

Region 2 NPDES Program and Permit Quality Review New Jersey

Review Date: September 2021
Report Date: March 2023

United States Environmental Protection Agency
Region 2
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Executive Summary

EPA Region 2's National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Review (PQR) for New Jersey found that permits issued in the state were generally sufficiently stringent to protect water quality and adhere to applicable state and federal regulations. The majority of the areas of improvement identified in the PQR were in regard to ensuring a complete and robust administrative record and ensuring that permits clearly describe the conditions permittees must comply with.

The PQR examined 13 individual permits and 1 general permit issued by the New Jersey Department of Environmental Protection (NJDEP) as well as state permitting policies and practices. The PQR also focuses on three national topic areas:

- Permit Controls for Nutrients in Non- Total Maximum Daily Load (TMDL) Waters,
- Effectiveness of publicly owned treatment works (POTW) NPDES Permits with Food Processor Contributions, and
- Small Municipal Separate Storm Sewer System (MS4) Permit Requirements.

The 2021 NJ PQR found that NJDEP administers a robust and thorough State Pollutant Discharge Elimination System program overall. New Jersey permits are largely comprehensive, enforceable, and protective of water quality. The New Jersey Environmental Management System (NJEMS) ensures that permits are complete and that fact sheets are comprehensive and document the basis of the permitting decisions well. The water quality-based and technology-based effluent limits established in permits are generally sufficiently stringent and comply with the applicable federal regulations; secondary treatment standards are consistently applied correctly. Additionally, NJDEP works to ensure their application forms remain up-to-date and that meaningful information is collected from the applicants. In early 2021, NJDEP proactively initiated a per- and polyfluoroalkyl substances (PFAS) Source Evaluation and Reduction Strategy and has been working with selected categories of New Jersey Pollutant Discharge Elimination System (NJPDDES) permittees on monitoring and data collection.

The PQR recognizes the challenges in staffing and workload faced by New Jersey, including emerging issues like permitting for applications of biological agents (i.e., the application of microbes to surface water to control algal blooms) and high-priority contaminants like PFAS, such as perfluorooctane sulfonic acid (PFOS). NJDEP also continues to improve their program through initiatives to address contaminants of emerging concern; enhance community engagement, particularly in the Environmental Justice communities; and update the NJPDDES permit application forms and forms within the NJEMS to create stronger environmental protection.

Although the permits reviewed commonly conform to national requirements, EPA identified several concerns, primarily regarding improved documentation of the basis of permitting decisions or adjustments needed to more clearly document conformance with federal regulations. Based on this PQR, EPA is recommending improvements to the:

- Authorization-to-discharge statement, special and standard conditions, and cooling water intake provisions in the permits;
- NJPDES permit applications and public notice language to ensure the appropriate information is collected from the permittee and shared with the public; and
- Development of nutrient effluent limitations to ensure permits are protective of impaired downstream waters and that reasonable potential analysis is performed and documented in the fact sheet.

NJDEP was provided with a draft of this report on August 4, 2022, and on February 9, 2023 and provided comments to EPA. NJDEP's comments and the subsequent discussions with EPA helped clarify details within the report, ensure EPA accurately described NJDEP's program, and that the report provided a clear basis for report findings and the resulting action items .

Common Acronyms

Table 1. Commonly Used Acronyms

BAT	Best Available Technology
BCT	Best Conventional Technology
BOD	Biochemical Oxygen Demand
BPJ	Best Professional Judgement
BAT	Best Available Technology
CBOD	Carbonaceous Biochemical Oxygen Demand
CFR	Code of Federal Regulations
CWA	Clean Water Act
DMR	Discharge Monitoring Report
ELG	Effluent Limitations Guideline
EPA	Environmental Protection Agency
MS4	Municipal Separate Storm Sewer System
NJEMS	New Jersey Environmental Management System
NJDEP	New Jersey Department of Environmental Protection
NJPDES	New Jersey Pollutant Discharge Elimination System
NPDES	National Pollutant Discharge Elimination System
POTW	Publicly Owned Treatment Works
PQR	Program and Permit Quality Review
R2	Region 2
TBEL	Technology-based Effluent Limitation
TSD	Technical Support Document for Water Quality-based Toxics Control
TSS	Total Suspended Solids
TMDL	Total Maximum Daily Load
WET	Whole Effluent Toxicity
WLA	Wasteload Allocation
WQS	Water Quality Standard
WQBEL	Water Quality-based Effluent Limitation

I. PQR BACKGROUND

A. 2021 NJ PQR

National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Reviews (PQRs) are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, the Environmental Protection Agency (EPA) promotes national consistency and identifies successes in the implementation of the NPDES program as well as opportunities for improvement in the development of NPDES permits.

EPA's review team, consisting of five EPA Region 2 (R2) staff members and two EPA contractors, conducted a review of New Jersey Pollutant Discharge Elimination System (NJPDDES) program which included virtual meetings on September 15, 23, and 30, 2021.

The New Jersey PQR included reviews of core permit components and national and regional topic areas, as well as discussions between the PQR evaluation team and New Jersey Department of Environmental Protection (NJDEP) staff regarding program status and the permit issuance process. The permit reviews focused on core permit quality and included a review of the permit application, draft permit, fact sheet, final permit, and other requested documentation which provides the basis for the development of the permit conditions and related administrative process. The PQR also included conversations between EPA and the state about program status, the permitting process, responsibilities, organization, staffing, and program challenges the state is experiencing.

A total of 14 permits were reviewed as part of the 2021 NJ PQR. Of these, 11 were reviewed for the core review, and 6 were reviewed for national topic areas. Some permits were reviewed for both the core review and a national topic area review. Permits were selected based on issuance date and the review categories that they fulfilled. A full list of the permits reviewed, and the review categories, is in Section V.

Core Review

The core permit review involved the evaluation of selected permits and supporting materials using basic NPDES program criteria. Reviewers completed the core review by examining selected permits and supporting documentation, assessing these materials using standard PQR tools, and talking with NJDEP management and staff regarding the permit development process. The core review focused on the Central Tenets of the NPDES Permitting Program¹ to evaluate the NJPDDES program. Core topic area permit reviews are conducted to evaluate similar issues or types of permits in all states.

Topic Area Reviews

¹ More information can be found at: <https://www.epa.gov/npdes/central-tenets-npdes-permitting-program>

The national topics reviewed in the NJPDES program were:

- Permit controls for nutrients in non-Total Maximum Daily Load (TMDL) waters,
- Small Municipal Separate Storm Sewer System (MS4) permit requirements, and
- Effectiveness of publicly owned treatment works (POTW) NPDES permits with food processor contributions.

EPA did not identify a regional topic area for the 2021 NJ PQR.

Action Items

As part of the PQR, the evaluation team proposed action items to improve the NJPDES permit program. The proposed action items are identified in Section VI of this report and are divided into two categories to identify the priority that should be placed on each item.

- *Essential Actions* - Proposed “essential” action items address noncompliance with respect to a federal regulation. EPA has provided the citation for each essential action item. The permitting authority must address these action items in order to comply with federal regulations.
- *Recommended Actions* - Proposed “recommended” action items are recommendations to increase the effectiveness of the states or Region’s NPDES permit program.

The essential actions are used to augment the existing list of follow up actions currently tracked by EPA Headquarters on an annual basis and are reviewed during subsequent PQRs.

B. 2016 NJ PQR

EPA conducted a PQR of the NJPDES Program on May 31 and June 1, 2016. The PQR summary report is available at: <https://www.epa.gov/npdes/regional-and-state-npdes-program-and-permit-quality-review-pqr-reports>.

The 2016 PQR review included the core permit review component as well as special topic area reviews. The national topic areas were nutrients, pretreatment program, pesticides general permit, and stormwater. The regional topic areas were reasonable potential analysis, power plants, combined sewer overflows, and arsenic.

As part of the 2021 PQR, EPA requested updates from NJDEP on the progress of the action items identified in the 2016 PQR. The 2016 PQR categorized findings into Critical Findings, Recommended Actions and Suggested Practices. Generally, NJDEP was able to resolve many of the action items. Of the 17 essential² action items identified during the 2016 PQR, 6 have been resolved, 1 was erroneously identified as an action item, and the remainder represent actions that are either longer-term or low-priority activities which NJDEP is still addressing. Section V of

² During the 2012-2017 PQR cycle, these action items were known as “Category 1” and address deficiencies or noncompliance with respect to federal regulations. EPA is now referring to those action items going forward, as essential. In addition, previous PQR reports identified recommendations as either “Category 2” or “Category 3” action items. EPA is now consolidating these categories of action items into a single category: recommended.

this report contains a detailed review of the progress on action items identified during the 2016 PQR.

II. STATE PROGRAM BACKGROUND

A. Program Structure

The NJ DEP, Division of Water Quality houses the pretreatment and NJPDES surface water permitting staff under the Assistant Commissioner for Water Resource Management. The Division of Watershed Protection and Restoration houses the Bureau of NJPDES Stormwater Permitting and Water Quality Management under the Assistant Commissioner for Watershed and Land Management Area. The NJDEP permitting offices are located in Trenton, New Jersey; there are no regional or field offices.

The NJPDES program has approximately 38 permit writers. These positions include permit writers for pretreatment, stormwater, and surface water permits. Each permit writer can issue between 5 and 15 individual NJPDES surface water permit actions annually depending on the complexity of each permit and the number of public comments received. Permit writers are also responsible for issuing multiple general permit authorizations. Permit writing staff are regularly enrolled in the EPA NPDES Permit Writers' Course and new staff are paired with a mentor in their unit to help them learn permit writing. In Summer 2021, the Water Quality Division introduced a virtual training program for 10 incoming staff members to introduce them to the Division and NJPDES permitting in which each Bureau in the Division presented an overview of their function. The presentations were recorded and are available for future reference.

The NJPDES permit writers are supported by other units in the Bureaus such as the Permit Administrative staff and Water Quality Analysis Unit in the Division of Water Quality and the Stormwater Management Unit in the Division of Watershed Protection and Restoration. The Division of Monitoring and Standards also provides support in standards development, ambient monitoring, and TMDL development. Compliance and Enforcement staff assist with compliance inspections, Administrative Consent Orders, and emergency preparedness and reactions. The Division of Information Technology assists with ongoing maintenance and assistance with information systems. Finally, the state Deputy Attorneys General from the Division of Law, the Delaware River Basin Commission, and Soil Conservation Districts also support the NJPDES program when appropriate.

The Division of Water Quality, and NJDEP as a whole, rely heavily on the New Jersey Environmental Management System (NJEMS), an environmental information management system which supports permit development and administration and other NJDEP activities. NJEMS is used for permit development, administration and tracking, inspection and compliance action support, and compliance monitoring and storage of associated documents. NJDEP has developed systems that transfer data to EPA's Integrated Compliance Information System (ICIS). All of the relevant historical data has been entered into ICIS.

Many of the tools that the Division of Water Quality relies on to support permit development are integrated into NJEMS. For example, NJEMS develops and populates templates for permits and fact sheets based on information entered into the system by permit writers. All significant permit administration and development documents (e.g., letters of completeness, public notices) also have templates in NJEMS. Standard operating procedures and policies are also embedded within NJEMS, including boilerplate language and standard options for permit writers to select from as they develop permits.

NJEMS includes a library of narrative permit provisions that permit writers can adjust based on the specific conditions of the permit. The system also includes substantial template information from NJPDES fact sheets. The templates prompt each permit writer to address all pertinent regulations and requirements when developing the basis for the permit.

The use of NJEMS promotes uniformity and consistency across the Division of Water Quality. Even so, all permits undergo a rigorous quality assurance process, which is facilitated through NJEMS. When the quality assurance process has been completed, permits are electronically signed by management and locked to prevent further editing. Once locked, a permit can only be unlocked by select individual users.

NJEMS also assists with maintaining the administrative records. Permit development documentation and correspondence are maintained within the system, as are draft and final permits and other pertinent documents. Some large paper files are archived in an off-site warehouse, in accordance with established procedures, rather than being electronically stored in NJEMS.

B. Universe and Permit Issuance

Based on information dated September 15, 2021, the NJPDES permit universe consists of 551 individual permits which includes 190 POTW permits (102 majors, 88 minors), 100 industrial permits (28 major, 72 minor), 179 individual stormwater permits, 66 individual pretreatment permits, and 25 combined sewer overflow permits.

The NJPDES program also includes 25 general permits which, as of September 15, 2021, covered a total of 11,119 permittees. The general permits are available on NJDEP's website at www.nj.gov/dep/dwq/gps.htm.

As of July 10, 2022, 18.6 percent of major individual permits were backlogged and 27.9 percent of minor individual permits were backlogged. Overall, 23.7 percent of all individual NPDES surface water permits were backlogged.

