

ENVIRONMENTAL PROTECTION

WATER RESOURCE MANAGEMENT

DIVISION OF WATER MONITORING STANDARDS AND PESTICIDE CONTROL

Adoption of New Jersey's 2018 and 2020 303(d) List of Water Quality Limited Waters as an Amendment to the Atlantic County, Cape May County, Lower Delaware, Lower Raritan/Middlesex County Mercer County, Monmouth County, Northeast, Ocean County, Sussex County, Tri-County, Upper Delaware and Upper Raritan Water Quality Management Plans

Public Notice

Take notice that on **May 12, 2022**, pursuant to the Section 303(d) of the Federal Clean Water Act at 33 U.S.C. 1313(d), the New Jersey Water Quality Planning Act at N.J.S.A. 58:11A-7, and the Water Quality Management Planning rules at N.J.A.C. 7:15-5.4, the New Jersey Department of Environmental Protection (NJDEP/Department) has adopted the final 2018 and 2020 303(d) Lists of Water Quality Limited Waters (303(d) List). The 2020 303(d) List replaces the 2016 303(d) List (52 N.J.R 1971(a)) and includes the Department's ranking and prioritization of impaired waters of the State for development of total maximum daily loads (TMDLs).

Pursuant to Section 305(b) of the Federal Clean Water Act (CWA) (33 U.S.C. 1315(b)), all states are required to biennially prepare and submit to the U. S. Environmental Protection Agency (USEPA) a report addressing the overall water quality of the State's waters, including support of designated uses (the Integrated List of Waters, or "Integrated List"). States are also required to develop a list of waters that currently do not meet, or are not expected to meet, applicable water quality standards after the implementation of technology-based controls. This list is known as the 303(d) List of Water Quality Limited

Waters or “303(d) List.” The 303(d) List includes a priority ranking for scheduling TMDLs, as well identifying TMDLs expected to be completed in the next two years. These two lists, along with strategies to maintain and improve water quality and other pertinent information, comprise the Integrated Water Quality Assessment Report (Integrated Report). The Department, in coordination with the USEPA, has combined the 2018 and 2020 303(d) Lists into the latest Integrated Report.

The Integrated Report identifies where regulatory and other actions have been successful in restoring water quality, where water quality improvement is needed, where high quality waters are threatened and/or need protection, and where further study and/or research is needed to address unresolved water quality issues, such as nutrient impacts on aquatic life uses. These results provide a sound scientific foundation to inform and prioritize the State’s water regulatory and management programs. USEPA compiles this water quality information from all states and tribes and, as required by the CWA, compiles it into a national assessment of water quality.

The scientific protocols and methods used by the Department to assess data and develop New Jersey’s 2018/2020 Integrated Report are explained in the Department’s 2016 Integrated Water Quality Monitoring and Assessment Methods (Methods Document) published at <https://www.nj.gov/dep/wms/bears/assessment.htm>. The 2018 and 2020 303(d) Lists were developed using the final 2016 Methods Document, and all readily available data submitted in response to the Department’s notices of solicitation published on October 16, 2017 (see 49 N.J.R. 3442(a)) and July 2, 2018 (see 50 N.J.R. 1507(b)).

The Department published the draft 2018/2020 303(d) List of Water Quality Limited Waters in the New Jersey Register on June 21, 2021 (53 N.J.R. 1511(a)) and posted the lists and web-based report on

the Department's website at <https://www.state.nj.us/dep/wms/bears/assessment-report20182020.html>. The public comment period ended on August 20, 2021. Seventy-four comments were received on behalf of ten entities.

Commenters:

1. L. Stanton Hales, Jr., Ph. D, Barnegat Bay Partnership (BBP)
2. Richard Dodds, Lower Delaware Wild and Scenic River Management Council c/o Delaware River Greenway Partnership (DRGP)
3. Paul Kenney, U.S. Department of the Interior, National Park Service (NPS)
4. Michael Pisauro Jr., The Watershed Institute
5. Alan R. Hunt, Musconetcong Watershed Association (MWA)
6. Charlie Fineran, Musconetcong River Management Council (MRMC)
7. Keith Fritschie, Trout Unlimited (TU)
8. Doug O'Malley [on behalf of 19 organizations] (ENJ)
9. Maya K. van Rossum (DRN)
10. Michelle DiBlasio, The Nature Conservancy (TNC)

A summary of the public comments and agency responses is provided below and included on the web page under the Response to Comments tab for the final 2018/2020 Integrated Report. The number(s) in parentheses after each comment identify the respective commenter(s) listed above.

Report Format and Time Extension Request to Public Comment Period

Comment 1: Commenters supported the Department's initiative to present the New Jersey Integrated Water Quality Assessment Report (IR) to a web-based platform. The supportive comments covered the

improvements in user-friendly design and features including interactive maps, search functions, hyperlinks for easy cross-references, location information, narrative and visual elements throughout the report, and exports of data into Excel. One commenter noted that displaying the information via an interactive map allows for easy review and helps users to quickly identify where impairments and/or full support exist, as well as where there are gaps in data. (WI, MWA, BBP, MRMCM, ENJ, DRN, TNC)

Response: The Department acknowledges the commenters support.

Comment 2: Commenters stated that the 60-day comment period was insufficient to fully review the draft IR, supplemental documents, and linked web pages. Commenters requested a 60-day extension of the comment period. (ENJ, MWA, MRMCM, DRN)

Response: The Water Quality Management Planning rules at N.J.A.C. 7:15 - 3.5(g)7 requires a 30-day public comment period on published actions. Executive Order No. 136 (2020) extended the comment response time by an additional 30 days resulting in a 60-day public comment period on published actions. At the time of publication, the 60-day comment period was still in effect. The NJR public notice (VOLUME 53, ISSUE 12, JUNE 21, 2021 - 53 N.J.R. 1115(a)), specified, in accordance with N.J.A.C. 7:15-5.4, that the Department was seeking public comment on the proposed 2018/2020 303(d) List, including priority ranking for development of TMDLs, prior to requesting approval from the USEPA.

Since 2001, the USEPA has recommended that states integrate their Water Quality Inventory Report (required under Section 305(b) of the federal Clean Water Act) with their List of Water Quality Limited Segments (required under Section 303(d) of the Act). New Jersey submitted its first Integrated Water Quality Assessment Report (IR) in 2002. New Jersey's 2018/2020 IR includes the "303(d) List of Water

Quality Limited Waters” (303(d) List), which satisfies the Section 303(d) requirement to biennially produce a list of waters that are not meeting surface water quality standards (SWQS) despite the implementation of technology based effluent limits and thus require the development of TMDLs to restore water quality. The 303(d) List is the only part of the IR that is subject to regulatory requirements, which include public participation and submission to USEPA for approval and adoption. The IR also includes an “Integrated List of Waters” (Integrated List), which satisfies the Section 305(b) requirement to biennially submit a report that assesses overall water quality and support of designated uses of all principal waters, as well as strategies to maintain and improve water quality. As stated above, the Department in its public notice identified that it was seeking comments on the combined 2018/2020 303(d) List which includes a priority ranking for scheduling TMDLs and two-year schedule for TMDL development. Any additional comments provided beyond the proposed 2018/2020 303(d) List, and priority ranking for development of TMDLs are appreciated; as such, the Department has prepared responses to all comments in this Response to Comment document. In accordance with the circumstances laid forth in the Department’s General Practice and Procedure rules, N.J.A.C. 7:1D that inform the basis for extending the comment period, the Department has decided to not extend the public comment period. The Division of Water Monitoring, Standards and Pesticide Control (DWMS&PC) is receptive to the submittal of comments at any time on its reports and websites.

Comment 3: Several commenters made suggestions for improving the web-based IR structure and design. The commenters noted that the design of the web report with numerous pages, and links and references to additional supplemental material made reviewing the material for the purpose of finding and commenting on the appropriate contents complex and difficult; the layout and hyperlinks were not clear about which pages constituted the IR and were open for public comment. Suggestions included a complete pdf of the report, a table of contents with hyperlinks to the IR component, clarification to web

pages, documents, and linked reports as enhancements for identifying and commenting on the components of the IR. (MWA, WI, MRM, ENJ, DRN)

Comment 4: Commenter suggests merging all data tables into one tabbed workbook to simplify locating information and add location information to “lr1820-3all_parameters_Station” and format it in the same way as the StoryMap. (BBP)

Response to Comments 3 and 4: The Department appreciates the commenters suggestions for improvements to the 2018/2020 web-based report. General comments on structure and design have been addressed through the addition of a Table of Contents tab that lays out the IR components. Clarity on content subject to public comment has been addressed through Comment 2 response above. The commenters request for a single pdf or other IR document would obviate the benefits of the web-based report and reduce accessibility to the present content and would likely result in a 700-page document. The website can be easily accessed via smart phone or other devices connected to the internet. To familiarize the public with the new formatting for the web IR, the Department provided a tutorial introduction to both the 2018/2020 IR information and the assessment outcome available on the ArcGIS StoryMap. Both tutorials describe where various report details can be found. A navigation tab which will serve as a search function has been added to the StoryMap/web report.

