



OFFICE OF WATER PROGRAMS

BUREAU OF CLEAN WATER

**RESPONSE DOCUMENT TO COMMENTS RECEIVED DURING PUBLIC
PARTICIPATION OF THE 2018 PENNSYLVANIA INTEGRATED WATER QUALITY
MONITORING AND ASSESSMENT REPORT
(INTEGRATED REPORT)
CLEAN WATER ACT
SECTION 303(d) LIST AND 305(b) REPORT**

2019

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Comment:

“EPA commends PADEP on the interactive, digital IR that was developed for the 2018 reporting cycle. The new web-based format provides the public with information in an easy to understand format and provides greater transparency to PADEP’s assessment decisions.”

Response:

Pennsylvania DEP’s 2018 Integrated Report is the first Integrated Report that has been created in an entirely interactive format by any state in the country. DEP appreciates this comment as it demonstrates acknowledgement of the enhanced transparency and usability of this report for the public.

Comment:

“EPA acknowledges PADEP’s decision to list the Susquehanna River from the confluence of the Juniata River to the Route 462 bridge near Columbia and the Juniata River from the confluence of the Raystown Branch to the mouth. EPA recognizes the significant amount of resources the Department dedicated to investigating small mouth bass health issues since 2012. EPA supports PADEP’s future plans to investigate potential sources and additional causes of these impairments.”

Response:

DEP has invested an unprecedented amount of resources into monitoring and assessing the Susquehanna River. This extensive work has led to the development of two new assessment methods, which were subsequently used to inform assessment determinations for large portions of the Juniata and Susquehanna rivers. DEP greatly appreciates EPA’s acknowledgement of this extraordinary effort. DEP will continue to work diligently to assess the remaining portions of these rivers and to investigate potential sources and additional causes of these impairments.

Comment:

“EPA encourages PADEP to evaluate whether any surface waters are not meeting public water supply use and/or any applicable narrative criteria due to negative drinking water impacts from elevated nutrient levels (e.g., nitrates) and/or associated taste and odor issues. As noted in EPA’s 2002 Consolidated Assessment and Listing Methodology, States have discretion to list waters as impaired for public water supply use where additional treatment beyond conventional treatment is required. EPA encourages PADEP to consider implementing this practice, as it further supports drinking water source protection. EPA also suggests that PADEP contact drinking water utilities that withdraw surface water as potential sources of water quality monitoring data during IR data requests.”

Response:

A review of water suppliers that utilize additional treatment beyond conventional treatment documented that nearly all surface water suppliers are providing treatment

aligned with funding incentives. Monitoring of raw water at water supply intakes resulted in nearly universal attainment of numeric potable water supply (PWS) water quality criteria; as a result, DEP has elected not to list PWS impairments where water suppliers employ advanced treatment.

DEP ceased directly contacting water suppliers for purposes of the Integrated Report after previous efforts resulted in a lack of responses from all water suppliers except the Chester Water Authority and the Philadelphia Water Department. DEP still encourages all water suppliers to submit any existing and readily available information during data solicitation periods for Integrated Reports. Any pertinent information received from water suppliers will be used to inform assessment determinations for DEP's 2020 Integrated Report.

Comment:

"EPA appreciates PADEP's continued cooperation updating EPA's ATTAINS database with Pennsylvania assessment data. PADEP staff have put forth considerable effort to provide EPA and the public with the most up to date assessment information."

Response:

To date, DEP has uploaded 216,207 unique waterbodies with assessment information to the ATTAINS database. DEP is very proud of this accomplishment and appreciates EPA's acknowledgement. DEP also acknowledges there is additional work to be completed to provide EPA and the public with the most complete and accurate data possible. DEP looks forward to working with EPA to achieve the goals set for ATTAINS.

Comment:

The U.S. Environmental Protection Agency (EPA) Region III is providing comments related to specific impaired waterbody segments in the enclosure. (Spreadsheet found in Appendix A)

Response:

Please see Appendix A to this comment and response document.

CHESAPEAKE BAY FOUNDATION

Comment:

"The 2018 draft Report is a valuable tool that CBF uses to evaluate, research and assess the status of local waters which impact the overall restoration of the Chesapeake Bay. We appreciate the intricate interface that was created to make the draft Report more interactive and comprehensive. Having the data in this format is a bit more digestible. However, the draft Report and details are only as good as what is accessible and what a user can readily extrapolate. With some careful refining CBF opines that the draft Report could be even more valuable."

And

“In general, the new format of the Draft Report is well-done and has the potential to be more informative than previous Integrated Water Quality Reports. The above recommendations provide more attention to a general user’s need. If revised with this focus in mind the Report will become an extremely useful resource.”

Response:

The 2018 Integrated Report marks a significant change from previous reports by moving to a new digital and fully interactive format. This offers the ability to convey tremendous amounts of information in a way that is much easier to understand. DEP greatly appreciates this positive feedback and will work to incorporate these comments into future iterations of the Integrated Report to provide users an even better experience.

Comment:

“The draft Report supplies a lot of information, but there still seems to be information that is not readily accessible. For example, in the Introduction there should be a narrative summary of the Report that gives pertinent information (such as new number of assessed streams, number of streams that have changed in status, total number of impaired streams, total number of restored streams, etc.). This information may be figured out by going through the multiple interactive maps and categories within the draft Report but is not readily accessible.”

Response:

DEP will evaluate some of these recommendations for future Integrated Reports. DEP recommends evaluating the Section 305(b) interactive charts to find statistics about the use attainment or impairment status for the four main protected water uses in Pennsylvania.

Comment:

“In the section, Pennsylvania Water Resources, a user has access to maps of all the streams, rivers, lakes, wetlands, etc. in the state. However, these maps do not allow for a query of any specific stream, river, etc. Queries will lead the user to a location near the water, but not to the whole waterbody. The same query flaw applies to watersheds/basins (such as Delaware River watershed, Chesapeake Bay watershed, etc.). It is recommended that the draft Report have a master map which allows a user to query for any stream, river, or lake, and be able to isolate basins/watersheds. Additionally, this interactive map should also have the status clearly defined for that waterbody along with supporting information such as impairment source and cause, etc. Without having direct access to this data (or knowledge of the status), a user must go through each status/Category map and conduct the query.”

And

“Further, some of the data and queries are quite cumbersome. For example, trying to ascertain the total number of impaired stream miles, by a specific source, either within the whole state or by specific basins/watersheds is possible, but it requires having GIS experience and even with that expertise it is both time-consuming and difficult. Other flaws are with isolating watersheds/basins, querying impairment sources (without having

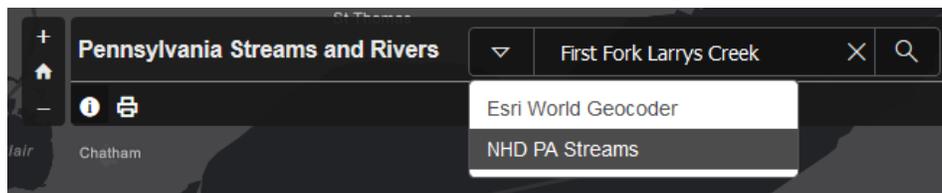
to first select an assessed use) or isolating cause of impairment and searching for impairment status without previous knowledge (currently one must already know this information to find the appropriate Category map to use).