C. State-Specific Challenges

The challenges facing NJDEP are common to many states. NJDEP is facing an ever-increasing amount of work in the permitting program without a commensurate increase in staffing. Management and staff are also pulled away from their day-to-day responsibility to work on new and high-priority concerns including permitting biological applications, emerging

contaminants such as PFAS, and stormwater issues, namely unfunded mandates and MS4 size definitions.

D. Current State Initiatives

NJDEP is working on a variety of initiatives to improve the efficiency and effectiveness of the NJPDES permitting program and to address emerging environmental issues. The NJPDES program has taken a number of steps in identifying and addressing potential sources of PFAS. The NJPDES application forms are currently undergoing review and revision to ensure they conform with the NPDES Updates Rule and that they collect meaningful and pertinent information. NJDEP is also consistently updating and improving NJEMS documents to ensure that permit templates and fact sheet development are robust, defensible, and seamless.

III. CORE REVIEW FINDINGS

A. Basic Facility Information and Permit Application

1. Facility Information

Background

Basic facility information is necessary to properly establish permit conditions. For example, information regarding facility type, location, processes, and other factors is required by NPDES permit application regulations (40 CFR 122.21). This information is essential for developing technically sound, complete, clear, and enforceable permits. Similarly, fact sheets must include a description of the type of facility or activity subject to a draft permit.

Program Strengths

The fact sheets reviewed for the 2021 NJ PQR were all developed using the NJEMS permit and fact sheet template language and provided a clear description of the subject facility, the wastewater streams, and the treatment processes. The permits also included appropriate issuance, effective, and expiration dates, and receiving water information such as designated uses and impairments.³

Areas for Improvement

The NPDES program requires permits for all entities discharging pollutants from a point source into “waters of the United States” (40 CFR 122.1(b)(1)). The permitting authority, in this case is NJDEP, authorizes a permittee to discharge. Most permitting authorities include very specific language in the permit (e.g., [Permitting authority] authorizes [facility operator] to discharge at [facility name] from [outfall number] to [receiving water]) authorizing the discharge. All the NJPDES permits reviewed as part of the PQR included the information typically found in the “authorization to discharge” statement but usually did not provide it in a clear, concise

³ A typographical error in the expiration date of the reviewed Bayshore Regional Sewerage Authority Wastewater Treatment Plant (NJ0024708) was found during the PQR. NJDEP promptly issued a modified permit correcting the error.

sentence. Only one permit (NJ0024694 – Monmouth County Bayshore Outfall Authority) provided a clear authorization-to-discharge sentence.

EPA recommends including a clear authorization-to-discharge statement (from where, to where, by whom) in all NJPDES permits in a consistent location. Most permitting authorities include this sentence on the cover or first page of the permit; however, it can be elsewhere in the permit document.

Action Items

Recommended

- NJDEP should provide clear authorization-to-discharge language, as referenced in 40 CFR 122.1(b)(1), in all NJPDES permits.

2. Permit Application Requirements

Background and Process

Federal regulations at 40 CFR 122.21 and 122.22 specify application requirements for permittees seeking NPDES permits. Although federal forms are available, authorized states are also permitted to use their own forms provided they include all information required by the federal regulations. This portion of the review assesses whether appropriate, complete, and timely application information was received by the state and used in permit development.

Permit applications are often received electronically, usually in .pdf format. Upon receipt, they are logged in and distributed to the Administrative Review Section for an administrative completeness review. This review includes ensuring that the correct forms were used, all fields are complete, etc. Depending on the findings of the review, the Administrative Review Section will issue either a completeness letter or an incompleteness letter requesting the outstanding information to the applicant. Only after the application is deemed administratively complete is the application then forwarded to the Permitting Bureau for a technical completeness review.

The technical completeness review conducted by the Permitting Bureau is to ensure that the correct information, sufficient data, correct flow diagrams, and the like have been submitted. If the technical review identifies missing information or if the permit writer has questions, they communicate directly with the permittee to resolve them. Generally, the data submitted as part of the application is supplemental as NJDEP requires all permittees to conduct priority pollutant scans and whole effluent toxicity (WET) testing during the previous permit term.

Program Strengths

In general, the permit applications for the core review were submitted using the appropriate NJDEP forms, complete applications were received, and the information included in the applications was accurate. NJPDES applications were also usually submitted in a timely manner, 180 days prior to the expiration date of the existing permit.

Areas for Improvement

In a few instances, it wasn't immediately clear if the appropriate official had signed the permit application. Federal regulations at 40 CFR 123.25 require that all state programs must implement specific federal regulations, or impose more stringent requirements, including the signatory requirements at 40 CFR 122.22. The signatory requirements state that permit applications for a corporation must be signed by a responsible corporate officer or manager of a manufacturing, production, or operating facility and that applications for a municipality or public agency must be signed by either a principal executive officer or ranking elected official. EPA recommends that NJDEP revise the permit application so that the applicant can more easily identify that the signatory requirements are met or, if necessary, provide training or resources to the necessary staff to assist them in determining whether the application has been signed by the appropriate individual.

On June 12, 2019, the NPDES Application and Program Updates Rule became effective. The rule, in part, modernizes the NPDES regulations, promotes submission of complete permit applications, and clarifies regulatory requirements to allow more timely development of NPDES permits that protect human health and the environment. States which issue NPDES permits were required to use EPA's updated application forms or update their forms to reflect the latest requirements within one year from promulgation of the final rule (June 19, 2020). If a state needed to amend or enact a statute to accomplish such changes, then the state had to use EPA's forms or update its own forms within two years (June 19, 2021). NJDEP requires NJPDES applicants to use NJ-specific forms which are based, in part, on EPA forms. As of December 2021, the NJ application forms do not conform with the NPDES Updates Rule in its entirety. While some of the changes implemented by the Updates Rule were already reflected in NJ forms (e.g., North American Industry Classification System codes, applicant's email address), some changes are still necessary to include items such as an indication of cooling water intake structures, variance requests, and others. NJDEP believes that NJPDES Form 1 as well as a few supplemental forms for specific discharger types (e.g., industrial surface water dischargers, stormwater, etc.) must be edited to ensure compliance with the NPDES Updates Rule. The process of updating forms is underway and NJDEP plans to have updated forms available in 2023.

Action Items

Essential

- NJDEP must ensure compliance with the NPDES Application and Program Updates Rule (84 FR 3324) as soon as possible.

Recommended

- EPA recommends that NJDEP revise the application so that the applicant can more easily identify that the signatory requirements are met or, if necessary, provide training or resources to the necessary staff to assist them in determining whether the application has been signed by the appropriate individual.

B. Developing Effluent Limitations

1. *Technology-based Effluent Limitations*

NPDES regulations at 40 CFR 125.3(a) require that permits include applicable technology-based effluent limitations. Permits, fact sheets and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether technology based effluent limitations (TBELs) represent the minimum level of control that must be imposed in a permit.

TBELs for POTWs

Background and Process

POTWs must meet secondary or equivalent-to-secondary standards which include limits for biochemical oxygen demand/carbonaceous biochemical oxygen demand (BOD/CBOD), total suspended solids (TSS), pH, and percent removal, and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of five POTW permits were reviewed as part of the PQR.

Program Strengths

EPA found that the appropriate numeric secondary treatment standards for BOD/CBOD, TSS, pH, and percent removals were all established in POTW permits. The limits were expressed in an appropriate unit of measure (concentration) and included both short- and long-term (7-day and 30-day averages) limits. The fact sheets provided a robust description of the treatment processes, clearly identified which secondary treatment standard were established in the permit, and identified the basis for the decision.

Areas for Improvement

No areas of improvement were identified during the 2021 PQR.

Action Items

No action items were identified during the 2021 PQR.

TBELs for Non-POTW Dischargers

Background and Process

Permits issued to non-POTWs must require compliance with a level of treatment performance equivalent to Best Available Technology Economically Achievable (BAT) or Best Conventional Pollutant Control Technology (BCT) for existing sources, and consistent with New Source Performance Standards (NSPS) for new sources. Where federal effluent limitations guidelines (ELGs) have been developed for a category of dischargers, the TBELs in a permit must be based on the application of these guidelines. If ELGs are not available, a permit must include requirements at least as stringent as BAT/BCT developed on a case-by-case using best professional judgment (BPJ) in accordance with the criteria outlined at 40 CFR 125.3(d).

NJDEP has found that the water quality standards are the prevailing factor for most effluent limitations. TBELs prevail less frequently, and limits developed based on BPJ are very unusual—so unusual that there is no written procedure for developing BPJ limits.

The CWA Act section 316(b) Existing Facilities Rule was not a specific focus of this PQR; however, two permits with section 316(b) provisions were reviewed as part of the core reviews. NJDEP generally writes consistent and well-documented fact sheets regarding compliance with CWA section 316(b) regulations. The Wheelabrator Gloucester (NJ0062391) permit is for an industrial facility with a design intake flow of 17.82 MGD, more than 25% of which is used for cooling purposes. The fact sheet included a determination of Best Technology Available (BTA) to minimize adverse impact, as required by CWA section 316(b), where the permittee selected option (2) of the BAT standards, and NJDEP has the option of including additional protective measures. However, the final permit did not include those technologies to require compliance with impingement mortality standards at 40 CFR 125.94(c). NJDEP also provided the Hope Creek Generating Station (NJ0025411) permit for review as a good example of NJDEP practices regarding CWA section 316(b) BTA determinations. The fact sheet for Hope Creek Generating Station is indeed very thorough and well-documented and includes a final determination of BTA for both the impingement mortality standard and the entrainment standard. In the case of Hope Creek, neither the BTA nor monitoring requirements were included in the final permit.

Program Strengths

NJPDES fact sheets generally provide a robust discussion of the wastestreams and the pollutants in the discharge. The description of the treatment process and identification of applicable standards is also clear and thorough. TBELs are in appropriate units and forms (i.e., concentration and mass).

Areas for Improvement

Occasionally, an effluent limitation is based on a rule or policy that originates outside of NJDEP or EPA. In these instances, EPA recommends providing a specific reference to the rule, policy, or standard to provide additional clarity in the fact sheet. For example, the fact sheet for the IMTT-Bayonne (NJ0002089) permit states that the TSS effluent limitation is consistent with the

Interstate Environmental Commission regulations but no citation to these regulations is provided.

Regarding permits with CWA section 316(b) provisions, conditions required for compliance with the impingement mortality standard and, where applicable, the entrainment standard must be included in the final permit as enforceable requirements, as required by 40 CFR 125.98(c)(2).

Action Items

Essential

- Final permits with CWA section 316(b) provisions must include the technologies and monitoring specified as BTA for compliance with the impingement mortality standard (40 CFR 125.98(c)) and the entrainment standard (40 CFR 125.94(d)), as enforceable conditions of the final permit, as required by 40 CFR 125.98(b)(2).

Recommended

- NJDEP should include a specific citation to the regulation, policy, or standard when an effluent limitation is established based on a rule or policy from outside NJDEP (i.e., the Interstate Environmental Commission, Delaware River Basin Commission).

2. Reasonable Potential and Water Quality-Based Effluent Limitations

Background

The NPDES regulations at 40 CFR 122.44(d) require permits to include any requirements in addition to or more stringent than technology-based requirements where necessary to achieve state water quality standards, including narrative criteria for water quality. To establish such “water quality-based effluent limits” (WQBELs), the permitting authority must evaluate whether any pollutants or pollutant parameters could cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. EPA’s Technical Support Document for Water Quality-based Toxics Control (TSD)⁴ provides guidance to authorized programs regarding calculating reasonable potential and determining appropriate water quality-based effluent limitations.

The NJ PQR assessed the processes employed to implement these requirements. Specifically, the PQR reviewed permits, fact sheets, and other documents in the administrative record to evaluate how permit writers and water quality modelers:

⁴ Available at <https://www3.epa.gov/npdes/pubs/owm0264.pdf>.

- determined the appropriate water quality standards applicable to receiving waters,
- evaluated and characterized the effluent and receiving water including identifying pollutants of concern,
- determined critical conditions,
- incorporated information on ambient pollutant concentrations,
- assessed any dilution considerations,
- determined whether limits were necessary for pollutants of concern, and,
- where necessary, calculated such limits or other permit conditions.

For impaired waters, the PQR also assessed whether and how permit writers consulted and developed limits consistent with the assumptions of applicable EPA-approved TMDLs.

Process for Assessing Reasonable Potential

NJDEP employs a two-step “cause” and “reasonable potential” decision making process, which is shown in Figure 1. The cause analysis is generally conducted based on 8-12 data points, but can be assessed using fewer data points, and evaluates whether the existing effluent results in an excursion of the applicable water quality standard by comparing sampling data to a wasteload allocation (WLA). If any data points are greater than the WLA, cause is determined and a WQBEL is established in the permit.

