



Fact Sheet: 303(d) Listed Impaired Waters State, Watershed and National Geospatial Datasets

Background on Clean Water Act (CWA) Section 303(d): Impaired Waters and Total Maximum Daily Loads (TMDLs)

Under Section 303(d) of the CWA, states, territories, and authorized tribes (referred to here as states) are required to develop lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet the state water quality standards. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop TMDLs for these waters. A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. Figure 1 illustrates where the 303(d) program fits into the larger CWA impaired waters framework.

How does EPA collect information about 303(d) Listed Impaired Waters?

In even-numbered years, states submit their lists of impaired waters (known as the “303[d] list”) to EPA, along with their schedule for TMDL development to restore the waters. The national 303(d) list changes continually as two-year reporting cycles occur and EPA and states work together to ensure appropriate placement of waters on the 303(d) list. As of mid-2009, the national list encompassed over 43,000 impaired waters with over 73,000 impairments (single waters may have multiple impairments). In addition to the 303(d) list submission, states also provide valuable data on the spatial extent of their impaired waters. These state-submitted, Geographic Information System (GIS) datasets are collected by EPA and indexed to the National Hydrography Dataset (NHDPlus) at 1:100K resolution.

What should users know about the 303(d) impaired waters geospatial datasets before downloading?

EPA provides the 303(d) impaired waters data for download at the state, watershed, and national levels. The state and watershed-level impaired waters geospatial datasets are available for download at <http://epamap32.epa.gov/radims/>. EPA also has created a composite **303(d) Impaired Waters National Geospatial Dataset** of recently mapped state reporting cycles, in which dates vary by state (available at <http://www.epa.gov/waters/data/downloads.html>). These datasets only include the impaired waters that appeared on a state’s 303(d) list to EPA (Integrated Reporting¹ [IR] Category 5) and do not represent all impaired waters reported in a state’s Integrated Report to EPA. Therefore, the state-level geospatial data do not include waters that are impaired but have an EPA-approved TMDL established (IR Category 4a), impaired waters for which other pollution control mechanisms are in place and expected to attain water quality standards (IR Category 4b), or waters with impairments such as flow alteration that are not caused by a pollutant (IR Category 4c). EPA does have both Category 4 and 5 (303(d)) impaired waters in the **2002 Impaired Waters Baseline National Geospatial Dataset** for users requiring a consistent, single-date national dataset.

EPA’s 303(d) Impaired Waters Geospatial Data at a Glance:

Includes: Only 303(d) EPA-approved, impaired waters (Category 5 of a state’s Integrated Report).

Does Not Include: Impaired waters listed under a state’s Integrated Reporting Category 4a, 4b, or 4c, nor does it include information on causes of impairment.

Key Point: State data in the national or state downloads are not all from the same reporting year nationally. Generally, what is available for each state represents their most recent GIS submittal.

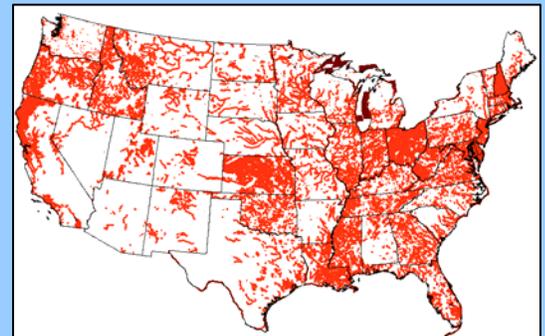
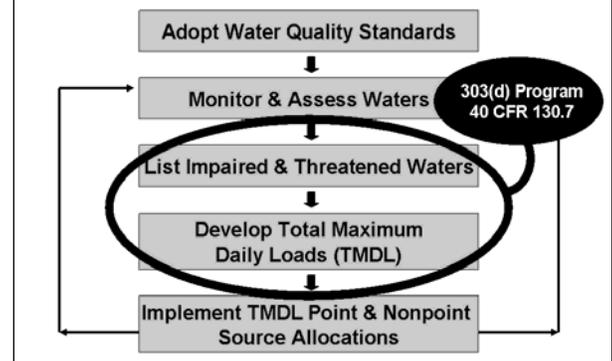


Figure 1: CWA Impaired Waters Restoration Framework



¹ For more information regarding impaired waters refer to EPA’s Integrated Reporting Guidance at: <http://www.epa.gov/owow/tmdl/guidance.html>