There are additional issues with regards to the individual impairment categories. Within, the spatial data, the way individual impairment source categories are combined for stream reaches makes it impossible to query based on a single impairment source. Given the various permutations of impairment sources, there are 1,199 unique impairment source values, which is unwieldy for analysis. There is also an additional problem of consistency within the combined fields. Likely, in order to fit all of the data into a single field, certain values were truncated. This inconsistency further complicates matters. The way these values are included in the data needs to be reconceptualized as the present configuration is extremely difficult to use.”

There are also some characteristics that make the maps awkward or not intuitive to the user. For example, a user must zoom in closely before being able to view the impaired status. This makes it impossible for the user to view and/or analyze waterbodies of a certain status on a broader scale (basins/watersheds). Another awkward feature is that within the Integrated Report Viewer to reset a map the user must reload the webpage.”

Response:

The mapping available in the 2018 Integrated Report provides the ability to search for specific waterbodies by name when the dropdown menu is opened and the specific layer is selected (e.g., “NHD PA Streams” in the photo below).



It is critical to note that the [main webpage](#) for the 2018 Integrated Report provides an advanced mapping application called the 2018 Integrated Report Viewer. This webpage notes that, “DEP has also created the 2018 Integrated Report Viewer, which provides enhanced search capabilities and export functions.” To facilitate data analyses, the Integrated Report Viewer also allows users to download data in a format that is not truncated.

Within the Integrated Report, the “Protected Uses and Categories” section states that, “A fully interactive mapping application with advanced search and download features is also available with DEP’s Integrated Report Viewer.” This sentence provides a direct link to the viewer resource. The 2018 Integrated Report restates and links to this important resource two additional times. DEP will take all user comments into consideration in continually enhancing the accessibility of the Integrated Report.

Comment:

“Another missing feature is a direct link to an approved TMDL for waters that are impaired with a TMDL (for example, allow a user to be able to click on a water segment or a data table within the viewer that will then open the applicable TMDL document).”

Response:

DEP does not currently have this ability but agrees that it would be a useful feature and will work to provide this resource in the future. This feature is also anticipated in EPA’s latest version of “How’s My Waterway”, which will be released in the near future. Currently, DEP provides the public the ability to view TMDL documents created by DEP on the TMDL [website](#). A link to DEP’s TMDL website is found in the report under the Section 305(b) tab, Restoration Programs. If you click on the program description for TMDLs, there is a direct link to Pennsylvania’s approved TMDLs at the end of the program description document.

Comment:

“Finally, some of the graphs that are displayed within the draft Report do not lead the user to the specific data sets. Some examples are with the DEP Data Overview bar graph, the Stream Assessment Status chart and Publicly Owned Significant Lake Assessment Status chart. It is recommended that the user have access to the data behind the graphs and charts.”

And

“Further it’s easy for a user to miss that most of the charts and graphs are, in fact, interactive. One example is with the DEP Data Overview bar graphs, unless the user already knows to click on the small circles of “data type” (such as biological data, chemical data and physical data) to isolate the bar graphs then it is not readily understood to be an interactive graph. An explanation somewhere within the draft Report would be helpful to users to know how to make the graphs, charts, etc. interactive.”

Response:

The interactive charts and graphs were designed to provide users with the ability to access the data behind the charts and graphs. DEP will take note of accessibility comments for the 2020 Integrated Report. Also, the 2018 Integrated Water Quality Monitoring and Assessment Report Video Overview, made publicly available on the 2018 Integrated Report [website](#) and on [YouTube](#), notes that the data behind the interactive charts and graphs can be downloaded. This video was part of the communication outreach effort during the initial release of the draft 2018 Integrated Report.

Comment:

“The draft Report provides ample information, but it is not always intuitive to the user. The headings alone are in EPA/regulatory language which is not easily understood by

the average user and are not specific to PA. It is recommended to use laymen and/or PA-specific terminology.”

Response:

The Integrated Report is designed to follow EPA guidance and regulation, which necessitates using certain regulatory language. DEP made every effort to explain this regulatory language throughout the report to facilitate public understanding. This new format conveys tremendous amounts of water quality data in a way that is much easier for the public to understand than in the past.

Comment:

“With regards to the different tables through the draft Report, further explanations would be helpful to the users. For example, in the 2016 to 2018 Changes Table, it recommended that a narrative page accompany the table to describe the fields listed. The narrative page would help the user interpret the data and detect the waterbodies that experienced changes. A descriptive narrative would be a valuable tool for all the tables within the draft Report. Another example would be to have a chart accompany the Lake Trophic Status map to allow a user to better quantify the number of lakes within a certain geographic area at different trophic levels.”

Response:

DEP will consider adding small narratives in future reports to aid in public understanding. DEP provided a chart to accompany the Lake Trophic Status map within Section 305(b). Additionally, descriptive statistics are easily found when the user hovers over the Lake Trophic Status chart, or if the user downloads the data behind the chart as previously suggested.

DELAWARE RIVERKEEPER NETWORK

Comment:

“Delaware Riverkeeper Network welcomes the integration of interactive mapping tools with the integrated listing report to make these important Clean Water Act requirements more transparent to the public. This interactive mapping approach appears to be a way for the public to better navigate and review lists spatially as compared to past methods and these methods should be encouraged in other aspects of public comment and review by the agencies. These tools and measures can assist the public in its review and make the agency listing easier to navigate and transparent to facilitate comment from the local watershed communities in the Commonwealth. However, there are definite needed improvements to this current interactive mapping that have been put on the record by colleagues who have navigated the new system closely for user friendly conditions and DRN would encourage review of those specific user points as the Department continues refining this online tool in the future. In our own cursory review of the online tool, DRN suggests:

The addition of tabular components by watershed or HUC and stream segment could help review large areas or watersheds at a glance. Designated uses of each stream and

when the stream was last assessed by each parameter are some key listings that could be part of this tabular output which appears to be missing in the current format.

General definitions of terms, summary information for the state, and narrative on background and applicability added to the online system could assist with public understanding and input of the integrated list report.

It is important to ensure that Pennsylvanian's who do not have access to computers or high speed internet also have a method to review the Integrated list. There are still many people who do not have the ability to navigate these new technologies and as part of the public process those constituencies need to be able to have options that are not web-based."

Response:

DEP appreciates this positive feedback and will work to incorporate several of these comments in future Integrated Reports to provide an even better user experience. The Integrated Report is designed to follow EPA guidance and regulation, which necessitates using certain regulatory language. DEP made every effort to explain this regulatory language throughout the report to facilitate public understanding.

The 2018 Integrated Report was specifically designed to accommodate the use of computers, cellphones, and tablets. Most Pennsylvanians can access local public libraries, coffee shops, restaurants, shopping malls, and other public buildings where they can access high-speed internet free of charge with or without owning a device. If members of the public are still not able to access the 2018 Integrated Report, DEP designed the 2018 Integrated Report to be printed in its entirety and will provide those accommodations at request.

Comment:

"Some of the tributaries in the Delaware Watershed are now listed as "impaired reassessed as attaining uses" but there appears to be no justification or rationale provided on how that determination was attained and the stream improved. By providing more information on those delistings, the Department would be more transparent and gain greater public confidence that the process of delisting was appropriate."

