EPA
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# Pilot Advanced Restoration Plan to Address Toxics in Delaware

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# The Clean Water Act & Section 303(d)

- States, territories, and authorized tribes are required to develop lists of impaired waters and submit to EPA for approval/disapproval.
- For each water on the list, the state must:
  - Identify the pollutant causing the impairment and
  - The designated use not being supported and,
  - Assign a priority for development of TMDLs
- States are required to develop TMDLs for the waterbodies and pollutants identified on its list of impaired waters.

# Section 303(d) Program “Vision”

- The “Vision” is a comprehensive document intended to guide the National 303(d) Program from 2022 – 2032
- Identifies opportunities to manage effectively 303(d) program activities to achieve water quality goals for the Nation’s aquatic resources
- Acknowledges flexibility in using available tools **beyond TMDLs** to attain water quality restoration and protection
- The 303(d) Vision Webpage: https://www.epa.gov/tmdl/Vision

| Goal Short Title | Goal |
| --- | --- |
| Planning and Prioritization | States, territories, and tribes develop **a holistic strategy for implementation of Vision Goals**, systematically **prioritize waters or watersheds** for TMDL and other plan development (restoration and/or protection), and **report on the progress** towards development of plans for priority waters. |
| Restoration Goal | States, territories, and tribes **design TMDLs and other restoration plans** to attain and maintain water quality standards, facilitate effective implementation, and drive restoration of impaired waters. |
| Protection Goal | In addition to recognizing the protection benefits that TMDLs and other restoration plans can provide, states, territories, and tribes may **develop protection plans** to prevent impairments and improve water quality, as part of a holistic watershed approach. |
| Data and Analysis Goal | The CWA Section 303(d) program **coordinates** with **other government and non-governmental stakeholders to facilitate data production and sharing**, and effectively analyzes data and information necessary to fulfill its multiple functions. |
| Partnerships Goal | The CWA Section 303(d) program meaningfully **communicates and collaborates** with other **government programs and non-governmental stakeholders** to restore and protect water quality effectively and sustainably. |

# Advanced Restoration Plans (ARP)

- ARPs represent one tool in the toolbox to achieve and maintain water quality standards
- During implementation, these waterbodies remain in category 5, so a TMDL or other regulatory action is still eventually required as long as the impairment remains.
- Voluntary Plan for Restoration, Developed in Advance of a TMDL
  - “Near-term Plan, or Description of Actions, with a Schedule and Milestones, that is more immediately beneficial or practicable to achieving WQS”
  - Guidance Provided in 2016 Integrated Report Memo
  - “Accepted” by EPA for Tracking Purposes (i.e., not “Approved”)

# ARP Elements

- **Identification of specific impaired water segments** or waters addressed by the alternative restoration approach, **and identification of all sources** contributing to the impairment.
- Analysis to support why the State believes that the implementation of the alternative **restoration approach is expected to achieve WQS**.
- An Action Plan or Implementation Plan to document: a) **the actions to address all sources—both point and nonpoint sources, as appropriate—necessary to achieve WQS** (this may include e.g., commitments to adjust permit limits when permits are re-issued or a list of nonpoint source conservation practices or BMPs to be implemented, as part of the alternative restoration approach); **and**, b) **a schedule of actions designed to meet WQS with clear milestones and dates**, which includes interim milestones and target dates with clear deliverables.
- **Identification of available funding opportunities** to implement the alternative restoration plan.

# ARP Elements - Continued

- Identification of all **parties committed, and/or additional parties needed**, to take actions that are expected to meet WQS.
- An estimate or projection of the time **when WQS will be met**.
- **Plans for effectiveness monitoring** to: demonstrate progress made toward achieving WQS following implementation; identify needed improvement for adaptive management as the project progresses; and evaluate the success of actions and outcome.
- **Commitment to periodically evaluate the alternative restoration approach** to determine if it is on track to be more immediately beneficial or practicable in achieving WQS than pursuing the TMDL approach in the near-term, and if the impaired water should be assigned a higher priority for TMDL development.

