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**EXISTING AND READILY AVAILABLE DATA**

The Department of Environmental Protection (DEP) Bureau of Clean Water’s Water Quality Division is seeking data for consideration in the **2026** 303(d) assessment process. Data will be accepted through **June 30th, 2025**.

Section 303(d) of the federal Clean Water Act (CWA) requires Pennsylvania (PA) to identify all water quality limited water bodies. These water bodies appear on Category 5 in the PA Integrated Water Quality Report (Integrated Report). As part of this ongoing effort, DEP utilizes available outside sources of data and information.

If you believe that your group, organization, or agency has data and information that could be utilized by DEP in the 303(d) listing and assessment process, we encourage you to submit your data and information. Please carefully read through the information in this document. For any data or information to be considered, a completed copy of the Excel Data Submission Forms should be submitted along with detailed maps or study plan showing the sampling sites and stream segments of consideration.

Data submitted after the deadline listed above will be considered for the next Integrated Report.

Chemical, physical, and biological monitoring data collection protocols and guidance for quality assurance and control procedures and assessment methodologies are available on the [DEP Water Quality Division](https://www.dep.pa.gov/Business/Water/CleanWater/WaterQuality/Pages/default.aspx) webpage. Please be sure to regularly check the “[Monitoring Book](https://files.dep.state.pa.us/Water/Drinking%20Water%20and%20Facility%20Regulation/WaterQualityPortalFiles/Technical%20Documentation/MONITORING_BOOK.pdf)” and “[Assessment Book”](https://files.dep.state.pa.us/Water/Drinking%20Water%20and%20Facility%20Regulation/WaterQualityPortalFiles/Methodology/2021%20Methodology/ASSESSMENT_BOOK_2021.pdf) for the most up to date monitoring data collection protocols and assessment methodologies as these documents may change.

Please feel free to distribute this information to all interested groups, agencies, and partners.

**DATA REQUIREMENTS FOR CONSIDERATION IN 305(b)/303(d) ASSESSMENT DECISIONS**

The CWA is a federal law governing pollution control and water quality of the Nation’s waters. The object of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. Section 305(b) of the CWA requires states, territories, tribes, and interstate commissions to report the water quality of all waterbodies every 2 years. The 303(d) list of impaired waters is a subset of the 305(b) report. DEP assesses the health of all PA waterbodies and the extent to which water quality standards and the goals of the CWA are being met. These goals are to achieve and maintain water quality that provides for potable water, aquatic life, propagation of fish and shellfish for consumption, and recreation and water contact sports. Water quality data and information allow states to characterize whether water quality meets these and other uses for their waters, which are expressed in water quality standards that each state sets.

# Water quality standards for all PA surface waters can be found in Chapter 93 - Water Quality Standards and Chapter 16 - Water Quality Toxics Management Strategy (PA Code - Title 25. Environmental Protection).

# DEP evaluates existing and readily available outside data and information for consideration in the development of the Integrated Report 305(b) Report and 303(d) List. To effectively evaluate outside data, data should be in the Data Submission Excel files provided on the [DEP Existing and Readily Available Data](https://www.dep.pa.gov/Business/Water/CleanWater/WaterQuality/IntegratedWatersReport/Pages/Existing-and-Readily-Available-Data.aspx) webpage. This allows the data to be run through the DEP assessment methods. Data that meets the minimal data requirements will be incorporated into the Integrated Report and may be used in the 303(d) listing process. Data not meeting the requirements may be helpful for other purposes such as public education or the targeting of waters for further study.

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DEP recognizes there are groups, agencies, and organizations that do not have established monitoring study design, data collection, and analysis protocols or a QAPP. Groups or individuals that would like to begin monitoring with the goal of having their data utilized by DEP in the 305(b)/303(d) assessment process are encouraged to reference DEP “Monitoring and Assessment Book”.