Response:

DEP has added narrative rationale with additional details for the 2018 delistings in the "Restored Waters" subsection of the 2018 Integrated Report.

Comment:

"In DRN's integrated use comments submitted to the Department November 26, 2013 we reiterate our concerns on Listing Outstanding Waters as Impaired - Antidegradation - In the Sept 3, 2013 EPA guidance, EPA explains the legal requirement for states to list outstanding waters on the impaired list if data is available that indicates these waters (in PA Exceptional Value and High Quality), have not been protected by DEP despite their outstanding designations and are in fact declining in water quality (40 CFR 130.7(b)(3).

It is critical for our very cleanest streams that DEP promptly list special protection streams that are degrading and prioritize cleaning up these streams to their special protection standards.”

Response:

DEP continues to assess, and will continue to list, impaired Exceptional Value and High Quality waters as part of the Integrated Report process.

Comment:

“On Sept. 3, 2013 US EPA issued guidance applicable to 2014 and future 303(d) listings: <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2014-memo.cfm>. Section 3 of this new guidance is titled “Identifying nutrient-impacted waters for the Section 303(d) list for States without numeric nutrient water quality criteria”. In this new guidance, EPA reiterates its long-standing policy regarding the need to list waters based on conditions inconsistent with narrative WQC and on direct evidence of lack of full support of one or more designated uses. The guidance includes examples of actual state policies regarding such listings.”

Response:

DEP does and will consider evidence that meets quality assurance requirements to assess the attainment of narrative water quality criteria. Additionally, the Eutrophication Cause Determination Method was added as part of DEP’s new 2018 [Assessment Book](#). This new cause determination method serves to identify waters that have over-productive systems and to impair them for eutrophication.

Comment:

“There are still substantial waters listed as Category 3 waters with insufficient or no water quality data available. As indicated in EPA guidance, the DEP should welcome and readily use data from sister agencies and data of known quality from the environmental community for impairment listing purposes to ensure timely listing and clean-up of streams. Another important data source could be data from the raw water intake suppliers to assist DEP in determining drinking water health and conditions.”

Response:

Category 3 represents approximately 483 stream miles of the roughly 85,000 total streams miles in Pennsylvania. This equates to approximately 0.6% of Pennsylvania’s waterways. DEP will work to complete assessments on all waters.

As required by 40 C.F.R. § 130.7(b)(5), each State must assemble and evaluate “all existing and readily available” water quality-related data and information, which “at a minimum,” includes water quality problems that have been reported by local, state, or federal agencies, members of the public, or academic institutions. DEP’s tiered data acceptance policy complies with this regulation and EPA guidance. DEP received and evaluated outside data, which can be viewed in the Data Solicitation Report under the “Listing Data” subsection in Section 303(d) of the Integrated Report.

Comment:

“The Delaware River is an important recreational river that has increasing water users in areas of Philadelphia. DRN submitted comments and data regarding main stem conditions and uses last year as part of the public input but it is not clear from these listings if those data have been considered from what we see in the mapping. The DEP must seriously consider any testimonials from waterbody users (swimmers, fisherpersons, boaters, and other recreationists) regarding the impairment of their enjoyment of specific waters for these purposes, beginning in the 2014 cycle, as designated uses are also, according to EPA regulations, components of state WQS, just like numeric and narrative WQC.”

Response:

DEP’s Data Solicitation Report is found in Section 303(d), within the subsection “Listing Data”. The solicitation report describes all data DEP received as part of the 2018 data solicitation period. DEP invites DRN to continue to submit data through DEP’s [Existing and Readily Available Data webpage](#).

Comment:

“Delaware Riverkeeper Network is inquiring why despite many listings, in the Delaware River watershed, only the Wissahickon Creek and the Swamp Creek are prioritized for restoration.”

Response:

EPA’s “open season” for adding or removing restoration priorities is currently closed. DEP encourages DRN to advocate for specific waters of interest to be added to the list of restoration priorities after EPA’s current vision is completed (i.e., after 2022).

ERIC ASHLEY

Comment:

“Re: Proposed Uses and Categories
An Impairment Source for an Unnamed Tributary to the Little Conestoga Creek is identified as Grazing Related Agriculture (HUC:02050306, Reachcode: 2050306001459). I have no doubt that the stream is impaired, but I have never seen any livestock in this urban watershed in my lifetime (50yrs).

The impairment sources of other nearby reaches (Reachcodes: 2050306004671, 2050306004657, 2050306000198, 2050306004639, and 20506000196) also appear to be misidentified as Impaired by Grazing Related Agriculture. Based on a review of this limited area (about 25 sq. miles), I found over 5 miles of stream that may have misidentified impairment sources. I suggest that it may be worthwhile to re-evaluate the impairment sources identified in other similar urbanized areas.”

Response:

DEP appreciates this comment as it demonstrates the enhanced transparency and usability of this report for the public. The referenced reach codes, along with most of the mainstem of Little Conestoga Creek, were listed as impaired for aquatic life in 2002 for Grazing Related Agriculture-Nutrients, Grazing Related Agriculture-Siltation, and Urban Runoff/Storm Sewers-Cause Unknown. This assessment represents a larger spatial determination that may not be applicable to every tributary. DEP will reevaluate the sources and causes of impairment in the watershed when the stream is reassessed.

PENNFUTURE**Comment:**

“PennFuture commends the Department for the impressive presentation of the information in its 2018 Draft Integrated Report. The interactive mapping functions are a significant advancement from information presentation in previous Integrated Reports. The new format makes citizen and community engagement with otherwise dense and confusing material much more approachable. We believe this is an important element of the Integrated Report process and hope that this new format results in increased public engagement.”

Response:

DEP takes pride in this groundbreaking accomplishment and greatly appreciates this positive feedback.

Comment:

“Each water body’s designated use should be included in the information available and presented. Identification of the designated use—the use that must be protected—of each water would make the Department’s assessment more valuable by allowing for the public to more easily obtain all relevant information.”

Response:

There are challenges to adding designated use information to this Integrated Report. One such challenge is that designated uses may change during the Integrated Report process. That is the main reason that DEP consolidates assessment reporting to four main uses (i.e., Aquatic Life, Recreation, Potable Water Supply, Fish Consumption) rather than reporting on more specific protected uses (e.g., Cold Water Fishes, Irrigation, Water Contact Sports).

DEP does submit designated use information along with assessment determinations to EPA’s ATTAINS database. When EPA releases the newest version of “How’s My Waterway”, the public should have access to specific designated uses. Designated and existing use data are also available on DEP’s [eMapPA](#) website.

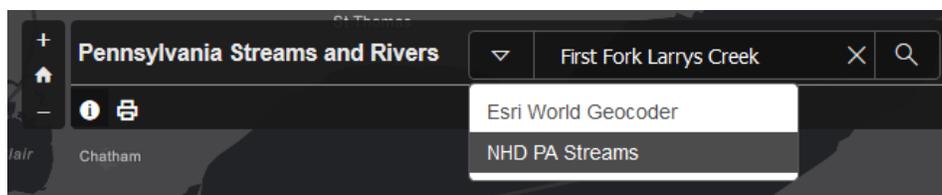
Comment:

“Search function should be keyed to Pennsylvania waters. For example, searching the name of a particular water body or segment should identify that segment in

Pennsylvania (and not, for example, take one to a location in a different country). The Department might also consider including the ability to search by the United States Geological Survey assigned hydrological unit code (HUC) for particular waters.”

