Fact Sheet on the New Jersey 2022 Impaired Waters List
February 2025

Section 303(d) of the Clean Water Act (CWA) requires states, territories, and authorized tribes to develop lists of impaired waters. Impaired waters are waters that are too polluted or otherwise degraded to meet the state water quality standards (WQS). Federal law requires these jurisdictions to establish priority rankings for waters on the lists and to develop total maximum daily loads (TMDL) for impaired waters. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet WQS. The EPA has approved the New Jersey 2022 list of impaired waters requiring a TMDL. The New Jersey 2022 list of impaired waters presents information on impaired waters, pollutants causing the impairment and pollutant sources.

How States Report on the Quality of their Waters

The CWA requires states to assess the quality of their waterbodies and to report their findings every two years to the EPA. States adopt specific WQS that serve as the foundation for water quality management. WQS identify the designated uses for each body of water (such as swimming, drinking, shellfish harvesting, etc.) and set criteria to protect those uses. During the assessment process, states compare the collected data to the established WQS.

In addition to reporting on the overall quality of all waters, the Clean Water Act directs states to identify and list specific waterbodies where water quality is impaired by pollutants. A waterbody is considered impaired if it does not meet WQS. The requirement to prepare the impaired waters list is found in section 303(d) of the CWA, and the list is often called the 303(d) list.

Each impairment reflected on the 303(d) list requires a calculation of the maximum amount of the impairing pollutant that a waterbody can receive and still meet WQS. TMDLs include reductions for pollutant sources impacting the waterbody that, when achieved, will result in the attainment of WQS in the waterbody.

In certain cases, an impaired water may not appear on a state's 303(d) list. If a TMDL has already been developed for the water, another required control measure is expected to result in the attainment of WQS within a reasonable amount of time, or the impairment is the result of pollution not caused by a pollutant (e.g., hydrologic or habitat alteration), then the water may not be included.

Water quality monitoring data and other information must be considered by states in assessment and reporting efforts. Monitoring may be carried out by national, state, local and tribal authorities, universities, dischargers, volunteers and others. It can include measurements of physical and chemical parameters (temperature, dissolved oxygen, suspended sediment, nutrients, metals, oils, and/or pesticides, for example), examinations of stream flow, water color, condition of stream banks and lake shores, observations of communities of aquatic wildlife, and sampling of fish tissue or sediment. Land use data, predictive models and land surveys may also be used.

Summary of 2022 Findings

The New Jersey 303(d) list includes 2653 instances where a pollutant is causing a designated use impairment. The indicators/causes of impairments from most frequent to least frequent are:

- arsenic (463)
- index of biological integrity (377)
- PCBs in fish tissue (245)
- pH (191)
- phosphorus, total (173)
- dissolved oxygen (172)
- escherichia coli (165)
- temperature (126)
- DDT in fish tissue (99)
- chlordane in fish tissue (90)
- mercury in fish tissue (90)
- turbidity (64)
- total dissolved solids (52)
- dieldrin in fish tissue (49)
- total suspended solids (47)
- dioxin in fish tissue (40)
- heptachlor in fish tissue (30)
- benzo[a]pyrene (PAHs) in fish tissue (29)
- lead (25)
- fecal coliform (24)
- copper (18)
- mercury in water column (16)
- chloride (14)
- hexachlorobenzene in fish tissue (10)
- arsenic in fish tissue (8)
- tetrachloroethylene (8)
- enterococcus (7)
- nitrate (7)
- trichloroethylene (4)
- cadmium (3)
- benzene (2)
- chromium (2)
- ammonia, un-ionized (1)
- sulfate (1)
- vinyl chloride (1)

Pollutant Sources include:

- Agriculture
- Atmospheric deposition
- Contaminated sediments
- Urban runoff/storm sewers
- Others

Note: a pollutant may come from more than one source.

New Jersey added 250 new waterbody/pollutant combinations to the 2022 303(d) list. These new combinations include:

- Temperature (47)
- Arsenic (37)
- heptachlor in fish tissue (17)
- index of biological integrity (16)
- turbidity (16)
- total dissolved solids (15)
- DDT in fish tissue (14)
- mercury in fish tissue (13)
- hexachlorobenzene in fish tissue (10)
- PCBs in fish tissue (10)
- pH (10)
- Arsenic in fish tissue (8)
- Chlordane in fish tissue (7)
- Chloride (6)
- Total phosphorus (5)
- Dioxin in fish tissue (4)
- Dissolved oxygen (3)
- Escherichia coli (3)
- Total suspended solids (3)
- Dieldrin in fish tissue (2)
- Lead (1)
- Cadmium (1)
- Tetrachloroethylene (1)
- vinyl chloride (1)