Comment 5: Commenter supports the integration of historical data and results from previous IRs to the interactive map to monitor and track changes in water quality. (TNC)

Response: The Department appreciates this suggestion and will consider assessment unit historical results delivered in an ArcGIS StoryMap format for future IRs.

Comment 6: State-level water quality show decreasing trends for phosphorus and nitrogen. The Delaware River Water Region shows differences from state level trends. The commenters request that the Department highlight trends at the watershed and subwatershed level scale, and not just the state level or Delaware River Water Region level, so that the information is meaningful to recreationists who experience water quality at the local level and useable for watershed management activities. The Department should afford nationally recognized inland recreational waters the same level of monitoring and attention as New Jersey's beaches. (MWA, MRMC)

Response: The purpose of the IR is to provide a broad-scale inventory of water quality conditions. The IR format serves to report on water quality standards, the attainment status of assessed waters, document availability of data and information for each assessment unit, identify trends in water quality conditions, and to assist managers in setting priorities for future actions to protect and restore the health of New Jersey's waterbodies. Although, the data used to develop the IR is publicly available through the National Water Quality Council's Water Quality Portal (WQP), the Department is exploring ways to provide assessment data in a user-friendly format that may be customized on the subwatershed scale. Data presentation tools are also planned for sharing of more detailed assessment information to the public in future IRs. Freshwater recreational bathing beaches are monitored in accordance with the New Jersey State Sanitary Code N.J.A.C. 8:26. The Department is developing a site similar to <https://njbeaches.org/> to display that data.

Water Quality Data

Comment 7: The commenter states that there should be less hurdles to include datasets that are from the public if the state does not have the resources to determine use on its own. The AmeriCorps New Jersey

Watershed Ambassadors Program (NJWAP) is a valuable program in the state and NJDEP should be looking to expand it. (DRN)

Comment 8: The commenter commends New Jersey's increase in the number of monitoring stations over the last decade in collaboration with other monitoring programs, including volunteer monitoring groups. New Jersey must be sure that the threshold of data is not too high to list streams that are impaired and to develop and implement TMDL's in a timely fashion. Strong TMDLs, restoration measures, and strengthened water quality standards are needed drive the technology and clean ups. DRBC has been requiring additional dissolved oxygen (DO) datasets and study. The data and need for DO SWQS improvement are clear based on the designated uses in the Delaware River and the current data available. This rigid data set size cutoff is inconsistent with Sec. IV.D.3 of USEPA's 2006 Integrated 303(d)/305(b) Reporting Guidance (2006 IRG) as stated on p. 36 and 37 of the 2006 IRG. (DRN)

Response to Comments 7 and 8: The Department appreciates the support for our AmeriCorps NJWAP and volunteer monitoring. The watershed ambassadors are the Department's boots on the ground and direct link to local communities engaged in clean water educational activities. For program Year 2021-2022, the NJWAP has been expanded from twenty members to include three additional positions related to source water protection. The Department is introducing a level of rigor to our Community Water Monitoring Program through a 3-tiered framework for data quality assurance (QA) in conjunction with the Watershed Institute for enhancement of water quality data. This level of QA will enable more data for inclusion in the assessment process.

The 2016 New Jersey Integrated Water Quality Assessment Methods (Methods Document - https://www.nj.gov/dep/wms/bears/docs/2016_final_methods_doc_wRTC.pdf) serves as the basis for

2018/2020 listing decisions. The Methods Document states that the target sample size for conventional parameters is 20 samples collected over at least a two-year period within the specified five-year reporting period. However, assessment decisions may also be made based on a minimum of 8 samples at stations in the primary water region, over a two-year period, if additional data and lines of evidence support an assessment decision. The target sample size was selected to characterize the existing water quality conditions more accurately and to better capture of natural variability, seasonal changes, varying hydrologic conditions, as well as underlying waterbody conditions and the effects of anthropogenic activities.

TMDLs planned and under development are provided in the two-year schedule and are compliant with EPA guidance which describes the statutory and regulatory requirements for approvable TMDLs under the Water Quality Management Planning rules N.J.A.C. 7:15-5.3. Implementation of TMDLs and mitigation of 303(d) impaired waters are realized through the federal 319(h) nonpoint source grant pass through program. Funding is provided through the Department's Water Quality Restoration Grants for Nonpoint Source Pollution.

As required by Section 303(c) in the CWA, states are required to conduct a triennial review of water quality standards. As a result of its review, the Department is preparing updates to its SWQS for amendments to update the bacterial quality criteria for primary contact recreation and the freshwater ammonia criteria to match USEPA criteria and a new subchapter for SWQS variance policies. Future changes under consideration are the development of standards for per- and polyfluoroalkyl substances (PFAS) to complement recent adoptions to the Department's Ground Water Quality Standards.

Comment 9: The commenter requests a consistent and transparent data solicitation process and requests the Department share the data solicitation schedule with stakeholders. The solicitation should be sent to all the entities that previously submitted data for the IR for which the Department has contact information. Also, the data solicitation schedule should be prominently posted on the Bureau's website. (MWA)

Comment 10: The Department deviated from the NJR notice for the 2020 data solicitation, which impeded the commenter's ability to provide quality-assured data relevant to the Upper Delaware Water Region this assessment cycle that could have altered assessment and the TMDL priority list. NJDEP should promote and make highly visible any IR data solicitation cycles, and when collection periods are changing from the customary cycle, three years advance notice, at minimum is needed. (MWA)

Response to Comments 9 and 10: The Department adhered to the data solicitation notice specifications at N.J.R. 1507(b) (VOLUME 50, ISSUE 13, JULY 2, 2018) that laid out the data collection and submittal deadlines for the next six 303(d) List cycles developed between 2020 and 2030. The published schedule should be used for the entry of data along with the accompanying Quality Assurance Project Plan (QAPP) for assessment consideration of any data. The request for data is posted on the Department's water quality assessment website at <http://www.state.nj.us/dep/wms/bears/assessment.htm#/>; however, the Department will look to relocate this information to make it more prominent and utilize listserv notifications for data providers in the future.

Comment 11: The commenter states that they have a cooperative agreement with the Fish and Wildlife Service for water quality assessment work and would like to work with the Department to include data collected in partnership with other federal agencies and from continuous monitoring sensors. (MWA)

Comment 12: Commenter and partners are interested in streamlining the data sharing process to reach the most accurate report conclusions in the future. Commenter is seeking Department guidance on submitting continuous monitoring data, including standardized templates for data uploading (TU).

Comment 13: In 2018, the commenter obtained state-approval of a QAPP for Paulins Kill water quality data collection; however, the Department is not using select data sets, specifically the continuous instream monitoring data in the surface water quality assessments. There is currently no database or storage system for continuous instream monitoring data and as a result, this information is not considered in the assessment. Consequently, there are data gaps for temperature in the Upper Delaware. (TNC)

Comment 14: The draft IR identifies 25 assessment units in the Upper Delaware basin that do not currently meet the temperature criteria for the aquatic life-trout designated use, 44 assessment units that do, and 9 with insufficient data to evaluate temperature criteria. The TNC, Trout Unlimited, Musconetcong Watershed Association and fisheries biologists at NJDEP's Division of Freshwater Fisheries submitted more than 200 stream temperature time series data to EcoSHEDs Stream Temperature Database and encourages the Department to discuss the potential for approving EcoSHEDs as an effective database for submitting continuous instream data (specifically for temperature) for use in water quality assessments of streams. Having a robust dataset available for data analysis will significantly help the New Jersey to accurately assess baseline conditions and document trends over time. The Nature Conservancy offers to help fill data gaps. (TNC, TU)

Response to Comments 11 through 14: The Department uses several continuous data sets for listing decisions. The protocol for comparing continuous monitoring data is articulated in the 2016 Methods

Document. The Department uses readily available data, and the number of samples used in assessment cycles has increased from approximately 300,000 data samples in the 2006 cycle to over 1.8 million discrete data samples and 2 million continuous data points in the 2018/2020 IR cycle. At present, the Department has the capacity to house and assess continuous monitoring data collected by NJDEP, USEPA and USGS through a Rutgers database. The Department appreciates the data collected by the commenters, and the Department is participating in an USEPA-led workgroup that is seeking to expand the capability of existing or a new database to store continuous data on a national scale. USEPA is working with states to identify the types of continuous data that are being collected so that the developed system will meet a variety of needs. Practicable outcomes from the national workgroup will be implemented for future IR development.

