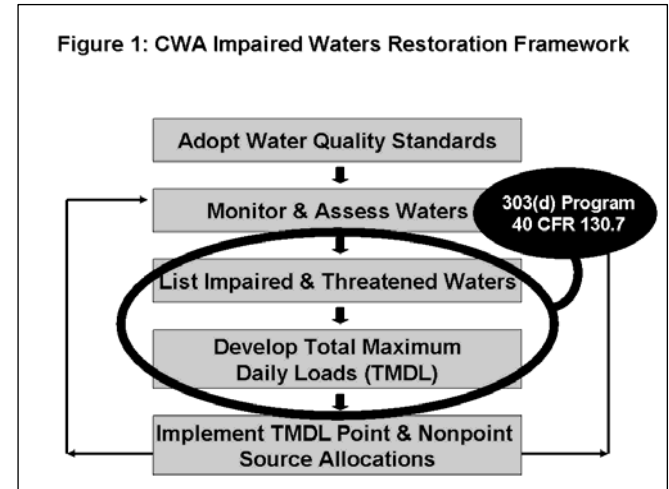




Fact Sheet: 2002 Impaired Waters Baseline National Geospatial Dataset

Background: the Clean Water Act, Impaired Waters and TMDLs

The goal of the Clean Water Act (CWA) is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters”. 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 every two years. Waterbody condition information for determining impairment generally comes from state monitoring programs carried out under CWA Section 305(b). A state’s 303(d) impaired waters list is comprised of all waters where 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). A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of the load reduction needed from various sources of the pollutant. Most TMDLs are technical documents that summarize the analysis and lay the groundwork for beginning to plan restoration. Over 40,000 TMDLs have been developed, and the number is continually increasing. **Figure 1** illustrates where the 303(d) Impaired Waters and TMDL Program fits into the larger CWA framework.



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

Figure 2: EPA’s Recommended Integrated Reporting (IR) Categories

Category	Description
1	All designated uses (DU) are supported, no use is threatened
2	Available data and/or information indicate that some, but not all of the DUs are supported
3	There is insufficient available data and/or information to make a DU support determination
4	Available data and/or information indicate that at least one DU is not being supported or is threatened, but a TMDL is not needed
4a	A TMDL is established
4b	Other required control measures are expected to result in attainment of an applicable water quality standard in a reasonable period of time
4c	The non-attainment of any applicable water quality standard is the result of pollution and is not caused by a pollutant
5	Available data and/or information indicate that at least one DU is not being supported or is threatened, and a TMDL is needed
5m	The non-attainment of any applicable water quality standard for mercury is the result of mainly atmospheric deposition sources and comprehensive mercury reduction programs are in place to address the impairment

2002 Impaired Waters Baseline National Dataset contains waters classified into these IR categories

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 finalize list approvals. As of mid-2009, the national list encompassed over 43,000 impaired waters with over 73,000 impairments (single waters may have multiple impairments). EPA recommends that states fulfill their CWA sections 305(b) and 303(d) reporting requirements to EPA through an Integrated Report (IR) submittal¹. EPA recommends that states use the five categories (shown in **Figure 2**) to categorize all their monitored and assessed waters.

In addition to the 303(d) list submission, states also provide valuable data on the spatial extent of their assessed and impaired waters. These state-submitted, Geographic Information System (GIS) datasets are collected by EPA and indexed to the National Hydrography Dataset (NHDPlus) at a 1:100K resolution. For the 2002 baseline reporting year, EPA compiled state-submitted GIS data to create a seamless and

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

nationally consistent picture of the Nation's impaired waters for measuring progress. EPA's Assessment and TMDL Tracking and Implementation System (ATTAINS) is a national compilation of states' 303(d) listings and TMDL development information, spanning several years of tracking over 40,000 impaired waters. ATTAINS impaired waters data are publicly available online in tabular format (www.epa.gov/waters/ir) and as geospatial datasets that are available for download from EPA's Reach Address Database (RAD) at <http://epamap32.epa.gov/radims/> for state or watershed datasets or <http://www.epa.gov/waters/data/downloads.html> for national datasets.