If the cause analysis does not demonstrate that a discharge currently causes or contributes to an exceedance of water quality standards, NJDEP conducts a statistical analysis to determine whether there is reasonable potential to cause or contribute to an excursion of the water quality standard. Reasonable potential to cause or contribute is determined when the projected effluent (maximum data point times a multiplying factor) exceeds the WLA. If reasonable potential is shown, a WQBEL is established in the permit.

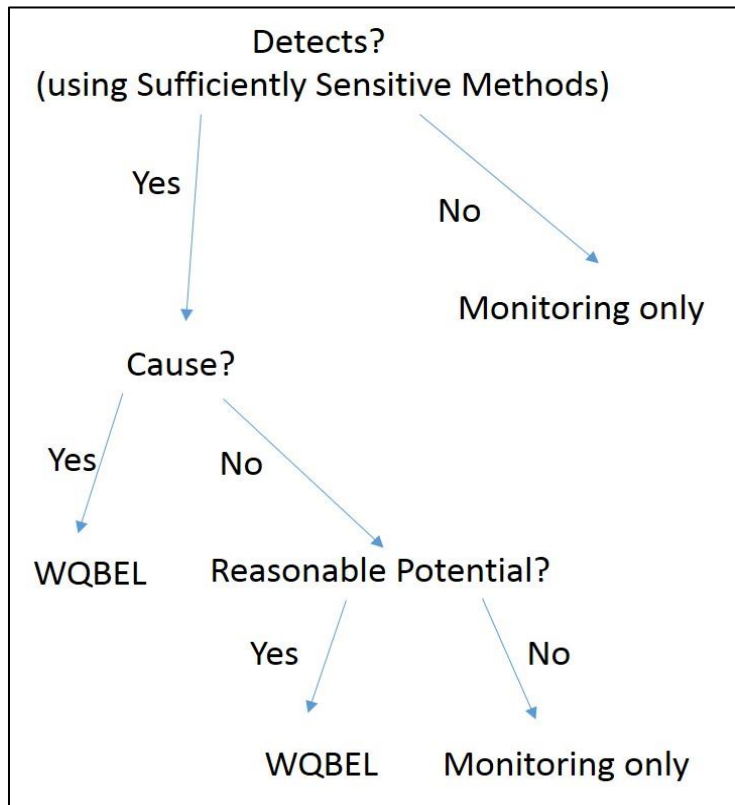


Figure 1: New Jersey Cause and Reasonable Potential Analysis Process

NJDEP generally uses one permit cycle of data for cause and reasonable potential analysis determinations and prefers to use a dataset of at least 10 results for the statistical analyses. However, if warranted, NJDEP will occasionally use data from an extended timeframe.

Monitoring requirements are increased as needed so that the permittee is required to collect sufficient data for a cause analysis each permit cycle.

NJDEP uses an Excel-based tool to evaluate cause and reasonable potential. Each pollutant is evaluated on a separate WQBEL Analysis Data Sheet. Receiving water information and site-specific hardness information, if available, is entered into the data sheet and informs the identification of the applicable water quality standards (WQS). The existing effluent data for each parameter is entered by the permit writer manually and the coefficient of variation is automatically calculated. The manual data entry functions as another quality control/quality assurance point as permit writers sometimes notice data inconsistencies (e.g., incorrect units) which can usually be resolved by referring to the original discharge monitoring reports (DMRs).

NJDEP rarely removes a data point when evaluating cause or reasonable potential. When permit writers notice an unusual data point, the lab sheets are often requested to determine whether it is a transposition mistake or unit mistake. If the permit writer corrects this type of error, it is noted in the fact sheet. When necessary, a statistical outlier procedure is conducted to determine if the unusual data point is a true outlier. If the data point is determined to be an outlier, it is removed from the cause and reasonable potential analysis and is fully documented in the fact sheet.

NJDEP evaluates cause and, if no cause is demonstrated, the statistical analysis for reasonable potential to cause or contribute, for all 126 priority pollutants using data submitted under the priority pollutant scan requirements in all NJPDES permits. In addition, NJDEP evaluates all data received through the waste characterization forms, DMRs, and the permit application when determining whether effluent limitations are appropriate in a permit. Ambient data is not routinely used when determining effluent limitations for renewal permits, except for ammonia. Ambient data is typically only used in TMDL-based limitations and for new or expanding facilities. NJDEP requires permittees to conduct studies rather than use default background values.

Process for Developing WQBELs

NJDEP permit writers determine the impairment and TMDL status for every new and renewal permit. Impairments are generally determined by hydrologic unit code (HUC). The most common impairment across New Jersey is for phosphorus and there are a few large, watershed TMDLs (Passaic River TMDL, Raritan TMDL, etc.). Impairment status is reviewed carefully. If the facility discharges detectable levels of a pollutant that may be contributing to the impairment, end-of-pipe or more stringent limits are established in the permit. If the facility does not discharge the pollutant, monitoring will usually be established in the permit.

NJ's WQS allow for mixing zones. Most mixing zones are in non-tidal waters. Complete mixing is initially assumed; further analysis for incomplete mixing is guided by EPA's TSD. In tidal waters, a dilution study and modeling are required to determine if a mixing zone is appropriate. NJDEP generally gives permittees the option to complete a dilution study in order to get a more

complex, accurate, and often larger, mixing zone. The calculations to determine the mixing zone always err on the side of safety. No dilution is permitted for intermittent streams.

Program Strengths

NJDEP's spreadsheet for statistical analysis of reasonable potential to cause or contribute to excursions of a water quality standard is very thorough. While the spreadsheet itself is considered deliberative and not included in the permit fact sheet, results of the analysis are well documented in permit files through the WQBEL Analysis Data Sheet. The outlier test data sheet results are also reasonably well summarized in the fact sheet. Another strength is that the coefficient of variation (CV) is calculated individually for each data set and the basis for the CV is provided in the data sheet. The data quality check conducted by the permit writers when entering data into the WQBEL Data Analysis Sheet is also a valuable checkpoint for ensuring the most appropriate limits are established in the permit.

NJDEP establishes appropriate and protective WQBELs in permits. The fact sheets contain a complete discussion of factors considered in WQBEL development including impairments, dilution studies, mixing zones, effluent data, outliers, and the like.

Areas for Improvement

NJDEP conducts a cause analysis and a reasonable potential to cause or contribute analysis on all pollutants of concern. However, the language in the fact sheet does not consistently state explicitly whether a cause analysis or reasonable potential analysis was completed and the results of the analysis. EPA recommends including language similar to the following suggestions for each evaluated parameter:

- Based on the results of a cause analysis, there is no cause for this pollutant to result in an excursion of the state's WQS. Based on the results of a reasonable potential analysis, including for both potential to cause or contribute to a WQS excursion, there is the reasonable potential for an excursion of the state's WQS. As a result, an effluent limitation was established.
- Based on the results of a cause analysis, the effluent shows cause for an excursion of the state's WQS. As a result, an effluent limitation was established. A reasonable potential analysis is not necessary.
- Based on the results of a cause and reasonable potential analysis, the effluent does not cause, have the reasonable potential to cause, or contribute to an excursion of the state's WQS. As a result, no effluent limitation was established. However, additional monitoring that is representative of the permitted activity and reporting the monitoring data (40 CFR 122.48(b)) is required.

EPA supports NJDEP’s two-step process for calculating cause and reasonable potential. However, as Chapter 3 of the TSD provides guidance for calculating reasonable potential with a limited sample size, EPA believes that NJDEP must calculate reasonable potential for all parameters with effluent data regardless of sample size.

Action Items

Essential	<ul style="list-style-type: none"> • NJDEP must calculate the reasonable potential of all pollutants of concern to cause or contribute to an exceedance of WQS to be consistent with EPA regulations at 40 CFR 122.44(d). This also applies to situations with limited or no data available, such as new facilities.
Recommended	<ul style="list-style-type: none"> • EPA recommends explicitly stating in the fact sheet whether a cause, the reasonable potential to cause or contribute to an excursion of the state's WQS analysis was completed and the results of the analysis.

3. Final Effluent Limitations and Documentation

Background and Process

Permits must reflect all applicable statutory and regulatory requirements, including technology and water quality standards, and must include effluent limitations that ensure that all applicable CWA standards are met. The permitting authority must identify the most stringent effluent limitations and establish them as the final effluent limitations in the permit. In addition, for reissued permits, if any of the limitations are less stringent than limitations on the same pollutant in the previous NPDES permit, the permit writer must conduct an anti-backsliding analysis, and if necessary, revise the limitations accordingly. In addition, for new or increased discharges, the permitting authority should conduct an antidegradation review, to ensure the permit is written to maintain existing high quality of surface waters, or if appropriate, allow for some degradation. The water quality standards regulations at 40 CFR 131.12 outline the common elements of the antidegradation review process.

In addition, permit records for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations (40 CFR 124.56). TBELs should include assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for

determining the need for WQBELs as well as the procedures explaining the basis for establishing, or for not establishing, WQBELs should be clear and straightforward. The permit writer should adequately document changes from the previous permit, ensure draft and final limitations match (unless the basis for a change is documented), and include all supporting documentation in the permit file (e.g., permit fact sheet [40 CFR 124.56] and administrative record). The permit writer should sufficiently document in the permit fact sheet the determinations regarding anti-backsliding and antidegradation requirements.

Specific types of discharges may require additional effluent limitations and permit provisions as well. The CWA Section 403 Ocean Discharge Criteria establish guidelines for discharges into the territorial seas, waters of the contiguous zone, or the oceans. As part of the 2021 PQR, EPA reviewed the final Monmouth County Bayshore Outfall Authority (NJ0024694) permit. Regarding the ocean discharge criteria, EPA agrees with NJDEP's conclusion that the discharge is not causing unreasonable degradation to the marine environment in the vicinity of the discharge and is, therefore, consistent with federal regulations at 40 CFR 125.123(a). Additionally, the inclusion of additional permit requirements specifically addressed the ocean discharge provision at the next permit renewal. NJDEP's ocean discharge criteria assessment is generally thorough and well-documented in the fact sheet. However, EPA suggests including additional permit provisions to collect monitoring and technical information in the following areas of significant importance to more completely meet the requirements of 40 CFR 125.122(a):

- Shellfish harvesting area, commercial and recreational fishing grounds;
- Primary and secondary contact recreation, and bathing beach water quality;
- Maintenance, migration and propagation of the natural and established biota; and
- Potential impacts on threatened and endangered species.

Program Strengths

Permit fact sheets provide a detailed discussion of the development of effluent limits and the basis for the final effluent limitation. Permit writers seem to consistently apply the most stringent applicable effluent limitations.

The fact sheets consistently address federal anti-backsliding requirements and state antidegradation requirements and seem compliant with both sets of regulatory requirements.

Areas for Improvement

While the information is implied by the referenced regulations, NJDEP does not explicitly state in fact sheets whether an effluent limit is a TBEL or a WQBEL. EPA recommends clearly stating in the fact sheet if an effluent limitation is a TBEL or a WQBEL.

NJDEP's assessment of the ocean discharge criteria is generally thorough and well documented in the fact sheet. To further bolster the ocean discharge criteria assessment, EPA recommends including specific requirements to collect additional monitoring and technical information during the permit term on areas of significant importance (commercial and recreational fishing

grounds, recreational water quality, etc.) This will help ensure that NJDEP has the information required to continue to confirm that the discharge had no adverse impacts on the receiving water.

Additionally, for ocean discharge permits, EPA recommends revising the reopener clause in permits to specifically list the need to incorporate “biological sampling” as a reason to modify or revoke the permit. The inclusion of biological sampling as a reason to modify or revoke the permit will ensure that NJDEP can require studies to confirm the biota in the vicinity of the outfall are balanced and healthy.

Action Items

Recommended

- NJDEP should explicitly state in fact sheets whether an effluent limitation is a TBEL or a QBEL to more clearly comply with 40 CFR 124.56.
- In ocean discharge permits, NJDEP should specifically include requirements to collect additional monitoring and technical information about areas of significant importance listed at 40 CFR 125.122(a) during the permit term so the determination of no adverse effects can be completed thoroughly at renewal.
- In ocean discharge permits, NJDEP should include "biological sampling" in the reopener clause as a reason to modify or revoke a permit.

C. Monitoring and Reporting Requirements

Background and Process

NPDES regulations at 40 CFR 122.41(j) require permittees to evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. Monitoring and reporting conditions require the permittee to conduct routine or episodic self-monitoring of permitted discharges and, where applicable, internal processes, and report the analytical results to the permitting authority with information necessary to evaluate discharge characteristics and compliance status.