Response:

The mapping available in the Integrated Report provides the ability to search for specific waterbodies by name when the dropdown menu is opened, and the specific layer is selected (e.g., “NHD PA Streams” in the photo below).



Also, the [main webpage](#) for the 2018 Integrated Report provides an advanced mapping application called the 2018 Integrated Report Viewer. This webpage notes that, “DEP has also created the 2018 Integrated Report Viewer, which provides enhanced search capabilities and export functions.” To facilitate data analyses, the Integrated Report Viewer also allows users to download data in a format that is not truncated.

Within the Integrated Report, the “Protected Uses and Categories” section states that, “A fully interactive mapping application with advanced search and download features is also available with DEP’s Integrated Report Viewer.” This sentence provides the direct link to the viewer resource. The 2018 Integrated Report restates and links to this important resource two additional times.

Comment:

“A list of standard terms used and intended definitions should be provided. For example, to describe the source of pollution resulting from urban stormwater impacts, the 2018 Draft Integrated Report uses terms such as “urban runoff/storm sewers,” “combined sewer overflow,” and “municipal point source.” These terms may, or may not, all refer to the same sources of pollutants. The final Integrated Report should use common verbiage throughout and define those terms in a centralized location.”

Response:

Terminology is specific to EPA’s reporting requirements. DEP recently added over 480 causes and 140 sources to its internal database at EPA’s request. Most of these new sources and causes are more specific and self-explanatory; however, DEP can provide elaboration on request. In addition, Appendix A of DEP’s [Assessment Book](#) provides lists of all EPA Sources and Causes with Cause Contexts.

Comment:

“Include the date of last assessment for each parameter in the information available about each stream.”

Response:

The approximate date of last assessment can be extrapolated from the first 8 numbers in the GIS Key field, which is found on all the category map pop-ups and in every category spreadsheet. The date-order of these numbers are as follows: YYYYMMDD.

Comment:

“Provide a single reviewable document containing the entirety of the Integrated Report. While we appreciated the interactive usability of the new format, we find it difficult to review and refer to specific elements of the Integrated Reports to provide the Department with comments. In addition, a solely internet-based Integrated Report makes it nearly impossible for the millions of Pennsylvanians who do not have access to high-speed broadband internet to access the information.”

Response:

A single reviewable document containing the entirety of the Integrated Report can be provided upon request. However, most Pennsylvanians would not find this resource useful. In the past, DEP received many comments that the paper document was not usable because of its overwhelming complexity and size. This is the main reason DEP shifted to a digital and interactive Integrated Report for 2018. In addition, millions of Pennsylvanians have access to high-speed internet through wireless cellphone providers. The 2018 Integrated Report was specifically designed to accommodate the use of computers, cellphones, and tablets. Also, most Pennsylvanians can access local public libraries, coffee shops, restaurants, shopping malls, and other public buildings where they can access high-speed internet free of charge with or without owning a device. If members of the public are not able to access the 2018 Integrated Report, DEP will provide accommodations at request.

Comment:

“For the purpose of determining water quality-limited segments, the water quality applicable to such waters refer to those water quality standards established under section 303 of the Clean Water Act—taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements. In establishing water quality standards, Pennsylvania included the groups of use of Aquatic Life, Water Supply, Recreation and Fish Consumption, Special Protection, and Other. Within each of these generalized groups, however, specific “[w]ater uses which shall be protected” are set forth. For example, the group of Aquatic Life includes the protected uses of: Cold Water Fishes (CWF), Warm Water Fishes (WWF), Migratory Fishes (MF), and Trout Stocking (TSF). Each of these water uses requires different in-stream water quality elements in order to be satisfactorily protected. Yet, the Department’s 2018 Draft Integrated Report only provides information as to the assessment and attainment of the protected uses of the general groups of Aquatic Life, Water Supply, Recreation, and Fishing without further detail. Thus, the 2018 Draft Integrated Report bundles important distinctions among protected uses into overarching categories. By doing so, important information about the precise water quality status is lost.

For example, the 2018 Draft Integrated Report lists the mainstem of the Delaware River from mile marker 81.8 to 108.4 on Category 2 as attaining its “recreational use”. However, this section of the Delaware is only designated for secondary contact recreation only. It is unclear whether the 2018 Draft Integrated Report is claiming that this segment meets the secondary contact recreation standard articulated in the Delaware River Basin Commission regulations or the more protective (primary contact) standard articulated in the Pennsylvania regulations for water contact.

This lack of specificity and comprehensive assessment of all of Pennsylvania’s protected uses becomes particularly significant when examining Special Protection waters, for which no distinguishing information is provided within the 2018 Draft Integrated Report. Special Protection waters include both High Quality (HQ) and Exceptional Value (EV) streams. These waters are subject to additional antidegradation requirements required by the Clean Water Act and articulated in Pennsylvania’s regulations. For the most part, these waters were assigned this status based on Index of Biotic Integrity (IBI) scores. The Department’s 2018 Assessment Methodology for Rivers and Streams notes that the “assessment decision process is somewhat different” for HQ and EV waters—the Department will protect special protection streams based on a baseline IBI score determined by previous surveys. However, since the 2018 Draft Integrated Report does not provide information about a water’s Special Protection designation, a reviewer is left without an understanding of whether a particular HQ or EV water is maintaining the water quality necessary to protect those important uses.”

Response:

DEP assesses all waters according to their designated uses. Different uses may require different assessment methods as documented in DEP’s Assessment Book. Designated uses may also change during the Integrated Report process. That is the main reason that DEP consolidates assessment reporting to four main uses (i.e., Aquatic Life, Recreation, Potable Water Supply, and Fish Consumption) rather than reporting on more specific protected uses (e.g., Cold Water Fishes, Irrigation, Water Contact Sports).

DEP does submit designated use information along with assessment determination to EPA’s ATTAINS database. When EPA releases the newest version of “How’s My Waterway”, the public should have access to specific designated uses. Designated use data are also available on DEP’s [eMapPA](#) website.

Comment:

“In 2016, PennFuture commented on the Department’s 2016 Integrated Report that “[e]ither all of the segments listed in Category 5alt should also be listed in Category 5, or the final Integrated Report should state: ‘The combination of Category 5 and Category 5alt constitutes the Section 303(d) list EPA will approve or disapprove under the Clean Water Act.’” We appreciated that the Department has followed PennFuture’s recommendation by noting in comments accompanying the interactive maps that: “Category 5 and 5alt are the ‘list’ of impaired waters (i.e., 303(d) list) that require

development of a Total Maximum Daily Load (TMDL).” However, merely noting this fact on a map is not enough to fully clarify the necessary information.

We believe that the Department should do more to make clear that Category 5alt waters still require the development of a TMDL and are included in the 303(d) list. In EPA’s memorandum concerning the 2016 Integrated Report, it noted that “Impaired waters on the CWA 303(d) list for which a State develops and pursues an alternative restoration approach shall remain on the CWA 303(d) list (i.e., Category 5) and still require TMDLs until [water quality standards] are achieved.”