The 2022 303(d) list also reflects waterbody/pollutant combinations that no longer require listing. Removal of a waterbody/pollutant combination from the 303(d) list, called delisting, may indicate that the water is restored, a TMDL was developed, the water is receiving management attention that is expected to result in the attainment of water quality standards, or other factors (including errors). New Jersey delisted 64 waterbody/pollutant combinations for the 2022 cycle, including:

- 5 waterbody/pollutant combination delisted for TMDL development. The NJDEP updated the Non-Tidal Raritan River Basin TMDL addressing Total Phosphorus, Dissolved Oxygen, pH and Total Suspended Solids Impairments to include 5 AUs impaired for total phosphorus. The EPA approved the original TMDL on May 19, 2016. At the time of the EPA's approval, these 5 AUs were not determined by the NJDEP to be impaired. The NJDEP determined that these 5 AUs were impaired due to phosphorus during the 2020-2022 listing cycle. On December 10, 2024, the supporting documentation for this update was submitted to the EPA and included as an addendum to the NJDEP's 2022 Integrated Report. As described in the addendum to the 2022 Integrated Report, the "TMDL assigns TP [(total phosphorus)] reductions to the watersheds within which each of these five assessment units are located, ensuring the attainment of the applicable TP water quality criteria and associated designated use(s) in each of these five assessment units (Phase II Final Report, Raritan River Basin Nutrient TMDL Study, Watershed Model and TMDL Calculations (Volume 3) (August 2016)2 The EPA approved the NJDEP's amendment to the Non-Tidal Raritan River Basin TMDL on January 13, 2025. The NJDEP delisted these 5 AUs from the New Jersey 2020 303(d) list because the impairments are addressed by a TMDL. These 5 waterbody/pollutant combinations include:
    - 5 waterbody/pollutant combinations for total phosphorus

- 24 waterbody/pollutant combinations where WQS are now met, based on new water quality data. These 24 waterbody/pollutant combinations include:
    - 10 waterbody/pollutant combinations for index of biological integrity
    - 5 waterbody/pollutant combinations for temperature
    - 4 waterbody/pollutant combinations for PCBs in fish tissue
    - 2 waterbody/pollutant combinations for total phosphorus
    - 1 waterbody/pollutant combination for dissolved oxygen
    - 1 waterbody/pollutant combination for escherichia coli (TMDL)
    - 1 waterbody/pollutant combination for pH

- 29 waterbody/pollutant combinations where the original basis for listing was incorrect. The NJDEP delisted 29 waterbody/pollutant combinations due to the NJDEP's incorrect association of data with the assessment unit. The NJDEP incorrectly assigned the monitoring station IDs to the assessment units listed below. The NJDEP performed a detailed review of the monitoring station associated within these 29 assessment units and corrected the errors for the 2022 listing cycle. These 29 waterbody/pollutant combinations include:
    - 6 waterbody/pollutant combinations for PCBs in fish tissue
    - 4 waterbody/pollutant combinations for arsenic
    - 4 waterbody/pollutant combinations for index of biological integrity
    - 2 waterbody/pollutant combinations for chlordane in fish tissue
    - 2 waterbody/pollutant combinations for mercury in fish tissue
    - 2 waterbody/pollutant combinations for pH

- 2 waterbody/pollutant combinations for total dissolved solids
- 1 waterbody/pollutant combination for benzene
- 1 waterbody/pollutant combination for DDT in fish tissue
- 1 waterbody/pollutant combination for dieldrin in fish tissue
- 1 waterbody/pollutant combination for dioxin in fish tissue
- 1 waterbody/pollutant combination for lead
- 1 waterbody/pollutant combination for tetrachloroethylene
- 1 waterbody/pollutant combination for vinyl chloride

- 4 waterbody/pollutant combinations delisted for index of biological integrity. The NJDEP carefully reviewed the index of biological integrity for four (4) AUs listed in previous cycles. The NJDEP determined that the biological monitoring station within each of these 4 AUs is in a location that does not produce data that is representative for the respective AU. The NJDEP concluded that outfall structures immediately upstream from the monitoring station impact benthic macroinvertebrate site scoring. Monitoring stations further downstream in an assessment unit are often determined to be more representative.

- 2 waterbody/pollutant combinations for DDT in fish tissue. These 2 waterbody/pollutant combinations were originally listed in error. There is no fish tissue data for DDT; only PCBs and mercury data are available for these 2 AUs.

New Jersey changed the name of the parameter or pollutant causing the impairment for 61 waterbody/pollutant combinations on the 2022 303d list to better reflect the impairment.

