



**OFFICE OF WATER
PROGRAMS**

**BUREAU OF
CLEAN WATER**

**RESPONSE DOCUMENT TO COMMENTS RECEIVED DURING PUBLIC
PARTICIPATION OF THE 2023 ASSESSMENT METHODS**

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INTRODUCTION

The Pennsylvania Department of Environmental Protection (DEP) published notice of the draft 2023 Assessment Methods in the *Pennsylvania Bulletin* on January 18, 2025 ([55 Pa.B. 603](#)) with a 60-day public comment period that closed on March 19, 2025. During the public comment period, DEP received comments from 2 commenters. This document provides DEP's responses to those comments. All comments as submitted are also recorded and available on DEP's eComment website at www.ahs.dep.pa.gov/eComment.

DELAWARE RIVERKEEPER NETWORK

Comment:

Established in 1988 upon the appointment of the Delaware Riverkeeper, the Delaware Riverkeeper Network (DRN) is a nonprofit 501(c)(3) membership organization. DRN's professional staff and volunteers work throughout the entire Delaware River Watershed. We work throughout the four states that comprise the Watershed -- including Pennsylvania, New Jersey, Delaware and New York -- and at the federal level on the issues, actions, regulations, legislation, policies, programs and decisions that impact the health of our Delaware River Watershed waterways and our ability to protect and restore them for the benefit of all. On behalf of DRN's almost 28,000 members, we provide for DEP's consideration these comments pertaining to some of the monitoring methodologies out for public comment from January 18, 2025 through March 19, 2025. For this review DRN did not deep dive into the Monitoring Book due to limited capacity but we understand that is an important manual for staff and the public to conduct sampling to assist with listings. We also did not provide comments on the Potable Water Supply Assessment Methodology or Bacteria Methodology due to time constraints. Thank you for the opportunity to provide comment and raise questions on these new and revised Pennsylvania Dept. of Environmental Protection's (DEP) assessment and monitoring methods, which indicate extensive expertise and work by committed Dept staff. These methodologies are important to determine whether or not streams are meeting their designated or existing uses as part of the federal requirements of the Clean Water Act sections 303(d) and 305(b) report. Waterbodies not meeting their uses are considered impaired and must be placed on the dirty water list. DEP is seeking input on five monitor protocols including:

DEP Draft Bacteriological Method – DRN did not review

DEP Draft Eutrophication Method

DEP Draft General Source and Cause Method

DEP Draft Physicochemical Potable Water Supply Assessment Method – DRN did not review

DEP Draft Wadeable Freestone Acidification Assessment Method

Response:

Many dedicated DEP staff have put a lot of time and effort into developing these important water quality tools. DEP appreciates the time that DRN has taken to review and provide comment.

Comment:

Wadeable Freestone Acidification Assessment Method

DEP and the author of this study, Matthew Shank, have produced an incredibly strong and comprehensive evaluation of a pernicious problem affecting many streams in Pennsylvania and eastern North America. We commend DEP and Mr. Shank for their deep-dive into this issue, their persistence and patience in investigating various approaches to determine links and causes, and the impressive report to document this body of work by DEP.

DRN wishes to express our support and concurrence with the overall Wadeable Freestone Acidification and Assessment Method. In particular (see note below), we feel the emphasis on starting with the biological assessment (macroinvertebrates stronger than fish) and using water chemistry to distinguish between Acid Deposition and Acid Mine Drainage is a well-reasoned and well-supported approach to tackling the assessment of these headwater streams and clearly identifying a distinct class of long-term impairments from Acid Deposition in particular geological settings.

There are elements in the Technical Report that could be further refined and strengthened, although we feel the overall assessment is still strong and valid despite our recommendations for further work. Most important among our comments is that our evaluation of the report and its data suggests that the macroinvertebrate discrimination far surpasses that of the fish-based methods. We feel the report should reflect this distinction in the data, and the greater strength in the macroinvertebrate assessment methods. We agree with the premise (see page 185 in Introduction to Chapter 5) that the biological response is the best approach for conducting these assessments, supplemented with water chemistry to help separate Acid Deposition from Abandoned Mine Drainage. However, we feel DEP should recognize and clearly state in Chapter 5 that the biological assessment is generally stronger and more accurate when conducted with benthic macroinvertebrates than with fish surveys. There is much information in assessing the fish community, and the report highlights the insights to be gained with fish assessments. But as the report's data demonstrate, there is much greater complexity in discriminating between natural and anthropogenic sources of variation in the fish community data. We recommend that the report be revised to reflect this stronger assessment with macroinvertebrate data.

