

Region 1 NPDES Program and Permit Quality Review

Rhode Island

Final Report

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Contents

Executive Summary.....	3
I. PQR BACKGROUND.....	4
II. STATE PROGRAM BACKGROUND	6
A. Program Structure	6
B. Universe and Permit Issuance	7
C. State-Specific Challenges.....	7
D. Current State Initiatives	7
III. CORE REVIEW FINDINGS.....	8
A. Basic Facility Information and Permit Application	8
1. Facility Information	8
2. Permit Application Requirements	9
B. Developing Effluent Limitations	10
1. Technology-based Effluent Limitations.....	10
2. Reasonable Potential and Water Quality-Based Effluent Limitations	11
3. Final Effluent Limitations and Documentation	15
C. Monitoring and Reporting Requirements.....	17
D. Standard and Special Conditions.....	19
E. Administrative Process.....	20
F. Administrative Record and Fact Sheet	22
IV. NATIONAL TOPIC AREA FINDINGS.....	23
A. Permit Controls for Nutrients in Non-TMDL Waters.....	23
B. Effectiveness of POTW NPDES Permits with Food Processor Contributions	28
C. Small Municipal Separate Storm Sewer System (MS4) Permit Requirements	34
V. REGIONAL TOPIC AREA FINDINGS	35
VI. REVIEW OF PROGRESS ON ESSENTIAL ACTION ITEMS FROM LAST PQR	36
Table 1. Essential Action Items Identified During 2014 PQR	36
VII. RECOMMENDED ACTION ITEMS FROM LAST PQR.....	37
Table 2. Recommended Action Items Identified During 2014 PQR.....	37
VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE	38
Table 3. Essential Action Items from FY 2018-2022 PQR Cycle	39
Table 4. Recommended Action Items from FY 2018-2022 PQR Cycle.....	40

Executive Summary

EPA Region 1's National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Review (PQR) for Rhode Island found that permits issued in the state were generally well-developed and consistent with federal regulations. We appreciate the willingness of Rhode Island to work with us on this PQR, as it was originally scheduled to involve an onsite visit; however, due to the COVID-19 pandemic, the PQR shifted to a remote review. Rhode Island was very accommodating in adjusting to a remote PQR, responsive to information and material requests, and meeting schedule.

The PQR examined 17 permits for discharges in Rhode Island issued by the Rhode Island Department of Environmental Management (RIDEM). The PQR also focused on several national priority areas including:

- 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.

Rhode Island permits 74 individual facilities. As of February 21, 2020, 63 percent of Rhode Island's permits are current.

The PQR recognizes the many state and region-specific challenges faced by the state of Rhode Island, including resource constraints and certain technical challenges (e.g., economic analyses in support of Clean Water Act Section 316(b) permitting). RIDEM also continues to work on several state priorities including: an update to its MS4 General Permit, outreach to auto salvage yards as part of its Multi-Sector General Permit (MSGP) efforts, industrial pretreatment program (IPP) guidance for brewery permitting, and compliance with the NPDES Electronic Reporting Rule requirements.

Although the permits reviewed commonly conformed to national requirements, we identified several concerns, including thorough documentation of effluent limitations. Since many of the deficiencies seem to stem from documentation of effluent limitations, we believe they can be best resolved if the RIDEM revises the fact sheet template to include specific discussions and prompts for permit writers to provide detailed discussions of technical information upon which effluent limitations are based. In addition to the items listed above, the report provides an overview of the Rhode Island NPDES permitting program and identifies specific areas where EPA and RIDEM can work together to continue to strengthen permit language and documentation in state NPDES permits.

The state of Rhode Island reviewed and provided comments on the draft PQR report in November 2020. The state agreed with many of the draft PQR's findings and recommendations and committed to take action to address many of the proposed action items.

I. PQR BACKGROUND

The 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 U.S. Environmental Protection Agency (EPA) promotes national consistency and identifies successes in implementation of the NPDES program as well as opportunities for improvement in the development of NPDES permits. EPA conducted a PQR of the Rhode Island NPDES permitting program on April 24–25, 2013. The PQR summary report is available at: https://www.epa.gov/sites/production/files/2015-09/documents/pqr_rhode_island_report.pdf. The evaluation team proposed various action items to improve the Rhode Island NPDES permitting program. As part of the current PQR, EPA requested updates from Rhode Island on the progress on those action items. Of the six action items identified during the last PQR as being Essential¹ tasks, four have been resolved and the remainder represent actions that are longer-term activities which the Rhode Island Department of Environmental Management (RIDEM) is still addressing. In addition, EPA identified Recommended action items to improve Rhode Island’s program; Rhode Island has chosen to implement most of them and is in the process of implementing certain other Recommended actions. Section VI of this report contains a detailed review of the progress on action items identified during the last PQR.

During this review, the evaluation team proposed action items to improve the Rhode Island NPDES permit program. The proposed action items are identified within sections III, IV, and V of this report and are divided into two categories to identify the priority that should be placed on each Item and facilitate discussions between 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 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 state’s 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.

EPA’s review team, consisting of four Regional staff, one Headquarters staff, and one contractor staff conducted a review of the Rhode Island NPDES permitting program. The PQR was conducted remotely, meaning a review of materials was conducted off-site, with materials RIDEM was able to provide electronically. Further, the remote PQR included interviews and discussions conducted via several conference calls. An opening interview was held on April 16,

¹ 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 these 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.

2020, a discussion with RIDEM staff regarding specific permit questions on April 30, 2020, and a closing meeting on May 7, 2020.

The Rhode Island PQR included reviews of core permit components and national and regional topic areas, as well as discussions between the PQR review team and Rhode Island staff addressing their program status and permit issuance process. The permit reviews focused on core permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports or documents that provide the basis for the development of the permit conditions and related administrative process. As a result of the PQR being conducted remotely and the decision for doing so coming just before the PQR began, certain items from the administrative record were not available for all permits reviewed. For example, applications were not available for all permits reviewed. The PQR also included conversations between EPA and the state on program status, the permitting process, responsibilities, organization, staffing, and program challenges the state is experiencing.

A total of 17 permits were reviewed as part of the PQR. Ten of these permits were reviewed for the core review, with four of the 10 permits reviewed for an assessment of the “permit controls for nutrients in non-Total Maximum Daily Load (TMDL) waters national topic area. Seven additional permits, and one core permit, were reviewed for an assessment of the “effectiveness of publicly-owned treatment works (POTW) NPDES permits with food processor” national review area. Permits were selected based on issuance date and the review categories that they fulfilled.

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 permit writers regarding the permit development process. The core review focused on the *Central Tenets of the NPDES Permitting Program*² to evaluate the Rhode Island NPDES program. Core topic area permit reviews are conducted to evaluate similar issues or types of permits in all states.

Topic Area Reviews

The national topics reviewed in the Rhode Island NPDES program were: Permit Controls for Nutrients in Non-TMDL Waters, and Effectiveness of POTW NPDES Permits with Food Processor Contributions. Ongoing updates to Rhode Island’s Small Municipal Separate Storm Sewer System (MS4) permit were also discussed in significant detail.

² <https://www.epa.gov/npdes/central-tenets-npdes-permitting-program>

II. STATE PROGRAM BACKGROUND

A. Program Structure

RIDEM's Office of Water Resources (OWR) administers the Rhode Island Pollutant Discharge Elimination System (RIPDES) program. The RIPDES program was granted authority to administer the NPDES program for Rhode Island on September 17, 1984, including the development and issuance of general and individual discharge permits. RIDEM's main office in Providence includes all of the OWR programs.

RIDEM assigns staff permits based on permit type (e.g., drinking water treatment permits are all assigned to the same permit writer) and staff workload. RIPDES program staff members are responsible for all facets of permit development, including permit application review, developing technology-based effluent limitations (TBELs), conducting reasonable potential analyses (RPAs), and developing water quality-based effluent limitations (WQBELs). Further, permit staff manage compliance monitoring, informal enforcement, and referral for formal enforcement to RIDEM's Office of Compliance and Inspection. RIDEM employs five RIPDES permit writers, who are supported by a pretreatment engineer and administrative staff (administrative and data entry assistance). In addition, RIPDES staff routinely work with staff from other OWR programs including staff supporting water quality criteria, TMDL, water quality certifications, wastewater treatment facility design, and waste management. RIPDES staff also work with RIDEM Office of Legal Services and Office of Compliance and Inspection staff.