However, as mentioned by the commenters and specific to available data that could be utilized in New Jersey, the Department will continue to work with the Division of Fish and Wildlife to ensure that data quality best practices are resolved, and that the data's quality assurance is compatible with the Methods Document. Once the two items above are addressed, data retrieved from the ECOSHEDs database and/or the DWM&S's Continuous Monitoring database supported by Rutgers University may serve as a data source for listing decisions. Per response to comment 7 and 8 above, the Department has embarked upon expanding the Community Water Monitoring program, which among other objectives will assist in filling data gaps. The Department also appreciates commenter's offer to assist with filling data gaps.

Comment 15: The current draft IR inadequately reflects the true state of temperature criteria attainment in trout waters across the Upper Delaware Basin because all available continuous temperature monitoring data monitored by various partners were not used in the assessment process. The commenter requests that the report incorporates QAPP-approved data that would lead to qualitatively different conclusions.

The commenter also encourages the Department to review temperature data for the additional seven assessment units flagged as not attaining designated uses by non-QAPP data, with the understanding that these data cannot be incorporated in this draft report (TU)

Comment 16: The Department's long-term trend report was based on 32 sites across the state and only one site for the Musconetcong River watershed when additional long-term data is available. In the future, we hope that the Department would have the ability to utilize data from more watersheds and from multiple sites in major watersheds for a more robust trends analysis. (MWA)

Response to Comments 15 and 16: The Department works diligently to include all high-quality data into the assessment process. The assessed data volume has expanded significantly. Since 2006, when the Department started using HUC14s as the basis for assessments, the number of unassessed designated uses caused by insufficient data declined from 38% to only 18%, the number of AUs with at least one designated use assessed rose to 97% statewide, and the number of assessment units where all the designated uses are assessed rose over 35% to 62% statewide. As more data sources are identified, the Department has developed QAPPs, offered trainings for both QAPPs construction and water sampling techniques, and assisted with WQP data entry.

As elaborated in response to comment 14, the Department will work with Fish and Wildlife to determine if EcoSHEDs is an acceptable data repository for IR assessment decisions. A trends analysis, based on the USGS Scientific Investigations Report 2016-5176 - *Trends in the Quality in Water in New Jersey Streams for Water Years 1971-2011*, was updated by the Department's Division of Science and Research in 2019. The purpose of the trend reports was to examine 28 monitoring stations for long-term trends in in levels of nitrogen and phosphorus present throughout New Jersey. Spatial representation was limited due to

site selection continuity based on historical data monitoring sites from 1970s to present. The Department appreciates the support for future trends report.

Total Maximum Daily Loads and Watershed-based Plans

Comment 17: The 303(d) list has over 2,500 assessment units for the development of TMDLs with low, medium, and high priority. The listings range from 1998 to present, and there are only ten listed for high priority. It is not clear how and when the Department plans to develop and implement these TMDLs, if at all considering the report includes reference to watershed restoration plans as an alternative approach. Compliance with TMDLs in discharge permitting is a requirement of the CWA and they are critical for managing and enforcing nonpoint source pollution reduction. Additionally, the severe backlog of TMDLs creates disadvantages in funding qualifications if priority funding is slated for those areas with a TMDL or alternative watershed plan. By continuing to push off TMDL development, local organizations may get passed over for funding – regardless of project merit – because the state has not yet developed the TMDL for their impaired waters. The commenter suggests the Department enlist the input of the ENJ organizations when deciding if, how and when to pursue a restructuring or re-strategizing of the TMDL process and alternative plans. (ENJ)

Comment 18: Given the changeable nature of state regulations, and the consistency of federal statute in Delaware River Water Region, the Department should ensure that it continues to develop TMDLs, while simultaneously encouraging the development of watershed-based plans (WBPs) after TMDLs are developed. (MWA)

Comment 19: We do not see any plans for addressing bacterial contamination in the state's recommendations. It is imperative that the Department recognize the recreational value and opportunity of both the Upper and Lower Delaware and develop TMDLs with complementary watershed-based restoration plans to tackle what is one of the greatest threats to recreation on the river. (ENJ)

Comment 20: The Department should follow-through and develop TMDLs for all the parameters listed, for all medium and high priority restoration waterbodies. The commenter states that the Department did not recommend waters impaired and recognized for restoration for TMDL development. (MWA, MRMC)

Comment 21: Impaired waterbodies with medium and high restoration potential should be prioritized for TMDL development. (MWA)

Comment 22: The Department should make clear which waters are low priority for TMDL listing because the Department intends to develop a WBP instead. (Watershed Institute)

Response to Comments 17 through 22: CWA Section 319(h) funding guidance provided by EPA recognizes and supports the implementation of both TMDLs and restoration measures for priority funding. The Department issues an annual Request for Proposals (RFPs) that solicits implementation projects to address both TMDLs and watershed-based plans along with other Department priorities.

The Department continues to work to address all impairments on the 303(d) List. The Department addresses pace and TMDL development considerations in the Vision Document (<https://www.state.nj.us/dep/wms/bears/docs/ir1820-NJVision2021.pdf>). Chapter 8 in the 2016 Methods Document describes the methods used to rank and prioritize assessment unit/pollutant

combinations for TMDL development. Factors considered for TMDL ranking include: TMDL complexity regarding data or modeling needs; severity and/or spatial extent of the actual or threatened exceedance/impairment; efficiencies that could result from grouping TMDLs by drainage basis or parameter or leveraging other ongoing water quality studies, including shared waters and degree of public interest. The Department will review the ranking and prioritization for TMDL development and make any changes in a future update to the Methods Document. TMDL prioritization may also be affected by resources such as additional monitoring needs for TMDL construction and availability of models capable of addressing impairments. As discussed in the Methods Document, waterbodies on Sublist 5R reflect HUC14 subwatersheds that fall within a Department approved watershed-based plan. They are given a lower priority for TMDL development as it is expected that watershed-based plans address nonpoint sources or regulated stormwater source controls through implementation of best practices is the most effective means to reduce loads. The Department continues to support restoration plan development and efforts by stakeholders.

Comment 23: The commenter asks why adjacent assessment units that have the same non-attaining status for the same parameter would have different priorities for TMDL development? For example, Barnegat Bay 08 and 09 are high priority for turbidity TMDL development but LEH Bay tributaries has a medium priority. Commenter notes making the same comment on the 2016 report. (BBP)

Response: The Barnegat Bay intensive monitoring and modeling effort was initially designed and developed to address conventional pollutant impairments identified on an earlier Integrated List. Given the coupled three-dimensional hydrodynamic (ROMS) and water-quality model (WASP) being developed for the Barnegat Bay, high priority designation was given to the turbidity impairment with the expectation that it would be covered by the model. Upon recent review of the model by an expert panel, turbidity

cannot be successfully simulated or represented by the outcome of the model. As a result, priority ranking was revised and the assessment unit -turbidity impairment combinations are shifted to medium.

Comment 24: How does the removal of assessment units from the impaired list once a TMDL is prepared impact the statistics of waters meeting or not meeting water quality standards? Does this practice result in an undercounting of impaired assessment units? The report should list as impaired all waters and indicate whether a TMDL or watershed-based plan was prepared. (Watershed Institute)

Response: As explained on the "Statewide Water Quality" tab of the web report under the section labeled "303(d) list and Sublist 4", the removal of an assessment unit from Sublist 5 upon USEPA approval of a TMDL does not impact calculated statistics on meeting water quality standards. The TMDL simply reclassifies the waterbody to Sublist 4, which still reflects nonattainment of standards. Please refer to this web report section for more details.