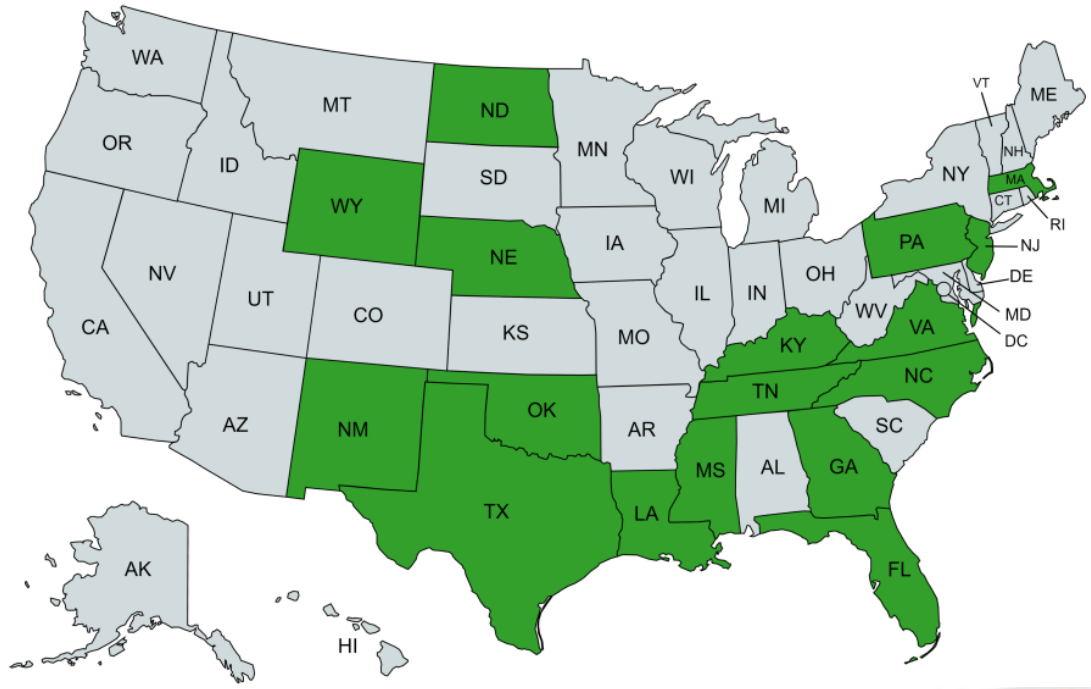
# Benefits of ARPs

- Provide a greater range of tools for States to address impairments and recognize work that may already be ongoing;
- Encourage coordination and awareness of issues across programs and with the public;
- Allow State programs to focus TMDL resources elsewhere;
- Empower local groups to address water quality problems while fostering partnership and collaboration at the local, state, and federal levels;
- Provide transparency to the public regarding restoration activities; and
- Receive recognition under the current 303(d)/TMDL program measure

# ARPs in the U.S.

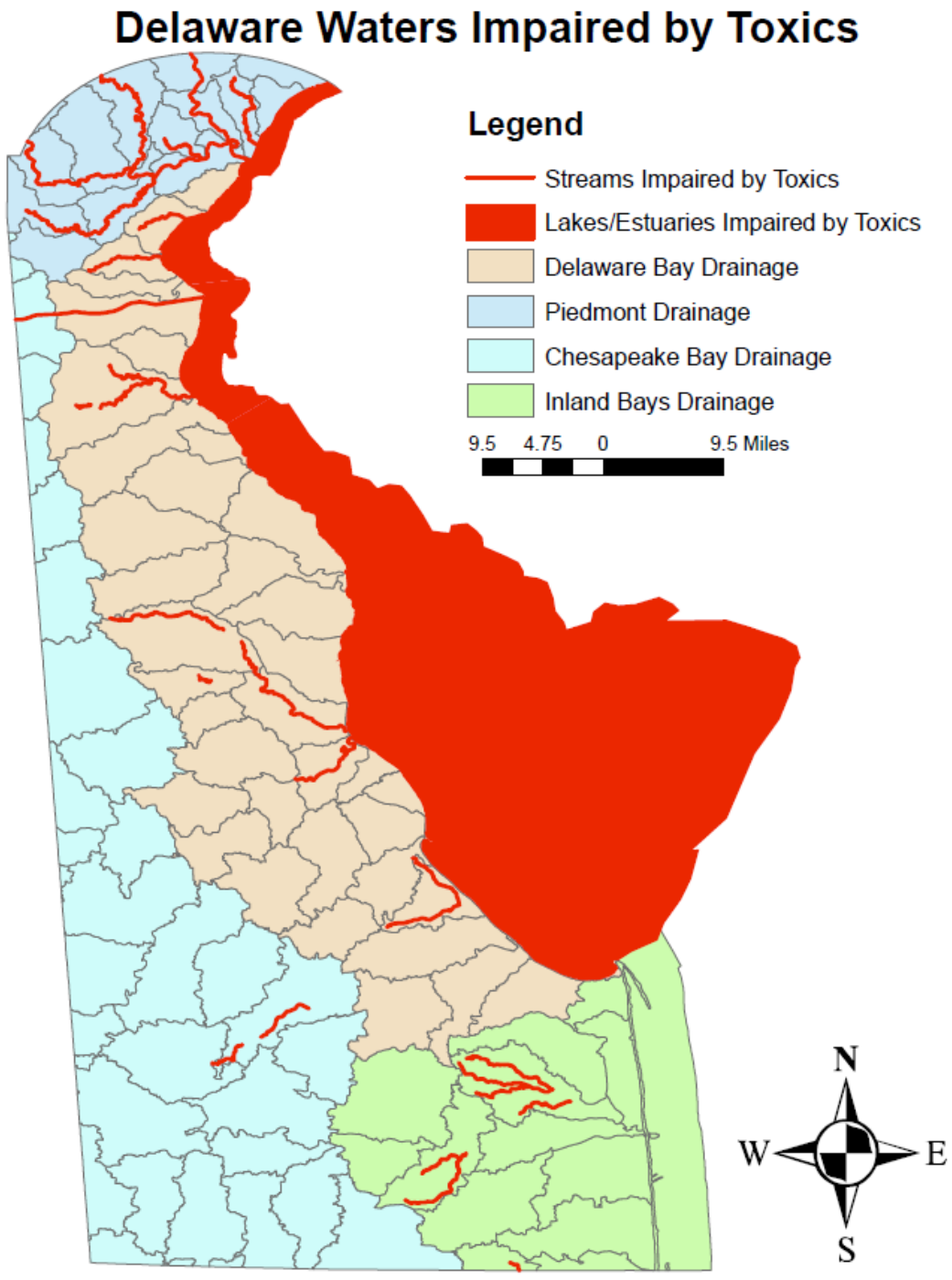
- < 20 states with ARPs
- Top Impairments Identified in Accepted Plans:
  - Pathogens
  - Nutrients
  - Low Dissolved Oxygen
- Most plans contained explicit goals to improve water quality, quantified the improvements needed, and contained actions to monitor water quality and/or implementation activities.