Permit writers receive training through attendance at EPA's NPDES Permit Writers' Course, Water Standards Academy, and through use of RIDEM internal permit development tools such as standard work instruction sheets and template documents and spreadsheets. Additionally, permit writers are encouraged to attend regional and national conferences, and all permit writers receive ongoing mentoring from senior staff.

RIDEM has developed RIPDES permitting tools including permit and fact sheet development checklists, standardized Word permit and fact sheet/statement of basis documents, and Excel spreadsheets to conduct RPAs and develop WQBELs. RIDEM has developed individual spreadsheets for each class of waterbody (i.e., freshwater non-class AA, freshwater class AA, and saltwater). The Word templates address the various types of permits (i.e., individual major, individual minor, and the various general permits) as well as fact sheets, statement of basis, and development documents. All of these templates and forms are available on RIDEM's shared computer network and are updated as necessary (e.g., in response to changes in water quality criteria). Use of these standard documents facilitates consistency in permit development.

RIDEM staff also directly enter permit status/facility information, monitoring and schedule requirements (required by permits and enforcement actions), and compliance status/enforcement data (e.g., inspection data and compliance actions) into EPA's Integrated Compliance Information System (ICIS) database and compliance tracking system.

The RIPDES supervisor performs final reviews for quality assurance (QA) and quality control (QC) for all individual RIPDES permits. Senior permit writers perform the QA/QC review for

general permits, with the supervisor's consultation for permits of significant interest. RIDEM uses checklists during permit QA/QC reviews.

B. Universe and Permit Issuance

As of April 2020, RIDEM is responsible for administering permit coverage for approximately 74 individual permits, including 23 major permits (19 POTWs and 4 non-POTWs) and 51 non-major individual permits. In addition, RIDEM administers six general permit categories (Non-Contact Cooling Water [NCCW], Remediation [RGP], Pesticide [PGP], Construction General Permit [CGP], Multi-Sector Industrial Stormwater General Permit [MSGP] and MS4 General Permit), covering 1,170 dischargers. Among the stormwater general permits, as of April 2020, 41 permittees were covered under the MS4 General Permit, 178 under the MSGP, and 235 under the CGP.

According to responses that RIDEM provided, 28 individual permits are administratively continued (8 major and 20 non-major), meaning that the RIDES program is 37 percent backlogged. In addition, the small MS4 general permit is also administratively extended; RIDEM indicated their top priority is reissuing the small MS4 general permit. RIDEM continues its efforts to reduce the permit backlog to no more than 10% (i.e., at least 90% current).

C. State-Specific Challenges

RIDEM is challenged by a lack of resources to reduce permit backlog. In addition, RIDEM noted difficulty with attracting and retaining staff. Further, certain staff are reaching retirement age; therefore, contributing to resource constraints. Recently, the pretreatment coordinator retired and RIDEM is seeking to fill that position immediately. RIDEM expressed interest in receiving assistance with economic analyses to support the reissuance of an individual permit that is subject to Clean Water Act Section 316(b) requirements. RIDEM has previously reached out to EPA to request this assistance and continues to seek this specific support. RIDEM also indicated interest in support from EPA regarding the rollout of electronic reporting requirements related to the small MS4 general permit reissuance. EPA has agreed to support RIDEM's implementation of NeT for its MS4 permit and has been working with the state to implement the NeT application when RIDEM reissues the MS4 permit in 2021.

D. Current State Initiatives

RIDEM has recently started including requirements for climate resiliency planning in major POTW permits. As stated in RIDEM's 2017 report, *Implications of Climate Change for Rhode Island Wastewater Collection and Treatment Infrastructure*, "RIDEM is working in collaboration with the state's Division of Planning and other agencies to integrate climate change considerations into wastewater system planning, as well as current operations." RIDEM has reached out to the state attorney general's office to address unpermitted auto salvage yards, subject to the MSGP, following an effort to identify unpermitted facilities and conduct initial outreach to those facilities. In addition, in 2019, RIDEM staff identified businesses with Standard Industrial Classification (SIC) codes that would be subject to the state's MSGP and conducted outreach to verify applicability of the MSGP and coverage status. As a result of this

effort, RIDEM received more than 50 no-exposure certifications and applications for MSGP coverage from a number of other industrial sites.

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 permits reviewed include appropriate issuance, expiration and effective dates, along with specific authorization to discharge language on the cover page. Further, the permits' cover page indicates that the "permit and the authorization to discharge expire at midnight, five (5) years from the effective date", but do not specify a specific expiration date. The permits and fact sheets reviewed generally include a basic description of the facility and of the treatment process. Fact sheets include a description of discharge location information relative to receiving waters.

Areas for Improvement

While the specific location of the outfalls is specified in the respective permit applications (latitude and longitude), this information is not included in the permit or fact sheet. Further, fact sheets do not consistently include a location map identifying the discharge location.

Action Items

Essential

- The PQR team did not identify any essential action items for this PQR component.

Recommended

- RIDEM should consider including clear identification of the physical location of outfalls in 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.

RIDEM historically interpreted the requirement to receive applications at least 180 days prior to permit expiration as having received the initial application. During the previous PQR, RIDEM realized the application must be both timely and complete. Based on this awareness, RIDEM revised its procedures for obtaining timely and complete applications and now conducts monthly ICIS pulls to identify upcoming permit expirations and sends a reapplication reminder letter (hard copy via certified mail) to permittees 12 months ahead of permit expiration. RIDEM's goal is to receive an application 9 months ahead of permit expiration and then work to have a complete application in the remaining 3-month window to ensure a complete application is received within the minimum timeframe of 180 days prior to permit expiration. Following revision of their application procedures, RIDEM has seen improvement in obtaining timely and complete applications within 180 days of permit expiration.

RIDEM uses EPA's NPDES application forms and the RIPDES website includes a link to EPA's application website. RIPDES permit writers are responsible for reviewing applications for completeness; upon such a determination, RIDEM issues an Application Complete Letter to the Responsible Official.

As discussed earlier, applications were not available for all permits reviewed; therefore, observations represent a subset of core permits reviewed.

Program Strengths

RIDEM has made improvements to their process for obtaining timely and complete applications; staff conduct outreach well in advance of the application due date and maintain communication with the applicant to work towards submittal of a complete application. Applications reviewed during this PQR are generally timely (e.g., one permit was received one month prior to permit expiration). Further, applications are signed by the appropriate official and contain required data.

Areas for Improvement

The PQR Team did not identify any specific essential or recommended actions.

Action Items

There were none identified for this PQR component.

B. Developing Effluent Limitations

1. Technology-based Effluent Limitations

NPDES regulations at 40 CFR 125.3(a) require that permitting authorities develop technology-based requirements where applicable. Permits, fact sheets and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether 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 (including limits for BOD, TSS, pH, and percent pollutant 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 six POTW permits were reviewed as part of the PQR.

RIDEM establishes effluent limitations for POTW permits based on the secondary treatment regulations at 40 CFR Part 133. In addition, RIDEM establishes maximum daily effluent limitations for TSS based on Rule 17.04(b) of the RIPDES regulations. RIDEM establishes appropriate minimum percent removal requirements, consistent with the federal secondary treatment regulations.

Program Strengths

The permits reviewed for POTWs included discharge limits for parameters addressed under the secondary treatment requirements and these limits were consistent with the secondary treatment requirements. In addition, RIPDES permits establish appropriate minimum percent removal requirements. Fact sheets provide a useful understanding of the POTW's treatment process and applicable regulations and effluent limitations.

Areas for Improvement

The PQR review team did not identify any specific essential or recommended actions.

Action Items

There were none identified for this PQR component.

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).

Four non-POTW permits were reviewed as part of the PQR. Of the four permits reviewed, only one permit was subject to ELGs; 40 CFR Part 408, Subpart X (Mechanized Clam Processing). RIPDES permit writers review federal ELGs to determine applicability to non-municipal discharges and apply standards as appropriate. RIPDES permit writers might also develop effluent limitations on a case-by-case basis using BPJ and will document decisions for such effluent limitations in the fact sheet. RIPDES permits include a discussion of facility operations and treatment processes and identify ELGs or state performance standards applicable to the discharge.

Program Strengths

Fact sheets provided an adequate description of facility processes and discussion of the applicability of ELGs. In one permit that was subject to ELGs, RIDEM established BPJ-based effluent limitations for fecal coliform based on state performance standards and included a discussion in the accompanying permit fact sheet.