Comment 25: To protect human health, and prevent degradation of the recreational fishery, the commenters recommend the following TMDLs be developed:

- Bacteria (E. coli) TMDLs for Lubbers Run (HUC14 02040105150040, HUC14 02040105150050), Mine Brook (HUC14 02040105150090), and Wills Brook to Lake Hopatcong (HUC14 02040105150030).
- Temperature TMDLs for Cranberry Lake/Jefferson Lake (HUC14 02040105150060), Musconetcong River from Hances Brook to Trout Brook (HUC14 02040105160010), Lake Hopatcong (HUC14 02040105150020), Lubbers Run (HUC14 02040105150040, HUC14 02040105150050), Mine Brook (HUC14 02040105150090), Weldon Brook/Beaver Brook (HUC14 02040105150010), and Wills Brook to Lake Hopatcong (HUC14 02040105150030).

- pH TMDLs for Musconetcong River Wills Bk to Lk Hopatcong (HUC14 02040105150030), Musconetcong R Trout Bk to Saxton Falls (HUC14 02040105150100), Musconetcong River Change water to Hances Bk (HUC14 02040105160020), Musconetcong River Saxton Falls to Waterloo (HUC14 02040105150080) (MWA, MPMC, NPS)

Comment 26: The commenter requests that more temperature TMDLs be developed since temperature is the major cause of aquatic life impairment not yet addressed on a broad scale by NJDEP. The commenter notes that the Department has developed 55 phosphorus TMDLs and one each for temperature and pH, within the Upper Delaware Water Region, despite the availability of monitoring and modeling techniques. (TU)

Response to Comments 25 and 26: The Department is preparing a technical approach for developing TMDLs for temperature impairments on the 303(d) List of Impaired Waters. Other conventional parameters on the 303(d) list are given medium priority for TMDL development as explained in the Methods Document and will be the subject of future TMDL efforts. Upon completion of the TMDLs identified on the current two-year schedule, the Department plans to proceed with TMDL development to address statewide temperature impairments as funding and resources allow. Remaining waterbodies on the 303(d) List of Impaired Waters will be the subject of future TMDL efforts and/or other enforceable measures to delist the waterbody through the appropriate procedures and subject to public comment.

Comment 27: Fresh water alkalinization, linked to the freshwater salinization syndrome, is a function of salt pollution and human-accelerated weathering shifting the chemical composition to more basic conditions. Highly basic conditions can impede the biological processes of macroinvertebrates, a key building block for the aquatic food web, including Trout. (MWA, ENJ)

Response: The Department has embarked upon a multi-year road salt monitoring program within the DWMS&PC's Bureau of Freshwater and Biological Monitoring in coordination with the Bureau of Environmental Analysis, Restoration and Standards. Continuous data loggers have been deployed to capture road salt effects on stream for the development of TMDLs to address chloride and total dissolved solids impairments. An ongoing complementary project is also engaging citizen scientists to evaluate the impacts of winter road salting on freshwater streams and lakes. Citizen science volunteers use test strips to measure chloride levels before and after winter weather events. The data is uploaded using Survey123 software, which displays results on a map app. Last year, more than 87 volunteers participated in the collection of 448 chloride measurements, finding at least 15% likely exceeded chronic chloride SWQS and 8% likely exceeded the acute SWQS. The data is displayed at <https://njwatershedwatch.org/road-salt/>, and will be used in the future to help locate the best places for the Department's continuous conductivity meters and address associated pollutant impairments.

Comment 28: The Department does not always incorporate TMDLs into Department decision-making process. A draft permit application in Bloomsbury Borough included discharge parameters for bacteria. However, the Department did not refer to the existing bacteria TMDL in the draft application. Significant amount of data on background conditions, useful information for meeting Category One anti-degradation standards were also unused in the draft application including watershed-based restoration plan, from Hampton to Bloomsbury, and designation as a National Wild and Scenic River.

Response: Any public comment received on a draft New Jersey Pollutant Discharge Elimination System (NJPDES) permit will be responded to separately as part of that permit action pursuant to N.J.A.C. 7:14A-15. If there is a sanitary wastewater component in a NJPDES permit, the Department would impose the

SWQS of 126 colonies per 100 ml as an effluent limitation as a monthly geometric mean. That effluent limit would be consistent with N.J.A.C. 7:9B-1.14(d)1 and is consistent with the TMDL.

Comment 29: As it is a statutory obligation to ensure that discharges do not worsen TMDL waters, the commenter requests the Department to better utilize available water quality data and SWQS, impairments, TMDLs, and restoration plans to ensure cross-compliance with the CWA across agency programs (e.g., NJDPES DSW permitting). (MWA)

Comment 30: The Department does not fully implement the wasteload allocations or load allocations as set forth in the TMDLs. It also appears to be inconsistent in its implementation of the TMDLs through its NJPDES program. TMDLs are not considered in the municipal separate storm sewers systems (MS4) permits. The Department should implement the wasteload allocation and load allocation within the MS4 permits which is currently not being implemented. (ENJ, DRN, Watershed Institute)

Comment 31: There are TMDLs established where wasteload allocations are not followed through at the permit level as required by the CWA. TMDLs are not considered in the Department's MS4 permitting requirements. (DRN)

Comment 32: TMDL's should inform Department review of Coastal Area Review Act, Freshwater Wetlands Protection Act, Flood Hazard Area Control Act, or Waterfront Development Act permitting program. The decision to allow impacts to a regulated feature should be informed by the reductions set out in the relevant TMDL and potential impacts from the proposed activity on achieving the targets set out in the TMDL so that the waterbody may achieve the designated uses and whether it is consistent with the wasteload allocation or load allocation in the TMDL or watershed protection plan. (ENJ, WI)

Response to Comments 29 through 32: TMDLs may be adopted by the Department to the applicable areawide Water Quality Management Plan(s). Once adopted, in accordance with the Water Quality Management Planning rules, N.J.A.C. 7:15-3.2, the Department shall not issue a permit or approval that conflicts with an adopted areawide plan or this chapter. Therefore, TMDLs are considered in the Department's permit decisions; moreover, the wasteload allocation component of the TMDL informs the NJPDES permit through assignment of effluent limitations that must be consistent with the individual wasteload allocation. Compliance with the assigned load is reviewed upon each permit renewal. The Department's Bureau of Stormwater Permitting (https://www.nj.gov/dep/dwg/bnpc_home.htm) issues permits that address stormwater pollutant sources affecting water quality. The minimum required elements under the Department's MS4 permit are generally expected to achieve a substantial portion of the required TMDL load reductions assigned to the associated urban land uses. The NJPDES stormwater permit renewals and rule revision process provide continuous steps for improvement of water quality. The Department rules and permit decisions are published as draft actions, and subject to public comment. Permits may be changed and/or finalized based on engagement with all interested parties per Department regulations (e.g., New Jersey Pollutant Discharge Elimination System N.J.A.C. 7:14A).

Comment 33: The Department does not indicate in the New Jersey Nonpoint Source Management Program Plan (NPS Plan) or in the IR what watershed-based plans are under development and their status. The NPS Plan references EPA Water Quality Measure 27 (WQ27); however, it did not identify those waterbodies. The commenter requests relevant references to the document or web pages. (WI)

Comment 34: The commenter requests that the IR provides a status on TMDL development provided in the TMDL's previously listed for development. (WI)

Comment 35: The NPS Plan, states that “TMDLs must be developed within 8 to 13 years of being listed as impaired”. There are several high priority waters that are within or exceeded this time-period. The Department should provide details on how these will be addressed through either TMDLs or WBPs and set out its plan and steps for implementation through regulatory and incentive-based incentives. (WI)

Comment 36: The NPS Plan only outlines the programs used to guide water quality attainment but does not set out regulatory requirements designed to reach attainment. The permitting program should address impaired waters prior to the development of a TMDL or watershed-based plan. (WI)

Response to Comments 33 through 36: The Department, in conjunction with USEPA, prioritizes and develops TMDLs and WBPs to calculate load reductions and implement measures to restore water quality to meet applicable designated uses. As mentioned in the response above, the list of impaired waters is subject to change due to constraints of approaches and resources. The purpose of the NPS Plan is to explain the Department’s approach to addressing water quality issues. The Department addresses water quality through many regulatory and incentive-based programs as articulated in the NPS Plan. USEPA’s 1997 policy’s 8–13-year timeframe for TMDL development serves as a general guideline to ensure timely development of TMDLs. With the issuance of the 2013 Vision Guidance, USEPA provided states a framework for managing CWA program activities to identify and address 303(d) list impairments, acknowledging that there are alternative means to restore impaired waters. Waterbodies that are parsed on Sublist 5A, 5R or 5L as explained in Section 7.0 Integrated Listing Guidance of the 2016 Methods Document retain the fundamental requirement to develop TMDLs if alternative approaches fall short of fully restoring waters.