As we did in 2016, we recommend that the Department follow EPA’s advice and include both Category 5 and 5alt as constituting the 303(d) list of impaired waters by either ensuring that all Category 5alt waters are also listed on Category 5 or including in the description of Category 5alt that these waters still require the development of a TMDL, but that an alternative restoration plan is contemplated for them. We recommend the Department take the first of these paths as it would provide clear information regarding which waters require the development of a TMDL. For example, by taking this approach, waters such as Fishing Creek (HUC 02050306), which appears on the Category 5alt list, should also be included in on the Category 5 list (it currently is not). Failing to include Fishing Creek on the Category 5 list could result in some misunderstanding of whether the Fishing Creek requires the development of a TMDL pursuant to 40 C.F.R. 130.7 or not (to be clear, it does). This is the clearest way to ensure that there is no confusion that Category 5alt waters are on the 303(d) list. Alternatively, however, should the Department choose the second proposed path of including the need for the development of a TMDL in the description for Category 5alt, PennFuture suggests the Department include the following changes to the description of Category 5alt waters (additions in italics):

Description: Waters impaired for one or more uses by a pollutant that require the development of a TMDL and are selected for alternative restoration implementation.

PennFuture appreciates the attempt by the Department in the 2018 Draft Integrated Report to explain that Category 5 and Category 5alt waters constitute the 303(d) list of impaired waters, but request that the Department make additional changes to make it clear that both Category 5 and Category 5alt waters continue to require the development of a TMDL.”

Response:

DEP mentions that Category 5 and Category 5alt are the “list” of impaired waters (i.e., the 303(d) list) that require development of a TMDL several times to try to make this point clear: the first instance is in the “Protected Uses and Categories” subsection; the second instance is in the “303(d) - CATEGORY 5alt” subsection where it clearly states, “Category 5alt still requires that a TMDL be completed...”; and the third instance is in the Restoration Priorities Table in the “Restoration Priorities” subsection (the table can be accessed by clicking on the “Restoration Priority Watersheds” box). DEP will consider adding additional language to clarify this further.

Comment:

“The Lower Schuylkill Should Be Listed as Impaired for Aquatic Life and Assessed for Recreational Use. The Lower Schuylkill River (HUC 02040203) is listed in Category 2 (“Waters where some, but not all uses are met. Attainment status of remaining uses may be unknown because data are insufficient to categorize the water or it may be impaired”). The 2018 Draft Integrated Report notes that the assessed status of this portion of the Schuylkill River through Philadelphia is approved and that it attains its “aquatic life” designated use.

This is a highly urbanized portion of the River that includes numerous combined sewer overflow (CSO) discharge points, industrial dischargers, and overland stormwater flow – all contributing pollution to the River. Furthermore, the tidal effect on the Lower Schuylkill is likely to compound pollutional event impacts on aquatic life. We also note that segments of the Schuylkill just upstream, in areas with far fewer CSO discharge points, have been assessed as not meeting their aquatic life designated use. Therefore, we find it hard to believe that the Lower Schuylkill River is in attainment for its “aquatic life” designation. PennFuture requests the Department reevaluate and provide additional explanation as to how this segment of the Schuylkill River attains its aquatic life use.

Additionally, although portions of the Schuylkill River, particularly above the Fairmont Dam, have historically been used for recreation, the Lower Schuylkill River is increasingly becoming accessible to and accessed by Philadelphians wanting to be on and near the water. For example, Bartram’s Garden, located on the tidal portion of the Schuylkill below the Fairmount Dam, is a place where people can access the Lower Schuylkill River all the way to its confluence with the Delaware River—for boating, fishing, and exploring. During the 2018 boating season (the last weekend in April through the last weekend in October), Bartram’s hosted about 4600 total boaters and 310 fishing program participants. These water recreators should be protected. However, despite this increase in exposure of Pennsylvanians to the Schuylkill River below the Fairmont Dam, there is no indication that this portion of the River was assessed for its recreational use. Consequently, the Department should prioritize a recreational use assessment for the Lower Schuylkill River and seek input and information from groups, like Bartram’s Garden, situated on the River and who provide access to recreational opportunities on the River.

Response:

Until 2018, DEP did not have an updated biological assessment method for rivers with watersheds larger than 1000 square miles. DEP will work to reassess the lower Schuylkill River for aquatic life in the future.

The Water Contact Sports (WC) recreation use for the tidal portions of the lower Delaware River and Estuary, as referenced in 25 Pa. Code §§ 93.9e and 93.9g, are currently deleted for river miles 108.4 to 81.8. DEP has committed to initiating an effort with the Delaware River Basin Commission (DRBC) and the Delaware River Basin Compact signatories to reevaluate the applicable recreational use for the tidal portion of the Delaware River and Estuary. An updated recommendation regarding the WC use for

these portions of the Delaware River and Estuary will be considered in the next triennial review of water quality standards, following the outcome of this collaboration with DRBC and the Compact signatories. DEP will include the lower Schuylkill River in this use evaluation and will advocate that input and information from groups like Bartram's Garden and others who provide access to recreational opportunities on the river also be included.

Comment:

The majority of White Clay Creek (HUC 02040205) watershed was designated as a Wild and Scenic River on October 24, 2000.¹⁶ In 2014, through the Wild and Scenic River Expansion Act, approximately nine additional miles of the White Clay Creek and its tributaries were added to the Wild and Scenic system, making it the first National Wild and Scenic River protected in its entirety. The Wild and Scenic Rivers Act seeks to preserve certain rivers' outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

Unfortunately, this designation, and the protection it affords, has not prevented the White Clay Creek from the impacts of pollution. Various segments of the White Clay Creek are listed as impaired for Aquatic Life due to Organic Enrichment/Low D.O. and Nutrients. The 2018 Draft Integrated Report primarily cites agriculture as the cause of these impairments. In 2006, the Christina River Basin TMDL was designed to address this impairment and restore the White Clay Creek and its neighboring waters to a healthy condition. However, in the intervening years, significant land use changes within the Basin have occurred. The area is increasingly subject to the pressures of development and urbanization. The Department should evaluate the impact of these land use changes on the TMDL allocations and adjust as necessary.

Response:

DEP continually works to reassess all Pennsylvania waters to provide the most accurate and timely determinations possible. New sources of impacts on water quality will be evaluated when White Clay Creek is reassessed.

Comment:

In 2016, PennFuture commented that the Wissahickon Creek (HUC 02040203) should be included in the Integrated Report's Category 5 waters because of its impairment of its aquatic life use, in addition to Category 5alt. In the 2018 Draft Integrated Report, the Wissahickon is listed in Category 5, but this time not in Category 5alt. For the reasons set forth below, the Department should list the Wissahickon Creek in both Category 5 and Category 5alt.

The Wissahickon Creek has been impaired for some time. In October 2003, EPA established TMDLs for the pollutants ammonia nitrogen, nitrate-nitrite, orthophosphate, and carbonaceous biochemical oxygen demand, to support restoration of the aquatic life use impairment in the Wissahickon Creek Watershed caused by nutrients (the "2003 Nutrient TMDL"). Although the 2003 Nutrient TMDL addressed dissolved oxygen concentrations, it did not adequately address other negative nutrient-based impacts on

aquatic life uses. Therefore, the stream segments remain impaired and on the state's impaired waters list, requiring an additional TMDL.