**Documentation of a Water Quality Standard Violation:**

For any given waterbody in the Commonwealth, the applicable water quality standard (as found in Chapter 93 - Water Quality Standards and Chapter 16 - Water Quality Toxics Management Strategy (PA Code - Title 25. Environmental Protection) is comprised of the designated uses and numeric and/or narrative criteria established to protect those uses. Documented evidence of a use impairment or criterion violation constitutes a violation of the applicable water quality standard. Because of the significance of the 303(d)List, any determination of a water quality standard violation must be based on scientifically sound methods and data. Assessments based on the comparison of numeric criteria with long-term water quality data typically meet this principle. Chemical assessments based on single, one-time grab samples generally do not. Single, one-time biological and physical surveys conducted to assess designated aquatic life use is generally acceptable because the biology is a long-term indicator of water quality. Sufficient evidence must be presented for chemical, physical, and biological data to indicate that the assessments are representative of the conditions throughout the entire waterbody segment or watershed and not simply a single site.

In reviewing data submitted by outside sources, DEP will use the following guidelines to determine if violations of water quality criteria occurred and/or uses are impaired or supporting.

**Chemical Data**

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| Data age | Data must be less than 5 years old, unless it can be demonstrated that data is representative of current conditions. |
| Chemical Parameters | Only those chemical parameters for which a criterion has been established can be considered. Applicable water quality criteria vary depending on the waterbody being considered.  |
| Minimum number of sampling sites | A minimum of two sites must be sampled for each stream segment. If landuse changes or point sources enter the stream between the upstream and downstream boundary points, more sites are required. See the discussion “Location of Waterbody” for more details. |
| Sampling duration and frequency | To avoid the problems associated with serial correlation of time series data, sample collections must be at least one week apart. Sampling should occur during the most critical time period for the parameters being monitored. |
| Minimum number of samples required for data to be considered representative of actual conditions | A minimum of 3 samples for each site is required. Single one-time grab samples will not be considered for assessments. |
| Quality assurance and control | Required to collect a sequential replicate and blank sample once per every 20 samples collected. |
| Laboratory | Samples need to be analyzed by a laboratory registered with or accredited by the PA Laboratory Accreditation Program (LAP) or the National Environmental Laboratory Accreditation Program (NELAP). |
| Required analysis to determine if samples exceed water quality criteria | To be performed by DEP using methodologies outlined in the current Assessment Book. |

**Bacteriological Data**

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| Data age | Data must be less than 5 years old, unless it can be demonstrated that data is representative of current conditions. |
| Minimum number of sampling sites | A minimum of two sites must be sampled for each stream segment. If landuse changes or point sources enter the stream between the upstream and downstream boundary points, more sites are required. See the discussion “Location of Waterbody” for more details. |
| Sampling duration and frequency | Sample collection occurs during the swimming season (May 1 – September 30). No more than one sample collected per 24 hours at each site. Samples are collected on different days spanning a minimum of 14 days and a maximum of 30 days constitutes one sampling period for one site. |
| Minimum number of samples required for data to be considered representative of actual conditions. | Five samples minimum collected within 30 days constitutes one sampling group. |
| Quality assurance and control | Required to collect a sequential replicate and blank sample once per every 20 samples collected. |
| Laboratory | Samples need to be analyzed by a laboratory registered with or accredited by the PA Laboratory Accreditation Program (LAP) or the National Environmental Laboratory Accreditation Program (NELAP). |
| Required analysis to determine if samples exceed water quality criteria | To be performed by DEP using methodologies outlined in the current Assessment Book. |

**Macroinvertebrate and Fish Data**

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| Data age | Data must be less than 5 years old, unless it can be demonstrated that data is representative of current conditions. |
| Minimum number of sampling sites | A minimum of two sites must be sampled for each stream segment. If landuse changes or point sources enter the stream between the upstream and downstream boundary points, more sites are required. See the discussion “Location of Waterbody” for more details. |
| Sampling duration | Single one-time samples are acceptable. Sample collection must be done using data collection protocols outlined in the current Monitoring Book. |
| Acceptable data | Benthic macroinvertebrates must be identified to the lowest practical taxonomic level (generally to genus, except for snails, worms, clams, and midges. Fish must be identified to species.  |
| Quality assurance and control for macroinvertebrate identification. | Persons with Society of Freshwater Science (SFS) certification is required and 10% of the identified samples must be provided to DEP to confirm identifications. Required to collect a replicate benthic macroinvertebrate sample once per every 10 samples collected. |
| Required analysis to determine if the biological community is impaired | To be performed by DEP using methodologies outlined in the current Assessment Book. |