The Department's watershed-based plan information is available through the "Protection and Restoration Efforts" tab at the top of the web-based report. The watershed-based plan information and link that takes the reader to additional information (<https://www.state.nj.us/dep/wms/bears/npsrestgrants.html#/>) describes the plans and projects that the Department has implemented. An overall status of completed TMDLs in several figures and maps is present in the web report. The Department has a tab on its TMDL home page entitled featured TMDLs which is periodically updated to reflect a specific TMDL under development. For complex TMDLs, which can take a significant amount of resources and time (5-10 years), the Department engages in periodic, informal stakeholder meetings and presents at meetings and workshops when requested. The Appendix G Vision Document in the IR covers WBP targeted work; however, the Department does not post WBPs until finalized and approved. As stated in Vision Document, the stakeholder process will provide the opportunity for public engagement in this prioritization process by providing a forum through which the public can share information about local water quality concerns, local restoration needs and priorities, restoration actions already completed or underway, and opportunities for funding and/or leveraging of resources for restoration actions. This stakeholder process is conducted in each subsequent water region and the results of these regional prioritization processes will be reported to USEPA through New Jersey's annual WQ 27 submissions and in each corresponding IR. The Department has added the language below to the web-based report describing ongoing watershed-based plans. "In recent years through the Water Quality Restoration Grants for Nonpoint Source Pollution, the Department has funded the development of eleven watershed restoration plans that will satisfy USEPA's recommended nine elements of a watershed-based plan. This work includes:

1. Developing a Watershed Restoration Plan for the Southern Barnegat Bay – Little Egg Harbor Tributaries
2. Watershed Restoration/Protection Plan for the Cedar Creek Watershed
3. Watershed Restoration/ Protection Plan for the Oyster Creek Watershed
4. Watershed Restoration/Protection Plan for the Toms River Watershed

5. Watershed Restoration and Protection Plan for Budd Lake
6. Creation of a Lake Protection and Watershed Management Plan for Lake Topanemus
7. Watershed Restoration and Protection Plan for the Spruce Run Watershed
8. Development of a Lake Protection and Watershed Management Plan for Twilight Lake in Ocean County
9. Swartswood Lakes Nonpoint Source Watershed Management Plan
10. Update and Expansion of the Musconetcong River Watershed Protection and Restoration Plan
11. Watershed Restoration and Protection Plans for Miry Run Watershed and Doctors Creek Watershed”

The Department’s Division of Water Quality administers the NJPDES program that is designed to set pollutant effluent limits to attain standards. The calculated wasteload allocation in the TMDL is implemented in the appropriate NJPDES permit upon its renewal. The load allocation calculated for the NPS loading is expected to be attained through the Department’s MS4 and best management practices.

Comment 37: The NPS Plan 2020-2025 summary section of the report mentions that for nonpoint source pollution, a watershed restoration plan or watershed-based plan “can be an effective alternative to a formal TMDL...”. While we do not disagree that a watershed approach can be effective, questions remain as to how these plans will be enforced and incorporated into permit limits and waste load allocation. (ENJ)

Comment 38: The Department should be clearer in the IR about the importance of developing TMDLs to inform onward decision-making processes for ensuring compliance with the CWA, and the use of watershed-based plans as a supplement, and not a substitute, to a TMDL. The commenter states that the Nonpoint Source Management Program report states a preference for funding and implementing WBPs instead of TMDLs going on to say that the NJDEP also acknowledges that the EPA’s preference is to

consider “alternative approaches” such as WBPs “in addition” to TMDLs, but not as a substitute for TMDL development. (MWA)

Comment 39: While TMDLs may be an imperfect tool for watershed restoration, they are the only tool offered, by statute, in the CWA to address nonpoint source pollution reduction and have special cross-compliance features that watershed-based plans do not have. By not developing a TMDL, the Department disadvantages impaired waterbodies, including the mobilization factor of funders which need to provide the matching funds for 319(h) planning and implementation grants. The Department should proceed with TMDL development first, then, second, develop watershed-based plans for restoration activities. (MWA)

Comment 40: TMDLs should be developed instead of watershed-based plans due to their regulatory mechanisms to protect waters. (TU, ENJ)

Comment 41: A watershed management plan should not take place of a TMDL. These plans are helpful tools but TMDL and enforcement conditions in permits provide legal mechanism and a watershed management plan should not replace them. The commenter refers to best management practices, rain gardens, riparian forested buffers, and other actions laid out as a watershed approach as components of a watershed management plan. (DRN)

Response to Comments 37 through 41: The Department agrees that watershed-based plans and TMDLs are complementary tools for water quality restoration and that watershed-based plans should not replace TMDLs. The current statutory and regulatory CWA 303(d) obligations including the development of TMDLs remain in place, and USEPA’s Vision approach provides each state the flexibility to implement other tools such as WBPs as a more immediate tool to address impairments. Ensuring that TMDLs continue to be

developed is central to the successful implementation of the Vision and alternative restoration approaches may be employed to attain water quality standards in the near term; however, the fundamental requirements to develop TMDLs remain for impaired waterbodies if the alternative approach fall short of fully restoring waters.

CWA Section 319(h) funding guidance provided by EPA recognizes and supports the implementation of both TMDLs and restoration measures for priority funding. The Department issues an annual RFP that solicits implementation projects to address both TMDLs and watershed-based plans along with other Department priorities.

Comment 42: The commenters encourage the Department to consult with stakeholders on the effectiveness of TMDLs and the Nonpoint Source Management Program, perhaps through holding an annual or biennial stakeholder workshop, including stakeholder views on TMDLs, watershed-based plans, and nonpoint source reduction strategies. This outreach, engagement, and public comment process should occur at a separate time from the IR public comment process. (MWA)

Response: The Department is implementing a multi-year monitoring project in the Whippany and Toms River watersheds which will entail a comparison of baseline conditions from the 1990's to present day conditions. The purpose of the monitoring project will be to assess the efficacy of the Department's programs and statewide initiatives such as TMDLs and wasteload allocation implementation through NJPDES permit limits, MS4 permitting program requirements, 319(h) nonpoint source grant program implementation and statewide fertilizer law. The results of the effectiveness of these initiatives on mitigating NPS pollution will be reported out in a future IR and NPS Plan. The Department will take the commenters suggestion into consideration for a future workshop.

Nonpoint Source Pollution/Miscellaneous

Comment 43: Citing Upper Delaware River recreational activities importance for the region's economic activities, the commenter requests the Department to research, develop, pilot, and implement programs that target support for small, lower-capacity rural areas which rely on decentralized wastewater systems, to improve wastewater manage and reduce nonpoint source pollution. The commenter notes their municipalities have very small governments and lack the capacity to manage a loan program. (MWA)

Response: The commenter's recommendations extend beyond the scope of the request for comments in the NJR notice. The Department advises the commenter to work with their county on its preparation of a Water Quality Management Plan to address wastewater management decentralization.

Comment 44: The commenter requests that the Department develop recommendations for 1) assessing bacterial contamination sources, 2) identifying nonpoint reduction strategies for reducing bacterial contamination, especially from septic systems in rural areas and hamlets where there is not the probability of connecting to waste water treatment plants, 3) identifying pollutant sources, and 4) how the NJ Water Bank priorities could be expanded to provided grants for decentralized wastewater treatment systems, nonpoint source management, watershed-based pilot projects, and technical assistance. Ten percent (10%) of the New Jersey Water Bank should be allocated for these purposes. (MWA)

Response: Although this is beyond the scope for request comments in the NJR notice, the Department has many initiatives to address bacteria impairment. The Department's Discharge to Ground Water Permitting Program publishes septic management guidance (https://www.nj.gov/dep/dwq/owm_home.htm). The

DWM&S's Bureau of Marine Water Monitoring perform extensive source track down efforts with various stakeholders to identify and address periodic local elevated bacteria water quality issues. In addition, the Water Quality Management Planning rules at N.J.A.C. 7:15 require nitrate dilution loading capacity analysis for areas served by individual subsurface sewage disposal systems (ISSDs) discharging 2,000 gallons per day or less to ground water to determine development density. In fulfillment of this analysis, a county-wide septic management plan is a required component of a County WMP and ensures that areas served by ISSDs are subject to mandatory maintenance. Properly functioning septic systems will attenuate bacteria preventing the bacteria from impairing ground and surface waters. The commenter may reach out to the New Jersey Water Bank directly and suggest expansion of eligible projects see https://www.nj.gov/dep/dwq/mface_njeifp.htm. The program does provide low-cost financing to New Jersey communities for a wide range of water quality infrastructure projects that include wastewater, stormwater, and other pollution control projects. The program prioritizes projects that repair wastewater problems such as leaking pipes, inadequate capacity, deficient treatment, combined sewer overflows, failing septic systems, or sludge disposal. The Department's Water Quality Restoration Grants for Nonpoint Source Pollution may be a better resource for developing and implementing watershed-based projects.