Areas for Improvement

The PQR review team did not identify any specific essential or recommended actions.

Action Items

There were none identified for this PQR component.

2. Reasonable Potential and Water Quality-Based Effluent Limitations

Background

The NPDES regulations at 40 CFR 122.44(d) and particularly 122.44(d)(1)(vii)(A)(2) 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 WQBELs, the permitting authority must evaluate whether any pollutants or pollutant parameters could cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.

The PQR for RIDEM 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:

- 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

RIPDES permit writers conduct the RPA and may at times consult with staff in the TMDL and Water Quality programs to collect receiving water information and identify applicable TMDLs and wasteload allocations (WLAs). RIPDES fact sheets clearly identify receiving streams, designated uses, and applicable water quality criteria, including TMDLs. RIPDES permit writers identify pollutants of concern through review of data provided in DMRs, applications, and priority pollutant scans. RIDEM conducts an RPA for all pollutants for which water quality criteria exist, using all available discharge monitoring data; permit writers typically review 5 years' worth of discharge monitoring data. Rhode Island's water quality standards are contained within the Water Quality Regulations at [250-RICR-150-05-1.8](#).

RIDEM considers ambient receiving water data from RIDEM's Rotating Basin Sampling Program (sampling occurs on a 5-year rotating basis), U.S. Geological Survey (USGS) data, or sometimes "Watershed Watch" volunteer organization sampling data (however, these data are sometimes of lower quality). RIPDES permit writers may also consider receiving water data available through TMDL development efforts. RIDEM allows 90 percent of the water quality criterion allocated. If background data are absent, RIDEM allocates only 80 percent of the water quality criterion.

RIPDES permit writers compare data from the DMRs, application, and priority pollutant scans to the potential WQBELs. RIDEM determines there is reasonable potential when the discharge data are greater than or equal to 50 percent of the potential WQBEL. RIPDES fact sheets generally discuss the analysis results, including which data were considered and parameters that demonstrated reasonable potential. RIDEM documents reasonable potential calculations and results in Fact Sheets as an attachment providing reasonable potential analysis, which consists of the comparison of effluent data with potential WQBELs. Potential WQBELs are based on applicable water quality criteria after accounting for dilution and mixing, or where mixing is not allowed, criteria are applied at end of pipe. The review revealed that fact sheet documentation consists of a series of data summary tables identifying discharge monitoring data evaluated, applicable water quality criteria, potential WQBELs, and resulting reasonable potential decision. The review revealed that RIPDES permits subsequently include limits for parameters that demonstrate reasonable potential, consistent with the information presented in the fact sheet.

Process for Developing WQBELs

RIPDES permit writers are also responsible for developing WQBELs. Rhode Island's mixing zone policy is provided in the Water Quality Standards at 250-RICR-150-05-1.10. Where dilution is granted, RIDEM follows EPA's *Technical Support Document for Water Quality-based Toxics Control* (TSD)³ recommendations in its application of the dilution or mixing zone policy. RIDEM does not allow dilution to impoundments, lakes, ponds, or wetlands. For estuaries, RIDEM uses dye studies to evaluate mixing zones. If no dilution is allowed, RIDEM applies WQC at the end of pipe. RIDEM assumes complete mixing in streams and rivers (unidirectional flow waters). RIPDES permit writers document implementation of mixing zones in the fact sheets.

RIDEM uses Excel spreadsheets to conduct RPAs and develop WQBELs; individual spreadsheets are used for each class of water. RIDEM obtains effluent data from ICIS and uses CORMIX models when appropriate (CORMIX is used mostly for discharges to saltwater receiving waters). RIDEM noted that CORMIX models (and 7Q10 flows) are not updated routinely (i.e., with each permit renewal cycle), but would update if the facility design flow changes. RIDEM recently updated their 7Q10 flows, using USGS data through 2018 (previous 7Q10 values were based on USGS data through 1993). The 7Q10 updates are resulting in lower available dilution and more stringent effluent limitations. As a result, RIDEM may look at using Metal Translators to achieve compliance with newly calculated effluent limitations. RIDEM documents WQBEL calculations in the fact sheets.

Program Strengths

Reasonable Potential

RIPDES permit fact sheets clearly identify the receiving stream, including segment, designated uses, impairment status, and applicable TMDLs. In addition, fact sheets describe the discharge data available and considered in the reasonable potential analysis. RIDEM evaluates all discharge data that are available and applies a conservative approach when evaluating whether a discharge demonstrates reasonable potential, in that RIDEM determines a WQBEL is necessary when discharge data are greater than or equal to 50 percent of the potential WQBEL. Fact sheet attachments provide tables summarizing the RPA, application of mixing zones, and resulting WQBELs.

WQBEL Development

RIDEM establishes WQBELs consistent with the summary provided in permit fact sheets and accompanying attachments and in accordance with the state's water quality standards. Fact sheet attachments include a general summary of WQBELs established in the permit.

³ U.S. EPA. (March 1991). *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001). <https://www3.epa.gov/npdes/pubs/owm0264.pdf>

Areas for Improvement

Reasonable Potential

RIDEM should consider including additional narrative discussion in the fact sheet, or accompanying attachments specific to the RPA, describing the process by which RIDEM determines whether WQBELs are necessary. The summary tables provide useful information; however, the lack of a narrative description of the analysis and results detracts from a complete understanding of RIDEM’s RPA.

WQBEL Development

RIDEM carries over certain effluent limitations from one permit term sometimes without discussion of the original basis of the effluent limitation; RIDEM’s fact sheets would be strengthened with a discussion of the basis for all effluent limitations, including those that are carried forward. Similarly, certain permit decisions based on special water quality studies or TMDLs lack a clear explanation of rationale in fact sheets. RIDEM’s fact sheets should include a thorough discussion of the supporting analyses and studies upon which WQBELs are based. While we acknowledge that Rhode Island has a new 7Q10 Policy (2019), it is important that updating the 7Q10 flows upon which effluent limitations are based occurs with every permit renewal cycle where there are known significant changes in the receiving stream.

Action Items

Essential

- Reasonable Potential
 - The PQR team did not identify any essential action items for this PQR component.
- WQBEL Development
 - The PQR team did not identify any essential action items for this PQR component.

Recommended

- Reasonable Potential
 - RIDEM should include in fact sheets a narrative discussion of the RPA to accompany the data summary tables contained in fact sheet attachments.
- WQBEL Development
 - RIDEM should describe the original basis for effluent limitations that are carried forward from the previous permit.
 - RIDEM should include a thorough discussion of supporting water quality studies and analyses upon which certain WQBELs are based.
 - RIDEM should consider updating 7Q10 flows with every permit cycle.

3. Final Effluent Limitations and Documentation

Background and Process

Permits must include 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 NPDES 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. Technology-based effluent limits 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 straight forward. 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. The permit writer should sufficiently document determinations regarding anti-backsliding and antidegradation requirements.

RIDEM's fact sheets include a general description of facility operations and wastewater treatment processes, expected waste streams and pollutants in the discharge, and identification of applicable treatment standards. In addition, the fact sheets indicate the applicable federal ELGs that are considered in the development of TBELs for the facility and describe the applicability of ELGs. RIDEM's fact sheets for municipal facilities include a discussion of the basis of TBELs. RIDEM's fact sheets clearly identify the receiving water body, the designated uses, and the applicable water quality standards. Permit writers discuss the impairment status of the receiving water body and identify whether TMDLs are applicable to the discharge. Further, permit writers briefly discuss the pollutants of concern and data evaluated in the reasonable potential analysis. Fact sheets include attachments that provide a summary of the data considered in the RPA, mixing zone and dilution allowances, RPA, and the subsequent WQBELs established in the permit.

RIPDES permit writers consider both TBELs and WQBELs when establishing final effluent limitations. Fact sheets clearly discuss applicable standards and effluent limitations and identify the most stringent effluent limitation which is then established in the permit.

RIDEM's antidegradation implementation procedures are contained in Appendix C (July 2006, Amended May 2009) to the state's Water Quality Regulations. The policy itself is contained in

Rule 18 of the State's Water Quality Regulations. The State's antidegradation regulations are based on the federal regulations (40 CFR 131.12). RIDEM indicated that antidegradation applies to all projects or activities subject to these regulations which will likely lower water quality or affect existing or designated water uses, including but not limited to all Water Quality Certification reviews and any new or modified RIPDES permits. RIDEM indicated that antidegradation is considered if any WQBELs are calculated to be less stringent, or if flow increased such that pollutant loading increased. If WQBELs are calculated to be well below previous permit limitations, there would be no need to grant additional assimilative capacity – RIDEM would hold them to the same discharge level. RIPDES permit fact sheets include documentation of antidegradation reviews. RIDEM indicated they consider anti-backsliding similar to how they deal with antidegradation, noting that one builds on another. RIPDES permit writers will document anti-backsliding reviews in permit fact sheets.