Specifically, 40 CFR 122.44(i) requires NPDES permits to establish, at minimum, annual reporting of monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 CFR 122.48(b) requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data which are representative of the monitored activity. The regulations at 40 CFR 122.44(i) also

require reporting of monitoring results with a frequency dependent on the nature and effect of the discharge. 40 CFR Part 127 requires NPDES-regulated entities to submit certain data electronically, including discharge monitoring reports and various program-specific reports, as applicable.

NPDES permits should specify appropriate monitoring locations to ensure compliance with the permit limitations and provide the necessary data to determine the effects of the effluent on the receiving water. A complete fact sheet will include a description and justification for all monitoring locations required by the permit. States may have policy or guidance documents to support determination of appropriate monitoring frequencies; documentation should include an explicit discussion in the fact sheet providing the basis for establishing monitoring frequencies, including identification of the specific state policy or internal guidance referenced. Permits are also required to specify the sample collection method for all parameters required to be monitored in the permit. Additionally, the fact sheet is required to present the rationale for requiring grab or composite samples and discuss the basis of a permit requirement mandating use of a sufficiently sensitive 40 CFR Part 136 analytical method.

Program Strengths

NJPDES permits require permittees to collect enough water quality data to support permitting decisions. NJPDES WET effluent limitations and monitoring requirements were appropriately established in permits. Permits also consistently included requirements to submit electronic DMRs.

Standard language in Part 4 of the NJPDES permits requires that sufficiently sensitive methods used when collecting and analyzing effluent data. There is detailed guidance available on NJDEP's website at <https://www.nj.gov/dep/dwg/pdf/sstm-faq.pdf>.

Overall, monitoring and reporting requirements seem sufficient to assess permit compliance and inform permitting decisions.

Areas for Improvement

No areas for improvement were identified during the 2021 PQR.

Action Items

No action items were identified during the 2021 PQR.

D. Standard and Special Conditions

Background and Process

Federal regulations at 40 CFR 122.41 require that all NPDES permits, including NPDES general permits, contain certain "standard" permit conditions. Further, the regulations at 40 CFR 122.42 require that NPDES permits for certain categories of dischargers must contain additional standard conditions. Permitting authorities must include these conditions in NPDES permits and

may not alter or omit any standard condition, unless such alteration or omission results in a requirement more stringent than those in the federal regulations.

Permits may also contain additional requirements that are unique to a particular discharger. These case-specific requirements are generally referred to as “special conditions.” Special conditions might include requirements such as: additional monitoring or special studies such as a mercury minimization plan; best management practices [see 40 CFR 122.44(k)], or permit compliance schedules [see 40 CFR 122.47]. Where a permit contains special conditions, such conditions must be consistent with applicable regulations.

NJDEP includes boilerplate template language provided in NJEMS in all NPDES permits. Most special conditions also have boilerplate language provided in NJEMS that the permit writer selects, customizes, and inserts into the permit. The bases for special conditions, when established, are discussed in the fact sheet.

NJDEP incorporates federal standard conditions by reference to NJ Administrative Code; included as Part I of the permit. In addition, NJAC 7:14A-2.3(a) incorporates NPDES regulations (including standard conditions) by reference, stating:

“The requirements applicable to the NJPDES program of the Federal Clean Water Act (33 USC 1251 et seq.), the Federal Safe Drinking Water Act (42 USC 300F et seq.), the State Act, and all Federal regulations cited in this chapter, including but not limited to, 40 CFR Part 110, 122, 123, 124, 125, 129, 133, 126, 144, 258, 262, 403, and National Pretreatment Standards in 40 CFR chapter I, subchapter N, and including all amendments and supplements thereto, are incorporated into this chapter by reference unless the context clearly indicates otherwise.”

Program Strengths

NJPDES permits consistently include the boilerplate standard and special conditions language provided by NJEMS. Appropriate special conditions are established in the permits, when necessary.

Areas for Improvement

The provisions for bypass (40 CFR 122.41(m)), upset (40 CFR 122.41(n)), and the additional reporting requirement for non-POTWs (40 CFR 122.42(a)) appear to be absent from direct inclusion in the permit. A crosswalk between the NJ standard condition regulations and the federal standard condition regulations would provide clarity and transparency to NJPDES permits.

Action Items

Essential

- NJPDES permits must include provisions for bypass, upset, and the additional reporting requirements for non-POTWs as required by 40 CFR 122.41(m), 122.41(n), and 122.42(a), respectively.

E. Administrative Process*Background and Process*

The administrative process includes documenting the basis of all permit decisions (40 CFR 124.5 and 40 CFR 124.6); coordinating EPA and state review of the draft (or proposed) permit (40 CFR 123.44); providing public notice (40 CFR 124.10); conducting hearings if appropriate (40 CFR 124.11 and 40 CFR 124.12); responding to public comments (40 CFR 124.17); and modifying a permit (if necessary) after issuance (40 CFR 124.5). EPA discussed each element of the administrative process with NJDEP, and reviewed materials from the administrative process as they related to the core permit review.

NJPDES public notices are managed by NJDEP. Notices for major permits are published in the newspaper and in the NJDEP Bulletin which is published biweekly online. Notices for minor permits are only published in the NJDEP Bulletin unless the permit has generated significant public interest. NJDEP provides the text of the public notice to the newspaper with a time period for publication. Upon publication, an affidavit or proof of publication is provided by the newspaper and most newspapers are available for public review under www.njpublicnotices.com. The affidavit is saved in hard copy and electronically. The hard copy is warehoused in NJDEP's document repository. Permittees are responsible for coordinating the public notice when requesting coverage under a general permit.

Comments received during the public comment period are logged through NJDEP's mail procedures and provided to the permit writer. The response to comments is written by the permit writer, with assistance from colleagues when necessary, and then is provided with the final permit, and is documented in the permit files.

Hearings are required when there is significant public interest. Usually, a public hearing is held when five or more individuals or entities request one. The hearings are transcribed and documented in the permit record. A more detailed description of the hearing process is available on NJDEP's website at <https://www.nj.gov/dep/legal/adminhear.htm>.

Program Strengths

The public notice is consistently and appropriately completed and documented in the permit files. The response to comments is consistently provided and provides a clear and detailed discussion of basis for the permitting decision or, if necessary, the basis for the change to the draft permit.

Areas for Improvement

Federal regulations at 40 CFR 123.25 establish administrative provisions that each state NPDES program must implement, or must impose more stringent requirements than, including provisions regarding public notices at 40 CFR 124.10(d). The public notices provided for NJPDES permits include all the information required by the federal regulations except for the provision which requires a general description of the location of each existing or proposed discharge point. EPA recommends including a plain-language description of the outfall location in the public notice to comply with this regulation, as required by 40 CFR 124.10(d)(vii).

*Action Items***Essential**

- NJDEP must include a general description of the location of each existing or proposed discharge point in the public notice, as required by 40 CFR 124.10(d)(vii).

F. Administrative Record and Fact Sheet*Background and Process*

The administrative record is the foundation that supports the NPDES permit. If EPA issues the permit, 40 CFR 124.9 identifies the required content of the administrative record for a draft permit and 40 CFR 124.18 identifies the requirements for a final permit. Authorized NPDES state permit programs should have equivalent documentation. The record should contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit should contain the following: the permit application and supporting data; draft permit; fact sheet or statement of basis;⁵ all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant and regulatory personnel; all other items supporting the file; final response to comments; and, for new sources where EPA issues the permit, any environmental assessment, environmental impact statement, or finding of no significant impact.

Current regulations (40 CFR 124.56) require that fact sheets include information regarding the type of facility or activity permitted, the type and quantity of pollutants discharged, the technical, statutory, and regulatory basis for permit conditions, the basis and calculations for effluent limits and conditions, the reasons for application of certain specific limits, rationales for variances or alternatives, contact information, and procedures for issuing the final permit. Generally, the administrative record includes the permit application, the draft permit, any fact

⁵ Per 40 CFR 124.8(a), every EPA and state-issued permit must be accompanied by a fact sheet if the permit: Incorporates a variance or requires an explanation under 124.56(b); is an NPDES general permit; is subject to widespread public interest; is a Class I sludge management facility; or includes a sewage sludge land application plan.

sheet or statement of basis, documents cited in the fact sheet or statement of basis, and other documents contained in the supporting file for the permit.

As NJDEP uses NJEMS to draft the permits and fact sheets, NJPDES fact sheets are consistent, robust, and very detailed. As a practice, NJDEP develops fact sheets for both major and minor permits.

Program Strengths

NJPDES fact sheets are very detailed, thorough, robust, and well organized. Generally, a wealth of information is included that provides a clear description of the facility, the receiving water, existing effluent quality, relevant pollutants, and the basis for the permitting decisions.

Areas for Improvement

While NJPDES fact sheets are very thorough, there are a few instances where the language could more clearly describe the basis for the permitting decision. For example, fact sheets should clearly distinguish between TBELs and WQBELs (as noted in Section III.B.3) or explicitly state whether a cause or reasonable potential analysis has been completed and the outcome of that analysis (as noted in Section III.B.3). These areas for improvement and the associated action items are discussed elsewhere in this report.

Action Items

No action items were identified during the 2021 PQR.

IV. NATIONAL TOPIC AREA FINDINGS

National topic areas are aspects of the NPDES permit program that warrant review based on the specific requirements applicable to the selected topic areas. These topic areas have been determined to be important on a national scale. National topic areas are reviewed for all PQRs. The national topics areas are Permit Controls for Nutrients in Non-TMDL Waters, Effectiveness of POTW NPDES Permits with Food Processor Contributions, and Small Municipal Separate Storm Sewer System (MS4) Permit Requirements.

A. Permit Controls for Nutrients in Non-TMDL Waters

Background

Nutrient pollution is an ongoing environmental challenge, however, nationally permits often lack nutrient limits. It is vital that permitting authorities actively consider nutrient pollution in their permitting decisions. Of the permits that do have limits, many are derived from wasteload allocations in TMDLs, since state criteria are often challenging to interpret. For this section, waters that are not protected by a TMDL are considered. These waters may already be impaired by nutrient pollution or may be vulnerable to nutrient pollution due to their hydrology and environmental conditions. For the purposes of this program area, ammonia is considered as a toxic pollutant, not a nutrient.

Federal regulations at 40 CFR 122.44(d)(vii)(A) require permit limits to be developed for any pollutant that causes, has reasonable potential to cause, or contributes to an impairment of water quality standards, whether those standards are narrative or numeric.

To assess how nutrients are addressed in the NJPDES program, EPA R2 reviewed four permits as well as the New Jersey Nutrient Criteria as amended on December 12, 2019. The four permits reviewed were Town of Phillipsburg (NJ0024716), Bayshore Regional Sewerage Authority WWTP (NJ0024708), Butterworth Water Pollution Control Facility (NJ0024911), and Monmouth County Bayshore Outfall Authority (NJ0024694).

NJDEP has a long-standing narrative criterion for nutrients, which states:

“Except as due to natural conditions, nutrients shall not be allowed in concentrations that render the waters unsuitable for the existing or designated uses due to objectionable algal densities, nuisance aquatic vegetation, diurnal fluctuations in dissolved oxygen or pH indicative of excessive photosynthetic activity, detrimental changes to the composition of aquatic ecosystems, or other indicators of use impairment caused by nutrients.” (N.J.A.C.7:9B-1.14(d)4i)

NJDEP has also established a numeric total phosphorus criterion of 0.1 mg/L in any non-tidal stream, and 0.05 mg/L for lakes, ponds, reservoirs, or tributaries to such waters, unless watershed specific translators are established or the NJDEP determines that such levels would render the waters unsuitable, for example due to algal overgrowth. NJDEP does not have a numeric criterion for Total Nitrogen currently.

The Delaware River Basin Commission (DRBC) is an Interstate Agency which establishes water quality requirements and technology-based treatment standards for dischargers to the main stem of the Delaware River. The discharge of pollutants into surface waters within the Delaware River Basin require approval by the DRBC, in addition to NJPDES permit coverage. For nutrients, DRBC sets technology-based treatment levels in its water quality regulations, including 30-day average effluent limits for Total Nitrogen and Total Phosphorus that represent “Best Demonstrable Technology (BDT).” DRBC’s water quality-based approach to nutrient control is focused on dissolved oxygen levels in the Delaware River, and what point and nonpoint sources may be contributing to low levels of dissolved oxygen.

Program Strengths

NJDEP includes detailed fact sheets, which include reasonable potential analyses, calculations, and discussion of discharge monitoring data. Fact sheets include effluent characteristics for Total Phosphorus, Total Nitrogen, and Nitrogen compounds such as Nitrate-Nitrite. Permit fact sheets consistently list whether the receiving waterbody is impaired, and for which pollutants. Permits tend to have at least monitoring requirements for Total Phosphorus, resulting in discharge monitoring data for NJDEP to discuss in their permit fact sheets and to perform reasonable potential analyses.