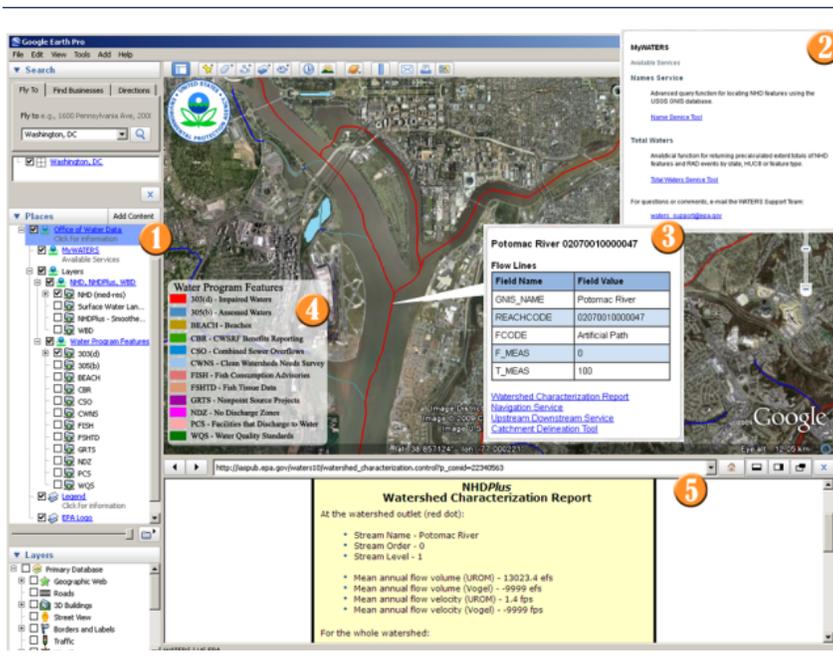
The state and watershed-level geospatial data reflect the most up-to-date, publicly available 303(d) impaired waters geospatial data submitted by states to EPA. States are required to submit their 303(d) lists to EPA by April 1 of even-numbered years; however, many circumstances exist that prevent states from submitting a list by the April 1 deadline. Often, EPA and the state work together to resolve issues with certain waterbodies or assessment methodologies associated with the 303(d) list. This means that not all state-level downloads are available for the same reporting cycle.

For this reason, as well as a general lag time in processing various geospatial formats and indexing these files to EPA's NHDPlus, Reach Address Database (RAD), the availability of 303(d) geospatial data for a given cycle varies considerably across the nation. For example, a state may have a final 303(d) list approved by EPA in May of the reporting year, but the final data submission and the processing of their geospatial data may take a year or more before it is made available to the public. This means that in some instances, the cycle year for 303(d) data available in the Assessment and TMDL Tracking And ImplementatioN System (ATTAINS) for a particular state may not always correspond with the available 303(d) geospatial data for that same state in the RAD.

When to use the state-level geospatial data?

Use the state-level geospatial data when you want the most up-to-date, publicly available 303(d) impaired waters data for a particular state. However, there are some states where 2002 is their most recent data submission to EPA. EPA is improving the ability to check the status of each state's data available to the public prior to download, however, once the geospatial data is downloaded, you can check the cycle year noted in the dataset's attribute table. By doing this prior to executing cycle-specific queries from ATTAINS Expert Query Tool, you can ensure that the geospatial data downloads will match the cycle-specific queries from ATTAINS.

Figure 2: Impaired waters and the associated impairment information from ATTAINS viewed in Google Earth. 1: Datasets in the WATERS database; 2: Tools, services and information access; 3: Indexed water program features with hyperlinks to additional reports and services; 4: Full descriptive legend; 5: Integrated information frame for analysis results.



What other impaired waters datasets or web services does EPA provide?

For national geospatial datasets on:

- 303(d) Listed Impaired Waters
- Impaired Waters with TMDLs
- 2002 Impaired Waters Baseline
- Watershed Boundaries for the 2002 Impaired Waters Baseline

visit EPA's WATERS National Downloads web page at:

<http://www.epa.gov/waters/data/downloads.html>

EPA Office of Water also provides WATERS web, mapping and database services, in addition to viewing impaired waters and other [WATERS data using Google Earth](#) version 4.2 or higher. Figure 2 shows impaired waters and the associated impairment information from ATTAINS viewed in Google Earth.

For more about TMDLs and impaired waters data, visit:

EPA TMDL Home: www.epa.gov/owow/tmdl

ATTAINS: www.epa.gov/waters/ir

ATTAINS Expert Query Tool: http://www.epa.gov/waters/tmdl/expert_query.html

WATERS (RAD) State/Watershed Data Downloads: <http://epamap32.epa.gov/radims/>

WATERS (RAD) National Data Downloads: <http://www.epa.gov/waters/data/downloads.html>

WATERS Web, Mapping and Database Services: <http://www.epa.gov/waters/geoservices/index.html>