Response:

DEP thanks DRN for these comments. Regarding macroinvertebrates having better discrimination capability than fish, DEP understands this perspective but must work toward creating assessment methods that protect all aquatic communities. As such, each assessment threshold (i.e., macroinvertebrates and fish) would be treated as independently applicable to make a final assessment decision. The discrimination efficiency for fish and macroinvertebrates were >80%, making each biological community a strong indicator of acidified conditions.

Comment:

The testing of the Acidification Assessment Method could have benefitted from including headwater streams (1st to 4th order) with drainages of < 25 sq.mi. drainage across a range of land covers, and not just forested headwaters. While the method is intended to assess the unique settings of forested headwater streams with high gradient and particular poorly-buffered geology, it would be valuable to see how the metrics and assessment decisions might respond to streams where human influence (e.g., residential, stormwater, agriculture, industry, roads, land clearing) were beginning to encroach on the watershed. The current validation data set focuses on a narrow setting where the method will likely be

most useful, but the scoring of streams across the full gradient of land use and human alteration would be helpful to include in the report to understand the method's performance.

Response:

The Acidification Assessment Method's primary purpose was to update existing methods, particularly in heavily forested watersheds where atmospheric deposition impacts can be missed with the current wadeable freestone IBI and confused with acid mine drainage impacts. Although heavily forested watersheds were the focus, the development dataset contained watersheds with up to 15% and 40% developed and cultivated land cover, respectively. DEP does intend to continually check and recalibrate all methodologies and will take this recommendation into advisement while doing so.

Comment:

We have some reservations and concern about the use of derived Acid Tolerance Values based on the Correspondence Analysis (CA) values along a single axis. While this statistical technique has a long history of use in exploring data and patterns in ecological data, it is important to recognize that these representations are simplifications of the complexity in multidimensional space, and the gradient represented even by the primary axis does not extract in a complete and accurate manner the response of species to the complex gradients of concern. We recommend that DEP continue to explore direct and indirect methods for determining the tolerance for each taxon to pH, dissolved aluminum, and other elements of these Acid Deposition settings. The Axis 1 values in the CA are a valid starting point for determining how each taxon responds to these stressor gradients, but we must recognize that the determination of pH tolerance values has proven elusive across many respected researchers. Any simple solution to this elusive challenge must be viewed with caution, and additional investment and refinement are warranted.

Response:

DEP agrees that Axis 1 values in the CA are a valid starting point for determining of pH tolerance values and the data supported this approach as being a valid path forward. As noted in the technical document, correspondence analysis models have been compared to other analytical techniques in the literature, with advantages noted when dealing with rare taxa. DEP also agrees that additional statistical techniques could be explored in future revisions of this assessment method to explore the multidimensional nature of acidification impacts.

Comment:

Can DEP elaborate or explain more about Figure 5? Does it mean that the Acidification Assessment Method is only used for streams where the main Wadeable freestone IBI is less than a score of 44?

Response:

Based on the changes to the Wadeable Freestone Riffle-Run Macroinvertebrate Assessment Method flowchart, all wadeable freestone assessments using macroinvertebrate communities should consult this acidification assessment method as a final step in an assessment regardless of when the sample was collected and regardless of the stream's designated use.

Comment:

We understand this methodology is more for defining use and attainment, but can DEP elaborate on the application for designating new HQ and EV Streams? Does DEP envision this methodology will allow more of these headwater streams to achieve EV or HQ designation in the first place if they do not already have these designations? For example, in the past sometimes the smaller 1st, 2nd 3rd order streams have not scored as high for benthics and it has resulted in even forested/largely intact and natural headwater tribs having a carved out or segmented lower designation (CWF for example) than a higher use designation downstream (HQ or EV in lower reaches) (ex: French Creek in Chester County). This has led, DRN has argued, to less EV or HQ protections for the headwaters which drain into lower downstream EV or HQ sections possibly impacting those higher designated uses if the watershed is carved out into different uses. Stroud, DRN and others have written during redesignations on these problems with the smaller upper reaches of waterbodies. DRN does hope that by the use and development of this protocol, streams that have natural tannins, wetland bogs, or our simply headwater tributaries with limited buffering (and naturally fewer bugs) but forested and healthy will be more easily upgraded to EV.