Areas for Improvement

For one permit (Town of Phillipsburg) there were nutrient related impairments downstream of the immediate receiving water. In this example, NJDEP did not include limitations, determining there was not reasonable potential for the immediate receiving water, and noting that the downstream impairments involved other standards such as those of the Delaware River Basin Commission. While this is documented in the calculations and reasonable potential section, the impairments listing at the beginning of the fact sheet could be clearer regarding which impairments were downstream and which were in the immediate receiving water. NJDEP must ensure that permits are protective of downstream uses, both numeric and narrative nutrient criteria, including water quality criteria of other states and interstate entities such as DRBC, as required by 40 CFR 122.44(d).

None of the permits included a reasonable potential analysis for total nitrogen. A numeric criterion for marine waters would make this easier for permit writers to implement.

In all four permits there were detailed calculations provided for a pollutant such as nitrate or ammonia nitrogen. There was also narrative discussion on whether there is reasonable potential for an excursion of the applicable phosphorus state water quality standards. None of the permits included discussion of protection of waterbodies to prevent algal blooms, or nutrient-related impairments in downstream waterbodies.

In the case of Bayshore, while the immediate receiving water segment does not list dissolved oxygen impairments, the fact sheet notes that the Atlantic Ocean, which is the downstream receiving water, is impaired for dissolved oxygen. Reasonable potential analyses for this discharge should include contributions to downstream dissolved oxygen impairments from the discharge of total nitrogen.

These findings and the resulting action items are similar to those identified in the 2016 PQR.

Action Items

Essential

- NJDEP must evaluate whether a discharge causes or contributes, or has the reasonable potential to cause or contribute to an exceedance of narrative or numeric WQS, and include numeric limits where necessary as required by 40 CFR 122.44(d).
- NJDEP must ensure that permits are protective of downstream uses, for both numeric and narrative nutrient criteria, including water quality criteria of other states and interstate entities such as DRBC, as required by 40 CFR 122.44(d).

Recommended

- NJDEP should clarify in the impairments section whether the direct receiving water is impaired, or a downstream segment.
- NJDEP should include monitoring requirements for Total Nitrogen, particularly for dischargers to marine water or tributaries to marine waters, such that waste load allocations may be calculated if there is a TMDL for dissolved oxygen impairment or algal overgrowth.

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

The general pretreatment regulations (40 CFR Part 403) establish responsibilities of federal, state, local government, and industrial users to implement pretreatment standards to control pollutants from indirect dischargers which may cause pass through or interfere with POTW treatment processes or which may contaminate sewage sludge.

Background

Indirect discharges from food processors can be a significant contributor to noncompliance at recipient POTWs. Food processing discharges contribute to nutrient pollution (e.g., nitrogen, phosphorus, ammonia) to the nation's waterways. Focusing specifically on the Food Processing Industrial Sector will synchronize PQRs with the Office of Enforcement and Compliance Assurance (OECA)'s Significant Non-compliance (SNC)/National Compliance Initiative (NCI).

The goal of the PQR was to identify successful and unique practices with respect to the control of food processor discharges by evaluating whether appropriate controls are included in the receiving POTW NPDES Permit and documented in the associated fact sheet or Statement of Basis; as well as by compiling information to develop or improve permit writers' tools to be used to improve both POTW and industrial user compliance.

The PQR also assessed the status of the pretreatment program in New Jersey as well as specific language in POTW NPDES permits. With respect to NPDES permits, focus was placed on the following regulatory requirements for pretreatment activities and pretreatment programs:

- 40 CFR 122.42(b) (POTW requirements to notify Director of new pollutants or change in discharge);
- 40 CFR 122.44(j) (Pretreatment Programs for POTWs);
- 40 CFR 403.8 (Pretreatment Program Requirements: Development and Implementation by POTW), including the requirement to permit all SIUs;
- 40 CFR 403.9 (POTW Pretreatment Program and/or Authorization to revise Pretreatment Standards: Submission for Approval);
- 40 CFR 403.12(i) (Annual POTW Reports); and
- 40 CFR 403.18 (Modification of POTW Pretreatment Program).

Pretreatment Program Summary and Background Information

New Jersey is authorized as the approval authority by EPA. The NJDEP oversees 17 approved pretreatment programs. The approved pretreatment programs regulate 409 Significant Industrial Users (SIUs), of which 167 are Categorical Industrial Users (CIUs). The approved pretreatment programs have designated 18 Non-Significant Categorical Industrial Users (NSCIUs) in addition to the 167 CIUs. NJDEP directly implements the pretreatment program in 35 non-approved areas (areas not serviced by a POTW with an approved program) and oversees 66 SIUs, of which 25 are CIUs (and there are no NSCIUs). These industries were issued individual permits; general permits were not issued by NJDEP. Table 1, below, provides a summary of industrial users by type.

Table 2. New Jersey Pretreatment Program Numbers

	Approved Programs (POTW Control Authority) ⁶	Non-Approved Programs (NJDEP Control Authority)
Number	17	35
SIUs including CIUs	409	66
CIUs	167	25
NSCIUs ⁷	18	0

NJDEP reviews the POTWs' NPDES applications, writes and issues the NJPDES permits, and develops and updates the NJPDES permit fact sheets. NJDEP is responsible for determining which POTWs need to develop a pretreatment program. Pretreatment regulations and requirements are written out in Section F of the NJPDES permits.

⁶ Please note that 3 approved programs operate more than one POTW: Bergen County Utilities Authority operates 2 POTWs, Ocean County Utilities Authority operates 3 POTWs, and the Township of Morris operates 2 POTWs

⁷ NSCIUs are not considered CIUs.

POTWs without an approved pretreatment program are required to submit an annual report, which requires submitting a list of all SIUs in accordance with the POTW's NJPDES permit. In addition, all individual NJPDES SIU permits issued by the NJDEP contain the pretreatment conditions or requirements as noted in the NJPDES Rules, N.J.A.C. 7:14A-21.10.

The pretreatment program is managed through NJDEP's Division of Water Quality, Bureau of Surface Water and Pretreatment Permitting. The program conducts pretreatment compliance audits (PCAs) of the 17 approved programs either every two years if the pretreatment program is in good standing or the following year if the pretreatment program received a rating of 'Conditionally Acceptable' or 'Unacceptable' during the previous audit. The NJDEP Pretreatment Program and EPA R2 do not conduct any pretreatment compliance inspections (PCIs) based upon a memorandum of agreement (MOA) between EPA and NJDEP⁸; the audit frequency is sufficient to forgo conducting PCIs between PCAs. NJDEP staff also review annual pretreatment program reports and local limit sampling and local limit development packages. Local limits must be evaluated each time the NJPDES permit is renewed and NJDEP has a protocol for POTWs to follow to conduct the evaluation.

NJPDES Discharge to Surface Water (i.e., non-stormwater, individual) permits are issued by the Surface Water Section in the Bureau of Surface Water and Pretreatment Permitting. For all POTW surface water permits being renewed, including non-approved programs, an internal draft is shared with the Pretreatment Unit. The Pretreatment Unit reviews the pretreatment language to ensure the correct pretreatment language is included. The Pretreatment Unit is also copied on the draft and final permits to ensure that the language is correct.

For this PQR, EPA staff reviewed documentation for two pairs of POTW-approved pretreatment programs and industrial users selected by NJDEP: the Cumberland County Utility Authority (CCUA) (permit NJ0024651) and Innovation Foods, LLC, and the Rockaway Valley Regional Sewerage Authority (RVRSA) (permit NJ0022349) and Anthony & Sons Bakery (see Table 2 and Table 3). The NPDES application, permit and fact sheet, 2021 Pretreatment Annual Report, the most recent Pretreatment Audit Report (conducted by NJDEP), and the sewer use ordinances⁹ were reviewed. For each industrial user, the industrial user permit, industrial user fact sheet, and most recent pretreatment inspection report were reviewed.

Table 3. CCUA and RVRSA Pretreatment Program Overview

Permittee	Permit No.	Approved Pretreatment Program?	Design Flow Average (MGD)	No. of SIUs ¹	No. of Food Processors ¹	Controls on Conventional Pollutants or Nutrients in sewer use ordinance?

⁸ New Jersey Department of Environmental Protection Bureau of Pretreatment & Residuals Pretreatment Program SOP for Approved Industrial Pretreatment Program (IPP) Audit Frequency Determination.

⁹ For RVRSA, the Sewer Use Ordinance is located at <https://rvrsa.org/wp-content/uploads/FINAL-Addendum-to-Service-Rules-2017-219493x9DC53.pdf> and for CCUA the Sewer Use Ordinance is located at <https://ccua.info/wp-content/uploads/2018/08/Sewer-Use-Rules-updated-1.18.18.pdf>.

Cumberland County Utility Authority (CCUA)	NJ0024651	Yes	7.0	7	1	Limits for BOD and TSS. No surcharges.
Rockaway Valley Region Sewerage Authority (RVRSA)	NJ0022349	Yes	2.8	15	2 SIU, 1 IU	Limits for BOD, TSS, and Ammonia. Surcharge for CBOD, TSS, and Ammonia.

Table 4. Industrial User Overview

Facility Name	Permit Number	Receiving POTW	Type of Food Processor	Classification by POTW	Average Process Wastewater Discharge (gallons per day [gpd])	Monitored Pollutants
Anthony & Sons Bakery	No Permit Number	RVRSA	Large Commercial/Retail Bakery	"Other Regulated" (non-categorical) Industrial Users:	6,000 ¹	Limits: CBOD, TSS, ammonia, pH, Oil and Grease, TPHC, copper, lead, molybdenum, nickel, and zinc. Report: Flow, BOD, TDS, and total phosphorus.
Innovation Foods, LLC	#A009	CCUA	Fruit juice and related products.	SIU/Minor	8,000 ²	Flow, COD, TSS, Oil and Grease, and pH.

¹ Based on information included in the industrial user's permit and fact sheet.

² Based on information included in the industrial user's fact sheet, pretreatment annual report and industrial user's permit.

NPDES Permit Application

EPA's Application Form 2A Section F requires identification of industrial user discharges per 40 CFR 122.21(j)(6)(i) and (ii); NJDEP has adopted an alternative New Jersey-specific form¹⁰ in their permit application. The "Application Completeness Checklist: NJPDES/Discharge to Surface Water" at the end of the permit application states:

Form SIU-1: Submit one form for each Significant Indirect User (SIU) not previously served by the applicant and reported to the Department. If there is no such SIU, or the treatment system is privately owned and operated, submit one copy of the form indicating NONE in response to the request for "User Name".

¹⁰ Form SIU-1 12/02: New Jersey Department of Environmental Protection Division of Water Quality Significant Indirect User Discharges and RCRA/CERCLA Wastes.

While EPA's Application Form 2A Section F requires information on all industrial users, New Jersey only requires information on new users, according to the Application Completeness Checklist. EPA was not provided information on existing users from previous permit application submissions. Since there were no new industrial users, CCUA did not complete the NJDEP Form SIU-1 12/02. Elsewhere in CCUA's 2014 permit application, CCUA did include the number of industrial users (IUs) in the pretreatment program, which was six. Since then, the number of IUs had increased to seven in the 2020 pretreatment annual report, along with zero CIUs. But CCUA did not provide additional information on specific IUs such as SIC codes, classifications, addresses, etc., nor did the application identify which IUs discharge food wastes.

In the RVRSA's 2012 permit application, Section 19 includes the number of IUs. Form SIU-1 12/02 is included in the application but is not filled out; instead, the applicant entered "See Attachments" on the first line. The attachment presents information on SIUs but does not address all the elements included in the form. The attachment's table includes data on the IUs, including the average daily volume of wastewater discharged (without specifying the amount contributed by process flow and non-process flow) and the discharge limits for each IU. However, marginally legible bold type denotes categorical limits and non-bold type denotes local limits in the table. The table does not identify for categorical industrial users (CIUs), the category and subcategory. In addition, the table does not provide the principal products and raw materials of the SIU that affect or contribute to the SIU's discharge.

In lieu of providing information on SIUs in the permit application, the NJDEP Pretreatment Program includes a pretreatment requirement/condition in all POTWs' NJPDES permits to prepare and submit an annual pretreatment program report consisting of a listing of all SIUs for POTWs with non-approved pretreatment programs and a listing of regulated IUs for POTWs with approved pretreatment programs. Therefore, the NJDEP Pretreatment program does not rely on the POTW's NJPDES permit application submission which is every 5 years or longer to obtain the inventory of POTWs' SIUs. This option is allowable according to 40 CFR 122.21(j)(6)(iii) which states that information required in 40 CFR 122.21(j)(6)(i) and (ii) may be waived by the Director for POTWs with pretreatment programs *if* the applicant has submitted either of the following that contain information substantially identical to that required in those paragraphs: (A) An annual report submitted within one year of the application; or (B) A pretreatment program submitted within one year of the application.