- 61 waterbody/pollutant combinations where the name of the parameter or pollutant causing the impairment was changed to better reflect the impairment. These 61 waterbody/pollutant combinations include:
    - 29 waterbody/pollutant combinations previously listed for "Benzo(A)PYRENE (PAHS)" that are now listed for Benzo(A)PYRENE (PAHS) in fish tissue
    - 23 waterbody/pollutant combinations previously listed for heptachlor epoxide that are now listed for "heptachlor in fish tissue"
    - 9 waterbody/pollutant combinations previously listed for hexachlorobenzene that are now listed for "hexachlorobenzene in fish tissue"

How the Water Quality Sampling and Reporting Process Works

The waters in and around New Jersey are divided into 958 assessment units. The NJDEP evaluates and assesses data gathered through its surface and groundwater monitoring programs. Water quality monitoring supports the NJDEP's efforts in developing and refining WQS, reporting on water quality conditions, listing impaired waters, issuing and enforcing discharge permits, managing nonpoint sources of pollution, protecting high quality waters, setting priorities for water quality restoration, tracking changes in water quality over time, and evaluating the effectiveness of restoration and protection actions necessary to achieve the CWA goal to "restore and maintain the chemical, physical and biological integrity of the Nation's waters".

The NJDEP operates the primary water quality monitoring networks for New Jersey, which are described in the NJDEP's Long-Term Monitoring Strategy[1] and on the NJDEP Division of Water Monitoring and Standards website[2]. The NJDEP's current ambient surface water quality monitoring program is based on the ambient surface water quality monitoring network that was established in the mid-1970s, in accordance with the CWA and subsequently expanded to address additional state and national water quality assessment needs. While some original monitoring stations have remained within the network (providing long-term water quality information), the program is continually updated and refined to reflect the changing water quality monitoring needs of the state. Components of the current monitoring program include the Ambient Surface Water Quality Monitoring Network, a cooperative NJDEP/U.S. Geological Survey program; the Regional Targeted Water Quality Network; and the NJDEP's Probabilistic Water Quality and Biological Network that monitor additional stations.

These networks employ multiple techniques, including collection of physical/chemical data from all waters of the State; biological monitoring, such as benthic macroinvertebrates and fish assemblage surveys and habitat assessment; pollutant source tracking in the coastal and freshwater environments (e.g., illicit discharges, stormwater, marinas); and probabilistic monitoring used to generate statistical estimates of water quality conditions statewide to support the EPA's national aquatic resource surveys.

Various monitoring organizations and other partners also collect data. These include federal and county government agencies, regional commissions (e.g., Pinelands Commission) watershed associations and other voluntary citizen monitoring, and discharger associations. The Integrated Report is generated using data from all the NJDEP's surface water quality monitoring networks along with relevant data from monitoring partners that meets all data requirements and quality controls set forth in New Jersey's corresponding Integrated Water Quality Assessment Methods.

How to Get Involved

Recognizing that stakeholders throughout New Jersey collect valuable water quality data, the NJDEP has established a process that allows groups and individuals to submit information for the state to use in its assessments. Submissions (data, photographs, etc.) must be sent to the NJDEP through the water quality data exchange system, generally by August of even-numbered years. When it is submitted as part of the water quality assessment process, stakeholder information is considered in the assessment process. Parties submitting information should send all water quality monitoring data to the water quality data exchange system.

Community water monitoring data may be used for environmental education and outreach, environmental stewardship, community-based watershed assessment, or regulatory response, depending on the type, quality, and format of the data collected. High quality data collected by citizen scientists and volunteer monitors can help supplement data collected by environmental professionals and can assist scientists, policy makers, and resource managers make more informed decisions that protect New Jersey waterways. Data that has met specific quality

[1] NJDEP's Long-Term Monitoring Strategy
[2] NJDEP Division of Water Monitoring and Standards

requirements in accordance with a Quality Assurance Project Plan (QAPP) and is submitted electronically through the EPA's Water Quality Exchange web portal can be used by the NJDEP to assess water quality for the New Jersey Integrated Water Quality Assessment Report.

For more information, please contact Kimberly Cenno, Bureau Chief, Bureau of Environmental Analysis, Restoration and Standards at (609) 633-1441 or by email at Kimberly.Cenno@dep.nj.gov.

The NJDEP provides the opportunity for formal public comment on draft 303(d) lists. This is typically announced in the New Jersey Register and on the NJDEP's website. Comments are accepted for a 30-day period.

The EPA Contact for the New Jersey 303(d) List

If you have questions or concerns, contact Makini Valentine-Turton at (212) 637-3824 or by email at valentine.makini@epa.gov.