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

Mr. Frank Piorko, Director
Division of Water Resources
Delaware Department of Natural Resources
and Environmental Control
89 Kings Highway
Dover, Delaware 19903

OCT 14 2015

Dear Frank Piorko:

The U.S. Environmental Protection Agency (EPA) has conducted a review of Delaware Department of Natural Resources and Environmental Control's (DNREC) 2014 Section 303(d) List and supporting documentation and information submitted as final on May 15, 2015. Based on this review, EPA has determined that Delaware'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, 33. U.S.C. §1313(d), and EPA's implementing regulations. Therefore, with this letter, EPA hereby approves Delaware's 2014 Section 303(d) List. The enclosed rationale for approval provides an explanation of the basis for EPA's approval.

EPA appreciates the effort put forth by you and your staff to compile this list and address issues identified during EPA's review. We look forward to the submission and review of future 303(d) Lists and working towards implementing the updated 303(d) Program Vision. If you have any questions, please contact Ms. Evelyn MacKnight, Associate Director, at 215-814-5717 or macknight.evelyn@epa.gov.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

RATIONALE FOR EPA APPROVAL OF DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL 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 Delaware Department of Natural Resources and Environmental Control's (DNREC) 2014 Section 303(d) list. EPA has conducted a complete review of Delaware's 2014 Section 303(d) list and supporting documentation and information. Based on this review, EPA has determined that Delaware'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 Delaware's Section 303(d) list, which is comprised of CALM Code 5 of Delaware's "Final Determination for the State of Delaware 2014 Clean Water Act Section 303(d) List of Waters Needing TMDLs".

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).

Delaware submitted a Combined Watershed Assessment, integrating the former CWA Section 303(d) list and 305(b) report, which identifies the assessment status of all of Delaware's waters. The Combined Watershed Assessment separates the waters of Delaware 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 and approved by EPA.
    - Category 4b – Other required control measures are expected to result in the attainment of WQSs in a reasonable period of time.
    - Category 4c – Not impaired by a pollutant.
- Category 5 – Waters impaired for one or more designated uses by any pollutant and a TMDL is needed. 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, Delaware's 2014 Combined Watershed Assessment submission (including the Section 303(d) list as Category 5) identified the State's assessment methodologies and included

documentation to support decisions to list or not list waters in certain categories.

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 FR §33040, 33045 (July 24, 1992), and EPA's 2006 Guidance.

III. Analysis of Delaware's Submission

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

EPA has reviewed Delaware's submission, and has concluded that the State 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 Delaware's submission from other organizations.

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

Delaware's 2014 303(d) list was developed using all existing and readily available data. In Delaware, DNREC's Water Resources Division is responsible for the collection and compilation of this information. For the 2014 assessment, DNREC considered data and information received on or before October 22, 2014, from the following sources:

- Reports prepared to satisfy CWA Sections 305(b), 303(d) and 314 and any updates;
- The most recent Section 319(a) nonpoint source assessment;
- Reports of ambient water quality data including State ambient water quality monitoring programs, citizen volunteer monitoring programs, complaint investigations, and other readily available data sources (e.g., STORET, USGS and research reports), and data and information provided by the public;
- Reports relative to dilution calculations or predictive models;
- Water quality management plans;

- Superfund Records of Decision;
- Safe Drinking Water Act source water assessments;
- Fish and shellfish advisories;
- Restrictions on water sports or recreational contact.

In addition, electronic mail requests are made of specific organizations. DNREC also coordinated with the Delaware River Basin Commission (DRBC) and incorporated the most recent use attainment determinations made by DRBC for the shared waters of the Delaware River and Delaware Bay. DNREC also incorporated the most recent use attainment determinations assessed by EPA's Chesapeake Bay Program for waters of the state that use criteria developed by that program for waters that drain to the Chesapeake Bay.

Water quality and biological data for Delaware's surface waters are collected under DNREC's Ambient Surface Water Quality Monitoring Program and Biological Monitoring Program. The Department routinely currently collects water quality samples at about 134 stations throughout the State. Several active citizen monitoring programs have also been developed throughout Delaware that augment the data collected by DNREC. DNREC's data is considered for use if it is collected and analyzed in accordance with the DNREC Environmental Laboratory Selection (ELS) Quality Assurance Project Plan. For data from sources other than the DNREC ELS, DNREC will consider the quality controls used in collection and analysis to determine if it will be appropriate for use in the assessment.