One option is to include the most recent information on IUs provided in the annual reports as an attachment to the NPDES permit application so that the permit application includes, independently of other documents, all the required information. To reiterate, the requirement is that the POTWs are supposed to provide the following information in the permit application for each SIU, as defined at 40 CFR 403.3(v), that discharges to the POTW:

- Name and mailing address,
- Description of all industrial processes that affect or contribute to the SIU's discharge,

- Principal products and raw materials of the SIU that affect or contribute to the SIU's discharge,
- Average daily volume of wastewater discharged, indicating the amount attributable to process flow and non-process flow,
- Whether the SIU is subject to local limits,
- Whether the SIU is subject to categorical standards, and if so, under which category(ies) and subcategory(ies), and
- Whether any problems at the POTW (e.g., upsets, pass through, interference) have been attributed to the SIU in the past four and one-half years.

POTW NPDES Fact Sheet

One of most important components of the administrative record is the permit fact sheet or statement of basis. The NPDES regulations at 40 CFR 124.8 require both state and EPA permitting authorities to prepare a fact sheet for draft permits for certain types of regulated facilities. The fact sheets must be prepared to accompany the draft permits for all major NPDES facilities and where there is widespread public interest. The requirements for the content of the fact sheet are established in 40 CFR 124.8 and 124.56. 40 CFR 124.8(b) states that "...The fact sheet shall include, when applicable: ...(2) The type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged."

Federal Regulations are not prescriptive of what needs to be included in a fact sheet with regard to pretreatment program-related information. That said, current regulations (40 CFR 124.56) require that fact sheets include information regarding the type of facility or activity permitted, the type and quantity of pollutants discharged, the technical, statutory, and regulatory basis for permit conditions, the basis and calculations for effluent limits and conditions, the reasons for application of certain specific limits, rationales for variances or alternatives, contact information, and procedures for issuing the final permit. EPA suggests that the following elements be included in the NPDES Fact Sheet in order to make informed decisions and a sound technical basis during NPDES permit development.

Both POTW NPDES fact sheets reviewed for pretreatment as part of this PQR included the following:

- The approval dates of the approved POTW pretreatment program, and
- Information on their local limits. RVRSA has adopted local limits for BOD/CBOD, TSS, and ammonia, while CUA has local limits for CBOD/BOD and TSS. Neither program has adopted local limits for phosphorus and nitrogen.

Both POTWs' NPDES fact sheets are lacking some information needed to fully describe circumstances of the facility and/or permit as follows:

- POTW pretreatment program modification dates; either there were no modifications, or the dates were not included.
- Whether hauled waste is accepted by the POTW.
- The identity of contributing industrial dischargers and their characteristics. In addition, the source of the information regarding industrial dischargers should be identified in the NPDES fact sheet (such as NPDES permit application, annual report, NPDES inspection, or TRI/DMR¹¹ pollutant loading tool, other...).

It also would be helpful to include the following information in the fact sheet:

- Whether the POTW has a compliance history of violations attributed to flow or strength of wastewater from industrial discharge(s), or, otherwise, if this is not the case. However, this information can be obtained from annual pretreatment reports and pretreatment audits.
- CCUA does not have the flow diagram in the NPDES permit application nor is information provided in the CCUA POTW fact sheet which describes where food processing waste is introduced into the POTW. On the other hand, the RVRSA NPDES permit application does have a flow diagram which indicates that wastewater is sent to the headworks via the collection system, and it is surmised (but not explicitly stated) that the food processing waste is introduced to the POTW via the collection system to the plant's headworks. NJDEP could either request flow diagrams from the POTW or, based on the NPDES permit application and/or pretreatment annual reports, include in the fact sheet a table of industrial users and whether their wastewater discharge is sent to the headworks via the collection system or hauled by truck to the POTW intake, or hauled by truck to a location other than the headworks (e.g., introduced to digester).
- Identification of food processors that are SIUs or IUs based on the annual pretreatment reports and/or the NJDPES permit applications.

POTW Permit Review

The permits for both pretreatment POTWs contain secondary treatment standards in accordance with 40 CFR 133.102.

The RVRSA NPDES permit imposes phosphorus and ammonia limitations and reporting only monitoring requirements for nitrogen-nitrate in the effluent. For BOD and TSS, the influent and effluent monitoring is conducted twice per week, while the effluent is monitored for ammonia and nitrogen-nitrate three times per week and phosphorus is monitored four times per month. The CCUA NPDES permit only imposes ammonia limitations and once-per-week effluent monitoring. The sampling frequency of influent and effluent for BOD and TSS is twice per week; limits are established for effluent and percent removal while influent results are reported only (but are used to calculate percent removal).

¹¹ Toxics Release Inventory (TRI) and Discharge Monitoring Report (DMR)

The NPDES permits require the POTWs to implement approved Pretreatment Programs per 40 CFR 403.8. The NPDES permits require a written technical evaluation of the need to revise local limits following permit issuance or reissuance as required under N.J.A.C. 7:14A-19.7(f) (per 40 CFR 122.44(j)(2)(ii)) within 6 months of the permit being issued. According to NJDEP staff, any timeline for local limit revision would be established based on discussions between NJDEP and the POTW; henceforth, the timeline would not be included in the permit. Local limits have been adopted for CBOD, TSS and ammonia by RVRSA, and for BOD and TSS by CCUA.

The NPDES permits also require the submittal of an annual pretreatment report (per 40 CFR 403.12(i)).

Neither POTW was granted an adjustment to the secondary treatment standards per 40 CFR 133.103(b)¹² [i.e., limits for BOD and TSS different from 40 CFR 133.102]. However, this is an option that the POTWs could pursue. If NJDEP opts to grant adjustments, information and calculations upon which the adjustments were made should be documented in the NPDES permit fact sheet.

Based on the information available, EPA cannot determine whether NJDEP includes language in NPDES permits, when warranted, such as a condition to develop and enforce local limits or require the POTW to evaluate treatment plant operation to ensure no recurrence per 40 CFR 403.5(c)(2). However, per N.J.A.C. 7:14A-19.7(d), any development of local limits is required to be conducted under an NJDEP approved workplan. In addition, this information would be included as part of the required annual reporting. Therefore, NJDEP has a mechanism outside of the NPDES permitting process which requires POTWs with a compliance history of violations due to industrial dischargers to develop local limits.

Neither of the NPDES permits:

- Requires notification and impact assessment of significant changes in industrial flow or character in accordance with 40 CFR 122.42(b)¹³. This could be in the form of a reporting requirement when POTWs inform NJDEP of changes or new pollutants being discharged to the system. This could either be included in the

¹² Adjustment to secondary treatment standards may be granted if the industrial process flow or loading exceeds 10% of the POTW design flow or loading and not greater than those that the industry would be subject to if a direct discharger.

¹³ All POTWs must provide adequate notice to the Director of the following:

- Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants.
- Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW.
- Adequate notice shall include information on any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

Pretreatment Annual Report (requirements are in Section F.10. of the NPDES permit) or a separate requirement to inform NJDEP of any changes within a specific predetermined amount of time.

- Provides the approval and most recent modification date(s) of the approved pretreatment program.
- Requires an updated list of pollutants or information on significant changes in pollutant loadings and flows; however, the permits do require an updated user inventory to be included in the Pretreatment Annual Report.

If a POTW cannot meet its permit limits or experiences operational issues due to loadings from food processing industries, NJDEP could opt to add optional clauses in the POTW's NPDES permit, including:

- Require reporting of industrial discharge flow volume (and changes) or reporting of industrial batch discharges (including cleaning processes, boiler blowdown, seasonal changes, etc.).
- Special conditions to control or monitor the indirect food processing waste stream.
- Internal pollutant quality monitoring locations and internal pollutant limitations.
- The development and enforcement of any Best Management Practices (BMPs) specific to the food processing facility or waste stream (e.g., discharge equalization, slug or spill control plan, monitoring and maintenance of grease traps).
- Specific controls on or monitoring of the food processing discharge (i.e., including sampling at an "internal"/collection system monitoring point). These could include methods to control the food processing industry via local limits, surcharges, permits, and/or spill or slug control plans.

Innovative/Voluntary Programs

NJDEP staff stated that the two POTWs do not participate in any voluntary programs to reduce food waste or reuse food waste for energy generation. NJDEP stated that the two POTWs did not implement innovative technologies or techniques such as, but not limited to, (1) struvite nitrogen or phosphorus removal technology and (2) energy co-generation technology in conjunction with either restaurant grease collection or hauled food processing collection.

Industrial User Control Mechanism (Permit) and Fact Sheet

NJDEP did not provide the industrial permit application forms for Anthony and Sons Bakery (RVRSA) or Innovation Foods (CCUA). For both IUs, an individual control mechanism (aka industrial user permit) was used. CCUA's IU fact sheet for Innovation Foods did not contain much information and could be significantly improved. The Anthony and Sons Bakery fact sheet was acceptable, and included information on a recent approved variance accorded to the bakery:

“Since Anthony and Sons Bakery desires to discharge a CBOD₅ concentration in excess of 500 mg/L, Anthony & Sons Bakery has submitted a variance application on June 30, 2020, requesting an increase in CBOD₅ concentration to a daily maximum limit of 3,000 mg/L. This variance request was approved by the RVRSA Board by Resolution #20-069 on August 13, 2020.”

The Innovation Foods permit does not impose nutrient effluent limitations but does have limits and requires monthly flow-proportional composite samples for COD and TSS. CCUA does not impose surcharge values. Meanwhile, the Anthony and Sons Bakery permit imposes ammonia and TSS limitations and a requirement to report only for phosphorus and BOD; all of these parameters require a time-proportional composite sample monthly. For RVRSA, surcharge values are implemented for BOD, TSS and Ammonia.

The following items were included in both industrial user permits:

- Statement of duration (≤ 5 years)
- Self-monitoring requirements, including an identification of pollutants to be monitored, sampling locations and/or discharge points.
- Sampling requirements
- Reporting requirements (including all monitoring results)
- Recordkeeping requirements
- Indication of parameters for which there are surcharge values (for RVRSA; CCUA does not assess surcharges)
- Notification of spills, bypasses, upsets, etc.
- The basis for the limitation and/or monitoring requirement in RVRSA’s Anthony and Sons Bakery permit; there are no such requirements applied to Innovation Foods by CCUA.

Neither the CCUA nor the RVRSA permit included the requirement for the IU to notify the POTW of a change affecting the potential for a slug discharge per 40 CFR 403.8(f)(2)(vi).

The following items were missing from CCUA’s Innovation Foods permit:

- A permit issuance date: the letter at the beginning of the permit is not dated. As a result, we cannot determine if the Innovation Foods permit was issued before or after its start date. The requirement is that the issuance date, the permit effective date, and the permit expiration date be clearly stated in the permit.
- Statement of non-transferability without prior notification/approval (40 CFR 403.8(f)(1)(iii)(B)(2)).
- A map or schematic of the facility which includes the sampling and effluent discharge points; however, the narrative in the permit adequately identifies the location of the sampling point.

The compliance schedule language in the Innovation Foods permit issued by CCUA is confusing. In Section C.2. of the permit, the compliance schedule language seems to apply to only CIUs but the permittee is not a major SIU nor a CIU and is identified as a SIU/minor. It is unclear if the language is included because it pertains to Innovation Foods, or if it is boilerplate language that is included in all permits even if the language does not apply to the permittee. In contrast, RVRSA has the appropriate language regarding compliance schedules in its permit.

CCUA's permit does not include a 24-hour notification of violation/resample requirement per 40 CFR 403.12(g)(2) nor slug discharge control plan conditions, if determined by the POTW to be required. The CCUA permit has a requirement for a slug discharge control plan, but no instructions of what should be included in the plan per 40 CFR 403.8(f)(1)(iii)(B)(6) and 403.8(f)(2)(vi). Meanwhile, RVRSA's permit includes both requirements.

CCUA's Innovation Foods permit included a notice of slug loadings in the IU permit, but RVRSA's Anthony and Sons Bakery permit does not properly include a "Notice of Slug Discharges" per 40 CFR 403.12(f). Section 9.E. of Anthony and Sons Bakery permit (Notification of Non-Compliance or Accidental Discharge: Protection from Accidental Discharge) has detailed information of what should be in a slug discharge control plan (i.e., procedures for notification of slug loading) for significant industrial users. But the slug discharge control plan requirement in 40 CFR 403.12(f)¹⁴ applies to all users, and the language in RVRSA's IU permit does not contain adequate language. In addition, Section 9.A. of the permit has notification of non-compliance or accidental discharge, but the permit does not contain a definition of what is accidental discharge. While the permit includes information regarding notice of slug discharge, the applicability of the slug discharge control plan and the notice could be presented more clearly.