DRN commends and supports DEP's work and ability to more fully embrace EV and HQ and the spirit of the Clean Water Act to use "softer qualifiers" for these clean tannin and wetland bog origin streams that are deserving of EV. Despite the lower insect counts, these streams have begun qualifying for EV and we are in support of those higher uses (i.e., DEP using the exceptional ecological significance qualifier). We hope that the development of this acidification benthic score for impairment purposes does not mean that less streams will qualify for the HQ or EV designation? If DEP can spell that out more in guidance it may be helpful to the more general public and help with the application of what this might mean for stream upgrades in context also with the assessments over time for integrated listing purposes.

Response:

This Acidification Assessment Method is for Federal Clean Water Act Sections 303(d) and 305(b) purposes only, which does certainly include the assessment and protection of HQ and EV streams; however, this method is not used to determine the designated or existing use of streams.

Comment:

Has the PA FBC been consulted or involved in the methodology and rationale with the fish sampling protocol? Have they provided comments on the methodology?

Response:

Yes, Pennsylvania Fish and Boat Commission staff were included in the initial development steps and were provided opportunities to provide comments both before (as development partners) and during the public comment period. A full list of contributors is provided in the Acknowledgements section of the full technical report.

Comment:**Draft Eutrophication Cause Method**

While DEP's methodologies are logical and well- grounded accepted analytical approaches, DRN

continues to be concerned with the major problem of high nitrogen being just as much of a concern as high Phosphorus. The methods DEP is proposing are not capturing numeric measurements for these major pollutants and instead is looking to the auto sensors and measuring DO and pH. The science is clear that some watersheds facing major high nitrogen and phosphorus threats and severe impairments do not always indicate or translate to fluctuations in DO and pH swings. DRN believes that nutrient concentrations and measurements combined with low IBI scores equals nutrient impairment and we simply must get to a point where we are addressing these very serious issues of nutrients – i.e. fixing the CSO's and other sewage/farm runoff inputs causing this nutrient threat and pollution rather than continually kicking the can down the road. This seems especially critical with the threat of warming temperatures and climate change. EPA has been instructing states to establish numeric aquatic life criteria for nitrogen due to the threat it causes and has stated back in 2009 that only examining narrative criteria or not direct measurements of nitrogen and phosphorus is not protective of uses.

Response:

DEP is committed to developing nutrient criteria in Pennsylvania and believes further development and understanding of eutrophication will lead to that goal.

Comment:

Can DEP clarify what benthic protocols would be used for the eutrophic cause method? Would it be any of them that is appropriate?

Response:

The current version of the Eutrophication Cause Method would be implemented when the wadeable freestone or wadeable limestone assessment method determines the stream to be impaired. The exact protocols and methods are referenced on page 9-22 of the Assessment Book, but DEP has added additional clarifying language in the introduction section of the method to make it clearer.

Comment:

What will be the affect of DEP using a % DO saturation to replace the prior eutrophic case determination method which used DO concentrations measured in mg/l? Would this new method using % saturation actually delist streams that actually would be impaired using the current or older method of mg/l? If that is the case, and with the threat nutrients bring to aquatic life and the ecosystem, this switch may not be protective and would weaken the clean up processes desperately needed.

Response:

DEP has conducted analyses comparing the two eutrophication cause methods and determined that it is highly unlikely for the new eutrophication cause method to remove an existing eutrophication listing simply through the difference between using dissolved oxygen percent saturation thresholds versus dissolved oxygen mg/L thresholds.

Comment:

General Source and Cause Method

For this methodology, DEP may want to further explain and highlight the Water Quality Index Tool (WQI) and explain further how it reliably measures instream water quality and why it is so valuable

when instream water quality is not representative of watershed land cover? A definition in the Monitoring Book defines it as - WQI uses concentrations of 21 physiochemical parameters to index an overall score from 1-100 (poor to good). DRN did research the WQI website to learn more https://fweco.shinyapps.io/padep_wqi_UI/ and DEP may want to include that link in the methodology, especially since the interface has maps and a friendly user interface that contains more than, according to the web page, 590,000 results from 28,000 samples from data collected between October 2010 and August 2024 at an average cost of \$600, which represents and investment of nearly \$17 million.