Program Strengths

RIDEM develops TBELs and WQBELs appropriately and provides adequate documentation of TBELs development, including discussion of applicable ELGs and secondary treatment standards for POTWs. RIPDES permit writers identify the basis for each effluent limitation, whether it is technology-based or water quality-based. Further, the fact sheets include discussion illustrating the permit writer compared applicable TBELs and WQBELs and established the more stringent effluent limitation in the permit.

Areas for Improvement

RIDEM's permit fact sheets would be strengthened with the addition of a discussion of the RPA procedure, steps, and explicit results to accompany the summary tables currently presented in fact sheet attachments. In addition, RIDEM's fact sheets and administrative records would be improved with clear documentation of the supporting analyses and studies (including TMDLs) upon which final effluent limitations are based. RIPDES fact sheets and administrative records should clearly articulate how anti-backsliding and antidegradation provisions will be met when any effluent limitations are either relaxed or discontinued. EPA acknowledges that Rhode Island has developed a new Fact Sheet template that addresses some of these additional details. EPA did not review permits that have utilized this template.

Action Items

Essential

- The PQR team did not identify any essential action items for this PQR component.

Recommended

- RIDEM should include a clear discussion of the basis for effluent limitations, including:
 - Reasonable potential analysis procedures, steps, and explicit results to accompany the summary tables currently presented in fact sheet attachments, and
 - Documentation of supporting studies and analyses (including TMDLs) upon which WBELs are based.
- RIPDES fact sheets and administrative records should clearly articulate how anti-backsliding and antidegradation provisions will be met when any effluent limitations are either relaxed or discontinued.

C. Monitoring and Reporting Requirements

Background and Process

NPDES regulations at 40 CFR 122.41(j) require permittees to periodically 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 in a manner that is representative of the permitted effluent discharge(s) 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 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 must also specify the sample collection method for all parameters required to be monitored in the permit. The fact sheet should 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 test method.

RIDEM does not have any standardized tools or resources to develop monitoring requirements. Permits establish monitoring locations as the final discharge point to the receiving water. Monitoring types are based on 40 CFR Part 136 requirements (via reference to 40 CFR Part 136). RIDEM establishes monitoring frequencies on a standardized list for POTWs based on facility size. Permit writer judgment is used to determine appropriate frequencies for non-POTWs.

RIDEM requires monthly reporting for DMRs (majors and most minors). Permittees are required to submit DMRs electronically and all individual facilities are submitting electronically now. Major facilities submit quarterly bioassay reports. POTWs are required to submit infiltration and inflow reports (frequency ranges from 6 months to every other year, based on historical flows to identify whether infiltration and inflow is problematic). Permits for non-major facilities that are perceived to have a low impact to water quality may include reduced reporting frequencies.

Program Strengths

The permits reviewed include appropriate monitoring requirements based on the facility type, type of discharge, and corresponding limit basis. Influent monitoring is appropriately required for BOD and TSS for POTWs. The permits contained a general requirement that monitoring must be conducted according to test procedures approved under 40 CFR Part 136. Permits reviewed consistently require permittees to use sufficiently sensitive 40 CFR Part 136 analytical methods capable of quantifying pollutants at concentrations equal to or less than the effluent limitations. All of the permits reviewed require monitoring for whole effluent toxicity. Permits specify reporting requirements clearly.

Areas for Improvement

RIDEM should consider including a specific description of monitoring locations, including latitude and longitude coordinates, to ensure clarity in monitoring requirements.

Action Items

Essential

- The PQR team did not identify any essential action items for this PQR component.

Recommended

- RIDEM should consider including a specific description of monitoring locations, including latitude and longitude coordinates.

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.

RIDEM uses boilerplate language, contained in Part II of permits, to identify standard permit conditions. RIDEM updated the boilerplate language approximately 1.5 years prior to when the PQR was conducted.

The permits reviewed include all of the NPDES standard conditions except for 40 CFR 122.41(l)(5), which addresses compliance schedules and requires that reports of compliance, noncompliance or progress with final or interim requirements be submitted within 14 days of the schedule date. RIDEM does not have authority to include compliance schedules in RIPDES permits. Rather, permit provisions must be appealed and compliance schedules can be included in an enforcement agreement. In addition, the RIPDES provision that appears to address 40 CFR 122.42(b) (i.e., introduction of new pollutants or substantial change in the volume or character of pollutants introduced to POTW requires notice to Director) is similar to the federal provision and might be sufficient, but it is unclear in some respects (e.g., it addresses facility expansions, production increases or process modifications that result in new, different or increased discharges of pollutants; requires notice to the Director if changes will not violate effluent limits; and requires a new permit application if they will). And while we note that we recommend that RIDEM ensure that its regulations related to the above-mentioned provisions

are consistent with federal requirements, it was beyond the scope of this review to complete a comprehensive review of all of Rhode Island's NPDES regulations.

Program Strengths

The special and standard conditions reviewed appeared to be consistent with applicable requirements.

Areas for Improvement

RIDEM should ensure that the provision that appears to address 40 CFR 122.42(b) (i.e., introduction of new pollutants or substantial change in the volume or character of pollutants introduced to POTW requires notice to Director) is consistent with the federal standard provision. Further, RIDEM should ensure that penalty amounts and language are consistent with federal standard conditions. Through this recommendation, EPA is merely reminding the state to check its regulations to make sure they are consistent with federal provisions; these issues can be addressed in upcoming discussions between EPA and RIDEM if that would be useful.

Action Items

Essential	<ul style="list-style-type: none">•The PQR team did not identify any essential action items for this PQR component.
Recommended	<ul style="list-style-type: none">•RIDEM should ensure that the standard condition that appears to address 40 CFR 122.42(b) is consistent with the federal standard condition.•RIDEM should ensure that penalty amounts and language are consistent with federal requirements.

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 Rhode Island and reviewed materials from the administrative process as they related to the core permit review.

Following completion of an internal draft permit, the RIPDES supervisor provides a QA review and then the draft permit is provided to the permittee for a 14-day review. RIDEM public notices the draft permit issuance and, if one is requested, a public hearing concurrently. RIDEM noted that the public comment period is sometimes 38 days long to allow for the Public Hearing

(the hearing is held within 38–39 days and the close of the public comment period is the next day after the public hearing). RIDEM accepts comments through the last day of the comment period.

RIDEM provides written responses to public commenters and anyone who requested to review a copy of the draft permit during the public notice period. RIDEM noted that during the 14-day permittee review, the intent is to identify clerical errors and verify that overall general information is correct. Further, the 14-day review is to notify the permittee of permit effluent limitations that require a compliance schedule, so a consent agreement is initiated. RIDEM would provide a written response to significant comments raised during the 14-day review. In some cases, a revised 14-day draft permit may be provided to the permittee for their review. The transactions occurring during the 14-day draft review are included in the public permit record, but not the public notice record.

RIPDES permit appeals are routine because of the use of consent agreements in place of compliance schedules. RIDEM issues the permit, then permittees have 30 days to appeal and stay the permit conditions (which occur in two separate actions). Permit appeals go to the Office of Administrative Adjudication. RIDEM will enter into a consent agreement to resolve the appeal. If after it goes through the Office of Administrative Adjudication and the permittee is not satisfied, the permittee can further the appeal into the court system.

Program Strengths

Permit records reviewed appeared to include complete documentation demonstrating that public notice procedures are implemented appropriately. In addition, permit records reviewed include comments received as well as RIDEM’s response to comments.

Areas for Improvement

RIDEM should consider including documentation of transactions occurring during the 14-day permittee review in the public notice record, to provide transparency in how RIDEM determined appropriate permit conditions.

Action Items

Essential

- The PQR team did not identify any essential action items for this PQR component.

Recommended

- RIDEM should consider including documentation of transactions occurring during the 14-day permittee review in the public notice record.

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 state 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 permit application and supporting data; draft permit; fact sheet or statement of basis;⁴ 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 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 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.