Comment 45: The Department should estimate funds needed for restoring the impaired waters in the IR and the return of investment to the public of the restored water quality, including increased economic development from outdoor recreation and tourism. The Department should estimate the environmental and economic costs necessary to improve water quality and the economic and social costs of reaching that goal, as required by the Clean Water Act, and not just list the economic value of ecosystem services for current water quality in 2009. (MWA)

Response: The Department agrees with the commenter and participates in the Clean Watersheds Needs Survey. The survey is conducted every four years in partnership with USEPA to identify and document the cost of the capital needs required to meet the water quality and water-related public health goals of the CWA. For additional information the commenter is directed to the Department's web page at <https://www.nj.gov/dep/dwq/cwns.htm>.

Recovery Potential Screening (RPS) Tool and Environmental Justice

Comment 46: State data show a general decline in wild trout populations at many sites in the Delaware basin, and models predict that climate change will exacerbate the struggles of many New Jersey trout populations. Assessment units with wild and native trout species should be prioritized for restoration and protected higher over stocked trout streams due to their prominent recreation value and conservation support. (TU)

Response: The Department agrees that these are valuable resources and important to protect while maintaining and restoring all waters. Areas in the Upper Delaware Water Region are protected via Outstanding National Resource Waters (ONRW) and Category One (C1) regulations. The most protective tier of antidegradation designation is ONRW, which include surface waters classified as FW1 and PL. These waters are set aside for posterity because of their unique significance. The second tier of antidegradation designation is C1. These waters are designated through rulemaking for protection from measurable changes in water quality because of their Exceptional Ecological Significance, Exceptional Water Supply, Exceptional Recreation, and Exceptional Fisheries to protect and maintain their water quality, aesthetic value, and ecological integrity. Moreover, headwaters are expected to maintain water quality due to development and water quality anti-degradation restrictions. The Department has also included the

“Trout Aquatic Life Use Support” layer in the Recovery Potential Screening (RPS) tool. The DWMS&PC conducts extensive fish monitoring as detailed at <https://www.nj.gov/dep/wms/bfbm/ibipagemain.htm> that feeds into water quality assessment and RPS tool. Using the RPS tool, the Department identified 55 assessment units in the Lower and Upper Delaware Water Regions within the 2018/2020 IR that are a priority for restoration measures. These watersheds were identified in the Department’s 2020-2022 RFP for Water Quality Restoration Grants for Nonpoint Source Pollution for priority funding. With these protections and prioritizations in place, the Department will continue to work with the Division of Fish and Wildlife on the identification of wild and native trout watersheds for additional consideration.

Comment 47: The commenter is seeking a more transparent restoration prioritization identification process with opportunity for public involvement. “New Jersey’s Vision Approach for Assessment, Restoration and Protection of Water Resources under the Clean Water Act Section 303(d) Program” does not describe the details of the prioritization process. Per USEPA guidance, the generic RPS tool should be customized to identify priorities. This process is hugely consequential and not enough detail is available on the data and weighting performed. The expertise of communities could benefit this process. (TU)

Comment 48: The Department should incorporate environmental justice layers into your RPS tool when prioritizing restoration areas and allocate restoration funding and support to the heavily impacted, underserved communities within New Jersey. Camden and Pennsauken areas are completely missing from the Department’s restoration priorities (ENJ, DRN)

Comment 49: We see a major omission in the lack of consideration for environmental justice communities and areas with historical and consistent pollution and degraded water quality. We understand the logic to focus on low hanging fruit and those assessment units that are close to reaching attaining status, but

the Department must also prioritize those waters that are heavily impaired and where those impairments create inequities and health impacts while also impeding access to our public waterways for the people living within those communities. (ENJ)

Comment 51: Primary contact recreation occurs in the Delaware River mainstem areas and failure to recognize and protect this use puts the health and safety of our communities and river users at risk. The high bacteria levels in these areas also pose environmental justice concerns and restrict access to communities that have long been denied safe recreational outlets. (ENJ)

Response to Comment 47 through 51: The Department agrees with the comments expressed regarding inclusion of environmental justice into the water quality assessment process and is expanding the section discussing the RPS tool in the IR web report to describe more about the data and weighting utilized. The Department through assistance by USEPA, has applied a customized RPS tool by using more detailed local data and a tool adjusted to provide information on a HUC 14/assessment unit scale. The Department is planning to improve the RPS tool for the 2022 IR cycle to include overburdened community data and updated ArcGIS layer files. The DWM&S is receptive to the submittal of additional input on the expanded language in this section of the IR web report and is open for input at any time on its reports and websites in order to provide more water quality assessment information easily to the public.

The Department has focused on environmental justice issues over several decades and the current administration has prioritized the incorporation of environmental justice considerations in each of its programs. Two websites that describe the extensive work in these communities are reviewable at <https://www.nj.gov/dep/ej/ej-state.html> and <https://www.nj.gov/dep/ej/>. The Department has invested in safely connecting these communities to waterbodies, open space, and recreational outlets (e.g., fishing,

park development and water quality education and outreach). Additional steps to improve quality of life in overburdened communities are expected to result from the September 18, 2020 New Jersey Environmental Justice Law <https://www.nj.gov/dep/ej/docs/ej-law.pdf>.

Assessment Outcome

Comment 52: TNC has a monitoring station on Meadows Road in the same stream location as NJDEP site AN0016. The assessment results show that this use is attaining; however, TNC has seen “poor” High Gradient Macroinvertebrate Index scores consistently at this site from 2016 through 2019. Although other parameters may have been used to classify this as attaining, it is difficult to agree with the Department’s “attaining” assessment when TNC’s biological data proves otherwise. Further review of this site is encouraged. (TNC)

Response: The Department appreciates the detailed monitoring and assessment of stream health that the commenter conducts. The Department maintains a strong commitment to the collection and use of high-quality data to support environmental decisions and regulatory programs. All environmental data collection performed or used by the Department must comply with and be accompanied by a signed Quality Assurance Project Plan (QAPP) approved by USEPA, USGS, Delaware River Basin Commission (DRBC) or the Department. The TNC’s QAPP was reviewed by the Department and approved in 2018. In accordance with the Notice of Solicitation of Water Quality Data and Information to Support Development of the 2018 303(d) List of Water Quality Limited Waters, the data will be used and will result in refinement of the assessment in the 2022 IR. Even though data collection began in 2016 and the same methods were followed per the 2018 QAPP, the Department only recently verified the data was quality assured. Please

also note that the assessment unit (HUC02040105040040) that contains AN0016 does show nonattainment in the posted StoryMap.

Comment 53: Results for HUC14 02040105040070/WAPPAUL3 show “Fully Supporting” for aquatic life general. TNC has a monitoring station in a nearby downstream reach (near Augusta) where we have seen macroinvertebrate HGBI scores between “fair” and “poor” from 2016 through 2019. Further review of this site is encouraged. (TNC)

Response: As explained in the comment response above, the Department recently approved the commenter’s QAPP and will include the supplied data in its 2022 assessment.

Comment 54: There are several labeling/mapping errors in the Metedeconk River assessment units. On both the 303(d) list and the StoryMap, station number “NF14” is listed in “HUC14 02040301030040/Metedeconk R SB (Rt 9 to Bennetts Pond)” when the sample site actually lies along the North Branch of the Metedeconk River, in “HUC14 02040301020050/Metedeconk R NB (confluence to Rt 9)”. In the StoryMap, there is a lack of consistency in BTMUA's monitoring location identifier as uploaded to WQDE and the name displayed on the map. For example, site "NA" is shown as "BTNA", "CB-1" is shown as “CB”, and “HS-1 is shown as “HS”. Also, several identical stations are shown in different locations on the story map; "SA" and "BT01", which are sampled side-by side by BTMUA for two different projects, are not collocated on the map. Finally, on the StoryMap Station Number SB1 is incorrectly identified in the Station Name field as “Raritan R S Br at Hamden Rd”. This site is located on the Metedeconk River South Branch at Lake Shenandoah County Park and was described in the 2016 IR as “Metedeconk R SB (Confluence to Rt 9)”. (BBP)

Response: According to the latitude and longitude in the water quality portal, NF14 is in HUC14 02040301030040/ Metedeconk R SB (Rt 9 to Bennetts Pond). The latitude/longitude in the portal is 40.08247, -74.216875, so this site location appears correct. Please note that co-located stations may have been shifted slightly in the StoryMap to aid in data and assessment display. However, if there is a necessary revision to the site location or SA and/or BT01 monitoring locations, please contact the Department with the latitude/longitude for monitoring site correction. The sample location identifiers were abbreviated or slightly modified in the assessment process due to similar naming conventions used in other monitoring sites and based on when certain sample locations were entered into the Department's automated assessment using R-scripting. The monitoring location name associated with SB1 has been corrected. The Department appreciates the detailed review provided by the commenter.

