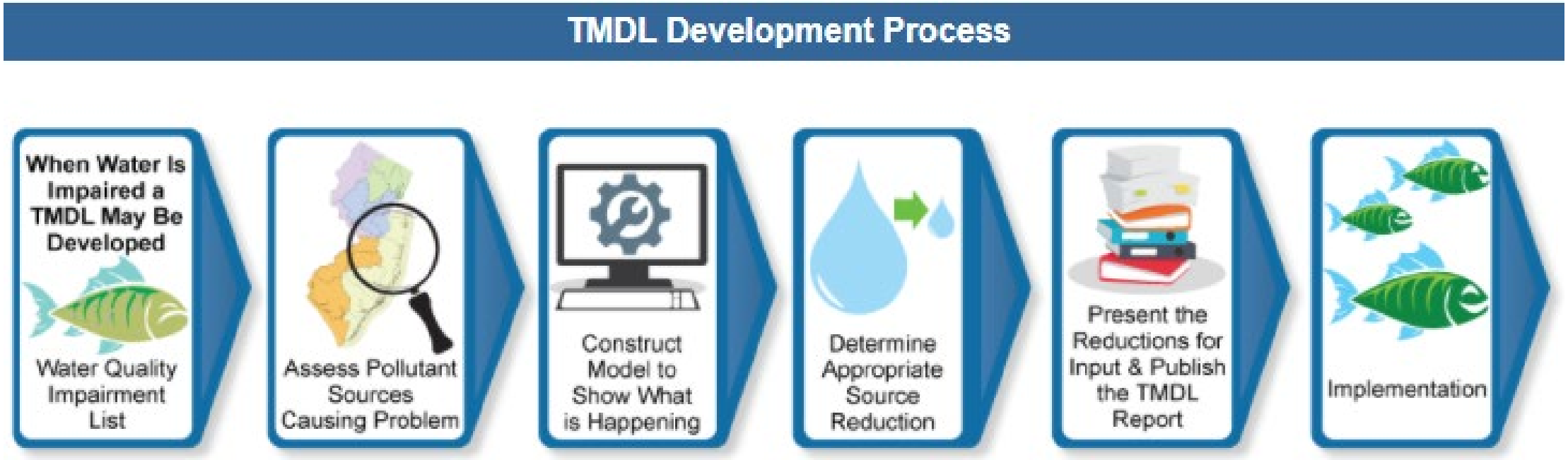
- Sublist 1: ATTAINMENT
- Sublist 2: LIMITED ATTAINMENT DATA
- Sublist 3: INSUFFICIENT DATA
- Sublist 4: NON-ATTAINMENT
  - TMDL already established
  - Other enforceable measures will address impairment
  - Impairment due to pollution, not pollutant(s)