RIPDES permit writers develop the fact sheet concurrent with the permit. Permit writers use template documents to draft the fact sheet; templates are updated routinely, and permit writers ensure the use of the most current template. Comments received during the public comment period are retained electronically with the permit and fact sheet files. RIDEM's administrative record is maintained in hard copy in an area devoted to permits.

Program Strengths

RIPDES permit fact sheets contain the required elements and are well organized. Rhode Island, after this review, also indicated that it now has a Fact Sheet Template that it is using to address remaining issues identified in this review.

Areas for Improvement

RIDEM has improved their fact sheets since the previous PQR; however, improvements in the amount of detail have not been consistent. For example, fact sheets reviewed during this PQR review often did not consistently discuss the basis for effluent limitations that are carried forward from the previous permit. We noted during our review that fact sheets would be

⁴ 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.

strengthened with a detailed discussion of the reasonable potential analysis process, steps for determining reasonable potential, and clear identification of results. RIDEM now utilizes a Fact Sheet Template to standardize this type of review, which it asserts will address these issues.

Action Items

Essential

- The PQR team did not identify any essential action items for this PQR component.

Recommended

- The PQR team did not identify any recommended action items for this PQR component due to changes now implemented by RIDEM regarding its use of a Fact Sheet Template.

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 state 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)(1)(i) require permit limits to be developed for any pollutant with the reasonable potential to cause or contribute to an excursion of the state's water quality standards, whether those standards are narrative or numeric.

To assess how nutrients are addressed in the Rhode Island NPDES program, EPA Region 1 reviewed four permits.

Rhode Island Nutrient Criteria

The State of Rhode Island Water Quality Regulations (see: <https://www.epa.gov/sites/production/files/2014-12/documents/riwqs.pdf>) include a combination of numeric response and numerical causal and narrative criteria for nutrients. Specifically:

Section 1.10.B.4: Nutrients - Nutrients shall not exceed the limitations specified in §§ 1.10(D)(1) and 1.10(E)(1) of this Part and/or more stringent site-specific limits necessary to prevent or minimize accelerated or cultural eutrophication.”

FRESHWATER (<i>Section 1.10.D.1 of RI WQ Regulations</i>)	
Parameter	Criteria
Dissolved Oxygen	<p>Cold Water Fish Habitat – Dissolved oxygen content of not less than 75% saturation, based on a daily average, and an instantaneous minimum dissolved oxygen concentration of at least 5 mg/L, except as naturally occurs. For the period from October 1st to May 14th, where in areas identified by the RI Division of Fish and Wildlife as cold water fish spawning areas the following criteria apply: For species whose early life stages are not directly exposed to the water column (ie, early life stages are intergravel), the 7 day mean water column dissolved oxygen concentration shall not be less than 9.5 mg/L and the instantaneous minimum dissolved oxygen concentration shall not be less than 8 mg/L. For species that have early life stages exposed directly to the water column, the 7 day mean water column dissolved oxygen concentration shall not be less than 6.5 mg/L and the instantaneous minimum dissolved oxygen concentration shall not be less than 5.0 mg/L. (See § 1.25 of this Part for cold water designated waters)</p> <p>Warm Water Fish Habitat – Dissolved oxygen content of not less than 60% saturation, based on a daily average, and an instantaneous minimum dissolved oxygen concentration of at least 5.0 mg/L, except as naturally occurs. The 7 day mean water column dissolved oxygen concentration shall not be less than 6 mg/L. (See § 1.25 of this Part for warmwater designated waters)</p>
Nutrients	<p>Average Total Phosphorus shall not exceed 0.025 mg/L in any lake, pond, kettlehole or reservoir, and average Total P in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria, except as naturally occurs, unless the Director determines, on a site-specific basis, that a different value for phosphorus is necessary to prevent cultural eutrophication.</p> <p>None in such concentration that would impair any usages specifically assigned to said Class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication, nor cause exceedance of the criterion above in a downstream lake, pond, or reservoir. New discharges of</p>

	wastes containing phosphates will not be permitted into or immediately upstream of lakes or ponds. Phosphates shall be removed from existing discharges to the extent that such removal is or may become technically and reasonably feasible.
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SEA WATERS (<i>Section 1.10.E.1 of RI WQSWQ Regulations</i>)	
Parameter	Criteria
Dissolved Oxygen	See § 1.10(F) of this Part
Nutrients	None in such concentration that would impair any usages specifically assigned to said Class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication. Shall not exceed site-specific limits if deemed necessary by the Director to prevent or minimize accelerated or cultural eutrophication. Total Phosphorus, nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies. Where waters have low tidal flushing rates, applicable treatment to prevent or minimize accelerated or cultural eutrophication may be required for regulated nonpoint source activities.

Warwick Wastewater Treatment Facility (RI0100234)

The 2019 Permit for the Warwick WWTF includes a minimum dissolved oxygen (DO) limit of 6.0 mg/L for the period from June 1st through October 31st which is based on a previous WLA that is not cited in the fact sheet, a total phosphorus limit of 0.1 mg/L for the period from April 1st through October 31st and a total phosphorus limit of 1.0 mg/L for the period from November 1st through March 31st, a monitoring requirement for orthophosphorus for the period from November 1st through March 31st, a total nitrogen limit of 8.0 mg/L for the period from May 1st through October 31st, and a requirement to optimize total nitrogen removal for the period from November 1st through March 31st.

The Fact Sheet states that the Providence and Seekonk Rivers are impacted by low DO levels and high phytoplankton concentrations that are related to excessive nitrogen loads and that these rivers suffer from hypoxic and anoxic conditions and violate water quality standards. The fact sheet, however, does not describe the relationship between the receiving water, the Pawtuxet River, to the Providence and Seekonk Rivers. There should be a short discussion of the relationship between the water bodies. The nitrogen limit of 8.0 mg/L (May-October) is based on an evaluation by RIDEM that took into consideration implementation costs, performance of available technology, and estimates of instream improvements. There should be further discussion in the fact sheet as to why 8.0 mg/L is more appropriate than 5.0 mg/L or 3.0 mg/L. The evaluation that these limits are based on, The Evaluation of Nitrogen Targets and WWTF Load Reductions for the Providence and Seekonk Rivers, (“Evaluation”) is now 16 years old and represented a phased approach to attaining water quality standards. These limits are the same as in the previous permit. There is no discussion of improvements in water quality

since the issuance of the previous permit and the segment remains on the Impaired Water List. Ambient sampling may be helpful for future permitting.

The total phosphorus limit is based on Rhode Island's determination that total phosphorus concentration of 0.1 mg/L is both technically and reasonably achievable using existing treatment technologies. RIDEM also evaluated the limit for being protective of water quality. The calculations for this evaluation should be included in the fact sheet.

The permit also includes ammonia limits based on the WLA (established in the late 80s/early 90s timeframe and not based on a TMDL) for DO.

East Greenwich Wastewater Treatment Plant (RI0100030)

The 2018 Permit for the East Greenwich WWTP includes a total nitrogen limit of 5.0 mg/L for the period from May through October and monitoring requirements for total nitrogen for the period November through April 30, and year-round monitoring requirements for total Kjeldahl nitrogen, total nitrite, total nitrate. The receiving water for this discharge, Greenwich Cove, is impaired for total nitrogen, DO, and fecal coliform.

The Fact Sheet does not discuss much of the background for nitrogen limits and simply notes that the limits have been maintained from the 2011 Permit. There should be further discussion of the history of these requirements and an evaluation of the current conditions. Ambient sampling would be helpful for future permitting.

Cranston Water Pollution Control Facility (RI0100013)

The 2019 Permit for the Cranston WPCF includes a dissolved oxygen limit of 6.0 mg/L for the period from June to October based on the WLA, (see "Evaluation" document cited in Warwick permit, above) a total phosphorus limit of 0.1 mg/L for the period from April through October and a limit of 1.0 mg/L for the period from November through March, a monitoring requirement for orthophosphorus for the period from November through March, a total nitrogen limit of 8.0 mg/L for the period May through October and monitoring requirement for the period from November through April. The permit also includes ammonia nitrogen limits and monitoring for total Kjeldahl nitrogen, total nitrate and total nitrite. The receiving water, Pawtuxet River is impaired for total phosphorus.

