Fact Sheet: Introduction to Clean Water Act (CWA) Section 303(d) Impaired Waters Lists

What is a 303(d) list of impaired waters?

The goal of the Clean Water Act (CWA) is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C §1251(a)). Under section 303(d) of the CWA, states, territories, and authorized tribes, collectively referred to in the Act and here as "states," are required to develop lists of impaired waters. The term "303(d) list" is short for the list of impaired and threatened waters (e.g., stream/river segments, lakes) that all states are required to submit for EPA approval during even-numbered years. The main program result of this process is EPA's national tracking system for impaired waters.

A state's 303(d) impaired waters list is comprised of all waters where the state has identified that required pollution controls are not sufficient to attain or maintain applicable water quality standards. The law requires that states establish a prioritized schedule for waters on the lists, and develop Total Maximum Daily Loads (TMDLs) for the identified waters based on the severity of the pollution and the sensitivity of the uses to be made of the waters, among other factors (40C.F.R. §130.7(b)(4)).

A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards, and an allocation of that load among the various sources of the pollutant. States provide to EPA a long-term plan for completing TMDLs within 8 to 13 years from the first listing of the waterbody. EPA policy allows states to remove waterbodies from their 303(d) list after they have developed a TMDL or made other changes to correct water quality problems.

How do states identify impaired waters?

Regulations say states must evaluate "all existing and readily available information" in developing their 303(d) lists (40 C.F.R. §130.7(b) (5)). Usually due to a lack of resources, most state water quality agencies are able to monitor only a limited percentage of their waters consistently enough to detect water quality problems. Many state agencies use data collected from outside organizations and the public to compile their lists. There are usually quality requirements for data collection and submission before state agencies will consider the data.

How do states submit lists?

In addition to the 303(d) impaired waters list, the CWA requires each state report every two years on the health of *all* its waters, not just those that are impaired. Information from this report, known as the 305(b) report or "biennial water quality report," has historically been used to develop the "threatened and impaired waters" (303(d)) list. Most states compile the data and findings from the 305(b) report and add information from other sources to produce the 303(d) list. EPA recommends that states combine the threatened and impaired waters list with the 305(b) report to create an "Integrated Report," due April 1 of even-numbered years.

Once states submit their 303(d) list to EPA, EPA then has 30 days to approve or disapprove the 303(d) lists. If EPA disapproves a state list, EPA has 30 days to develop a new list for the state; although historically, EPA has rarely established an entire list for a state. Sometimes EPA partially disapproves a list because of omission and adds waters to the state's list.

National Summary of Top 303(d) Listing Impairments

EPA's Assessment and TMDLs Tracking and Implementation System (ATTAINS) provides state-reported data on the condition of monitored surface waters. ATTAINS is the primary result of long-term state and EPA collaboration on tracking, characterizing, and mapping of 303(d)-listed waters. Below is an excerpt showing the top15 causes of impairment for 303(d) listed waters in ATTAINS. Note that one body of water may have single or multiple listed impairment causes.

Causes of Impairment for 303(d) Listed Waters

Description of this table

NOTE: Click on a cause of impairment (e.g. pathogens) to see the specific state-reported causes that are grouped to make up this category. Click on the "Number of Causes of Impairment Reported" to see a list of waters with that cause of impairment.

Cause of Impairment Group Name	Number of Causes of Impairment Reported
Pathogens	10,249
Mercury	7,966
Metals (other than Mercury)	7,164
Nutrients	6,900
Sediment	6,477
Organic Enrichment/Oxygen Depletion	5,989
pH/Acidity/Caustic Conditions	3,756
Polychlorinated Biphenyls (PCBs)	3,286
Cause Unknown - Impaired Biota	3,254
Turbidity	3,062
Temperature	3,025
Pesticides	1,558
Salinity/Total Dissolved Solids/Chlorides/Sulfates	1,470
Cause Unknown	1,237
Noxious Aquatic Plants	998

How does the 303(d) listing process help to improve water quality?