In 2015, EPA published a draft TMDL for the Wissahickon for phosphorus calling for significant reductions from major dischargers, such as wastewater treatment plants. Seeking a more palatable solution, 16 municipalities and 4 wastewater treatment plants, agreed to undertake a collaborative process to craft an alternative to EPA's draft phosphorus TMDL. This multi-municipal collaboration as an alternative to a TMDL is currently underway and making progress towards a mutually-agreeable solution. Therefore, for aquatic life, the Wissahickon will soon have an alternative restoration implementation plan and should be included on both Category 5 and 5alt.

Response:

The 2003 TMDL addressed nutrient-related pollutants as stated in this comment. The 2003 TMDL currently and correctly places the causes of impairment in Category 4a, not Category 5 which is only used when a TMDL is required but has not yet been developed. DEP has added nutrients to Category 5alt in the acknowledgement that this pollutant will be evaluated further as a restoration alternative for the Wissahickon Creek TMDL.

Comment:

"The listing of Frankford Creek (HUC 02040202) demonstrates confusion within the 2018 Draft Integrated Report. Frankford Creek is included in the 2018 Draft Integrated Report in Categories 4b ("waters impaired for one or more uses, not needing a TMDL, because uses are expected to be attained within a reasonable time frame"), 4c ("waters impaired for one or more uses, not needing a TMDL, because the impairment is not caused by a pollutant"), and 5 ("waters impaired for one or more pollutant that require the development of a TMDL"). In each of these categories the source of the pollution appears to be related to stormwater and the urban density of the area. Yet, in two instances (Categories 4b and 4c), no TMDL needs to be developed and, in the third instance (Category 5), Frankford Creek is listed as a medium priority for the development of a TMDL. These multiple listings can only leave one confused about the path forward for Frankford Creek.

The inclusion of Frankford Creek in Category 5 obviates the need for its inclusion in Category 4b. For both Categories Frankford Creek's listed cause of the impairment is "organic enrichment/low D.O." If this cause of impairment needs to be addressed through the development of a TMDL, as defined by its inclusion in Category 5, it is improperly listed in Category 4b, which asserts that no TMDL is necessary.

Furthermore, PennFuture questions the use of Category 4b as applied to Frankford Creek. Category 4b excludes impaired waters from a state's 303(d) list if "[o]ther pollution control requirements (e.g., best management practices) required by local, State, or Federal authority" are stringent enough to implement applicable water quality standards within a reasonable period of time. In order for a water to qualify for inclusion

within Category 4b and thus not Category 5, the state must demonstrate adequate support for the decision addressing the following six elements:

1. Identification of segment and statement of problem causing the impairment;
2. Description of pollution controls and how they will achieve water quality standards;
3. An estimate or projection of the time when WQS will be met;
4. Schedule for implementing pollution controls;
5. Monitoring plan to track effectiveness of pollution controls; and
6. Commitment to revise pollution controls, as necessary.

The 2018 Draft Integrated Report does not provide support or explanation to demonstrate that Frankford Creek is properly included in Category 4b. As a comment to the Creek's listing on Category 4b, the Department notes that it "has signed a CO&A with PWD for a CSO Longterm Control strategy which, in-part, provides for correction of this impairment." This does not provide sufficient information on which to determine if the six elements listed above have been appropriately satisfied. Although this information can be as a stand-alone document, if Frankford Creek remains in Category 4b, the final 2018 Integrated Report should reference the appropriate supporting documentation that provides the required information and include the reasonable timeframe by which the Department expects water uses to be attained."

Response:

A justification that complies with the six required elements in both the [Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303\(d\), 305\(b\) and 314 of the Clean Water Act](#) and [Information Concerning 2008 Clean Water Act Sections 303\(d\), 305\(b\), and 314 Integrated Reporting and Listing Decisions](#) was included with the official submission of DEP's 2012 Integrated Report to EPA and is now part of the public record. DEP will also submit the Category 4b justification document to EPA's ATTAINS database for additional public transparency. DEP believes the Frankford Creek impairment listing for organic enrichment/low DO is correctly included in Category 4b based on DEP's Consent Order and Agreement (CO&A) – currently in EPA's possession – with the City of Philadelphia that establishes an enforceable schedule, milestones, and end date for the implementation and completion of the Long-Term Control Plan (LTCP). In accordance with Pennsylvania's Combined Sewer Overflow Policy, both the LTCP and CO&A require compliance with state water-quality based standards. Additionally, based on Philadelphia's financial capability assessment for LTCP implementation, DEP believes that the 25-year schedule provided by the CO&A is reasonable.

Cheltenham Township has chronic sanitary sewer overflows that discharge to Frankford Creek and that contribute to the organic enrichment/low DO documented in the Philadelphia Water Department's sonde data. DEP currently does not have a formal agreement with Cheltenham Township to fully address this ongoing pollution, which is why Frankford Creek also appears in Category 5 for organic enrichment/low DO. Therefore, DEP will maintain the Frankford Creek organic enrichment/low DO impairment listing in Category 5 and 4b.

PENNSYLVANIA FISH AND BOAT COMMISSION

Comment:

“The Pennsylvania Fish and Boat Commission (PFBC) appreciates the opportunity to review and comment on the Draft 2018 Pennsylvania Integrated Water Quality Monitoring and Assessment Report.”

Response:

DEP appreciates this comment and looks forward to working with PFBC during future Integrated Reports.

Comment:

“Over the years, the PFBC has been jointly working with the Pennsylvania Department of Environmental Protection (DEP) to evaluate the health and water quality of the Juniata and the Susquehanna River. These rivers are very important resources to the Commonwealth’s anglers, boaters, fish, aquatic species and citizens. It is disappointing to learn that the rivers are both being recommended for listing as impaired for aquatic life use due to high pH. However, we commend DEP for listing them so that the next steps can occur to work towards water quality improvement.”

Response:

DEP, in collaboration with PFBC, has invested a large amount of resources in monitoring the Susquehanna and Juniata rivers. This extensive work has led to the development of two new assessment methods, which were subsequently used to inform assessment determinations for the Juniata and Susquehanna rivers. DEP will work diligently to assess the remaining portions of these rivers and to investigate potential sources and additional causes of these impairments.

Comment:

“Overall, the new fully digital format is extremely helpful and very easy to use. Especially encouraging is the list of impairment delistings found in the Measuring Progress section. We stand ready to assist and work together with the DEP in addressing these water quality issues.”

Response:

DEP appreciates this comment and looks forward to working collaboratively with PFBC in the future to protect Pennsylvania’s water resources.

PENNSYLVANIA SUSTAINABLE FORESTRY INITIATIVE IMPLEMENTATION COMMITTEE

Comment:

“The draft 2018 integrated report mapping application identifies 3.5 miles of unnamed tributaries to Mahantango Creek as being impaired for Aquatic Life by "Silvaculture" (Reachcodes: 2050301002621, 2050301001090, 2050301002621, 2050301002637, 2050301002636, 2050301002636, 2050301002637, 2050301002665, 2050301002654,

2050301001090, 2050301001090, 2050301001090, 2050301002665, 2050301001090). Being otherwise undefined, we assume "Silvaculture" to mean timber harvesting disturbances (on a technical note, the correct spelling should be Silviculture). These stream segments were listed in 1998 and recent aerial photography does not show timber harvesting activity in the area of these watercourses that could be contributing to the current siltation that they are apparently being impaired by. We would request that the "Silvaculture" source be reevaluated for these impaired stream segments. If current on-the-ground conditions do not support "Silvaculture" as the true source of siltation impairment then we would request that a different impairment cause be assigned or that the steam segments be de-listed."