The Fact Sheet states that the Providence and Seekonk Rivers are impacted by low DO levels and high phytoplankton concentrations that are related to excessive nitrogen loads and that these rivers suffer from hypoxic and anoxic conditions and violate water quality standards. The fact sheet, however, does not describe the relationship between the receiving water, the Pawtuxet River, to the Providence and Seekonk Rivers. It appears that the Seekonk is upstream from the confluence of the Pawtuxet River with the Providence River. The nitrogen limit of 8.0 mg/L (May-October) is based on an evaluation by RIDEM that took into consideration implementation costs, performance of available technology, and estimates of instream improvements. This evaluation, cited above in the Warwick permit, is now 16 years old and represented a phased approach to attaining water quality standards. These limits are the same as in the previous permit. There is no discussion of improvements in water quality since the

issuance of the previous permit and the segment remains on the Impaired Water List. Ambient sampling would be helpful for future permitting.

The permit also includes ammonia limits based on the WLA and the corresponding Evaluation document cited in the Warwick permit, above.

Woonsocket Regional Wastewater Commission (RI0100111)

The 2017 Permit for the Woonsocket Regional Wastewater Commission includes a total phosphorus limit of 0.1 mg/L for the period from April through October and a limit of 1.0 mg/L for the period from November through March. The permit also requires monitoring for orthophosphorus year-round. Total nitrogen limits are 10 mg/L for the month of April and then 3.0 mg/L for the period from May through October and then monitoring for the period from November through March. The facility is also required to optimize the removal of total nitrogen for the period from November through March “to the maximum extent possible using all available treatment equipment in place at the facility.” The permit also has monitoring requirements for total Kjeldahl nitrogen, total nitrate and total nitrite.

Program Strengths

Rhode Island has done quite well with their nutrient controls. Their biggest issue faced by the permitting program is nitrogen and RIDEM has required nitrogen limits for all, or most, of the large entities in the state (partly due to a legislative mandate as a result of a massive fish kill to cut nitrogen by 50%). Rhode Island has taken an adaptive management approach since there is no TMDL and that has been effective. Rhode Island has done a good job addressing the DO issue. Rhode Island is farther ahead than most other states with respect to the management of nutrients.

Areas for Improvement

Rhode Island could do a better job with providing more information in their fact sheets with respect to nutrient limits. Often, the fact sheets refer to WLAs as the sources of a limit and then refers to the previous permit. The WLAs should be cited specifically with the documentation included in the current permit files and described in the fact sheet. Furthermore, the reasonable potential calculations should be included in the fact sheet. For some permits, a discussion of recent assessments related to the Providence River, Seekonk River and Upper Narraganset Bay should be discussed. Significant efforts are ongoing and even if the limits from the previous permit are maintained, those limits should be evaluated with respect to more current ambient data and reports. In addition, Rhode Island interprets a total phosphorus concentration of 0.1 mg/L as both technically and reasonably achievable and additional documentation supporting this interpretation should be supplied.

Action Items

Essential

- The PQR team did not identify any essential action items for this PQR component.

Recommended

- RIDEM should include all relevant information in the fact sheets related to nutrient limit development including WLAs and reasonable potential calculations, even if such calculations were conducted for the prior permit.
- RIDEM should provide documentation that the total phosphorus concentration of 0.1 mg/L is both technically and reasonably achievable.

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

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

Background

Indirect discharges of 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 Compliance and 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 Rhode Island 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).

Rhode Island is a NPDES authorized state with an approved state pretreatment program and therefore acts as the approval authority. RIDEM received approval of its Pretreatment Program in 1981. The pretreatment universe in Rhode Island includes 15 state approved local industrial pretreatment programs, which regulates approximately 160 significant industrial users (SIUs) and over 55 categorical industrial users (CIUs).

RIDEM coordinates with the pretreatment authority to determine the appropriate pretreatment conditions for a POTW permit. RIDEM pretreatment staff reviews the POTW application, POTW permit and POTW fact sheet. Pretreatment regulations are incorporated by both reference and are written out in the permit. RIDEM pretreatment staff also determine which and when a POTW needs to develop a pretreatment program. There are only four POTWs in the state that do not have an approved pretreatment program. The state provides direct oversight of any industrial users in these four POTWs.

RIDEM currently does not have any SIUs or CIUs that they oversee directly as the Control Authority. They identify SIUs in non-approved pretreatment programs through the regular RIPDES Permit re-issuance process (Fact Sheets, discussions with the POTW, etc.) and in the past, via periodic EPA industrial waste surveys and multi-media inspections.

The RIPDES pretreatment section reviews all POTW annual reports, periodic local limits evaluations, IPP modification requests (e.g., amended sewer use ordinances [SUOs], enforcement response plans, interjurisdictional agreements, etc.), as may be required by the POTW's RIPDES Permit. The Rhode Island pretreatment coordinator took leave after the EPA PQR took place and has since retired. RIDEM has reassigned a permit writer to assume the state's pretreatment coordinator's tasks. EPA wants to emphasize the importance of the pretreatment coordinator position. RIDEM has implemented a thorough pretreatment program for many years because of the oversight of the pretreatment coordinator. The coordinator position has been a full-time position and should continue to be a full-time position.

For this PQR, four POTW permits were reviewed, two with approved pretreatment programs and two without a pretreatment program. Four industrial user permits that discharge to the chosen POTWs were also reviewed. This PQR also included SUOs, industry fact sheets, and the most recent pretreatment compliance audit report (PCA) or pretreatment compliant inspection (PCI) conducted by RIDEM.

The following POTWs were selected for review after discussion with the RIDEM pretreatment staff and their knowledge of which POTWs currently have food processors that discharge to the plant.

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 SUO?
The Narragansett Bay Commission (NBC) Field's Point WWTF	RI0100315	Yes	18.2	65	1	BOD and TSS surcharge
Burrillville Sewer Commission	RI0100455	No	1.5	0	1 ²	BOD5, TSS, Ammonia, Total Nitrogen and Total Phosphorus surcharge
Town of Narragansett	RI0100188	No	1.4	1	1	BOD and TSS surcharge
Quonset Development Corporation	RI0100404	Yes	1.78	6	0 ³	BOD and TSS surcharge

¹Based on the information provided in the permit application.

²Based on information provided by DEM pretreatment staff and discussion with POTW.

³Permit application state one industry (Greencore USA, Inc.) that produces ready to eat fresh products (i.e. sandwiches, pasta, salads), but EPA decided that this did not fall under the category of a food processing.

Four food processing industrial user permits were also reviewed as part of the PQR; they are identified in the table below.

Facility Name	Permit Number	Receiving POTW	Type of Food Processor	Classification by POTW	Average Process Wastewater Discharge (gallons per day [gpd])	Monitored Pollutants
Providence Specialty Products, LLC	P3404-006-1023	NBC Field's Point Wastewater Treatment Facility	Cheese Manufacturing Operations	SIU	26,831 ¹	Flow, pH, TTO, BOD, TSS, Total Oil and Grease, Oil and Grease (mineral origin), Oil and Grease (animal/vegetable origin), Cd, Cr, Cu, CN, Pb, Hg, Ni, Ag and Zn
Daniele International, LLC	N/A ²	Burrillville Sewer Commission	Meat Processing (Cured Italian Meats)	SIU	85,000 ³	Flow, pH, BOD, TSS, Total N (TKN + Nitrite + Nitrate), TKN, Nitrite (as N), Nitrate (as N), Ammonia (as N), Total P, O&G (Petroleum/Mineral Origin), O&G (Animal/Vegetable Origin) and Total O&G
The Town Dock	TD 2019-2020	Town of Narragansett	Seafood Processor	Category 1 IU	1,600 ⁴	Flow, BOD, TSS
Seafreeze Shoreside Ltd.	2018-001	Town of Narragansett	Seafood Processor	Category 4 IU	25 ⁴	N/A

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

² Permit provided by POTW had the permit number section left blank.

³ Based on discussion with POTW and average rate is a combination of both plants discharge.

⁴ Based on discussion with POTW

Program Strengths

The RIDEM pretreatment staff has been conducting outreach and voluntary programs regarding microbreweries and distilleries. They have created and distributed a fact sheet with information on how discharges from breweries affect POTWs. RIDEM pretreatment staff have completed several outreach, training and workshop events throughout the state aimed at those industries. As a follow-up to these events, RIDEM plans to produce an informational video geared towards breweries and distilleries, and to develop BMPs on how breweries can decrease their BOD loading to POTWs. RIDEM also recently received a Pollution Prevention (P2) Grant to provide facility level technical assistance, checklists, videos, and training for breweries on how they can reduce their environmental impacts.