RVRSA's Anthony and Sons Bakery fact sheet does not offer a rationale as to why time-proportional rather than a flow-proportional monthly sampling is accepted. Per 40 CFR 403.12(g)(3):

*"...Grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. For all other pollutants, 24-hour composite samples must be obtained through flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the Control Authority. Where time-proportional composite sampling or grab sampling is authorized by the Control Authority, the samples must be representative of the Discharge and *the decision to allow the alternative sampling must be documented the Industrial User file for that or facilities...*"*

¹⁴ 403.23(f): All categorical and non-categorical Industrial Users shall notify the POTW immediately of all discharges that could cause problems to the POTW, including any slug loadings, as defined by § 403.5(b), by the Industrial User.

RVRSA's Anthony and Sons Permit Section 15 includes most applicable civil penalties and Section 16 applicable criminal penalties; however, Section 15 does not state what the minimum daily penalty should be per 403.8(f)(1)(iii)(B)(5) and 403.8(f)(1)(vi)(A).¹⁵

RVRSA's Anthony and Sons Bakery permit does not have language regarding notification of significant change in discharge (per 40 CFR 403.12(j)) while CCUA's IU permit includes this language.

Action Items

¹⁵ 40 CFR 403.8(f)(1)(iii)(B)(5) states:

"Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond applicable federal deadlines;"

And 403.8(f)(1)(vi)(A) states:

"Obtain remedies for noncompliance by any Industrial User with any Pretreatment Standard and Requirement. All POTW's shall be able to seek injunctive relief for noncompliance by Industrial Users with Pretreatment Standards and Requirements. All POTWs shall also have authority to seek or assess civil or criminal penalties in at least the amount of \$1,000 a day for each violation by Industrial Users of Pretreatment Standards and Requirements."

Essential

- NJDEP must ensure that permits require notification and an impact assessment of significant change in industrial flow or character in accordance with 40 CFR 122.42(b) along with an updated list of pollutants or information on significant changes in pollutant loading and flows. In addition, the NPDES permit should include the approval and most recent modification date(s) of the approved pretreatment program.
- NJDEP must ensure that all IU permits include:
 - The requirement of the IU to notify the POTW of a change affecting the potential for a slug discharge per 40 CFR 403.8(f)(2)(vi),
 - A permit issuance date along with the permit start and end date,
 - A statement of non-transferability without prior notification/approval per 40 CFR 403.8(f)(1)(iii)(B)(2),
 - A 24-hour notification of violation/resample requirement per 40 CFR 403.21(f),
 - Details on what minimum elements should be included in a slug discharge control plan per 40 CFR 403.8(f)(2)(vi),
 - Minimum daily civil penalties per 40 CFR 403.8(f)(1)(vi)(A), and
 - Requirement for notification of significant change in discharge per 40 CFR 403.12(g)(3).
- NJDEP must require that the RVRSA requires flow-proportional monthly sampling in their permits or document within the IU's fact sheet the basis for accepting time-proportional sampling, as required by 40 CFR 403.12(g)(3).

Recommended

- NJDEP can opt to add an addendum to permit applications that includes data on IUs from the previous year pretreatment annual reports so that the NPDES Permit Application includes, independent of other documents, the information required by EPA's Application Form 2A Section F that requires identification of Industrial User Discharges per 40 CFR 122.21(j)(6)(i) and (ii) and 40 CFR 403.3(v).
- NJDEP can opt to include additional information in its NPDES fact sheets. The NPDES fact sheets are missing several components such as POTW pretreatment modification dates, a list of the POTW's compliance history of violations, whether the POTW accepts hauled waste, wastewater flow diagrams, and a list of contributing industrial dischargers and their characteristics including whether they are minor-IUs, SIUs, or CIUs.
- NJDEP can include language in the NPDES permit requiring the POTW to provide the approval date and most recent modification date(s) of the approved pretreatment program.
- If a POTW cannot meet its permit limits due to loading from food processing industries, NJDEP can opt to include additional requirements in the POTW's NPDES permit regarding monitoring, sampling, and reporting of food processing wastes and implementation of BMPs.
- NJDEP should encourage POTWs to participate in voluntary programs to reduce food waste or reuse food waste for energy generation.
- POTWs should keep the most recent IU permit on file, and it should be made available to NJDEP when requested.
- IU Permits should only include the compliance schedule clause if it applies to the particular IU as required by 40 CFR 403.8(f)(1)(iv). Clauses which do not pertain to that particular IU should not be included in the IU permit.

C. Small Municipal Separate Storm Sewer System (MS4) Permit Requirements

Background

As part of this PQR, EPA reviewed the NJDEP Highway Agency Stormwater General Permit R12 (NJ0141887), issued on November 29, 2019, for consistency with the Phase II stormwater permit regulations. In 2016 EPA updated the small MS4 permitting regulations to clarify:

- The procedures to be used when coverage is by general permits (see 40 CFR 122.28(d));
- The requirements that the permit establish the terms and conditions necessary to meet the MS4 permit standard (i.e., “to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality control measures, reporting, and, as appropriate, water quality requirements” (see 40 CFR 122.34(a) and (b)); and
- That permit terms must be established in a “clear, specific, and measurable” manner (see 40 CFR 122.34(a)).

Program Strengths

The permit’s stormwater management requirements and the stormwater pollution prevention plan are prescriptive.

The state’s Statewide Basic Requirements (six minimum control measures) are prescriptive, clear, specific, and measurable.

Attachment A of the permit provides the measurable goals for the six minimum control measures, and stormwater facility maintenance. These goals are enforceable in the permit, clear, specific, and measurable.

Attachment B of the permit provides a list of public education and outreach activities with a point system for each activity. The permittee needs to meet a minimum number of points to meet the requirement of these two minimum control measures.

Attachment E of the permit provides best management practices for maintenance yards which are clear, specific, and measurable.

Areas for Improvement

The permits sections for TMDLs and Additional Requirements should be strengthened. EPA R2 believes that these sections that address TMDLs, impaired waters, and pollutants of concern are the least prescriptive sections of the permit. The State of New Jersey Council on Local Mandates¹⁶ may consider the removal of Additional Measures addressing TMDLs (Part 4 Tier A Municipal General MS4 Permit, Section D) if the state has not provided funds to the MS4 permittee for the implementation of the additional measures. NJDEP should include a requirement in MS4 permits to use BMPs that would directly address specific pollutants of concern and explore options to overcome the unfunded mandate as a barrier to implementation.

There currently are no standard procedures that involve EPA in the stormwater permit development process or notify EPA of impending permit actions. This has made it difficult at times for EPA to participate in permit development and address concerns in a cooperative manner prior to permit issuance. It would be beneficial to have a standard procedure for

¹⁶ More information can be found at <https://www.nj.gov/localmandates/general/>.

regular coordination between EPA and NJDEP stormwater staff for the permit development and issuance process.

Action Items

Recommended

- NJDEP should strengthen their program by providing sufficient detail in the permit to implement BMPs and other strategies regarding TMDLs, impaired waters, and pollutant of concerns.
- NJDEP should coordinate earlier, more often and regularly with EPA throughout the general permit development process.

V. PERMITS REVIEWED FOR 2021 NJ PQR

Table 5. NJPDES Permits Reviewed for the 2021 NJ PQR

Permit Number	Facility Name	2021 PQR Review Topic
NJ0024708	Bayshore Regional Sewerage Authority Wastewater Treatment Plant	Core review, Nutrients in non-TMDL waters
NJ0024694	Monmouth County Bayshore Outfall Authority	Core review, Nutrients in non-TMDL waters
NJ0002089	IMTT – Bayonne	Core review
NJ0024716	Town of Phillipsburg	Core review, Nutrients in non-TMDL waters
NJ0024911	Butterworth Water Pollution Control Plant	Core review, Nutrients in non-TMDL waters
NJ0062391	Wheelabrator Gloucester Co., LP.	Core review
NJ0005240	Bridgeport Disposal, LLC.	Core review
NJ0024821	Francis S. Doyle Jr. Treatment Facility	Core review
NJ0000809	Hopewell Business Campus	Core review
NJ0020923	Trenton Sewer Utility	Core review
NJ0024651	Cumberland County Utilities Authority	Core review, POTW permits with food processor contributions
NJ0022349	Rockaway Valley Regional Sewerage Authority	Core review, POTW permits with food processor contributions
NJ0025411	Hopewell Creek Generating Station	Core review
NJ0141887	Highway Agency Stormwater General Permit	Small MS4

VI. 2016 NJ PQR ACTION ITEM REVIEW

This section provides a summary of the main findings from the last PQR and provides a review of the status of the state’s efforts in addressing the action items identified during the last PQR, conducted in 2016. As discussed previously, during the 2012-2017 PQR cycle, EPA referred to action items that address deficiencies or noncompliance with respect to federal regulations as “Category 1”. EPA is now referring to these action items going forward, as Essential. In addition, previous PQR reports identified recommendations to strengthen the state’s program as either “Category 2” or “Category 3” action items. EPA is consolidating these two categories of action items into a single category: Recommended.

Table 6. Essential Action Items Identified During the 2016 PQR

Program Area	Action Item Title	Status Update
Basic Facility Information and Permit Application	NJDEP must ensure that a permit is not administratively continued if the permit application as not submitted 180 days prior to expiration of the existing permit to be consistent with EPA regulations at 40 CFR 122.22(c) and 122.21(d) or, if applicable, NJDEP must ensure that a proof of an extension was included in the administrative record.	Resolved. This action item was erroneously established in the 2016 PQR.
Technology-based Effluent Limitations	NJDEP must include a clear discussion in fact sheets for non-POTWs subject to ELGs regarding ELG applicability (or why a seemingly-applicable ELG does not apply) in order to be consistent with EPA regulations at 40 CFR 124.56.	Resolved.
Technology-based Effluent Limitations	NJDEP must ensure that when effluent limitations are carried forward from the previous permit, the basis for the effluent limitation is discussed in the fact sheet in order to be consistent with 40 CFR 124.56.	Resolved.
Nutrients	NJDEP must ensure that fact sheets consistently include a reasonable potential analysis for all nutrient related parameters to be consistent with EPA regulations at 40 CFR 124.56.	In progress. This is also being addressed as a 2021 PQR Action Item.
Nutrients	NJDEP must ensure that fact sheets address how downstream impacts, such as algal blooms and dissolved oxygen impairments, were considered in the reasonable potential analysis, and if necessary, in limit development to be consistent with federal regulations at 40 CFR 124.56.	In progress. This is also being addressed as a 2021 PQR Action Item.
Nutrients	NJDEP must ensure that the monitoring requirements specified in the permit are sufficient to provide a representative sample for use in future reasonable potential calculations and limit development to be consistent with federal regulations at 40 CFR 122.44(j).	Resolved.

Program Area	Action Item Title	Status Update
Pretreatment	NJDEP must use ICIS to enter pretreatment data to improve consistency and transparency as soon as possible, but in no case later than the agreed upon action plan included in the 2017-2019 Performance Partnership Agreement, to be consistent with EPA regulations at 40 CFR 127.21.	In progress. The Pretreatment program has been entering data but there is a backlog due to the lack of trained staff able to complete an audit. Additional staff members are being trained.
Stormwater	NJDEP must ensure that the permit provisions ensure that the WQS will be met in the receiving water to be consistent with EPA regulations at CWA Section 301(b)(1)(C).	In progress.
Stormwater	NJDEP must include specific requirements for sites that will discharge to impaired waters to be consistent with 40 CFR 122.34(b)(6)(e).	In progress.
Stormwater – Construction Activity	NJDEP must ensure that the fact sheet includes contact information to request additional information to be consistent with EPA regulations at 40 CFR 124.8(b)(7).	Resolved.
Stormwater – Tier A MS4	NJDEP must ensure that the permit specifies which SIC codes are applicable and which regulated industries are required to receive coverage under the permit to be consistent with EPA regulations at 40 CFR 122.44(d)(1)(vii)(B).	In progress.
Stormwater – Basic Industrial	NJDEP must ensure that the permit specifies which SIC codes are applicable and which regulated industries are required to receive coverage under the permit to be consistent with EPA regulations at 40 CFR 122.26 and 122.41.	In progress.
Reasonable Potential	NJDEP must ensure that effluent limitations are established in permits for all parameters whose discharge causes, has the reasonable potential to cause, or contribute to an excursion of applicable WQS to be consistent with EPA regulations at 40 CFR 122.41(d).	Resolved.
Reasonable Potential	NJDEP must, for all pollutants of concern, evaluate whether a discharge causes or contributes or has the reasonable potential to cause or contribute to an exceedance of WQS to be consistent with EPA regulations at 40 CFR 122.44(d), including where there is limited or no data available.	In progress. This is also being addressed as a 2021 PQR Action Item.
Power Plants	NJDEP must ensure that fact sheets clearly document the basis and schedule for CWA 316(b) requirements for impingement and entrainment to be consistent with EPA regulations at 40 CFR 125.98.	In progress.