303(d) List ←

- Sublist 5: NON-ATTAINMENT

Federal Requirement

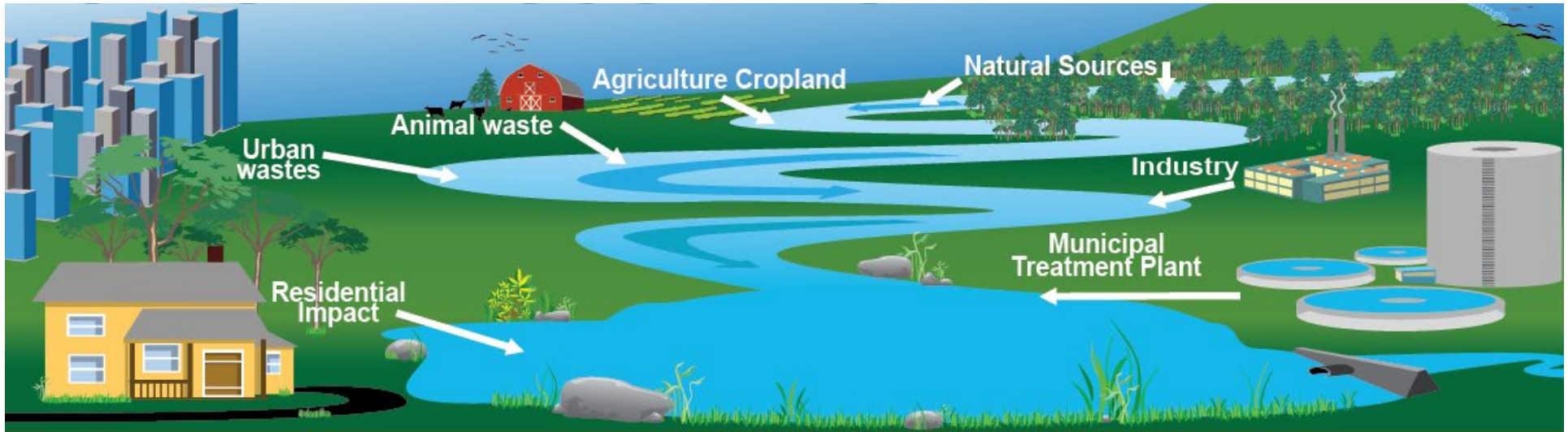
TMDLs are required, under Section 303(d) of the federal Clean Water Act, to be developed for waterbodies that cannot meet surface water quality standards after the implementation of technology-based effluent limitations (secondary treatment).



What are TMDLs?

Total Maximum Daily Loads (TMDLs) provide the regulatory framework to specify the reductions needed to attain the water quality target, taking into consideration:

- Point sources of pollutants (WLA – Waste Load Allocation) - NJPDES permittees
- Nonpoint sources of pollutants (LA – Load Allocation)
- Margin of Safety (MOS)
- Reserve Capacity (RC)



Target(s) of TMDL

- Surface Water Quality Standard
  - Numeric criteria
  - Non-numeric criteria- narrative criteria
- Natural condition
  - Geology
  - Physical Characteristics of Watershed
- Alternative Endpoint

Linking Source Loads with Observed Water Quality

TMDL = WLA + LA + MOS + RS

- Simple mass-balance models, Spreadsheet calculations
- Dynamic Water Quality Models

Required Components of a TMDL Report

1. Source Assessment
    - Characterization and quantification
    - Point, nonpoint and background
    - Applicable water quality standard
2. Water quality analysis
    - Select endpoint
    - Link pollutant sources and water quality
    - Seasonal variation / critical conditions
3. Loading Capacity/TMDL calculations
    - Load and Wasteload Allocations
    - Margin of safety
    - Seasonal Variation
    - Reasonable Assurance
4. Follow-up monitoring
5. Implementation
6. Public participation

Develop & Implement TMDLs

Develop TMDL :

