



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Ms. Kelly Jean Heffner
Deputy Secretary for Water Management
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, Pennsylvania 17105-2063

DEC 19 2014

Dear Ms. ^{Kelly}Heffner:

The U.S. Environmental Protection Agency (EPA) has conducted a review of the Pennsylvania Department of Environmental Protection's (PADEP) 2014 Section 303(d) list and supporting documentation and information. Based on our review, EPA has determined that Pennsylvania's list of water quality-limited segments still requiring Total Maximum Daily Loads (TMDLs) meets the requirements of Section 303(d) of the Clean Water Act and EPA's implementing regulations. Therefore, with this letter (including the rationale set forth in the enclosure to this letter) EPA approves Pennsylvania's 2014 Section 303(d) list as submitted electronically to EPA on October 28, 2014. The statutory and regulatory requirements, as well as an analysis of Pennsylvania's 2014 Section 303(d) submittal, are described in the enclosure.

EPA supports PADEP's continued decision to list portions of the Susquehanna River in Category 3 due to lack of adequate data to make aquatic life use and recreational use assessment determinations. EPA remains concerned about the health of smallmouth bass in the Susquehanna River and is encouraged by PADEP's voluntary effort to analyze the causal factors impacting the health of smallmouth bass in the Susquehanna Basin. EPA's expectation is that the unassessed portions of the Susquehanna River will be fully assessed in Pennsylvania's 2016 Integrated Water Quality Monitoring and Assessment Report.

EPA looks forward to working with PADEP staff on future assessment reports along with implementation of EPA's New Vision for the Clean Water Act 303(d) program. If you or your staff has any questions, please feel free to contact Ms. Evelyn MacKnight at 215-814-5717, or Mr. William Richardson at 215-814-5675.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jon M. Capacasa".

Jon M. Capacasa, Director
Water Protection Division

Enclosure

**RATIONALE FOR EPA APPROVAL OF
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2014 SECTION 303(d) LIST**

I. Purpose

The purpose of this document is to describe the rationale for the U.S. Environmental Protection Agency's (EPA) approval of Pennsylvania Department of Environmental Protection's (PADEP) 2014 Section 303(d) list. EPA has conducted a complete review of Pennsylvania's 2014 Section 303(d) list and supporting documentation and information. Based on this review, EPA has determined that the Commonwealth's list of water quality limited segments (WQLSs) still requiring Total Daily Maximum Loads (TMDLs) meets the requirements of Section 303(d) of the Clean Water Act (CWA or the Act) and EPA's implementing regulations. Therefore, by this letter, EPA hereby approves Pennsylvania's Section 303(d) list, as submitted electronically on October 28, 2014, which is comprised of Category 5 of Pennsylvania's Integrated Water Quality Monitoring and Assessment Report (Integrated Report).

II. Statutory And Regulatory Background

A. Identification of WQLSs for Inclusion on Section 303(d) List

Section 303(d)(1) of the CWA directs states to identify those waters within their jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters taking into account the severity of the pollution and the uses to be made of such waters (Section 303(d) list). The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long standing interpretation of Section 303(d).

EPA regulations provide that states do not need to identify waters on the Section 303(d) list where the following controls are adequate to implement applicable standards: (1) technology based effluent limitations required by the Act; (2) more stringent effluent limitations required by state or local authority; and (3) other pollution control requirements required by state, local, or Federal authority. See 40 CFR §130.7(b)(1).

Pennsylvania developed an Integrated Report (IR), combining the former CWA Section 303(d) list and 305(b) report, which identifies the assessment status of all of Pennsylvania's waters. The Integrated Report separates the waters of Pennsylvania into five distinct categories. All stream segments or assessment units fall into one or more of the following categories:

- Category 1 – Waters attaining all designated uses.
- Category 2 – Waters where some, but not all, designated uses are met. Attainment status of the remaining designated uses is unknown because

- data are insufficient to categorize the water.
- Category 3 – Waters for which there are insufficient or no data and information to determine if designated uses are met.
- Category 4 – Waters impaired for one or more designated use, but not needing a TMDL. These waters are placed in one or more of the following three subcategories:
 - Category 4a – TMDL has been completed.
 - Category 4b – Expected to meet all designated uses within a reasonable timeframe.
 - Category 4c – Not impaired by a pollutant.
- Category 5 – Waters impaired for one or more designated uses by any pollutant. Category 5 constitutes the Section 303(d) list.