For many states, identifying waters on a 303(d) list is the first step towards achieving water quality goals. Listing a waterbody on a 303(d) list requires states to review their water quality standards, evaluate available monitoring data and determine if adequate controls are in place for point and nonpoint sources of pollutants. States use this information to identify those waters not meeting the applicable water quality standards (referred to as "impaired waters") or having declining trends (referred to as "threatened waters"), after pollution controls are in place. By identifying threatened waters, states take a more proactive "pollution prevention" approach to water quality management.

In many respects, the 303(d) list acts as a "trigger" signaling the need for immediate management actions to address water quality impairments. Section 303(d) of the CWA also requires states to identify those water quality-limited waters needing TMDLs and to organize its list of waters in a prioritized schedule for TMDL development. Using the impaired waters listing process, states have readily available data and determinations on current water quality impairments, and therefore are able to set management priorities for addressing such impairments accordingly. A 303(d) list effectively influences and guides many appropriate courses of action for restoring and protecting the waters of the U.S.

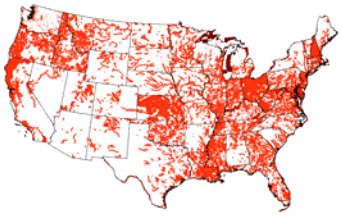
Program Results through 303(d) Listings of Impaired Waters

- **Guidance to States**
  - EPA first provided guidance for states developing 303(d) lists in the 1992 issuance of Guidance for Water Quality-Based Decisions: The TMDL Process.
  - EPA continues to provide guidance to states through various Integrated Reporting Guidances (issued for reporting cycles 2002, 2004, 2006, 2008 and 2010), with the 2006 Integrated Reporting Guidance providing the most comprehensive level of detail on using the 5 categories.
  - Additionally, EPA recognizes unusual listing challenges, such as in listing and addressing waters impaired due to atmospheric sources of mercury, and has developed specific guidance appropriate to these challenges (see: Listing Waters Impaired by Atmospheric Mercury).

- **Timely Submission and Review of 303(d) Lists/Integrated Reports**
  Over the past two years, EPA has worked with states to anticipate and address potential issues with the 303(d) list early on in an effort to streamline the 303(d) list submission process. EPA saw a substantial jump in the number of 303(d) List/Integrated Report submissions for the 2008 Integrated Report Cycle. Over three times as many lists were received by the deadline month compared with the 2006 Cycle. Similarly, EPA has made considerable progress in the amount of time the Agency takes in issuing a final action (approve/disapprove) on a State's list.

- **National Information about 303(d) Listed Waters Online**
  EPA has consolidated several years of states' 303(d) listing into the ATTAINS data system, providing publicly available information on over 40,000 tracked waters and user-friendly access to data at scales from local to statewide to national.

- **National GIS (Mapped) Data on Geo-Referenced Impaired Waters Online**
  EPA indexes state spatial data to the National Hydrography Dataset Plus (NHD*Plus*) to provide a nationally consistent reference layer. The indexed data is housed in EPA's Reach Address Database (RAD). EPA provides access to a static national shapefile of 303(d) listed waters, as well as dynamic access to individual state or watershed-level shapefile downloads as new data become available. The spatial data downloads can be related to tabular data extracted from ATTAINS via the WATERS Expert Query tool.



Additional Resources:

- For more information on **CWA Section 303(d) lists** visit: http://www.epa.gov/owow/tmdl/overview.html
- For more information on **EPA's 303(d) Listing Guidance, including the recommended "Integrated Reporting"** for reporting under Sections 303(d) and 305(b) visit: http://www.epa.gov/owow/tmdl/guidance.html#2
- For a national summary or state-by-state data on listed threatened and impaired waterbodies visit **EPA's Assessment and TMDL Tracking and Implementation System (ATTAINS)**: http://www.epa.gov/waters/ir/index.html
- For tabular state data on 303(d) listed impaired waterbodies visit **EPA's WATERS Expert Query Tool**: http://www.epa.gov//waters/tmdl/expert_query.html
- For **Geographic Information Systems (GIS) Downloads** visit EPA's Reach Address Database (RAD): http://epamap32.epa.gov/radims/ or visit the WATERS Data Download page: http://www.epa.gov/waters/data/downloads.html
- For more information on the TMDL Program Results Analysis Project visit: http://www.epa.gov/owow/tmdl/results or contact the project leader at norton.douglas@epa.gov