**Location of Waterbody:**

DEP defines a stream segment as the portion of a stream between an upstream tributary and the next downstream tributary. Assessments may consist of one or multiple segments. For headwater sections, the first segment extends from the source to the first tributary. DEP uses the United States Geological Survey’s (USGS) National Hydrography Dataset (NHD) to identify tributaries and the resulting stream segments. This GIS layer is set to a 1:24,000 scale. The rationale for segmenting streams is that tributaries can deliver pollution loads and/or dilute water in quantities sufficient to affect the water quality of the receiving stream. Some tributaries have a flow so small in relation to the mainstem that they are not a factor in the overall quality of the mainstem. There is no need to place sampling sites around these tributaries.

After identifying a stream segment for study, sampling locations should be situated so they reflect the quality of all waters upstream to the next sampling point. A minimum of two sites is required to assess the quality of a stream segment. One location is just above the upstream tributary to measure the water quality entering the stream segment (background water quality) and another location just above the downstream tributary to measure the water quality as it flows out of the segment.

Outside sources of data and information that fail to adequately delineate a stream segment, cannot be used in the 305(b)/303(d) process. Submitted data and information must clearly identify the extent of the waterbody segment(s) to which the data applies.

For water quality limited segments, DEP requires the submitted information to include maps with impaired segments clearly highlighted. For assessments that document impaired or supporting conditions to entire basins, identifying the location of the mouth of the major stream is sufficient. In this latter case, all segments upstream of the mouth will be assigned the same impaired or supporting status.

**Quality Assurance and Quality Control:**

All data, and information submitted to DEP should be accompanied by either a QAPP completed in accordance with EPA’s “The Volunteer Monitors Guide to Quality Assurance Project Plans”, the DEP QAPP, or a standard QAPP. A QAPP should be adhered to that includes external checks such as split replicate sample analysis by DEP or NELAP certified labs.

**INTEGRATED REPORT EXISTING AND READILY AVAILABLE OUTSIDE WATER QUALITY DATA**

**What is the Integrated Report 303(d) List?**

Section 303(d) of the federal CWA requires PA to identify all waters within the Commonwealth for which effluent limitations required by the CWA are not stringent enough to implement any water quality standard applicable to such waters. The 303(d) List includes those water quality limited segments that still require the development of total maximum daily loads (TMDLs) to assure future compliance with water quality standards. Water quality limited segments are defined as waterbodies that do not meet water quality standards even after the application of technology-based treatment requirements to point and nonpoint sources of pollution. Water quality standards are defined as the combination of designated water uses to be protected and the water quality criteria necessary to protect those uses. DEP complies and submits the 303(d) List to the Environmental Protection Agency (EPA) once every two years by April 1st of a reporting year. Unlike the 305(b) report, EPA must approve or disapprove the 303(d) list. Visit the most current version of the [PA Integrated Water Quality Report](https://storymaps.arcgis.com/stories/7af67824d6924b88b544dbad302ebc4f).

**How is the determination made to place a waterbody on the 303(d) List?**

In determining which waters to place on the 303(d) List, DEP is required by federal regulation (40 CFR 130.7(b)(5)) to assemble and evaluate all existing and readily available water quality related data and information. At a minimum, all existing and readily available water quality related data and information includes the following categories of waters:

1. Waters identified by the State in its most recent section 305(b) report as partially supporting or not supporting designated uses, or as threatened;
2. Waters for which dilution calculations or predictive models indicate non-attainment of applicable water quality standards;
3. Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions.
4. Waters identified by the State as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA.