B. Consideration of Existing and Readily Available Water Quality Related Data and Information

In developing Section 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality related data and information including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the state's most recent Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate non-attainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to EPA. See 40 CFR §130.7(b)(5). In addition to these minimum categories, states are required to consider any other data and information that is existing and readily available. EPA's 1991 Guidance for Water Quality Based Decisions describes categories of water quality related data and information that may be existing and readily available. See *Guidance for Water Quality Based Decisions: The TMDL Process, EPA Office of Water, 1991, Appendix C (EPA's 1991 Guidance)*. While states are required to evaluate all existing and readily available water quality related data and information, states may decide to rely or not rely on particular data or information in determining whether to list particular waters.

In addition to requiring states to assemble and evaluate all existing and readily available water quality related data and information, EPA regulations at 40 CFR §130.7(b)(6) require states to include, as part of their submissions to EPA, documentation to support decisions to rely or not rely on particular data and information, and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; and (3) any other reasonable information requested by the Region. As described in more detail below, Pennsylvania's 2014 Integrated Report submission (including the Section 303(d) list as Part 5) identified (1) the Commonwealth's assessment methodologies; (2) included documentation to support decisions to list or not list waters in certain categories;

(3) description of data that PADEP considered; (4) comments received on the draft list; (5) PADEP's response to those comments; (6) Integrated Report narrative; and (7) report appendices.

C. Priority Ranking

EPA regulations also codify and interpret the requirement in Section 303(d)(1)(A) of the Act that States establish a priority ranking for listed waters. The regulations at 40 CFR §130.7(b)(4) require states to prioritize waters on their Section 303(d) lists for TMDL development, and also to identify those WQLSs targeted for TMDL development in the next two years. In prioritizing and targeting waters, states must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. As long as these factors are taken into account, the Act provides that states establish priorities for TMDL development. States may consider other factors relevant to prioritizing the waters for TMDL development, including: immediate programmatic needs; vulnerability of particular waters with regard to aquatic habitats and recreational, economic, or aesthetic importance of particular waters; degree of public interest and support; and state or national policies and priorities. See 57 CFR §33040, 33045 (July 24, 1992), and EPA's 1991 Guidance.

III. Analysis of Pennsylvania's Submission

A. Identification of Waters and Consideration of Existing and Readily Available Water Quality Related Data and Information

EPA has reviewed Pennsylvania's submission, and has concluded that the Commonwealth developed its Section 303(d) list in compliance with Section 303(d) of the Act and 40 CFR §130.7. EPA's review is based on its analysis of whether the state reasonably considered existing and readily available water quality related data and information and reasonably identified waters required to be listed. EPA also considered the additional information and documents regarding Pennsylvania's submission from other organizations and individuals.

Description of the methodology used to develop the list (CFR §130.7(b)(6)(I))

PADEP based the 2014 Section 303(d) list on a variety of data and information sources. The rivers and streams water quality assessments reflect a combination of information from intensive surveys, Statewide Surface Water Assessment Program (SSWAP) surveys, Instream Comprehensive Evaluations (ICE) and data solicited from outside sources. Fish consumption and recreational use specific data also take into account information from the Pennsylvania interagency fish tissue sampling program and bacteriological indicator data collected by government agencies and citizen/volunteer groups, respectively. Pennsylvania also solicited, by mail in 2013, relevant water quality data and information from roughly five hundred individuals associated with government agencies, academic institutions, advisory groups, citizen monitoring groups, watershed associations, public interest groups, and sportsmen groups. Pennsylvania considered all

data and information regarding CFR §130.7(b)(5) Categories, which is the minimum required by Federal regulations.

Detailed assessment methodologies were made available to the public prior to issuance of the 2014 Integrated Report. In 2013, PADEP held a public comment period on changes made to their 2014 assessment methodologies. PADEP compiled responses to comments received in a response document which was posted to PADEP's website.

Description of the data and information used to identify waters, including a description of the data and information used as required by CFR §130.7(b)(5)

Beginning in 2013, PADEP sent EPA documentation of data and information used to support Pennsylvania's decisions to not include certain waters on the draft 2014 Section 303(d) list. The availability of Pennsylvania's proposed Section 303(d) list of impaired waters was announced in the April 25, 2014 issue of the *Pennsylvania Bulletin*. A 45-day public comment period was provided.

EPA submitted general and specific comments to PADEP in a letter dated June 9, 2014. Pennsylvania responded to each of EPA's comments in a Comment Response Document.

On October 28, 2014, PADEP notified EPA of the availability of the final 2014 Integrated Report and invited EPA to consider that Report as its 2014 submission. Due to the size and volume of the entire report (which includes the narrative report, assessment methodology, and integrated list), it was obtained by EPA directly from PADEP's website. EPA considered: the Integrated Report; appendices detailing the data solicitation and public notice processes; listing of delisted waters; the comment response document; documentation supporting the inclusion of waters in Category 4B and the removal of waters from Category 5; and an amended version of Category 5, as Pennsylvania's final 2014 Integrated Report package for review.

