January 16, 2018 (revised 01-2021)

Data Quality Record for Long-Term Performance Goal

Long-Term Performance Goal Text: By September 30, 2022, reduce the number of square miles of watershed with surface water not meeting standards by 37,000 square miles.
Goal Number/Objective: Goal 1: A Cleaner, Healthier Environment/Objective 1.2: Provide for Clean and Safe Water
NPM Lead: Office of Water (OW)

1a. Purpose of Long-Term Performance Goal:
The purpose of this long-term performance goal is to track the progress of water quality standards attainment in water previously identified as impaired in the Integrated Report as of August 30, 2019. Progress will be evident by a downward trend in previously impaired waters attaining water quality standards.

1b. Performance Measure Term Definitions:
Catchment-based indexing:[1] An automated process that corresponds state geospatial information (e.g., streams, lakes, HUCs, basins) with National Hydrology Dataset Plus (NHD*Plus)* Version 2 catchments. Catchments represent the local drainage area for the individual stream segments of a specific stream network.[2] The process to correspond the state's geospatial information to catchments varies depending on the type of input file: linear files (representing rivers and streams), area files (representing lakes, ponds, or reservoirs), or boundary files (representing Watershed Boundary Dataset Hydrologic Units). For more information about NHD*Plus* V2 catchments, see https://www.epa.gov/waterdata/nhdplus-national-hydrography-dataset-plus.

Water Quality Standards Attainment means that the waterbody now meets water quality standards for that particular pollutant or stressor for which it had been impaired.

1c. Unit of Measure: Number of square miles not meeting standards.

2a. Data Source:
The Assessment and Total Maximum Daily Load Tracking and Implementation System (ATTAINS) is the data system of record. States submit to EPA their Integrated Report on April 1 of every even numbered year. The Integrated Report includes information on the status of the states' waters, which is used to report on this measure. In odd years, new information may not be available, so no changes may be seen. State geospatial data, which is used to calculate these measures, is processed to the NHDPlus using an automated process, and is verified following an approved Quality Assurance Project Plan (QAPP). This QAPP is part of the overall Data Process and Users Support task order, and is available upon request.

2b. Data needed for interpretation of (calculated) Performance Result:

- Universe: Area corresponding to the impaired waters (assessment units) identified in the state's most recent Integrated Report (i.e., Categories 4 and 5). The universe represents 587,536 square miles of watershed area not meeting standards. The universe was updated on August 30, 2019 to account for missing states (all states are now accounted for). This universe will be static through September 30, 2022, after which it will be updated to reflect newer data.
- Baseline: The baseline for this measure is 587,536 square miles of watershed area not meeting standards.
- Frequency of Reporting: This metric is tracked monthly. When states submit final Integrated Reports, results from those reports are compared to the universe to track progress towards addressing impaired waters. State Integrated Reports are due on April 1 of every even numbered year, however, currently not all states

[1] For the Integrated Reporting Georeferencing Pilot Report visit https://www.epa.gov/waterdata/water-quality-framework
[2] EPA is currently working to develop NHD*Plus* catchments for Alaska.

submit their reports on time allowing the EPA to provide monthly updates to this measure as additional states submit their reports.

3. Methodology:

The measure assesses unit/pollutant combinations based on the most up-to-date state Integrated Report data available in ATTAINS. The catchment area that is associated with the assessment units will be used to report on the measure.

The process to calculate this measure includes the following steps:

- Step 1: EPA established the universe based on state Integrated Reporting data
- Step 2: State submits subsequent assessment decision data (Integrated Reporting data) to EPA
- Step 3: EPA Reviews/Approves state Integrated Reports
- Step 4: EPA calculates progress

Additional details about each step are provided below.

Step 1: EPA calculates the universe based on most recent state data

In December 2018, EPA established an initial universe using all available and most current state assessment data. This allowed EPA to report on this measure through 2019. However, a number of states were still missing, or needed to update their data. In August 2019, data for these missing states were added to represent a final universe that will be used through September 2022. The universe represents the NHDPlus catchments and the corresponding pollutants for all impaired waters (Categories 4 and 5). The area of the catchments (in square miles) are summed to provide the total area for the universe.