Response:

DEP appreciates this comment as it demonstrates the enhanced transparency and usability of this report for the public. The term "Silvaculture" was corrected in DEP's internal database just after the 2018 Integrated Report was released. The correct spelling will be reflected in the final 2018 Integrated Report. DEP agrees that current aerial photography does not suggest silviculture activities currently exist in the watershed; however, this assessment was conducted over 20 years ago. DEP will reevaluate all sources and causes when Mahantango Creek is reassessed.

RIVER NETWORK

Comment:

"Thank you for the new online format with so many maps. We really appreciate the effort to get more people to look at the data and information you compile and submit to EPA. It would be great if the spreadsheets of the map data could be more easily sorted and scanned to review the waters that people care about most. Perhaps you could hide some of the fields."

Response:

DEP thanks River Network for this comment and the acknowledgement that this report better serves the public. DEP will work to make the spreadsheet headers easier to understand and to reduce the amount of unnecessary information for the 2020 Integrated Report.

Comment:

"The TMDL priority list does not provide the status and timing of all the waters that are in Category 5. Such a list would be helpful in addition to the map you have developed that represents those waters that are the top priorities. Our current work is primarily in the Delaware Basin. There appear to be only two waters in the Delaware on the TMDL priority list – Wissahickon and Swamp Creeks. Is that true? What does priority mean? When are these waters scheduled to be completed? Where would we find the schedule for all the other Delaware tributaries? Searching on the DEP website to see whether the schedule was available there, we were unable to locate a few specific TMDLs. The link said they were unavailable. Is there a page where all the completed TMDLs can be

accessed? If you are successful in increasing the public interest in this biennial exercise, it is important that you support the logical inquiries that may follow.”

Response:

DEP sets TMDL development priority as high, medium, or low in accordance with EPA guidance. High priorities are found within the “Restoration Priorities” subsection of the 2018 Integrated Report. Low priorities are where a restoration alternative plan is currently being developed and are also found within the “Restoration Priorities” subsection of the 2018 Integrated Report. All other waters requiring a TMDL are considered medium priority. Specific waters and their TMDL development priority can be found in the Category 5 spreadsheet. A link to DEP’s TMDL website is found in the report under the Section 305(b) tab, Restoration Programs. If you click on the program description for TMDLs, there is a direct link to Pennsylvania’s approved TMDLs at the end of the program description document. A link is also provided [here](#) for your convenience.

Comment:

“We have discovered that there is a disconnect between designated Aquatic Life Uses and assessment for impairment. There are no assessments for temperature or dissolved oxygen, yet in the Water Quality Standards regulations, the water quality criteria list specific temperatures by month and different levels of dissolved oxygen required to support Cold Water Fishes (CWF), Trout Stocking (TSF) and Warm Water Fishes (WWF). It appears you have chosen to exclusively use your biocriteria assessment. This approach is acceptable and done in other states, however, to do so, you need put the IBI scores that demonstrate support for different designated uses into the water quality criteria and remove temperature and dissolved oxygen distinctions. We have seen the flowchart in the assessment protocol, but those levels need to be in the criteria if you are not going to monitor temperature and dissolved oxygen. In addition, there are many waters in the Delaware that are exceeding temperature criteria for each of the ALUs during the warmest summer months, yet you have no method for reporting impairment of CWF, TSF and WWF separately. If you do not intend to assess support of CWF, TSF and WWF separately, the Water Quality Standards should list only Aquatic Life Uses generally, not all the distinctions. The implications are significant for the permitting process and the attention to thermal loads or oxygen demands.”

Response:

Biological scores are assessment methods used to interpret and evaluate Pennsylvania’s general narrative water quality criteria at 25 Pa. Code § 93.6(a). Therefore, specific IBI scores are not placed into regulation. In addition, DEP can and will assess waters for temperature and dissolved oxygen in appropriate situations. A full list of possible sources and causes DEP can impair a water for can be found in DEP’s 2018 Assessment Book.

Regarding temperature specifically, an aquatic life use assessment – with the exception of qualifying as a High Quality Water as specified at 25 Pa. Code § 93.4b(a)(1) – does

not simply apply and compare temperature criteria in 25 Pa. Code § 93.7, Table 3. Temperature criteria at 25 Pa. Code § 93.7, Table 3 are defined as, “Maximum temperatures in the receiving water body resulting from heated waste sources regulated under Chapters 92a, 96 and other sources where temperature limits are necessary to protect designated and existing uses.” Maximum temperature criteria in 25 Pa. Code § 93.7, Table 3 are provided for defined times of the year and for specific water uses. Temperature criteria in 25 Pa. Code § 93.7 are applied to heated waste sources regulated under 25 Pa. Code Chapters 92a and 96, and apply to other sources when needed to protect designated and existing uses.

An appropriate aquatic life use assessment includes a biological evaluation based on instream flora and fauna to determine impairment of designated uses. Typically, fish community evaluations have the best resolution in characterizing a waterbody’s thermal regime due to the effects of water temperature on fish physiology and distribution patterns.

Comment:

The Lower Schuylkill River appears to be unassessed for Recreational Uses, yet thousands of people are on the water every year at and around Bartram’s Garden through the boating program - 4600 total boaters and 310 fishing program participants during the 2018 season (including before May 1). This reach needs to be assessed to support these uses through upstream and downstream permit renewals (with tidal influences) that could negatively impact them.

Response:

DEP is working diligently to assess the remaining 70% of Pennsylvania waters where Recreation uses apply that do not have assessment determinations.

The Water Contact Sports (WC) recreation use for the tidal portions of the lower Delaware River and Estuary, as referenced in 25 Pa. Code §§ 93.9e and 93.9g are currently deleted for river miles 108.4 to 81.8. DEP has committed to initiating an effort with the Delaware River Basin Commission (DRBC) and the Delaware River Basin Compact signatories to reevaluate the applicable recreational use for the tidal portion of the Delaware River and Estuary. An updated recommendation regarding the WC use for these portions of the Delaware River and Estuary will be considered in the next triennial review of water quality standards, following the outcome of this collaboration with DRBC and the Compact signatories. DEP will include the lower Schuylkill River in this use evaluation and will advocate that input and information from groups like Bartram’s Garden and others who provide access to recreational opportunities on the river also be included.

Comment:

“The Lower Schuylkill River is listed as supporting Aquatic Life Uses below the dam and as impaired above the dam, yet below the dam it is affected by numerous CSOs, compounded by the tidal influences and unlikely to be supporting WWF as designated. This reach needs to be revisited as soon as possible in order to properly be reflected in the overdue permit renewals in the area.”

Response:

Until 2018, DEP did not have an updated biological assessment method for rivers with watersheds larger than 1000 square miles. DEP will work to reassess the lower Schuylkill River for aquatic life in the future.