What does the term "Baseline" mean?

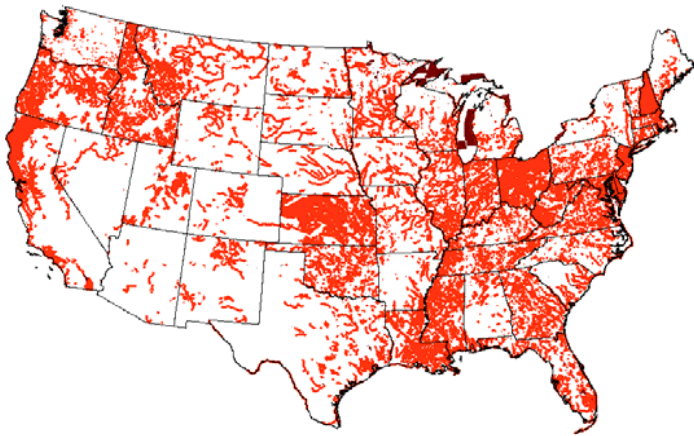
The term "baseline" refers to a benchmark date from which to measure changes over time. For the impaired waters baseline, the 2002 reporting cycle year was selected because of improved reporting by states, as well as improved accuracy and availability of state-submitted geospatial data.

Why does EPA use a Baseline?

The dataset was created to have a national picture or snapshot of state-reported impaired waters. The attributes associated with these waters (e.g., cause of impairment and TMDL information reported in ATTAINS) are being tracked by EPA to report on Agency Strategic Plan Measures (see measure descriptions at http://www.epa.gov/water/waterplan/pamsfy09/def_wq09.html).

What should I know about the 2002 Impaired Waters Baseline Dataset?

The 2002 Impaired Waters Baseline Geospatial Dataset contains all state-reported impaired waters at the date of extraction from EPA's Reach Address Database. To be included in the dataset, state's must have submitted their impaired waters information to ATTAINS and be indexed to the RAD. The dataset represents 39,978 impaired waterbodies classified into EPA's recommended **IR Categories 4a, 4b, 4c and 5** (see Figure 2 above for IR category descriptions).



What other datasets does EPA provide on impaired waters?

EPA provides state-level, watershed-level, and national impaired waters geospatial datasets. The 2002 baseline dataset is unique in that it already contains attribute information on state-reported impairment information associated with each waterbody in the dataset. This is not typically included in the state and watershed-level geospatial datasets; however, the state and watershed-level geospatial datasets reflect the most up-to-date, publicly available 303(d) impaired waters spatial data submitted by states to EPA.

The state and watershed-level impaired waters datasets only include the impaired waters that are listed on a state's 303(d) list to EPA (Integrated Reporting [IR] Category 5) and **do not represent all impaired waters** reported in a state's Integrated Report to EPA. The availability of 303(d) geospatial data for a given cycle varies considerably across the nation. Due to the time it takes for EPA and states to finalize the 303(d) list of impaired waters, as well as a general lag time in processing various geospatial formats and indexing these files to the NHDPlus, not all states have geospatial data available for the same year. EPA is working to improve the ability to select certain cycles for download. If you are relating the geospatial data to cycle data in ATTAINS, it's a good

idea to open the attribute table in the geospatial file and verify that it matches your data pull from the ATTAINS Expert Query Tool. 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.

For more about TMDLs and impaired waters data, visit:

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

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

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

WATERS Google Earth Downloads: <http://www.epa.gov/waters/tools/WATERSKMZ/WATERSKMZ.html>

ATTAINS: www.epa.gov/waters/ir

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

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

TMDL Results Analysis: www.epa.gov/owow/tmdl/results