Response:

The Water Quality Index Tool is further explained and highlighted in the following journal article: Wertz, T., and M. K. Shank. 2019. Land use from water quality: Development of a water quality index across Pennsylvania streams. Ecosphere 10(11):e02947. 10.1002/ecs2.2947.

Comment:

Can DEP define further the additional tools that might be used for stressor identification”? This causal method also seems to make clear the importance of setting and establishing more numeric criteria for stressors over only qualitative measurements, so we have more solid numbers for better clean up and enforcement. At the same time, we recognize for example, the incredible scientific effort for numeric manganese standards DEP staff invested, which were later refuted through the convoluted regulatory process.

Response:

DEP’s intent with this version of the assessment method was to establish a defensible process for stressor identification. DEP intends on further developing the stressor identification process in future revisions of this assessment method. A main goal of future development will be to provide more quantitative thresholds for certain stressors, just as DRN indicates in this comment.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Comment:

General Source and Cause Method

This method lays out a logical approach to detecting causes and sources of a variety of common stressors and justifications for failing Aquatic Life Use (ALU). The EPA appreciates the increased transparency this updated method provides. While the list of causes in Appendix A is extensive, and some of the causes are defined quantitatively (e.g., habitat metrics alluding to sedimentation or flow alteration; low pH thresholds for acidification), the current methodology does not reference the existing empirical analysis to support the derivations and there is no indication of empirical thresholds for parameters (in Appendix A) that do not have water quality criteria (WQC). Since macroinvertebrate or fish assemblages may respond differently to chemical exposures than endpoints found via laboratory-derived WQC, reliance on 25 Pa. Code § 93.7 WQC, alone, may miss stressors.

PADEP made significant progress toward use of empirical, data-driven stressor ID endpoints (for stressors without numeric criteria) through the Eutrophication Cause Determination Method and the Wadeable Freestone Acidification Method. The EPA encourages PADEP to continue development of

these data-driven stressor ID processes to both improve the rigor of existing protocols and develop new protocols for additional stressors without numeric criteria.

Response:

DEP appreciates the utility and need for more quantitative stressor thresholds and will continue to work towards these goals in future revisions of the General Source and Cause Method.

Comment:

Eutrophication Cause Determination Method

The EPA reviewed this methodology extensively as it was being developed. The derivation and procedural methods are logical and based on well-grounded analytical approaches. The increased use of the macroinvertebrate Eutrophication Tolerance Index (ETI) in the screening procedure in the cause-effect detection will add support to the robustness of the overall method. However, in the Assessment Book, the table of macroinvertebrates tolerance values presents only the first page of the entire list (only showing EPT taxa). The EPA recommends including the full list in the Assessment Book.

Response:

DEP will add a link to its Online Macroinvertebrate Data Dictionary that contains the requested information. The most appropriate location for this link is in Chapter 3.6 of the Monitoring Book (*Macroinvertebrate Laboratory Subsampling and Identification Protocol*).

Comment:

Please confirm the EPA's understanding (and consider clarifying in the Assessment Book), that the method could be applied to streams (up to 500 square miles) identified as impaired using any of the existing macroinvertebrate assessment methods (Wadeable Freestone Riffle-Run, Wadeable Limestone Streams, Wadeable Multihabitat Stream, or Semi-wadeable Large River Assessment Methods).

Response:

The current version of the Eutrophication Cause Method would be implemented when the wadeable freestone or wadeable limestone assessment method determines the stream to be impaired. The exact protocols and methods are referenced on page 9-22 of the Assessment Book, but DEP has added additional clarifying language in the introduction section of the method to make it clearer.

Comment:

The EPA understands that the Eutrophication Cause Determination method is only conducted when the macroinvertebrate assemblage is identified as impaired. As PADEP develops additional aquatic life use indicators that may be more sensitive to nutrient pollution (than macroinvertebrates used in this protocol) and collects additional chemical data, the EPA encourages PADEP to work toward updating the method or developing new protocols accordingly. The EPA also encourages development of tools to identify the specific pollutants (nitrogen, phosphorus, etc.) causing eutrophication on Pennsylvania's Clean Water Act Section 303(d) impaired waters list.

Response:

DEP will work toward developing eutrophication cause methods applicable to all available aquatic life communities and continues to work toward developing nutrient criteria.