Comment:

“Tohickon Creek is listed as meeting ALU generally, yet it is designated for CWF. In the Tohickon Report responding to the proposal for EV or HQ designation, DEP has reported temperature monitoring results that do not meet CWF. This water body should be listed as impaired for CWF, NOT proposed for downgrading to TSF until improvements to point source permits in the reach are made and implemented.”

Response:

It is important to recognize the difference between an existing use evaluation, an aquatic life use assessment, and requirements and evaluations that may be necessary to regulate permitted activities (i.e., the application of temperature criteria). These endpoints would utilize much of the same information, but the spatial and legal considerations and implications would differ.

For existing and designated use evaluations, protected uses are applied to surface waters based on the definitions at 25 Pa. Code § 93.3. In addition, 25 Pa. Code § 93.9 states, “Water uses which shall be protected, and upon which the development of water quality criteria shall be based, are set forth...”

Numeric and narrative criteria for pollutants are developed to protect the “protected uses”. Specific and unique criteria (e.g., temperature, pH, dissolved oxygen) have been developed to protect surface waters with certain designated or existing uses (e.g., Cold Water Fishes, Warm Water Fishes, Trout Stocking). Typically, exceedances of criteria as assessed according to DEP assessment methods clearly demonstrate that instream water quality is not meeting the criteria and that additional measures should be implemented to improve water quality.

This is not the case for temperature criteria. An aquatic life use assessment – with the exception of qualifying as a High Quality Water as specified at 25 Pa. Code § 93.4b(a)(1) – does not simply apply and compare temperature criteria in 25 Pa. Code § 93.7, Table 3. Temperature criteria at 25 Pa. Code § 93.7, Table 3 are defined as, “Maximum temperatures in the receiving water body resulting from heated waste sources regulated under Chapters 92a, 96 and other sources where temperature limits

are necessary to protect designated and existing uses.” Maximum temperature criteria in 25 Pa. Code § 93.7, Table 3 are provided for defined times of the year and for specific water uses. Temperature criteria in 25 Pa. Code § 93.7, Table 3 are applied to heated waste sources regulated under 25 Pa. Code Chapters 92a and 96, and apply to other sources when needed to protect designated and existing uses.

An appropriate aquatic life use assessment includes a biological evaluation based on instream flora and fauna to determine and protect the proper designated use. Typically, fish community evaluations have the best resolution in characterizing a waterbody’s thermal regime due to the effects of water temperature on fish physiology and distribution patterns.

APPENDIX A

INT_ASSESSMENT_UNIT_ID.x	HUC8_CODE	OLD_STREAM_NAME	STREAM_NAME	INT_ASSESSMENT_UNIT_ID.y	CHANGE	OLD_CAUSES	EPA COMMENT	DEP REPSONSE
20105	02040105	Tohickon Creek	Tohickon Creek	2167	Impaired reassessed as attaining	Nutrients, Siltation	Please provide a delisting rationale	Segment was assessed in error originally and is not a delisting. Conversed with EPA and agreed this does not need rationale.
21463	02050106	Ackerly Creek	Ackerly Creek	16461	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	New assessment is attaining based on fecal coliform geometric mean of 167 colony forming units/100 mL.
21465	02050106	Kennedy Creek	Kennedy Creek	16552	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	New assessment is attaining based on fecal coliform geometric mean of 155 colony forming units/100 mL.
21465	02050106	South Branch Tunkhannock Creek	South Branch Tunkhannock Creek	16411	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	New assessment is attaining based on fecal coliform geometric means of 51, 53, and 11 colony forming units/100 mL.
21463	02050106	South Branch Tunkhannock Creek	South Branch Tunkhannock Creek	16411	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	New assessment is attaining based on fecal coliform geometric means of 48 and 51 colony forming units/100 mL.
21463	02050106	Ackerly Creek Unnamed To (ID:66404747)	Unnamed Tributary to Ackerly Creek	16461	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	New assessment is attaining based on fecal coliform geometric mean of 167 colony forming units/100 mL.
21463	02050106	Ackerly Creek Unnamed To (ID:66404757)	Unnamed Tributary to Ackerly Creek	16461	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	New assessment is attaining based on fecal coliform geometric mean of 167 colony forming units/100 mL.
21465	02050106	South Branch Tunkhannock Creek Unnamed To (ID:66403337)	Unnamed Tributary to South Branch Tunkhannock Creek	16410	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	New assessment is attaining based on fecal coliform geometric mean of 140 colony forming units/100 mL.
20501	02050305	Letort Spring Run	Letort Spring Run	1644	Impaired reassessed as attaining	Pesticides, Priority Organics	Please provide a delisting rationale	Pesticides and priority organics were delisted on 2004 303(d) list
20222	02050305	Middle Creek	Middle Creek	8566	Impaired reassessed as attaining	Metals	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 52.0.
21053	02050306	Conewago Creek	Conewago Creek	18577	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	Segment labeled with incorrect assessment unit. COMID has been updated from assessment unit 21053 to 21503.
21503	02050306	Conewago Creek	Conewago Creek	18577	Impaired reassessed as attaining	Pathogens	Please provide a delisting rationale	Assessment unit ID 18577 was impaired in error. Result was attaining recreational use based on fecal coliform geometric mean of 181 colony forming units/100 mL.
20211	02050306	Haines Branch	Haines Branch	2138	Impaired reassessed as attaining	Siltation	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 64.5.

INT_ASSESSMENT_UNIT_ID.x	HUC8_CODE	OLD_STREAM_NAME	STREAM_NAME	INT_ASSESSMENT_UNIT_ID.y	CHANGE	OLD_CAUSES	EPA COMMENT	DEP REPSONSE
21438	02050306	Pierceville Run	Pierceville Run	10938	Impaired reassessed as attaining	Flow Alterations, Siltation	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 58.8.
21438	02050306	Pierceville Run Unnamed To (ID:57475181)	Unnamed Tributary to Pierceville Run	10938	Impaired reassessed as attaining	Flow Alterations, Siltation	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 58.8.
21438	02050306	Pierceville Run Unnamed To (ID:57475689)	Unnamed Tributary to Pierceville Run	10938	Impaired reassessed as attaining	Flow Alterations, Siltation	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 58.8.
21438	02050306	Pierceville Run Unnamed Of (ID:57475789)	Unnamed Tributary to Pierceville Run	10938	Impaired reassessed as attaining	Flow Alterations, Siltation	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 58.8.
21438	02050306	Pierceville Run Unnamed To (ID:57475871)	Unnamed Tributary to Pierceville Run	10938	Impaired reassessed as attaining	Flow Alterations, Siltation	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 58.8.
21438	02050306	Pierceville Run Unnamed Of (ID:57475881)	Unnamed Tributary to Pierceville Run	10938	Impaired reassessed as attaining	Flow Alterations, Siltation	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) score of 58.8.
20052	05010005	Big Mill Creek Unnamed To (ID:134396210)	Unnamed Tributary to Big Mill Creek	17339	Impaired reassessed as attaining	Metals, pH	Please provide a delisting rationale	Delisted based on reassessment of aquatic life use, based on index of biotic integrity (IBI) scores of 74.1, 75.4, and 78.5.