EPA has reviewed Pennsylvania's description of the data and information considered in the listing process, biological and chemical data collected by the Commonwealth and interstate basin commissions, and its methodology for identifying waters. EPA concludes that the Commonwealth properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 CFR §130.7(b)(5).

In addition, Pennsylvania provided its rationale for not relying on particular existing and readily available water quality related data and information as a basis for identifying waters as part of the Section 303(d) list (Category 5 of the IR). While soliciting water quality data and information from outside sources, Pennsylvania sent out an information sheet explaining the determination process for placing a waterbody on the Section 303(d) list, the criteria required for data and/or information submitted to PADEP from outside sources, and logistical details regarding such data submittals. As part of the process the state uses in its evaluation of outside data and information, Pennsylvania screens all

outside sources of data received for minimal requirements, including the specific location of the reported impairment; identification of the particular water quality standards violation(s); data to substantiate the conclusion of impairment; identification of the source(s) and cause(s) of impairment; and the presence of a quality assurance/quality control plan. EPA finds Pennsylvania's screening protocol and criteria described in its 2014 Section 303(d) list narrative report to be a reasonable rationale in determining the usage of outside data, as waters listed as impaired on the 303(d) list should be based on scientifically valid data.

This approval rationale applies to Pennsylvania's Section 303(d) list (Category 5) as published on October 28, 2014. EPA considered Categories 1, 2, 3, 4A, 4B and 4C to the extent they impact the Section 303(d) list during our approval. In addition, EPA approves the specific water pollutant combination removals and listing changes identified in Appendix E, F and G of the Integrated Report.

EPA views the 2014 Integrated Report as a snapshot of the Commonwealth's water quality in time, with the attainment status of waters continually changing with each round of reassessment. The 2016 Integrated Report therefore should build upon, by updating and possibly correcting, the approved information presented in the 2014 report. EPA will work with PADEP to update the national tracking system to reflect Pennsylvania's new report.

We encourage PADEP to maintain its efforts using volunteers to collect recreational use assessment information on Pennsylvania streams. Additionally in 2013, PADEP undertook a pilot project utilizing a probabilistic sampling design to assess surface waters for recreation uses. The pilot project assessed recreation use for almost 1,000 miles of water. EPA supports this approach and encourages PADEP to continue the probabilistic design to assess recreation use, including listing waters as impaired, for all surface waters in the Commonwealth.

PADEP has continued its effort to monitor and assess water quality of the Susquehanna River. The work was initially undertaken in response to issues identified by the Pennsylvania Fish and Boat Commission (PFBC) related to disease and mortality of smallmouth bass during the 2012 IR public comment period. In 2012, the PFBC submitted comments and materials to PADEP to support their claim that the decline in Susquehanna smallmouth bass populations indicated an aquatic life use impairment. Of all the comments received by PADEP on the Susquehanna River, the PFBC was the only organization to also submit water quality data. The PFBC requested approximately 98 miles of the Susquehanna River be listed as impaired. The river section referenced by the PFBC was from Sunbury, PA to the Holtwood Dam (9.4 miles north of the Maryland state line). PADEP evaluated the information provided by the PFBC and determined that the data supplied by the PFBC was not sufficient to list the 98 mile section of the Susquehanna River as impaired. As a result of the information provided by PFBC in 2012, PADEP listed the mainstem Susquehanna River from Sunbury, PA to the Maryland state line in Category 3 for both aquatic life and recreational uses, with approximately two miles listed as impaired due to metals near Marietta, PA. In 2012, EPA found

PADEP's interpretation of its water quality standards and 303(d) listing assessment methodology as reasonable in this case, and therefore supported PADEP's decision.

In the draft 2014 IR release, PADEP reported that the data set available at that time was not yet sufficient for the agency to make an attainment determination for the Susquehanna River. In the 2014 IR, pending completion of ongoing studies discussed below, PADEP has continued to list the Susquehanna River in category 3 as unassessed due to insufficient information for aquatic life use and recreation use.

Since the 2012 IR, PADEP and PFBC have undertaken an analysis of potential stressors impacting the health of smallmouth bass in the Susquehanna River. EPA's Causal Analysis/Diagnosis Decision Information System Analysis (CADDIS) is being used to conduct the causal assessment. Fisheries biologist from across the region are participating in three workshops to evaluate available data to determine potential causes of smallmouth bass mortality. A final report detailing the results of the CADDIS process is expected by summer 2015.