What about Toxics?



# Toxics in DE

- PCBs
- Dioxins and Furan Compounds
- Dieldrin
- Heptachlor Epoxide
- Chlordane
- DDT, DDD, DDE
- Mercury



# DNREC's Watershed Approach to Toxics Assessment and Restoration (WATAR) Program

- WATAR is a cooperative project to create a framework for implementing remediation and restoration in Delaware watersheds impacted by toxic pollutants.

- The long-term goals are to return watersheds to fishable status as quickly as possible, control releases from remaining land-based sources, and create innovative strategies to mitigate legacy contamination in sediment.

- Short-term actions aim to address DE's largest sources of toxic contamination (often historical), with a focus on remediation and follow-up monitoring.

# DNREC's Watershed Approach to Toxics Assessment and Restoration (WATAR) Program

- Short-term action items have included:
  - Monitoring for Toxics Remaining on Delaware's 303(d) List
  - PCB Trackback Studies in the City of Wilmington and New Castle County Sewer System
  - Calculate PCB Mass Loading from Delaware Waste Sites
  - Assess, remediate, and evaluate progress at Little Mill Creek/Meco Ditch
  - Post-Remediation Sampling in Mirror Lake
  - Remediation of the Fort Du Pont Landfill Permeable Reactive Barrier
  - …and many others

- These **ongoing**, **cooperative**, **implementation-focused** actions along with plans for effectiveness monitoring align well with ARP elements

# Leveraging the WATAR Program into Watershed-Specific ARPs

- In 2022, EPA and DNREC began working with a contractor to develop a pilot ARP to address toxic impairments in the C&D Canal (Winter 2024)
- Experience gained through pilot ARP development will be used to develop an ARP Framework (Summer 2024)
- DNREC can use the ARP Framework to continue developing ARPs for other toxic-impaired watersheds throughout Delaware

# Pilot ARP

- Relies on the work already accomplished through the WATAR program as well as work planned for the future
- Considers additional data and information outside of data collected through the WATAR program
- Data-driven decision making
- Evaluates water quality and trends
- Identifies all sources within the watershed and estimates their contribution of toxics
- Will propose a set of actions, including monitoring, to ensure that the waterbody will meet water quality standards
- Due for completion in Winter 2024

# Pilot ARP – Sneak Peak

- Majority of the toxic loading to the C&D Canal originates from transboundary loadings
- Toxic levels in fish tissue have been trending downward over time and several impairments (e.g., dieldrin) are expected to be meeting water quality standards within a few years
- Ongoing efforts to address more widespread sources (regulated and unregulated stormwater runoff) is likely to quicken the timeline for water quality attainment, but post-plan monitoring is necessary to ensure trends continue to decline at acceptable paces

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