The determination of how much data and information is adequate to include a waterbody on the 303(d) List is a deliberative process involving science and DEP data collection protocols and assessment methodologies. The EPA guidance identifies several screening categories that DEP should use to identify water quality limited waters. Those that may apply to existing and readily available water quality data and information submitted by outside sources include:

1. **Evidence of numeric criterion violations**. Example: Ambient monitoring data demonstrates chronic exceedance of the Chapter 93 temperature criteria.
2. **Beneficial use impaired.** Listing a waterbody due to use impairment requires information that shows the use is not being supported and that this failure is due to degraded water quality. Examples: A waterbody designated for water contact sports has been closed to swimming by local or state authorities due to human health concerns. A waterbody designated as a cold water fishery has exhibited a documented decline in biomass due to excessive sediment deposits that have inhibited or precluded spawning.
3. **Evidence of a narrative criterion violation.** Example: Assessment demonstrates that a discharge is releasing substances that produce color, odor, or turbidity in amounts harmful to a designated water use.
4. **Technical analysis.** Example: Predicative modeling results show that criteria will be violated at design flow or Rapid Bioassessment Protocol results indicate beneficial uses will not be maintained.

**Is DEP required to use all data and information submitted by outside sources in determining if a waterbody should be included on the 303(d) List?**

In order for outside data to be used in the 303(d) listing process, the data submission forms, maps, QAPP, and other information should be submitted to DEP.

DEP is interested in evaluating all available data and information in the 303(d) listing process; however, some types and sources of data and information will not be adequate. At a minimum, data and information submitted to DEP will be reviewed to determine the following:

1. Presence of a QAPP.
2. Adherence to accepted protocols in the operation of field instruments.
3. Use of DEP data collection protocols for chemical, physical, and biological monitoring.
4. An indication that all other testing methods comply with accepted scientific practices.
5. Location and extent of the waterbody.

Once DEP reviews the data, the data will be placed into tiers. DEP then creates the Data Solicitation Report (as part of the Integrated Report) so that data submitters know how DEP has used the data.

DEP will place the data in tiers as described below.

 **Tier 1**: educational or environmental screening data that has known quality and a study plan but does not follow DEP or EPA quality assurance plans. These data will not be used for regulatory assessment purposes but can be used by DEP to highlight areas of interest for future monitoring efforts.

 **Tier 2**: data have clearly defined quality assurance plans and procedures but may not have followed approved DEP data collection protocols. These data may not be used for assessment purposes but can be used for other purposes such as trend or performance analysis.

 **Tier 3**: assessment level data that have approved quality assurance plans, follow appropriate study designs, and followed DEP data collection protocols. Individuals seeking to provide DEP with tier 3 data must also be audited by DEP staff before submitting data.

DEP is required to review all submitted data. However, Tier 1 and 2 data will not be used in the compiling of the 303(d) List. An explanation will be provided in the Integrated Report 303(d) List documentation submitted to EPA for any data reviewed but not included on the list.

**When can groups, agencies, and organizations** **submit data and information to DEP for consideration in the 303(d) listing process?**

The 303(d) listing process is an ongoing effort and outside sources are encouraged to submit data and information at any time. However, in order to allow for the federally mandated submission of the Integrated Report to EPA by April 1st of even years, DEP must impose a data submission deadline. Data and information submitted to DEP by close of business on the last day of the deadline will be included in the upcoming Integrated Report. Data and information received after the established deadline will be considered during the next Integrated Report cycle.

**Where should groups, agencies, and organizations** **submit data and information for consideration in the 303(d) listing process?**

Any individual or group wishing to submit data and information for consideration in the 303(d) listing process may submit:

By mail: By e-mail:

 **Bureau of Clean Water RA-epwater@pa.gov**

 **Water Quality Division** Place “Integrated Report DataSubmission” in subject line.

 **Attn: Shawn Miller**

 **P. O. Box 8774**

 **Harrisburg, PA 17105-8774**

**Who should be contacted with questions regarding the Integrated Report 305(b) Report and 303(d) List processes and outside data submissions?**

Questions can be directed to:

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Water Quality Division

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