Surface water quality monitoring is conducted in a manner that focuses available resources on the Whole Basin Management concept. The Whole Basin Management Program in Delaware operates on a 5-year rotating basis. This approach enables DNREC to comprehensively monitor and assess the condition of the State environment with due considerations to all facets of the ecosystem. The 303(d) list was developed using water quality analysis and designated use support findings data from the period of September 1, 2008, through August 31, 2013. For waters of Exceptional Recreational or Ecological Significance (ERES), data from calendar years 1995-2012 were assessed for trends.

The availability of the Tentative Determination for Delaware's 2014 303(d) List was announced to stakeholders on September 12, 2014, via electronic mail, and copies of the determination were available from DNREC's website or by contacting DNREC. A 30-day public comment period was provided. Notice of availability of the Tentative Determination was also published in the Delaware State News and the News Journal starting on September 12, 2014.

EPA submitted general and specific comments to DNREC by electronic mail dated September 3, 2014 and September 10, 2014. DNREC responded to each of EPA's comments in electronic correspondence.

On May 15, 2015, EPA received Delaware's final 2014 Combined Watershed Assessment. EPA has reviewed Delaware's description of the data and information

considered in the listing process, biological and chemical data collected by the DNREC, DRBC, CBP, and citizen monitoring groups, and its methodology for identifying waters. EPA concludes that the State 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). EPA notes that DNREC works closely with Delaware's citizen monitoring groups and that all data submitted was in an acceptable form. The citizen monitoring data used is included as Appendix B to the report.

For the 2014 Combined Watershed Assessment, DNREC considered information in two reports prepared by Tetra Tech for EPA and the Department decided to delist several segments, and list one segment in the White Clay Creek watershed. The stressor analysis reports also recommended the evaluation of several segments for listing as water quality-limited segments for lead. DNREC evaluated all lead data from the 2008-2013 assessment period and did not find any exceedances of the numeric acute or chronic lead criteria. The Department envisions using stressor analyses and other considerations in cooperation with EPA and stakeholders to address the remaining Habitat and Biology listings in the state. EPA supports the Department's plans to evaluate outstanding habitat and biology listings and is willing to offer technical assistance as needed.

One segment in Red Clay Creek, waterbody ID DE260-00I, was listed this assessment cycle in Category 3 for DDT. DDT levels at the state line exceed human health and aquatic life criteria and decline downstream in a response explained by simple dilution, indicating sources are possibly in Pennsylvania. The Department plans to extensively sample the basin in 2015 as part of the WATAR process and anticipates working with Pennsylvania and EPA to address this issue. EPA encourages DNREC to conduct the sampling it has planned for 2015 to verify that there aren't any sources located in Delaware, but suggests this segment will be listed on Category 5 for the 2016 assessment cycle based on any exceedances of the human health and/or aquatic life criteria. Impaired segments should be identified on Delaware's 303(d) list regardless of the pollutant sources.

In addition, Delaware 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). In its 2014 Assessment, Listing, and Reporting Methodologies Pursuant to Sections 303(d) and 305(b) of the Clean Water Act, Delaware explained the determination process for placing a waterbody on the section 303(d) list, the criteria required for data and/or information submitted to DNREC from outside sources, and logistical details regarding such submittals. DNREC explained that for data from sources other than DNREC, the Department would consider the quality controls used in collection and analysis to determine if it will be appropriate for use in the assessment. Data would be considered readily available if it is in an electronic format that can be imported or exported from a modern spreadsheet or database program like Microsoft Excel, Access, or Quattro Pro. Data that was only available on paper would be considered on a case by case basis given the resources available to convert such data to the more usable electronic format. EPA finds Delaware's screening protocol and criteria described in its 2014 Section 303(d) list

narrative to be a reasonable rationale in determining the usage of outside data, as waters listed as "impaired" should be based on scientifically-valid data.

This approval rationale applies to Delaware's Section 303(d) list (Category 5) as published on May 15, 2015. The Combined Watershed Assessment was submitted for EPA approval in its entirety on May 15, 2015.

C. Public Participation

Delaware announced the availability and opportunity to comment on DNREC's Tentative Determination for Delaware's 2014 Section 303(d) List on September 12, 2014, and identified that all comments received on or prior to October 22, 2014, will be considered in developing the Final 2014 Section 303(d) List.