Comment:

The EPA understands that this updated Eutrophication Cause Determination method relies on evaluation of dissolved oxygen saturation and replaces the prior Eutrophication Cause Determination Method which relies on dissolved oxygen concentration in milligrams per liter (mg/L). If the new method is used to delist streams originally identified as impaired using the prior Eutrophication Method, when submitting future Integrated Reports, please note that the change in listing status is based upon assessment of new water quality data as well as application of the new assessment methodology.

Response:

DEP has conducted analyses comparing the two eutrophication cause methods and determined that it is highly unlikely that the new eutrophication cause method would be the reason for a Eutrophication cause removal. Regardless, DEP will appropriately label cause removals with the appropriate reason codes as described in the *Cause Removal Method*.

Comment:Wadeable Freestone Acidification Assessment Method

The EPA recommends clarifying the applicability of the method, specifically how it is both a supplemental and independent method. The Figure 1 flow chart has two paths from answering yes to the 1st box of “Are mayflies, stoneflies, or caddisflies absent from the sub-sample?” There is a path where macroinvertebrates are used to determine aquatic life use impairment, but then the Acidification Method is not performed. However, the EPA understands that the Wadeable Freestone Acidification Assessment method will be applied to all macroinvertebrate data (and applicable fish data) that meet the protocol requirements to determine if acidification is a cause of biological impairment.

Response:

DEP has adjusted the arrows in the flow chart on page 2-13 of the Assessment Book to make it clear that the Wadeable Freestone Acidification Assessment Method should be evaluated in all applicable streams.

Comment:Fishing Assessment Methods

The EPA understands that establishment of fish tissue advisories restricting meals more than the statewide advisories of 1 meal/week will result in Fishing Use Impairment. If that is correct, please clarify the statement on page 8-5 that “All issued advisories are considered impaired for Fishing Use” to exclude the statewide advisory.

Response:

DEP has made the following change to the language on page 8-5: “All issued advisories exceeding the 1 meal per week statewide advisory (e.g. one meal per month) are considered impaired for Fishing Use.”

Comment:**Natural Conditions**

PADEP Assessment methodology states that:

Natural Conditions (pg 1-20, 28 of 319): Exception Natural quality is defined in 25 Pa. Code § 93.1 as “The water quality conditions that exist or that would reasonably be expected to exist in the absence of human related activity.” In accordance with the provisions of Pennsylvania's WQS, waters that have naturally occurring pollutant concentrations, or “natural quality,” that would not be supporting of an established use will not be assessed as impaired, if it can be demonstrated that anthropogenic sources do not cause or contribute to the “impairment” and the pollutant(s) of concern are generated by natural processes.

- The EPA recommends clarifying that this exception only applies to the aquatic life use.
- If the EPA’s interpretation is correct, please consider clarifying this paragraph to indicate that if waters with naturally occurring pollutants are identified, PADEP will begin the process of publishing these waters in the PA Bulletin, subject to a minimum 30-day comment period, as outlined in Pennsylvania’s WQS. The EPA also requests that PADEP notify the EPA if PADEP does publish these waters in the PA Bulletin.
- To clarify the existing locations of streams with natural condition exceptions, the EPA recommends that PADEP include in the Assessment Book the location/website of the publicly available list of waters where natural condition exceptions apply. (This list is referenced in Pennsylvania’s WQS, “The Department will maintain a publicly available list of surface waters and parameters where this subsection applies, and will, from time to time, submit appropriate amendments to § 93.9a—93.9z.”)

Response:

DEP will specify that natural quality is in reference to Aquatic Life Use only. DEP will address and communicate waters with natural conditions exceptions through the Water Quality Standards review process, as provided in § 93.7(d).

Comment:**PFAS and Related Compounds**

PADEP has included a method for identifying PFAS related fish tissue impairments. The EPA notes that research on PFAS and related compounds is developing rapidly. Please consider using information from EPA’s Final Aquatic Life Criteria for Perfluorooctanoic Acid (PFOA), and EPA’s Draft Human Health Water Quality Criteria for Perfluorooctanoic Acid (PFOA), Perfluorooctane Sulfonate (PFOS), and Perfluorobutane Sulfonic Acid (PFBS) to inform future assessments.

Response:

DEP will review and adopt new science and criteria recommendations as appropriate through conventional and publicly participated processes (i.e., Water Quality Standards development and Assessment Methodology development).