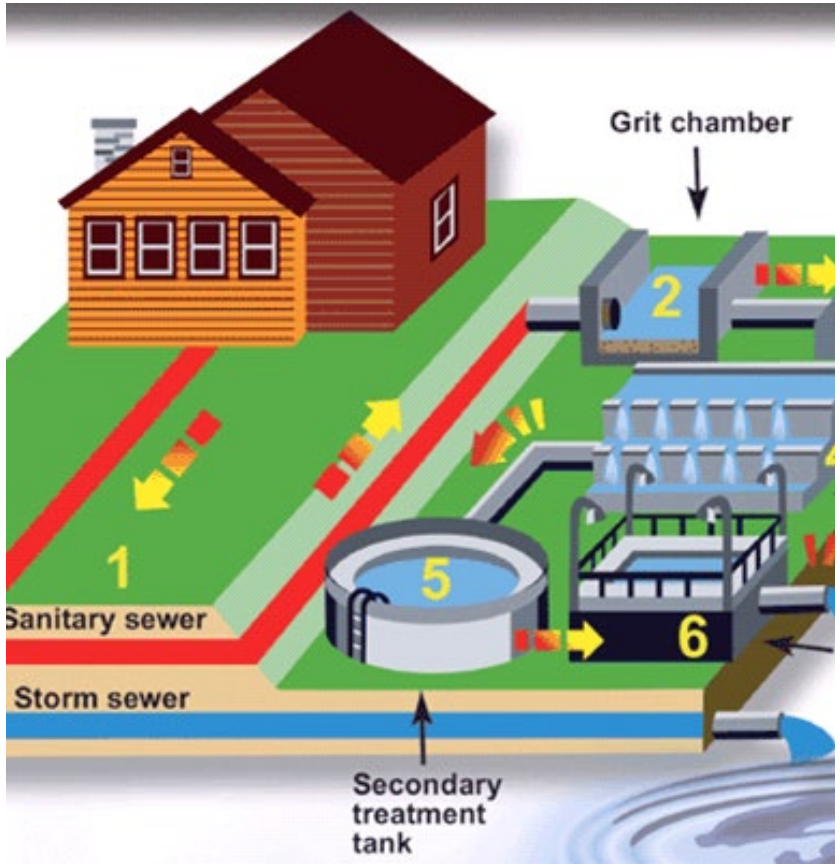
- Propose TMDL as amendment to Water Quality Management Plan(s) (WQMP) in accordance with N.J.A.C. 7:15-5.4
- Establish TMDL - Submit to EPA for formal approval
- Adopt EPA-approved TMDL is adopted as amendment to WQMP(s) in accordance with N.J.A.C. 7:15-5.4

Implementation:

- All projects and activities affecting water quality in any planning area shall be developed and conducted in a manner consistent with the adopted areawide WQMP. The Commissioner shall not grant any permit which conflicts with an adopted areawide WQMP. (7:15-3.2 Water Quality Management Plan Consistency Assessment)

TMDL Outcome and Implementation Plan

- WWTP loads will be assigned through individual NJPDES permits upon renewal based on WLA.
- Reductions will be achieved through MS4 permit improvements, fertilizer law, existing stewardship programs, and targeted future funding (ex: 319 grants, Farm Bill funding, SRF loans).
- Inputs from stakeholders are welcome to enhance the implementation plan.



MS4 Permit Requirements

- Adoption of revised Stormwater Control Ordinance for new development and redevelopment
- Expanded Stormwater Facility Mapping, inspection and maintenance program
- Establish a schedule to retrofit basins to address water quality based on results of the mapping and analysis of data
- Illicit connection identification and elimination
- Complete Stormwater Training at www.njstormwater.org/training.htm