Program Area	Action Item Title	Status Update
Power Plants	NJDEP must ensure that the development of CWA 316(b) decisions consider the impacts to threatened and endangered species to be consistent with EPA regulations at 40 CFR 125.94.	In progress.
Power Plants	NJDEP must ensure that the requirements for cooling water intake structures are consistent with the revised Final Regulation to Establish Requirements for Cooling Water Intake Structure at Existing Facilities at 40 CFR 122 and 125.	In progress.

Table 7. Recommended Action Items Identified During the 2016 PQR

Program Area	Action Item Title	Status
Basic Facility Information and Permit Application	NJDEP should include standard authorization-to-discharge, as described in 40 CFR 122.1(b)(1), terminology to be included on the first page of the NJPDES permit.	In progress. This is also being addressed as a 2021 PQR Action Item.
Basic Facility Information and Permit Application	NJDEP should include a zip code in the address provided for the discharging facility in the permit.	Resolved.
Special and Standard Conditions	NJDEP should cite the specific NJAC provisions in permits that correspond with the standard conditions required by 40 CFR 122.41 and 122.42.	In progress. This is also being addressed as a 2021 PQR Action Item.
Special and Standard Conditions	NJDEP should cite the specific NJAC provisions in permits that establish notification requirements for POTWs, to clearly capture these requirements.	In progress. This is also being addressed as a 2021 PQR Action Item.
Special and Standard Conditions	NJDEP should cite the specific NJAC provisions in permits that establish the notification requirements for non-POTWs, to more clearly capture these requirements.	In progress. This is also being addressed as a 2021 PQR Action Item.
Administrative Record	NJDEP should include the WQBEL Analysis Data Sheets or, at minimum, clearly reference them in the administrative record.	In progress.
Administrative Record	NJDEP should include or reference the calculations used to develop any TBELs established in the permit in the administrative record.	In progress.
Administrative Process	NJDEP should file the proof of public notice in the permit file with the remainder of the administrative record.	Resolved.
Pretreatment	NJDEP should streamline the pretreatment reporting requirement into a single report that covers a consistent monitoring period.	Resolved. This action item was erroneously included in the 2016 PQR.
Stormwater	NJDEP should establish specific requirements for corrective action, including timeframes for correcting deficiencies in all general permits.	Resolved.
Stormwater	NJDEP should specify in the permit the required qualifications or training of the individual conducting inspections.	Resolved.

Program Area	Action Item Title	Status
Stormwater – Construction Activity	NJDEP must establish a requirement that the permittee must provide a paper submission 30 days prior to the commencement of “construction activities”, rather than the “commencement of land disturbance”, to be consistent with the federal Construction General Permit and 40 CFR 122.28.	Resolved.
Stormwater – Construction Activity	NJDEP should specify in the permit basis stormwater and/or NJPDES training requirements for permittees or operators to ensure that an individual on site has sufficient knowledge of stormwater requirements and practices.	In progress.
Stormwater – Construction Activity	NJDEP should define “completed” and “operating entity” in the permit.	In progress.
Stormwater – Construction Activity	EPA suggests that NJDEP include related federal endangered species requirements in the permit.	In progress.
Stormwater – Construction Activity	NJDEP should establish uniform requirements to terminate coverage and should specify what site stabilization criteria are required prior to termination.	In progress.
Stormwater – Construction Activity	NJDEP should require inspection every 7 days in the permit, rather than weekly, to ensure adequate implementation and enforcement.	In progress.
Stormwater – Basic Industrial	NJDEP should include requirements in the permit for controls to be implemented at all industrial site to manage stormwater runoff, salt storage, and vehicle dust reduction and should specify a frequency for maintenance of control measure.	In progress.
Reasonable Potential	In the case of limited data sample size, NJDEP should either use EPA’s TSD procedures for limited data or ensure that a representative data set is available to be consistent with EPA regulations at 40 CFR 122.44(d) and EPA guidance in the Technical Support Document for Water Quality-based Toxics Control.	Resolved.
Power Plants	NJDEP must ensure that all coal-fired power plant permits reflect the revised ELGs in order to be consistent with EPA regulations at 40 CFR 423, upon reissuance.	Resolved.
Combined Sewer Overflows	NJDEP Should require in the permit that a thorough evaluation of a sufficient range of control alternatives is conducted in accordance with EPA’s <i>CSO Control Policy</i> .	Resolved.
Combined Sewer Overflows	NJDEP should require in the permit that a comprehensive monitoring program be developed and implemented in accordance with EPA’s <i>CSO Control Policy</i> .	Resolved.

Program Area	Action Item Title	Status
Combined Sewer Overflows	The permit should include a requirement to develop and submit a report documenting the implementation of the nine minimum controls, as per the <i>CSO Control Policy</i> .	In progress.
Combined Sewer Overflows	NJDEP should consider requiring permittees to submit ambient monitoring data in an electronic format suitable for inclusion in state water-quality systems.	Resolved.
Arsenic	NJDEP should adopt a multiple discharger variance for arsenic in the State's WQS that conforms with federal regulations at 40 CFR 131.14.	Resolved. Based on additional research, a multiple discharger variance may not be the best approach for arsenic at this time. NJDEP continues to research this issue.

VII. ACTION ITEMS IDENTIFIED DURING THE 2021 PQR

This section provides a summary of the main findings of the PQR and provides proposed action items to improve New Jersey's NPDES permit programs, as discussed throughout sections III and IV of this report.

The proposed action items are divided into two categories to identify the priority that should be placed on each Item and facilitate discussions between EPA Regions and states.

- **Essential Actions** - Proposed "Essential" action items address noncompliance with respect to a federal regulation. EPA has provided the citation for each Essential action item. The permitting authority is expected to address these action items in order to comply with federal regulations. As discussed earlier in the report, prior PQR reports identified these action items as Category 1. Essential actions are listed in Table 3 below.
- **Recommended Actions** - Proposed "Recommended" action items are recommendations to increase the effectiveness of the state's or Region's NPDES permit program. Prior reports identified these action items as Category 2 and 3. Recommended actions are listed in Table 4 below.

Table 8. Essential Action Items Identified During the 2016 PQR

Topic	Action(s)
Permit Application Requirements	NJDEP must ensure compliance with the NPDES Application and Program Updates Rule (84 FR 3324) as soon as possible.
TBELs for Non-POTWs	Final permits with CWA section 316(b) provisions must include the technologies and monitoring specified as BTA for compliance with the impingement mortality standard (40 CFR 125.98(c)) and the entrainment standard (40 CFR 125.94(d)), as enforceable conditions of the final permit, as required by 40 CFR 125.98(b)(2).
Reasonable Potential and WQBELs	NJDEP must calculate the reasonable potential of all pollutants of concern to cause or contribute to an exceedance of WQS to be consistent with EPA regulations at 40 CFR 122.44(d). This also applies to situations with limited or no data available, such as new facilities.
Standard and Special Conditions	NJDEP permits must include provisions for bypass, upset, and the additional reporting requirements for non-POTWs as required by 40 CFR 122.41(m), 122.41(n), and 122.42(a), respectively.
Administrative Process	NJDEP must include a general description of the location of each existing or proposed discharge point in the public notice, as required by 40 CFR 124.10(d)(vii).
Nutrients	NJDEP must evaluate whether a discharge causes or contributes, or has the reasonable potential to cause or contribute to an exceedance of narrative or numeric WQS, and include numeric limits where necessary, as required by 40 CFR 122.44(d).
Nutrients	NJDEP must ensure that permits are protective of downstream uses, for both numeric and narrative nutrient criteria, including water quality criteria of other states and interstate entities such as DRBC, as required by 40 CFR 122.44(d).
Pretreatment	NJDEP must ensure that permit require notification and an impact assessment of significant change in industrial flow or character in accordance with 40 CFR 122.42(b) along with an updated list of pollutants or information on significant changes in pollutant loading and flows. In addition, the NPDES permit should include the approval and most recent modification date(s) of the approved pretreatment program.

<p>Pretreatment</p>	<p>NJDEP must ensure that all IU permits include:</p> <ul style="list-style-type: none"> • The requirement of the industrial user to notify the POTW of a change affecting the potential for a slug discharge per 40 CFR 403.8(f)(2)(vi), • A permit issuance date along with the permit start and end date, • A statement of non-transferability without prior notification/approval per 40 CFR 403.8(f)(1)(iii)(B)(2), • A 24-hour notification of violation/resample requirement per 40 CFR 403.21(f), • Details on what minimum elements should be included in a slug discharge control plan per 40 CFR 403.8(f)(2)(vi), • Minimum daily civil penalties per 40 CFR 403.8(f)(1)(vi)(A), and • Requirement for notification of significant change in discharge per 40 CFR 403.12(g)(3).
<p>Pretreatment</p>	<p>NJDEP must require that the RVRSA requires flow-proportional monthly sampling in their permits or document within the IU's fact sheet the basis for accepting time-proportional sampling, as required by 40 CFR 403.12(g)(3).</p>

Table 9. Recommended Action Items Identified During the 2016 PQR

Topic	Action(s)
Facility Information	NJDEP should provide clear authorization-to-discharge language, as referenced in 40 CFR 122.1(b)(1), in all NJPDES permits.
Permit Application Requirements	EPA recommends that NJDEP revise the application so that the applicant can more easily identify that the signatory requirements are met or, if necessary, provide training or resources to the necessary staff to assist them in determining whether the application has been signed by the appropriate individual.
TBELs for Non-POTW POTWs	NJDEP should include a specific citation to the regulation, policy, or standard when an effluent limitation is established based on a rule or policy from outside NJDEP (i.e., the Interstate Environmental Commission, Delaware River Basin Commission).
Reasonable Potential & WQBELs	EPA recommends explicitly stating in the fact sheet whether a cause, the reasonable potential to cause or contribute to an excursion of the state's WQS analysis was completed and the results of the analysis.
Final Effluent Limitations	NJDEP should explicitly state in fact sheets whether an effluent limitation is a TBEL or a WQBEL to more clearly comply with 40 CFR 124.56.
Final Effluent Limitations	In ocean discharge permits, NJDEP should specifically include requirements to collect additional monitoring and technical information about areas of significant importance listed at 40 CFR 125.122(a) during the permit term so the determination of no adverse effects can be completed thoroughly at renewal.
Final Effluent Limitations	In ocean discharge permits, NJDEP should include "biological sampling" in the reopener clause as a reason to modify or revoke a permit.
Nutrients	NJDEP should clarify in the impairments section whether the direct receiving water is impaired, or a downstream segment.
Nutrients	NJDEP should include monitoring requirements for Total Nitrogen, particularly for dischargers to marine water or tributaries to marine waters, such that waste load allocations may be calculated if there is a TMDL for dissolved oxygen impairment or algal overgrowth.

Pretreatment	NJDEP can opt to add an addendum to permit applications that includes data on IUs from the previous year pretreatment annual reports so that the NPDES Permit Application includes, independent of other documents, the information required by EPA's Application Form 2A Section F that requires identification of Industrial User Discharges per 40 CFR 122.21(j)(6)(i) and (ii) and 40 CFR 403.3(v).
Pretreatment	NJDEP can opt to include additional information in its NPDES fact sheets. The NPDES fact sheets are missing several components such as POTW pretreatment modification dates, a list of the POTW's compliance history of violations, whether the POTW accepts hauled waste, wastewater flow diagrams, and a list of contributing industrial dischargers and their characteristics including whether they are minor-IUs, SIUs, or CIUs.
Pretreatment	NJDEP can include language in the NPDES permit requiring the POTW to provide the approval date and most recent modification(s) date of the approved pretreatment language.
Pretreatment	If a POTW cannot meet its permit limits due to loading from food processing industries, NJDEP can opt to include additional requirements in the POTW's NPDES permit regarding monitoring, sampling, and reporting of food processing wastes and implementation of BMPs.
Pretreatment	NJDEP should encourage POTWs to participate in voluntary programs to reduce food waste or reuse food waste for energy generation.
Pretreatment	POTWs should keep the most recent IU permit on file, and it should be made available to NJDEP when requested.
Pretreatment	IU Permits should only include the compliance schedule clause if it applies to the particular IU as required by 40 CFR 403.8(f)(1)(iv). Clauses which do not pertain to that particular IU should not be included in the IU permit.
MS4s	NJDEP should strengthen their program by providing sufficient detail in the permit to implement BMPs and other strategies regarding TMDLs, impaired waters, and pollutant of concerns.
MS4s	NJDEP should coordinate with EPA earlier, more often and regularly with EPA throughout the general permit development process.