There is currently no energy co-generation technology in the state, but Orbit Energy in Johnston, Rhode Island is trying to construct a food to energy digester. The industry is currently having issues with facility design.

Each POTW with an approved pretreatment program within the State of Rhode Island has established both local discharge limitations and grease trap requirements in its Sewer Use Ordinance regulations. Additional (more stringent) FOG-related requirements have also been developed and implemented on a case-by-case basis as necessary by the individual pretreatment programs, some of which (e.g., NBC and Warwick) have been the subject of regional noteworthiness and presentation at the annual EPA-Region 1 Pretreatment Conference.

Approved Pretreatment Programs

The NBC Field's Point and Quonset Development Corp. RIPDES permits included requirements to identify Significant Industrial Users per 40 CFR 122.44(j)(1). Each permit includes an "Industrial Pretreatment Program" section of their permit which includes subsections that detail requirements related to local limits, enforcement response plans, CIUs, annual reports, interjurisdictional agreements, sewer use regulations and general pretreatment conditions. The general pretreatment conditions include sampling and analysis, permitting, noncompliance, pretreatment program modification, and Significant Noncompliance (SNC) requirements. Both POTWs permit applications also included information about the character and volume of pollutants from the SIUs and CIUs.

The Providence Specialty Products' permit and fact sheet were well organized and included all federally required control mechanism items. The SIU permit included sampling requirements and limitations for BOD, TSS, and O&G to be taken quarterly from two identified sampling locations.

The most recent PCA, conducted in December 2018 by the DEM, was also reviewed as part of the PQR process. RIDEM pretreatment staff conduct very thorough audits, and part of the audit included the review of 5 industries that discharge to NBC Field's Point Wastewater Treatment Facility, including Providence Specialty Products. The audit included a detailed write-up and recommendation of the POTW to escalate their enforcement against the SIU because of repeated O&G and pH violations and instances of SNC. Correspondence back and forth then took place between RIDEM and NBC regarding how NBC was working with Providence Specialty Products to get the industry back in compliance and what enforcement actions they have already taken against the industry.

RIDEM has consistently and diligently met its EPA Workplan commitments for conducting PCIs and PCAs. Rhode Island has fifteen approved IPPs and quarterly PCIs or PCAs have been conducted without exception over the past 22 years. All 15 IPPS have had a PCI or PCA performed over the last four calendar years, and for the 2018 and 2019 calendar years, 9 annual events were performed.

Non- Approved Pretreatment Programs

The Burrillville Sewer Commission and the Town of Narragansett's permits were also reviewed. The permit application for Narragansett included Section F, which was completed and listed information about Narragansett's one industrial user, The Town Dock. Narragansett does not define any industry as a SIU in their sewer regulations but instead permits industries that fall into one of four categories. These 4 industrial user categories are:

- Category 1: Commercial/industrial users discharging or having the potential of discharging conventional (BOD₅ and TSS) pollutant concentrations in excess of 250 mg/L.
- Category 2; Commercial/industrial users discharging production processing wastewater or using solvents, toxic chemicals, and/or hazardous chemicals that could potentially be discharged into the sewers.
- Category 3: Commercial/industrial users discharging or having the potential to discharge concentrations of O&G and other solids which may cause interference with the collection system or at the treatment facility.
- Category 4: Commercial/industrial users with only sanitary wastes and/or nontoxic discharges.

The Town Dock is the only industry that falls under the Category 1 and Seafreeze is a Category 4 IU (no sampling or limits). RIDEM pretreatment staff indicated that Narragansett has local limits, but they are not actually technically based and are using the nearby South Kingstown Wastewater Treatment Plant's local limits. The reason that Narragansett does not have an approved pretreatment program is that in 1981, when most POTWs were establishing programs, the Town did not want to be overseen by the State and instead had entered into a consent decree with EPA to establish local limits (although if Rhode Island wanted to pursue the development and/or updating of local limitations, there is nothing stopping them from doing so given they are the approval authority).

The one permitted industry by Burrville is Daniele International. This was previously an industry that was permitted and reported directly to RIDEM as the control authority. The industry had not had any non-compliance issues in several years and it was decided that the Town could permit and oversee the industry. The industrial user permit is reissued every year. The permit includes continuous Flow and pH sampling; weekly Nitrite (as N), Nitrate (as N), Ammonia (as N), TKN, Total N and Total P sampling; and twice per week BOD, TSS, O&G (Petroleum/Mineral Origin), O&G (Animal/Vegetable Origin) and Total O&G sampling.

Areas for Improvement

Approved Pretreatment Programs

Both the Field's Point and Quonset permits were very well organized and included a significant amount of information with regard to the approved pretreatment program requirements. EPA offers certain recommendations that would improve these permits further. Although there is reference in both permits to abide by all of the requirements stated in 40 CFR Section 403.5, revising the POTW permits to specify the general and specific prohibitions found at 40 CFR Section 403.5(a)(1) and (b), rather than incorporating by reference, will strengthen the permit effectiveness. Permit writers should also specify whether the POTW accepts hauled waste and identify and characterize contributing industrial dischargers in the permit fact sheet to clarify the basis for inclusion of language regarding the control of industrial discharges. The Quonset permit application mentions that the POTW accepts hauled waste, but the Fact Sheet does not identify if hauled waste is accepted. Additionally, the POTW fact sheet should clearly state whether the POTW is required to develop or implement a pretreatment program. Neither the Field's Point nor the Quonset permit fact referred to the pretreatment program.

Permit writers should specify a submission date for the required development and enforcement of local limits in all permits with industrial pretreatment programs. Although there is specific language requiring the POTW to evaluate local limitations, there is no clear date indicated for the submission of the development of local limitations in the Quonset Development Corp. permit. The permit states, "at the time of renewal of this permit and in accordance with 40 CFR 122.44(j)(2), the Permittee shall submit to the DEM with its permit renewal applications a written technical evaluation of the need to revise local limitations."

There was one pretreatment related action item from the 2013 PQR which appears to continue to be unaddressed in the findings for this PQR: that being that permit writers should specify the program approval or modification dates in fact sheets to ensure that the program includes up-to-date federal regulations.

Non- Approved Pretreatment Programs

While both the Burrillville and Narragansett POTWs are not required to operate an approved pretreatment program, the RIPDES permit must still include all 40 CFR 122.42 notification requirements. Neither the Burrillville nor the Narragansett permits included this language.

Also, Daniele International, LLC was not included as an industry in the Burrville Sewer Commission permit application. Permit writers shall ensure that the RIPDES permit application includes all industrial users or potential SIUs, including any associated applicable categorical standards/classifications [40 CFR 122.21(J)(6)].

Action Items

Essential

- Permit writers shall ensure that the NPDES permit includes all 40 CFR 122.42(b) notification requirements.
- Permit writers shall ensure that the NPDES permit application includes all industrial users or potential SIUs and identifies any applicable categorical classifications [40 CFR 122.21(J)(6)].

Recommended

- Revise POTW permits to specify the general and specific prohibitions found at 40 CFR Section 403.5(a)(1) and (b), rather than incorporating by reference, in order to strengthen the permit effectiveness.
- Permit writers should specify the program approval or modification dates in fact sheets to ensure that the program includes up-to-date federal regulations.
- Permit writers should specify whether the POTW accepts hauled waste and identify and characterize contributing industrial dischargers in the permit fact sheet to clarify the basis for inclusion of language regarding the control of industrial discharges.
- Permit writers should specify a submission date for the required development and enforcement of local limits in all permits with industrial pretreatment programs.
- The POTW fact sheet should clearly state whether the POTW is required to develop or implement a pretreatment program.

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

Background

As part of this PQR, EPA discussed with RIDEM the status of its MS4 general permit which has not been reissued since 2003 and the fact that recommendations made from the 2014 PQR regarding the updating of this permit were not addressed. Rhode Island indicated that it has had ongoing challenges with getting its MS4 general permit completed due to resource constraints, but that it is currently in the process of finalizing a draft of its MS4 general permit for EPA review by no later than June 30, 2021. EPA indicated to RIDEM during the PQR review that it will be looking for consistency with EPA's recent updates to its small MS4 Phase II stormwater permitting regulations that clarify: (1) the procedures to be used when coverage is

by general permits see 40 CFR 122.28(d)); (2) the requirement 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 requirements of the Clean Water Act”), including conditions to address the minimum control measures, reporting, and, as appropriate, water quality requirements (see 40 CFR 122.34(a) and (b)); and (3) the requirement that permit terms must be established in a “clear, specific, and measurable” manner (see 40 CFR 122.34(a)).