Additional Measures and Optional Measures

Additional Measures

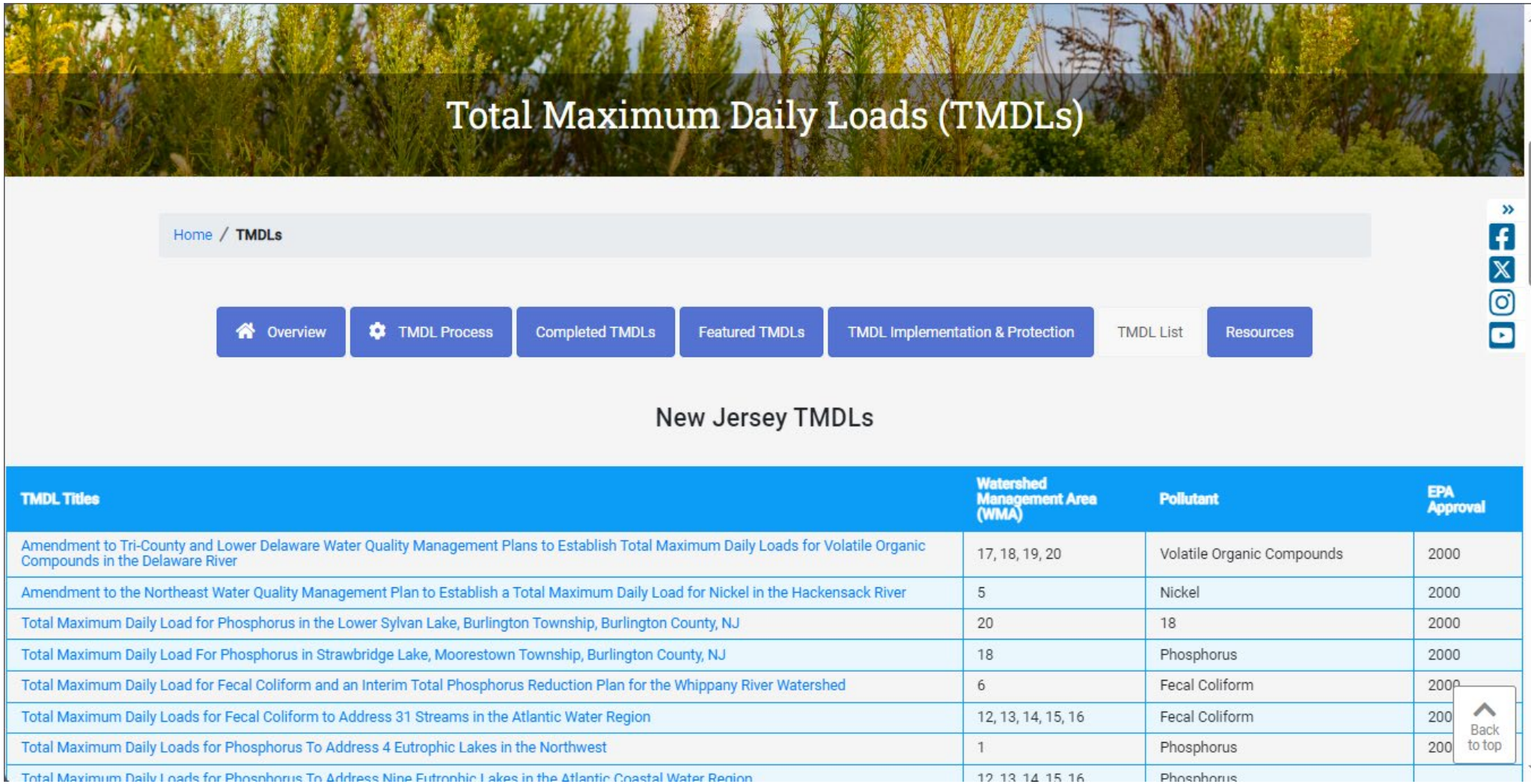
- Additional Measures are non-numeric or numeric effluent limitations that are expressly required to be included in a permittee's stormwater program by a TMDL, a regional stormwater management plan, or other elements of an adopted areawide Water Quality Management Plan.

Optional Measures

- Optional Measures are BMPs, developed by the permittee, that extend beyond the requirements of the Tier A MS4 NJPDES permit and that prevent or reduce pollution to waters of the State.