EPA understands and shares the concerns of the public related to the Susquehanna River smallmouth bass health. Based on the forthcoming Susquehanna River monitoring and assessment results and the CADDIS report, EPA expects there will be sufficient data for PADEP to make assessment determinations for the mainstem Susquehanna River for the 2016 IR.

B. Public Participation

Pennsylvania announced the availability of its draft 2014 Integrated Report and the Section 303(d) list of impaired waters in the April 25, 2014, issue of the *Pennsylvania Bulletin*. At that time, the Commonwealth accepted public comments on the proposed list until June 10, 2014. Comments were received from EPA in a letter dated June 9, 2014. To address comments received, a number of changes were made to the list and a Comment Response Document was developed as an appendix of Pennsylvania's Integrated Report.

C. Previously Listed Waterbodies Not Included on the 2012 Section 303(d) List

Pennsylvania has also demonstrated, to EPA's satisfaction, good cause for not including certain waters on its list. As provided in 40 CFR §130.7(b)(6)(iv), EPA requested that Pennsylvania demonstrate good cause for not including such waters. For the 2014 Section 303(d) list, Pennsylvania submitted various sets of data demonstrating that certain previously listed waters either recovered to the point that the applicable water quality standards have been attained, or were initially listed in error and/or are currently not impaired. There may also be reassessments revealing that a WQLS is still impaired, but that the causes of impairment have changed; these waters therefore remain on the list, but are identified as impaired by different pollutant(s).

For each segment proposed for removal from the 2014 Section 303(d) list, Pennsylvania

provided EPA with sufficient documentation and justification. Such data included benthic macroinvertebrate data, chemical data, habitat surveys, and narrative statements from PADEP biologists, compliance data, and other forms of documentation. EPA reviewed this data and approves the set of waters or pollutant-water combinations delisted from the 2014 Section 303(d) list, which are listed in Appendices E, F and G of the 2012 Integrated Report. Delisted waters are characterized as either (1) removals from the 2014 Section 303(d) list due to attainment of WQS for the previously listed pollutant(s), listing in error, or removal of a pollutant source; or (2) remaining on the 2014 Section 303(d) list but impaired due to a different pollutant.

PADEP removed the “other inorganic” (i.e., sulfates) potable water supply use impairment listing on the Monongahela River. PADEP based this removal on available Monongahela River sulfate data from PADEP and the Army Corps of Engineers that did not show any exceedances of the sulfate water quality criterion (250 mg/L) or otherwise indicate an impairment of the potable water supply use. EPA finds this decision reasonable and supported by PADEP’s rationale.

Removal of water pollutant combinations from the 2014 Section 303(d) list also included those segments where EPA approved TMDL(s) have been developed. These segments can be found in Category 4A. Implementation of the TMDL was not required prior to removal. Where a water was previously listed for more than one pollutant, only those pollutants addressed in an approved TMDL were moved to Category 4A.

D. Segments Excluded from the Section 303(d) List Pursuant to 40 CFR §130.7(b)(1) Because They Are Expected to Meet Water Quality Standards

Pennsylvania’s decision not to include waters on its 2014 Section 303(d) list due to other required pollution controls is consistent with EPA regulations at 40 CFR §130.7(b)(1). These waters were identified in Category 4B of the Integrated Report. Under 40 CFR §130.7(b)(1), states are not required to list WQLSs still requiring TMDLs (i.e., the Section 303(d) list or Part 5 of the IR) where effluent limitations required by the CWA, more stringent effluent limitations required by state or local authority, or other pollution control requirements required by state, local, or federal authority, are stringent enough to implement applicable water quality standard. The regulation does not specify the timeframe in which these various requirements must implement applicable water quality standard to support a state’s decision not to list particular waters. Consistent with EPA guidance on this issue, EPA expects that required controls will result in attainment in a reasonable time, based on the nature of the pollutant and actions that need to be taken to achieve attainment.

Monitoring should be scheduled for these waters to verify that the water quality standard is attained as expected in a reasonable timeframe. Where standards will not be attained through implementation of the requirements listed in 40 CFR §130.7(b)(1) in a reasonable time, it is appropriate for the water to be placed on the Section 303(d) list to ensure that implementation of the required controls, and progress towards compliance with applicable standards, is tracked. If it is determined that the water is, in fact, meeting

applicable standards when the next Section 303(d) list is developed, it would be appropriate for the state to remove the water from the list at that time.