Comment 55: Barnegat Bay 04 (Toms River Estuary) is "not attaining" for aquatic life due to pH. This is based on BBP_WQX-9, however that sampling point is within the direct influence of Long Swamp Creek. The sampling point may be more representative of Long Swamp Creek than Toms River at this location.
(BBP)

Response: The Department will review the station association in the assessment unit and determine if the suggested adjustment is appropriate for the 2022 IR. As explained in the Methods Document, initial data evaluation is conducted as the station level, designated use assessments are conducted for an entire assessment unit (i.e., HUC14), each of which may contain data from multiple stations and multiple waterbody types. Data from one or more monitoring stations located within a given assessment unit can be used to evaluate water quality within that assessment unit's boundaries.

Comment 56: The commenter has collected macroinvertebrate and habitat data with a NJDEP approved QAPP since 2016. Only one TNC station (TNC_8) was identified in the interactive map. Why is this the only site displayed in the interactive map and not others? (TNC)

Response: The Department reviewed the site information available and the IR assessment outcome for the watershed. The site was included as an assessment input as an oversight but resulted in no assessment change. As stated in Response to Comment 54, the Department recently approved the commenter's QAPP and will include the supplied data in its assessment for the 2022 303(d) List and IR.

Comment 57: It is unclear how and why 2018 and 2020 results are displayed on the same map, and which data years were analyzed to generate the report. It would be beneficial for future reports to link the results to the years data was collected. (TNC)

Response: The Department has chosen to post the results from both the 2018 and 2020 and display the 2020 Integrated Lists on the StoryMap to make the information easy to access, read, and improve visualization of the water quality results. The web-based IR does include a separate 303(d) of Impaired Waters for both 2018 and 2020 under the Statewide Water Quality tab within the web-based IR. The Department does not anticipate this being an issue in the IR cycles going forward, which will be published separately.

Delaware River Water Region

Comment 58: Commenter inquired if the Department would consider including New Jersey Delaware River tributaries (especially C1 streams) in data collection and analysis in the future? Many tributaries that

feed into the Delaware River are not considered in the report are a part of DRGP's Management Plan.
(DRGP)

Response: The Department assesses the New Jersey Delaware River tributaries each biennial reporting cycle based on all quality assured data that is readily available. In general, New Jersey's data collection is extensive, as shown by the designated use station coverages in the IR StoryMap tabbed information. The actual monitoring station coverage exceeds what is displayed due to insufficient data being held back from display to allow for more legible content display. The tributaries to the Delaware River are assessed by the Department, whereas the waters of the mainstem Delaware River and Delaware Bay are assessed by the Delaware River Basin Commission. Due to large wetland complexes and few road crossings which restrict locations to perform sampling and the fact that tributaries are not typically wadable, the Department faces restricted access or limited sampling stations in these tributaries. The Department identifies waterbodies with limited or older data each assessment cycle and works diligently to address any assessment units that did not have a previous assessment outcome by analyzing these situations through GIS and scouting new sample locations. Per response to comment 7 and 8, the Department has embarked upon expanding its Community Water Monitoring Program, which among other objectives will assist in filling data gaps. The commenter is encouraged to work with the program in support of this effort.

Comment 59: Clean water and safe recreation is very important. Impairments in recreation (in the lower main stem and portions of the Delaware River Wild & Scenic Waters program) are critical for clean-up with no further delay. It is also concerning to see some areas of the Lower Delaware and tributaries having insufficient data to determine if primary or secondary recreation is being attained as primary contact occurs on the Lower Delaware in highly populated areas. (ENJ, DRN)

Comment 60: Investments in clean-ups of the Delaware River mainstem can have a positive economic effect on all surrounding communities and protect aquatic life (e.g., genetically unique Delaware River Atlantic Sturgeon) by increasing dissolved oxygen. Since 2009, the Delaware Riverkeeper Network has fought for higher standards required in the Clean Water Act. Without immediate action by the DRBC and agencies to require conventional upgrades at the region's treatment plants, and without immediate action by the DRBC and agencies to require conventional upgrades at the region's treatment plants, the Delaware River will continue to suffer. The increase of dissolved oxygen in the Lower Delaware River and addressing water quality impairment should not be delayed by agencies any longer. (DRN)

Response to Comment 59 and 60: The Department agrees that clean water and safe recreation are very important. In addition to the water quality program work inside the Department, New Jersey is working with the DRBC and adjoining states to cooperatively improve water quality in the Delaware River through many initiatives. Since this is a multi-agency and multi-program issue within the Department, the best path for the commenter's recommendation is to work through the DRBC and its established subcommittees. In areas outside the jurisdiction of the DRBC, the Department is pursuing several water quality studies in the tributaries to the Delaware River that will have a positive impact in the water region and will further define where improvements can be made.

Comment 61: The Lower Delaware is impacted by nutrients with total phosphorus as the leading cause of impairments. The Department must establish strong standards, act on TMDL clean-ups now, and ensure C1 waters are not degrading over time. (DRN)

Response: The Department is continuously working to establish strong standards, implement TMDLs, and ensure C1 waters are protected. The Department is working with the DRBC and various subcommittees

to address nutrient impacts (i.e., eutrophication) in the Delaware River. The Department's most recent C1 additions published on March 4, 2020 covered approximately 600 river miles, and more monitoring and analysis is underway for identifying future C1 streams.

Comment 62: The Delaware Basin has 34 TMDL reports to address total phosphorus, TSS, fecal coliform, total coliform, mercury in fish, arsenic, VOCs, PCBs, and temperature water quality impairments, encompassing 277 parameter-HUC combinations and a significant portion of the total Delaware Water Region area. There are many areas where there appears to be impairments but where no TMDL is being pursued or where there is no timeline for TMDL development. (DRN)

Comment 63: The commenter looks forward to the work NJDEP is doing to develop TMDLs for chloride and TDS impairments as well as its effort working with DRBC on low dissolved oxygen in the Lower Delaware and urges NJDEP and DRBC to move quickly with the DO and other data they already have and not delay on the DO improvements and TMDL developments needed now for the Lower Delaware estuary. (DRN)

Response to Comment 62 and 63: The Department appreciates its working relationship with the commenter and many DRBC stakeholders. As a member of the Commission, NJDEP both funds and contributes to the eutrophication modeling efforts underway in recognition of the importance of the Delaware River and estuary to the region. The Department continues to work together with the DRBC's water quality advisory committee as the best and quickest path forward to achieving DO improvement in the Delaware River. The Department is also conducting monitoring and collecting data to further inform TDS assessment and support the development of TDS and chloride TMDLs in the tributaries to the Delaware River. The Department has identified 39 TDS statewide impairments on the 2020 IR with 5 of

these impairments occurring in the Upper and Lower Delaware water region. The 2020 IR also includes 8 statewide chloride impairments with one impairment located in the Lower Delaware Water Region.

Comment 64: Our National Wild and Scenic Waters are designated in part for their recreational uses and the public has the right to safe and healthy recreation and should be prioritized, not to mention the amount of revenue these areas bring in for the state. The Department should afford Delaware Water Region's Wild and Scenic Rivers, such as the Musconetcong River, as important, nationally recognized inland recreational waters, the same level of monitoring and attention as New Jersey's beaches. (MWA, ENJ, MRMC)

Comment 65: Citing increased recreational use during the summer season, the commenter asks if the NJDEP would consider a Delaware River water sampling program in Warren and Hunterdon County for fecal and bacterial counts during the summer months. (DRGP)

Response to Comment 64 and 65: The DRBC does conduct routine sampling in the upper zones of Delaware River and defers assessment of water quality attainment for the mainstem river to the Commission. Recreational tubing in Warren and Hunterdon is generally done when high flows are not present and precipitation is less likely to contribute pathogen runoff concerns; however, the Department will forward this comment to DRBC for their consideration.