Finding TMDLs

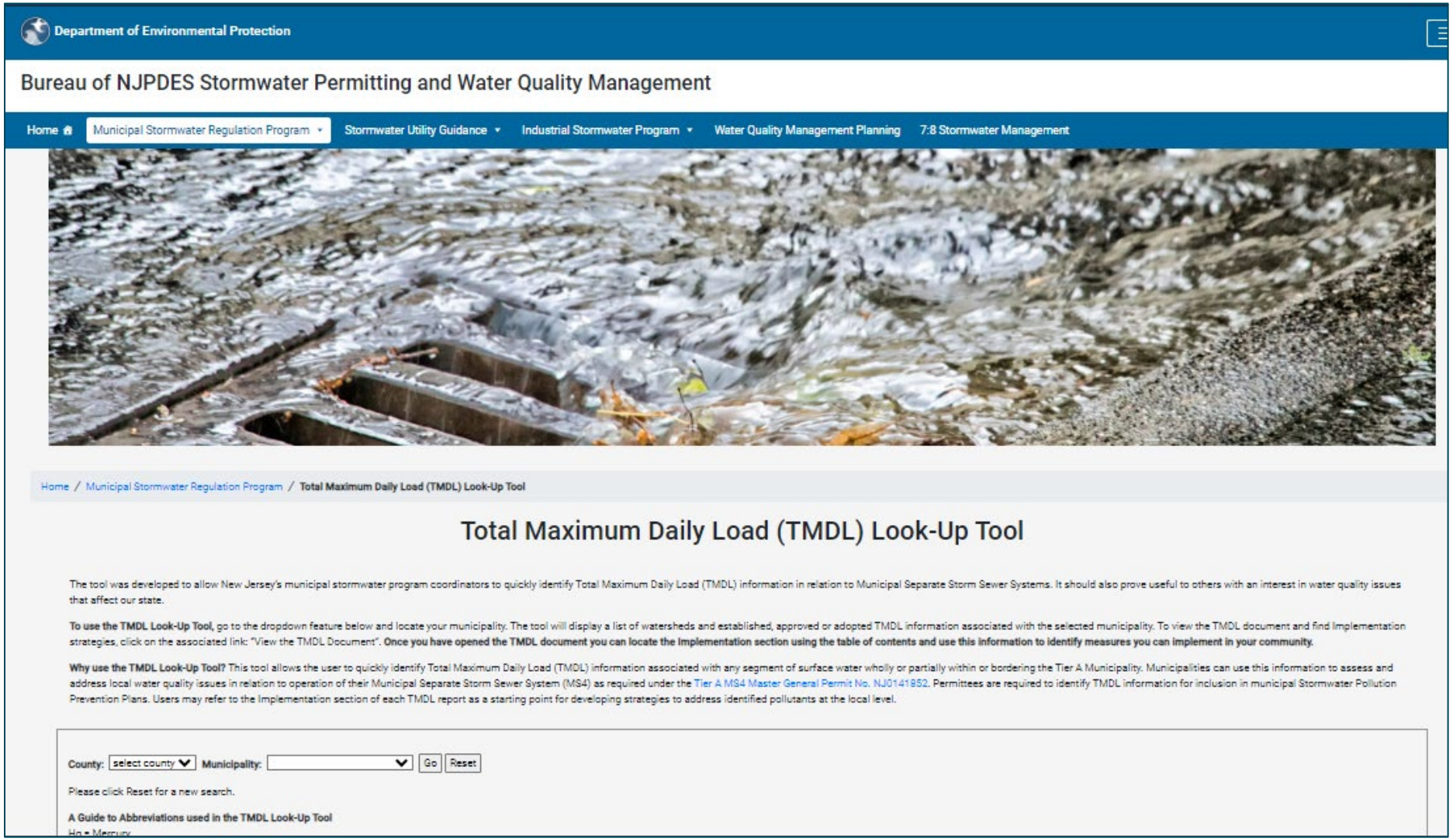
- Table of TMDLs



TMDL Titles	Watershed Management Area (WMA)	Pollutant	EPA Approval
Amendment to Tri-County and Lower Delaware Water Quality Management Plans to Establish Total Maximum Daily Loads for Volatile Organic Compounds in the Delaware River	17, 18, 19, 20	Volatile Organic Compounds	2000
Amendment to the Northeast Water Quality Management Plan to Establish a Total Maximum Daily Load for Nickel in the Hackensack River	5	Nickel	2000
Total Maximum Daily Load for Phosphorus in the Lower Sylvan Lake, Burlington Township, Burlington County, NJ	20	18	2000
Total Maximum Daily Load For Phosphorus in Strawbridge Lake, Moorestown Township, Burlington County, NJ	18	Phosphorus	2000
Total Maximum Daily Load for Fecal Coliform and an Interim Total Phosphorus Reduction Plan for the Whippany River Watershed	6	Fecal Coliform	2000
Total Maximum Daily Loads for Fecal Coliform to Address 31 Streams in the Atlantic Water Region	12, 13, 14, 15, 16	Fecal Coliform	200
Total Maximum Daily Loads for Phosphorus To Address 4 Eutrophic Lakes in the Northwest	1	Phosphorus	200
Total Maximum Daily Loads for Phosphorus To Address Nine Eutrophic Lakes in the Atlantic Coastal Water Region	12, 13, 14, 15, 16	Phosphorus	