Program Strengths

EPA has not yet reviewed the most recent draft of Rhode Island’s MS4 general permit.

Areas for Improvement

EPA expects that Rhode Island will meet its deadline of having a draft for EPA review by June 30, 2021.

Action Items

RIDEM will have a final draft of its MS4 stormwater general permit available for EPA review by no later than June 3, 2021 and such draft will be consistent with federal updates as set forth in 40 CFR Part 122.

Essential

- RIDEM will have a final draft of its MS4 stormwater general permit available for EPA review by no later than June 30, 2021 and such draft will be consistent with federal updates as set forth in 40 CFR Part 122.

Recommended

- The PQR Team did not identify any recommended actions for this topic area.

V. REGIONAL TOPIC AREA FINDINGS

Region 1 has elected not to include the optional Regional Topics in this review.

VI. REVIEW OF PROGRESS ON ESSENTIAL ACTION ITEMS FROM LAST PQR

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 2014. 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 1. Essential Action Items Identified During 2014 PQR

Program Area	Action Item Title	Status Update
Basic Facility Information	Permit Applications	(Resolved) Ensure that permit applications are complete. Per 1/31/19 email to Damien Houlihan, this has been completed.
	Permit Applications	(Resolved) Ensure that permit applications are submitted at least 180 days before the permit expiration. Per 1/31/19 email to Damien Houlihan, this has been completed.
Stormwater	Municipal Stormwater	(In progress) Re-issue the Small MS4 General Permit, which expired on 12/19/03. Annual EPA-State Performance Partnership Agreements should address the time frames for re-issuance. Response: this has not been completed and RIDEM is currently drafting the permit with the goal of having a draft for EPA review by 6/30/21.
	Industrial Stormwater	(Resolved) Include the new airfield deicing ELG (40 CFR Part 449) if it makes eligible discharges subject to the ELG. Response: This was included in Part VIII.8 of Rhode Island’s MSGP that became effective on 5/3/19.
	Industrial Stormwater	(Resolved) Add a five-year renewal and resubmission requirement for the No Exposure Certification pursuant to 40 CFR 122.26(g)(1)(iii) and consistent with its RIPDES rules and certification form. Response: Included in Part I.E of Rhode Island’s MSGP that became effective 5/3/19.
CSO	Wet-Weather	(Not started) The permitting of the wet-weather bypass at the Field’s Point treatment facility needs to be consistent with the requirements at 40 CFR 122.4(m). Response: Not completed. The Permit was reissued on 9/29/17. RIDEM will work with EPA to address this issue when the permit is next reissued.

VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

This section provides a summary of the recommendations from the last PQR, conducted in 2014 and notes any state efforts to act on those recommendations. As discussed previously, during the 2012-2017 PQR cycle, EPA referred to action items that are recommendations to strengthen the state’s program as either “Category 2” action items.

Table 2. Recommended Action Items Identified During 2014 PQR

Program Area	Action Item Title	Status
<i>Technology-Based Effluent Limitations</i>	Include an industry categorization in industrial permit fact sheets to indicate which ELGs apply	(Resolved)
	Where technology-based limits are imposed and are not based on ELGs indicate that such Limits are based on BPJ and document the basis.	(Resolved)
Water Quality-Based Effluent Limitations	Include a discussion of the 303(d) and TMDL status of the receiving water in the fact sheets for all facilities.	(Resolved)
Permit Documentation	When a permit limit is removed or made less stringent, explain the basis in the fact sheet. Explain whether anti-back sliding requirements apply.	(Resolved)
	When a limit is carried forward from the prior permit, document the basis of the limit Including the validity of the limit in the new permit.	(Resolved)
Nutrients	Include in fact sheets a discussion of the receiving water quality above and below the discharges.	(Resolved)
	Include in fact sheets a discussion of reasonable potential and explanation of basis.	(Resolved)
Municipal Stormwater	The MS4 permit needs to be re-issued with many improvements.	(In progress)
Industrial Stormwater	Affirm that permit covers discharges only from primary and co-located industrial activities as defined in Appendix A.	(Not pursuing)

Program Area	Action Item Title	Status
	Increase eligibility for MSGP	(Not pursuing)
	Add a waiting period between NOI and authorization for existing discharges that are presently authorized under the 2006 permit.	(Not pursuing)
	Expand requirements for additional actions/control measures taken.	(Not pursuing)
	Post on web NOIs submitted	(Resolved)
	Clarify that operators should identify secondary SIC codes for co-located facilities.	(Not pursuing)
	Incorporate modifications similar to those made to EPA's 2013 MSGP once finalized.	(Resolved)

VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE

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

The following tables summarize only those action items that were identified in Sections III, IV, and V of the report.

Table 3. Essential Action Items from FY 2018-2022 PQR Cycle

Topic	Action(s)
Pretreatment: Food Processing Sector	<ul style="list-style-type: none"> • Permit writers shall ensure that the NPDES permit includes all 40 CFR 122.42(b) notification requirements. • Permit writers shall ensure that the NPDES permit application includes all industrial users or potential SIUs and identifies any applicable categorical classifications (40 CFR 122.21 (j)(6)).
Municipal Separate Storm Sewer Systems (MS4s)	RIDEM will have a final draft of its MS4 stormwater general permit available for EPA review by no later than June 30, 2021 and such draft will be consistent with federal updates as set forth in 40 CFR Part 122.

Table 4. Recommended Action Items from FY 2018-2022 PQR Cycle

Topic	Action(s)
Facility Information	RIDEM should consider including clear identification of the physical location of outfalls in permits.
TBELs for POTWs	The PQR team did not identify any recommended action items for this PQR component.
TBELs for Non-POTW Dischargers	The PQR team did not identify any recommended action items for this PQR component.
Reasonable Potential	RIDEM should include in fact sheets a narrative discussion of the reasonable potential analysis to accompany the data summary tables contained in fact sheet attachments.
WQBELs Development	<ul style="list-style-type: none"> • RIDEM should describe the original basis for effluent limitations that are carried forward from the previous permit. • RIDEM should include a thorough discussion of supporting water quality studies and analyses upon which certain WQBELs are based. • RIDEM should consider updating 7Q10 flows with every permit cycle.
Final Effluent Limitations and Documentation of Effluent Limitations Development	<ul style="list-style-type: none"> • RIDEM should consistently include a clear discussion of the basis for effluent limitations, including: RPA procedures, steps, and explicit results to accompany the summary tables currently presented in fact sheet attachments, and Documentation of supporting studies and analyses (including TMDLs) upon which WBELs are based. • RIPDES fact sheets and administrative records should clearly articulate how anti-backsliding and antidegradation provisions will be met when any effluent limitations are either relaxed or discontinued.
Establishing Monitoring and Reporting Requirements	RIDEM should consider including a specific description of monitoring locations, including latitude and longitude coordinates.
Standard and Special Conditions	<ul style="list-style-type: none"> • RIDEM should ensure that the standard condition that appears to address 40 CFR 122.42(b) is consistent with the federal standard condition. • RIDEM should ensure that penalty amounts and language are consistent with federal requirements.
Administrative Process	RIDEM should consider including documentation of transactions occurring during the 14-day permittee review in the public notice record.
Nutrients	<ul style="list-style-type: none"> • RIDEM should include all relevant information in the fact sheets related to nutrient limit development including WLAs and reasonable potential calculations, even if such calculations were conducted for the prior permit.

	<ul style="list-style-type: none"> • RIDEM should provide documentation that the total phosphorus concentration of 0.1 mg/L is both technically and reasonably achievable.
<p>Pretreatment: Food Processing Sector</p>	<ul style="list-style-type: none"> • Revise POTW permits to specify the general and specific prohibitions found at 40 CFR Section 403.5(a)(1) and (b), rather than incorporating by reference, in order to strengthen the permit effectiveness. • Permit writers should specify the program approval or modification dates in fact sheets to ensure that the program includes up-to-date federal regulations. • Permit writers should specify whether the POTW accepts hauled waste and identify and characterize contributing industrial dischargers in the permit fact sheet to clarify the basis for inclusion of language regarding the control of industrial discharges. • Permit writers should specify a submission date for the required development and enforcement of local limits in all permits with industrial pretreatment programs. • The POTW fact sheet should clearly state whether the POTW is required to develop or implement a pretreatment program.