Comment 66: The commenter suggests limiting nitrogenous biochemical oxygen demand in the effluent of the major contributors in the Delaware estuary before there is an impact for sensitive aquatic species survival. (DRN)

Response: The Department is working with the DRBC through the Water Quality Advisory Commission to model and set the appropriate regulatory limits necessary to achieve successful restoration and protections.

Other Comments

Comment 67: The current and past IRs demonstrate the clear link between land use practices and impacts to water quality. The Department's land use regulations should be more closely aligned with the Surface Water Quality Standards. When making permit application decisions, water quality data must be considered, and the applicant should demonstrate the proposed activity will neither contribute to impairment nor prevent restoration. Riparian zones and transition areas must remain as intact and wide as possible to ensure protection of our resources from anthropogenic impacts. (WI)

Response: The Department agrees with the commenter and in June 2020 formed a Watershed and Land Use program under the direction of Assistant Commissioner Vincent Mazzei, to embark upon a holistic approach to planning, permitting, mitigation and restoration of impacts to New Jersey's watersheds. The WLM will work to preserve, protect, and improve the integrity of New Jersey's water and natural resources, while protecting life and property from environmental threats. To accomplish this, WLM will work together with the Water Resource Management program led by Assistant Commissioner Patricia Gardner to unify and strengthen aspects of DEP's land use and water regulatory programs in service of a watershed approach to our stewardship of land-based resources that have a critical nexus to water quality. This will be accomplished through one, comprehensive approach to watershed management into a networked watershed coordination plan.

Comment 68: DRN supports the swift adoption of SWQS for PFAS compounds already drafted by NJDEP. DRN supports and encourages NJDEP to investigate and regulate additional PFAS compounds. Regulation of PFAS treatment waste is also needed to ensure that PFAS residue removed by water treatment and remediation systems is properly handled and disposed of properly. (DRN)

Response: The Department is pursuing establishment of SWQS for PFAS compounds. As the commenter describes, these pollutants affect many programs, and the Department is continually working to reduce this persistent and toxic chemical in our waters. More information on NJDEP program PFAS initiatives can be found at <https://www.nj.gov/dep/pfas/>, <https://www.nj.gov/dep/dwq/pfas.htm>, <https://www.nj.gov/dep/watersupply/pfas/>, <https://www.nj.gov/dep/srp/emerging-contaminants/>, and projects outlined at <https://www.nj.gov/dep/dsr/>. To set the appropriate SWQS, the Department is researching the applicable bio-accumulation factor (BAF) that will determine the appropriate proposed standard.

Comment 69: The Pequest River has enrichment from the state trout nursery that has been an age-old “elephant in the room” problem because no one wants to hurt the hatchery. The hatchery can do a better job of preventing enrichment from fish excrement. The time is now for New Jersey to review and act on this important need by the local watershed group. (DRN)

Response: The Department prepared a phosphorus TMDL in 2010 (https://www.nj.gov/dep/wms/bears/docs/pequest_tmdl_adopted.pdf) which required the Pequest Trout Hatchery to hold the nutrient load being discharged. This loading contributes approximately 12% of the overall load capacity of the river. The Hatchery recycles its wastewater to reduce nutrient loading.

The NJPDES permit issued to the Pequest Trout Hatchery contains a phosphorus monthly average limit and monitoring to ensure they are meeting the wasteload allocation of the TMDL.

Comment 70: Significant restoration efforts have occurred along the mainstem Paulins Kill since 2015. These continuing efforts will have impacts to water quality and should be recognized by the Department when developing and implementing TMDLs. (TNC)

Response: The Department applauds this work and the IR in successive cycles will show data results and catalog the water quality improvement in this waterbody.

Comment 71: HUC14 02040105040090 is a TNC macroinvertebrate monitoring station below Paulins Kill Lake dam with a “fair” High Gradient Stream Metric (HGMI) score in 2016-2018 and 2021. The assessment unit is in full support for aquatic life, however TNC’s monitoring station should be included to show the impact of aquatic life below the dam to illustrate the negative impacts of dams on aquatic habitats and water quality. The positive improvements once the dam is removed may also be observed. (TNC)

Response: The Department appreciates the commenter’s sampling effort in the Paulins Kill. Due to the sample timing, the data provided will be available next assessment cycle. Results of any improvement may also be reflected then. As noted in the NJDEP’s Methods Document, the Department considers the monitoring station location to determine if it represents the water quality conditions of an assessment unit each IR cycle. Factors used to determine a monitoring station’s spatial extent include the location of potential point and nonpoint sources, land use, stream classifications, significant tributaries, impoundments, or other hydrological alterations that could impact water quality.

Comment 72: It is important to recognize the many watershed-wide initiatives happening, as they all aim to improve water quality conditions over time. We strongly encourage the Department to consider and rely on partner data in future water quality assessments for this region. We have a unique opportunity to leverage both raw water quality data and technical expertise of the many water quality partners currently working in this region. We look forward to working collaboratively with the NJDEP in the years ahead to ensure the data being collected in this region is in the hands of our water quality regulators for use and consideration in future IRs. (TNC)

Comment 73: Arsenic impairments are from natural sources, therefore a TMDL does not need to be developed. However, fish advisory consumption notices for Lake Hopatcong and Lake Musconetcong, especially at the public water access points, like the Lake Musconetcong Boat Ramp and the Hopatcong State Park entrance must be posted. (MWA)

Response to Comment 72 and 73: Assessment units impaired for arsenic are assigned a low priority for TMDL development based on the complexity regarding data or modeling needs which is accord with Section 8 of the 2016 Methods Document. The Department will take these comments under advisement

Comment 74: The sediment (TSS) impairment in the Musconetcong River below Warren Glen at USGS-01457400 must be reassessed in the next cycle as the current assessment could be related to the Hughesville dam removal and riverbank restoration conducted in 2016. USGS-01457400 was the only result that exceeded the criteria limit of 40 mg/L. (MWA)

Response: The Department appreciates the insight and will reassess the data for the 2022 IR-cycle.

Summary of Agency Initiated Changes:

The Department has administratively corrected the designated use assessment outcome for part of the mainstem Delaware River in the 2020 IR to properly reflect the DRBC's water quality assessment available at: <https://www.nj.gov/drbc/library/documents/WQAssessmentReport2020.pdf>

The Department has included a Primary Recreational Use StoryMap Footnote.

“Note: Water quality attainment for assessment units in the Delaware River (named Delaware 1C, 1D, 1E) are carried over from the previous assessment cycle showing primary recreation support. Assessment Unit named Delaware River 3 is not designated for primary recreation therefore it is shown as “NA”. Assessment unit named Delaware 4 for primary recreation is shown as insufficient data based on <https://www.nj.gov/drbc/library/documents/WQAssessmentReport2020.pdf>”

The Department has also included a Delaware Secondary Recreational Use StoryMap Footnote.

“Note: Delaware 3 in its entirety is attaining secondary use per <https://www.nj.gov/drbc/library/documents/WQAssessmentReport2020.pdf> Delaware 4 attains secondary use in the upper portion of the assessment unit per the report link above, however; the Delaware 4 area displayed on the map covers the entire assessment unit.”

The Department revised the draft 2018 and 2020 303(d) Lists based on careful consideration of the comments received. The final 2018 303(d) List was submitted to USEPA on December 6, 2021 and the final 2020 303(d) List on December 15, 2021, for approval. USEPA approved the final 2018 303(d) List on December 15, 2021 and the final 2020 303(d) List on January 12, 2022.

The Department's submission of the final 2018/2020 Integrated Report to USEPA on December 6, 2021 and December 15, 2021 satisfies the requirements of CWA Section 303(d) and 305(b), as well as N.J.S.A. 58:11A-7 and N.J.A.C. 7:15-5.2. The final 2018/2020 Integrated Report, including the final 2018 and 2020 303(d) Lists, final two-year TMDL schedule, and other related documents, are available on the Department's website at <https://www.nj.gov/dep/wms/bears/assessment.htm#/> under the Statewide Assessments tab and 2018/2020 Integrated Water Quality Assessment Report tab.

May 12, 2022

Date

Bruce Friedman

Bruce Friedman, Director

Division of Water Monitoring, Standards
and Pesticide Control