During the process of developing the list, two organizations, including EPA, provided comment. The Center of Biological Diversity (CBD) also provided comments. In a letter dated October 14, 2014, CBD requested that DNREC list coastal waters as impaired due to ocean acidification under section 303(d) of the Clean Water Act. CBD also specified in their letter that Delaware must assess all narrative and numeric WQS as they pertain to pH and ocean acidification. CBD also submitted 10 article to support their assertions. These publications were mainly peer-reviewed, scientific articles.

Delaware's 2014 Section 303(d) list did not include these requested waters and provided the following reasons: "1. The submission had no Delaware specific data or information, 2. No evidence was submitted showing that Delaware's applicable pH standards were not being attained, and 3. Websites cited by the commenter had no Delaware specific data or information.".

The EPA reviewed the articles submitted by CBD and concurs with Delaware's decision not to list their coastal waters and Delaware Bay as impaired or threatened concerning the water quality standards specified by CBD. EPA concluded the articles did not have sufficient data and/or information that could be used to determine non-attainment of any applicable water quality standard. Delaware has identified some coastal bays as impaired for multiple pollutants including bacteria, nutrients, and dissolved oxygen. While EPA recognizes that ocean acidification has the potential to negatively impact aquatic life and the growing body of evidence supporting the relationship between increased levels of atmospheric carbon dioxide and ocean acidification, based on this review, and in accordance with EPA's guidance on Section 303(d) and 305(b) and 314 of the Clean Water Act (EPA, 2011) and Integrated Reporting and Listing Decisions Related to Ocean Acidification (EPA, 2010), the EPA concurs that none of the articles had sufficient data and/or information to warrant listing Delaware's coastal waters and Delaware Bay as impaired (i.e., not meeting an existing, applicable water quality standard) or threatened (i.e., currently attaining water quality standards, but expected to not meet water quality standards by the next listing cycle) related to these water quality standards, at this time.

The EPA encourages Delaware to reach out to the research community, including the University of Delaware, Woods Hole and the National Oceanic and Atmospheric Agency when soliciting data from the public for their 2016 Combined Watershed Assessment, to identify any existing and readily available data and information.

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

Delaware has also demonstrated, to EPA's satisfaction, good cause for not including certain waters on its list. According to Federal regulations at 40 CFR §130.7(b)(6)(iv), a water may be delisted for the following reasons: more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed in the categories in section §130.7(b)(5); or changes in conditions (e.g., new control equipment, elimination of discharges). As provided in 40 CFR §130.7(b)(6)(iv), EPA requested that Delaware demonstrate good cause for not including such waters.

DNREC has provided documentation through the 2014 305(b) assessment report that water quality conditions have improved and the basis for listing the waters as impaired for the identified pollutant no longer exists. As stated previously, DNREC considered information from two reports prepared by Tetra Tech for US EPA and the Department to delist several segments. Where waters were previously listed for more than one pollutant or stressor, only those pollutants or stressors that have been determined to have improved were delisted. Although this approval rationale only applies to those waters previously listed as Pollutant CALM Code 5.

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

Delaware 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 Delaware's priority ranking of listed waters for TMDL development, and concluded that the State properly took into account the severity of pollution and the uses to be made of such waters. Prior to 2008, the priority ranking and schedule for TMDL development in Delaware was influenced by the schedule adopted in the consent decree which settled the TMDL lawsuit in Delaware (*American Littoral Society and Sierra Club v. EPA,* Civil Action No. 96-591 (SLR)(D.De) – settled August 9, 1997). The requirements of the consent decree were met by December 2006, and TMDLs were

established for all impaired streams that were listed on the State's 1996 303(d) list. The schedule is now influenced by the rotating basin cycle incorporated in the Delaware Whole Basin Management Program. The Whole Basin Management Program has divided the waters in Delaware into five major basins and each basin cycles through assessment and monitoring, model development, TMDL development and pollution control strategy preparation over a five-year schedule. EPA has reviewed the State's identification of WQLSs targeted for TMDL development in the next two years, and concludes that the targeted waters are appropriate for TMDL development in this timeframe. Waters targeted for TMDL development in the next two years are included in the Category 5 list.

Delaware has identified, primarily for toxic pollutants, target dates for TMDL development that are supported with the "Watershed Approach to Toxics Assessment and Restoration."

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 August 24, 2015, of the availability of Delaware'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.