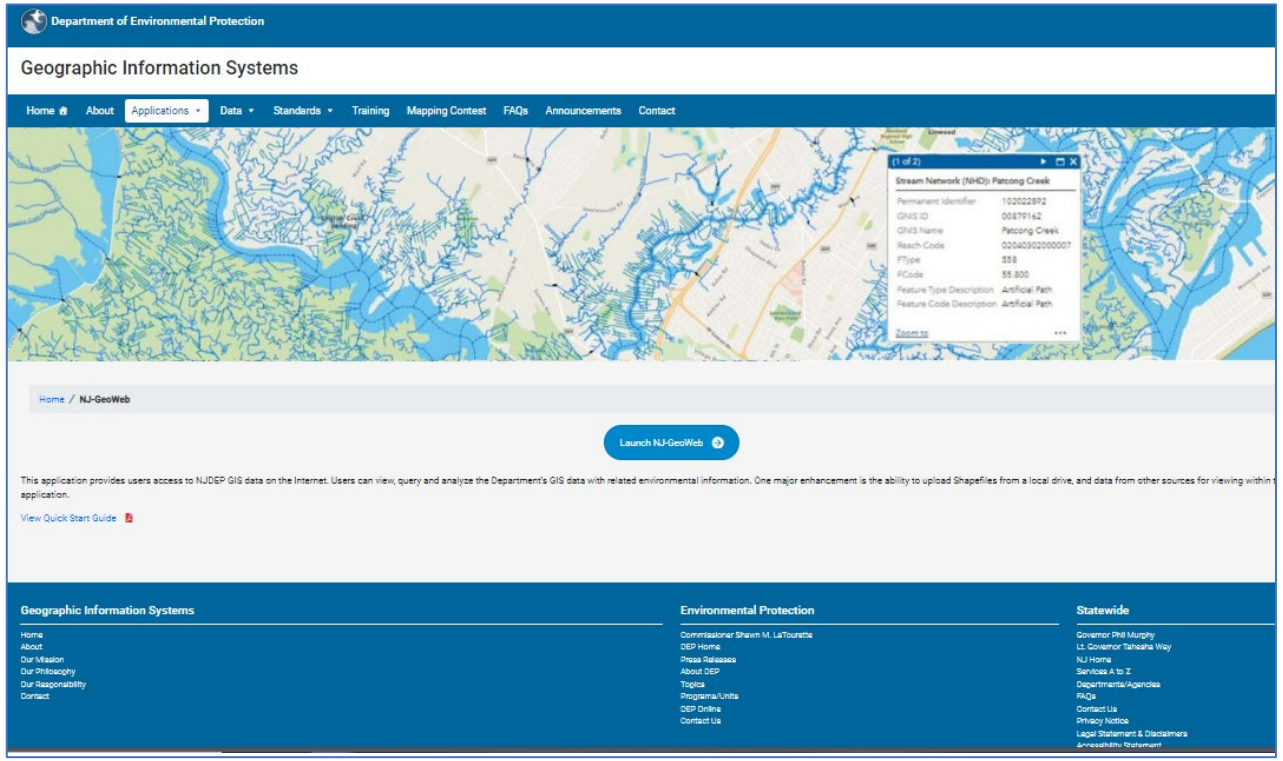
Finding TMDLs

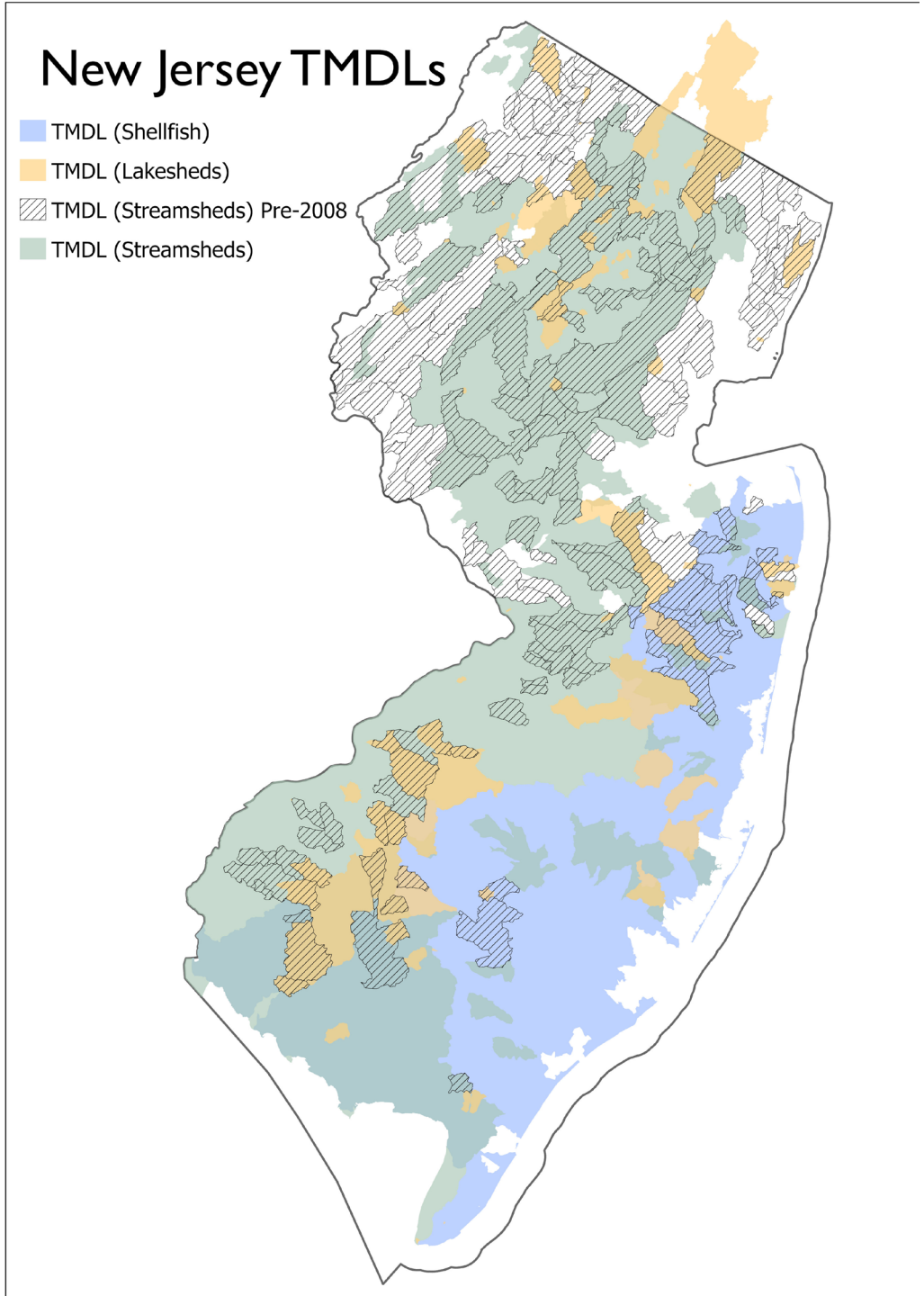
TMDL Look-up Tool



Finding TMDLs (cont.)

NJ GeoWeb





Ongoing TMDL Work

- Barnegat Bay
- Swartswood Lake
- Lake Hopatcong
- Greenwood Lake
- Total Phosphorus - FIRE Method
- Statewide TDS/Cl
- Hammonton Creek
- Saddle River

Upcoming Stakeholder Meeting

- Barnegat Bay Meeting 3
    - Date: TBD

Questions?

Contact

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