Comment:

Water Contact Sports Assessment: Beaches Data

PADEP's Monitoring Book states (pg 2-43) that, "the Pennsylvania Department of Health (DOH) and Pennsylvania Department of Conservation and Natural Resources (DCNR) collect weekly samples for E. coli... In cooperation with DEP, the DOH and DCNR provide a list of closures that DEP will utilize to prioritize bacteriological monitoring and assessment." Could PADEP clarify why all three agencies (PADEP, DOH, and DCNR) are sampling? Is PADEP not able to use DOH and DCNR data for assessment without additional sampling?

Response:

Pennsylvania DOH and DCNR operate separate monitoring and advisory programs for the protection of their beaches (localized portions of a lake assessment unit). In the language quoted above, DEP is simply stating that this information should be used during the sample design and planning process of lake assessments. It does not reference what data DEP will or will not use to make assessments.

Comment:

Data Targets and Requirements

- Pg. 2-94 of the Assessment Book states, "DEP does not discount any data or information from consideration, so no strict guidelines are set with regard to what sampling designs are acceptable for assessments" and "In order to have sufficient data for assessment decisions, physicochemical data should be collected according to the protocols established in the Monitoring Book (Lookenbill and Arnold 2023)". This appears to imply that if Monitoring Book protocols are not followed, there would be insufficient data for assessment decisions. The bullets below are examples of sampling targets or requirements established by the Monitoring Book. Please consider including language in the Assessment Book to clarify how to interpret the above two sentences in light of the Monitoring Book language.
- Monitoring Book language:
 - The Cause and Effect Survey Sampling Design Chapter states (pg 2-11), "The sampling design for a cause and effect survey on flowing waterbodies and, in some cases, impoundments requires a minimum of two sampling stations."
 - The Combined Sewer Overflow (CSO) Compliance Data Collection protocols (pg 2-21) appear to outline several requirements, including two sampling locations (upstream and downstream), collection of 5 bacteria samples under normal conditions, collection of 5 samples under other critical conditions (high flows, stormwater, etc), and corresponding qPCR samples.
 - The Copper Biotic Ligand Model Sampling Design states (pg 2-28), "A minimum of two sampling stations is required." The Data Collection guidance recommends at least twelve sampling events in one year and a total of 24 sampling events (over one or two years).
 - The Lake Assessment Sampling Design states (pg 2-39) that the Trophic State Index requires at least three, seasonal data collection efforts.
 - The Stream and River Assessment Sampling Design Chapter states (page 2-49), "Adhere to the minimum assessment unit length – The minimum length of any use assessment unit is ½ mile. Any impact delineated that is less than ½ mile is considered a localized impact, which is potentially a compliance issue, not a use impairment." This appears to be a spatial requirement for data to be considered for assessment.

- The EPA understands that the Monitoring Book is intended to be a manual for PADEP staff to use when collecting data and that PADEP invests significant resources to collect data necessary to make assessment decisions. The EPA also notes that regardless of the purpose of data collection, all readily available data and information is required to be used unless a technical, science-based rationale is provided.
- The EPA requests that PADEP provide examples, if they are available, where some data is available, but an assessment decision is not made because Monitoring Book requirements (like those noted in the above bullets) were not met. This will help the EPA understand how the various protocols outlined in both the Monitoring Book and the Assessment Book are applied to assessment decisions.

Response:

It is correct that DEP assessment methodology recommends no minimum data requirements to make an assessment. This is specifically stated in assessment methodology and implemented in the assessment program to be compliant with the federal requirements related to all existing and readily available information. To establish appropriate representativeness and create defensible assessments, the Monitoring Book does describe some data collection requirements. It is important to note that the Monitoring Book is part of larger conceptual framework that DEP uses to collect quality data for multiple of objectives. One objective is to assess protected uses. Other objectives include existing and designated use evaluations, cause and effect surveys, compliance monitoring, point of first use evaluations, protocol and method development, site-specific criteria development, and Water Quality Network monitoring. These requirements are necessary for several of these additional objectives, but also serve as data goals to ensure that assessment decisions can be defended, because DEP uses assessment information to directly make permitting decisions, which are appealable actions. It can be true that DEP both evaluates all existing and readily available information while also setting data standards for making strong assessments. DEP will continue to share data and reports with EPA staff to facilitate EPA's understanding of Pennsylvania's monitoring and assessment program.