In 2014, PADEP listed for the first time in category 4B a 2.64 mile segment of the Allegheny River (Assessment ID 17330 and ComID 112375327) as impaired due to chlorides, osmotic pressure and total dissolved solids (TDS). PADEP provided a justification document for that listing that addressed EPA's criteria to list an impaired waterbody in category 4B of the IR. This river segment is primarily impacted by discharges from the Water Treatment Corporation (WTC) discharge, NPDES Permit No. PA0102784. PADEP issued a final Water Quality Management Permit on August 29, 2014 authorizing WTC to install additional treatment at the plant to reduce chlorides to 87 mg/L and TDS to 401 mg/L. PADEP has reported that WTC is proceeding to install the additional treatment. PADEP also undertook legal action against WTC on November 18, 2014 in the Commonwealth Court of Pennsylvania for violations of Pennsylvania's Clean Streams Law. *PADEP v. Waste Treatment Corporation*, Docket No. 463 M.D. 2013 (Pa. Commw. Ct.). Using data provided by the U.S. Fish and Wildlife Service, in that filing (Complaint) PADEP outlined the WTC discharges as causing "take" of endangered Northern Riffleshell mussels in the Allegheny River downstream of the WTC discharge. PADEP has determined the Allegheny River to be critical habitat for the Northern Riffleshell mussel. In the complaint, PADEP requested the Court enjoin WTC from discharging pollutants at levels more than that detailed to ensure protection of aquatic life including the mussels (i.e., chloride limit of 87 mg/L and TDS limit of 401 mg/L), which were included in a draft NPDES permit issued by PADEP and was released for public comment in the November 29, 2014 issue of the *Pennsylvania Bulletin*. The draft permit limits for chlorides and TDS are intended to prevent the "take" of Northern Riffleshell mussels.

In addition, Clean Water Action and WTC entered into a civil settlement of CWA litigation regarding WTC's discharge on September 10, 2014. *Clean Water Action v. Waste Treatment Corporation*, Docket No. 13-328 E (W.D.Pa). The settlement outlined treatment options that are required to be installed and operational by WTC by April 29, 2015. The settlement also recites the commitment of WTC that after treatment upgrades are complete, WTC agreed to discharge wastewater that would not exceed an effluent limit of 401 mg/L of TDS after the new treatment equipment is operational. Prior to the installation and operation of the new treatment equipment, WTC also agreed to limit the amount of discharge to 137,500 gallons per day, and to not accept any wastewater from unconventional oil and gas operations.

Both the PADEP complaint in the Commonwealth Court of Pennsylvania and the WTC settlement with Clean Water Action outline treatment options that are expected to be installed by WTC by February 22, 2015. The advanced treatment is designed to meet chlorides, osmotic pressure and TDS water quality standards in the Allegheny River as determined by PADEP. The advanced treatment is expected to effectively address the impairment and the impaired segment of the Allegheny River so that this segment should be meeting water quality standards in spring 2015. EPA finds PADEP's identification of this water on 4B of the IR to be reasonable. EPA's 4B listing approval does not affect

any review of WTC's draft National Pollution Discharge Elimination System (NPDES) permit. EPA reserves the right to comment upon, object or make recommendations on WTC's draft permit as needed.

E. Segments Identified by the State as Impaired by Nonpoint Sources

Pennsylvania properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with Section 303(d) and EPA guidance. Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the source of impairment is a point and/or nonpoint source. EPA's long standing interpretation is that Section 303(d) applies to waters impacted by point and/or nonpoint sources. In *Pronsolino v. Marcus*, the District Court for the Northern District of California held that Section 303(d) of the CWA authorizes EPA to identify and establish TMDLs for waters impaired by nonpoint sources (*Pronsolino et al. v. Marcus et al.*, 91 F.Supp.2d 1337, 1347 (N.D.Ca. 2000)). See, also, EPA's 1991 *Guidance and National Clarifying Guidance for 1998 Section 303(d) Lists*, Aug. 27, 1997.

F. Priority Ranking and Targeting

EPA reviewed Pennsylvania's priority ranking of listed waters for TMDL development, and concluded that the Commonwealth properly took into account the severity of pollution and the uses to be made of such waters. PADEP utilizes various mechanisms to schedule the development of TMDLs, as EPA guidance allows for states to use additional criteria to prioritize its Section 303(d) list (see EPA, April 1991).

EPA has reviewed Pennsylvania's identification of WQLS targeted for TMDL development in the next two years, and concludes that the targeted waters are appropriate for TMDL development in this timeframe.

G. Coordination with the U.S. Fish and Wildlife Service

EPA notified the Pennsylvania Field Office of the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), by letter dated May 5, 2014, of the availability of Pennsylvania's 2014 Integrated Report. EPA provided notification as an informal coordination regarding potential impacts the proposed listings may have on threatened and endangered species. No comments were received from either USFWS or NMFS.