Step 2: State submits assessment decision data (Integrated Reporting data) to EPA

- On April 1 of every even-numbered year, states are required to submit to EPA their list of assessed and impaired waters, also referred to as the Integrated Report. The Integrated Report assessment decision data (attribute and geospatial data) is submitted to EPA via the Exchange Network or directly through the ATTAINS User Interface).
- EPA processes the state geospatial information through the Catchment Indexing Process (CIP) Tool to select the corresponding NHD*Plus* V2 catchments. Figure 1 below is a simple graphic showing the relationship of an assessment unit to catchments.
- EPA conducts an internal QA/QC check of the results from the previous step.
- The catchments, which represent the assessment units, are used solely for the purpose of automating[3] the calculation of the measure and providing a consistent geospatial unit of measure that can translate from the disparate geospatial scales that states use to track their assessment units. (See Figure 1).

[3] Automating refers to the use of technology to run the necessary calculations for the measure. An interactive framework is being developed in the ATTAINS system.

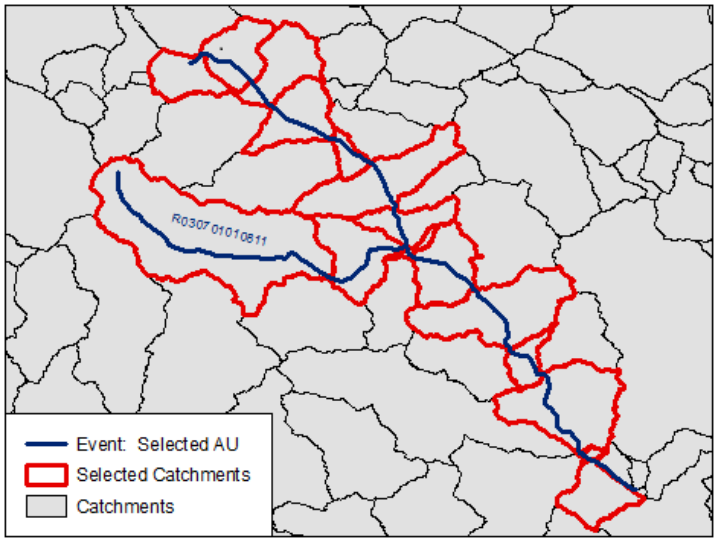


Figure 1: Graphic showing how the Catchment Indexing Process (CIP) Tool relates an assessment unit to catchments as an example to communicate how this process works.

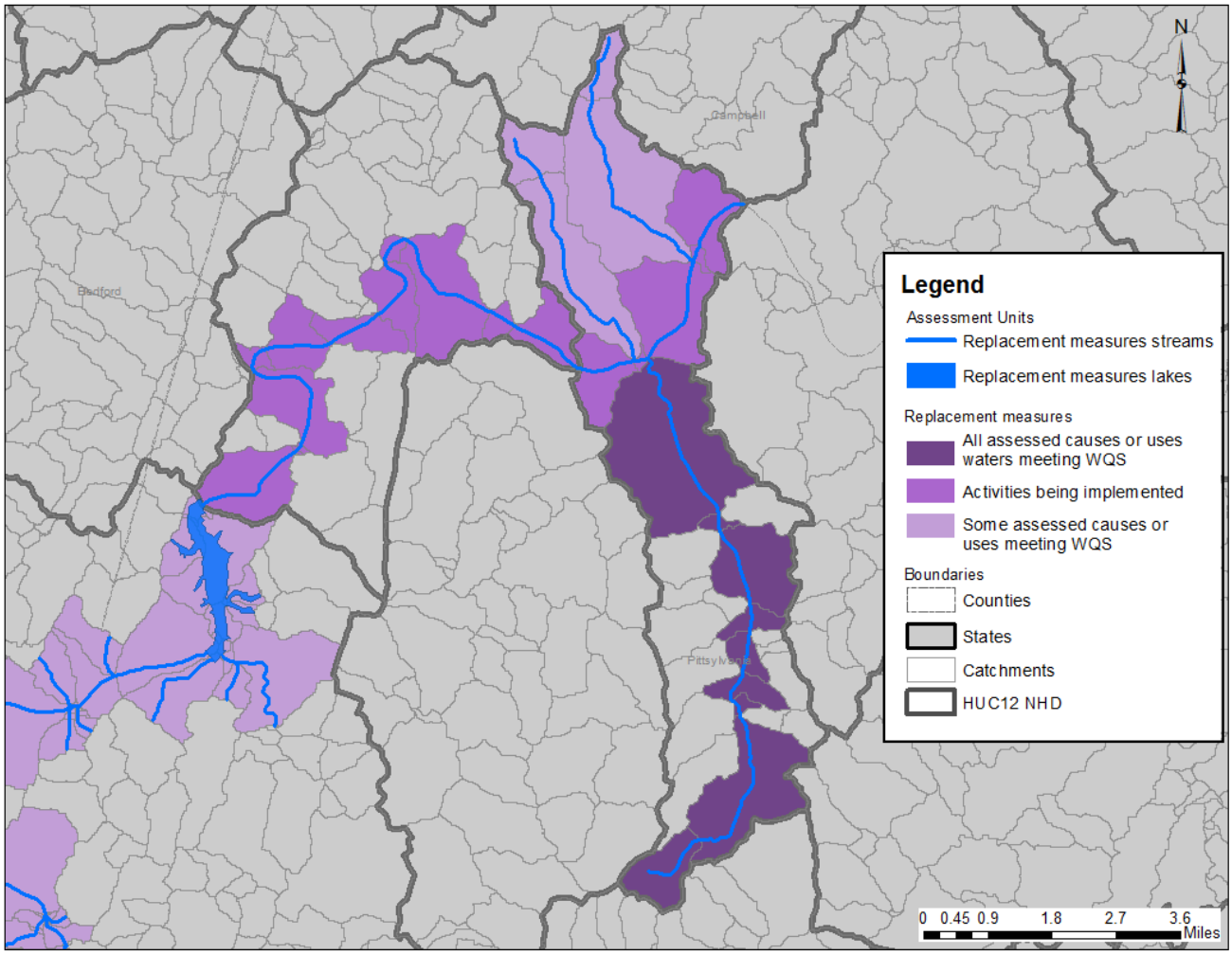
Step 3: EPA Reviews/Approves the State Integrated Report:
Following submittal, EPA reviews the 303(d) portion of the state's integrated report. This includes a review of waters that have been removed from the 303(d) list for various reasons. Following this review, EPA makes a determination to approve or disapprove the state's list. Once EPA takes action on a state list, the data can then be used to calculate the measure.

Step 4: EPA calculates the end-of-year progress

- EPA uses state assessment decisions submitted as part of their Integrated Report and available in ATTAINS. The assessment decisions (the assessment unit/pollutant combinations) are either removed or identified as meeting water quality standards (moving from Categories 4 or 5 to Categories 1 or 2) for any of the following reasons:
    - Applicable WQS attained, according to new assessment method
    - Applicable WQS attained, due to change in WQS
    - Applicable WQS attained, due to restoration activities
    - Applicable WQS attained; original basis for listing was incorrect
    - Applicable WQS attained; reason for recovery unspecified
    - Applicable WQS attained; threatened water no longer threatened
    - Applicable WQS attained; based on new data
- EPA sums the weighted area of the catchments that correspond to each assessment unit/pollutant combination.
    - How will a weighted approach work? Take for example an assessment unit that has four pollutants and corresponds to a catchment area of 100 acres. If the state monitored and assessed <u>two</u> of the pollutants and determined water quality standards attainment, then the state would report this information in the state's next Integrated Report. The measure would reflect that 50% or 50 acres of the catchment area will contribute to the measure. These results are reported monthly based on new information reported in a state's Integrated Report and reported to EPA and available in ATTAINS.

Conceptual Display of Progress on Meeting Water Quality Standards in Waters Targeted for Local Action Performance Measure

The groups “all assessed pollutants meeting WQS” and “some assessed pollutants meeting WQS” contribute to this measure.



4. Data Limitations/Qualifications:

The information reported under this performance measure reflects the status of the states’ waters as reported in the Integrated Report. This measure tracks high-level reasons for WQS attainment. If additional information is needed for any of these reasons, additional research would need to be conducted.

This measure does not measure incremental improvement for individual waters as they progress towards meeting water quality standards. For example, if a water is impaired for sediment, and after some restoration activity, the sediment issues are improving, but not yet meeting Water Quality Standards, this would not be counted under this measure until the water actually meets standards for sediment.

5. Technical Contact

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6. Certification Statement/Signature

I certify the information in this DQR is complete and accurate.

DAA Signature