

Region 8 NPDES Program and Permit Quality Review

North Dakota

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EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

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Executive Summary

The United States Environmental Protection Agency, Region 8 (EPA) performed an on-site National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Review (PQR) of the North Dakota Department of Environmental Quality (NDDEQ) North Dakota NPDES (NDPDES) program on July 9–11, 2019. At the time of the PQR, North Dakota administered 95 individual NDPDES permits and, as of June 25, 2019, all of NDDEQ's permits were current (i.e. no expired/administratively continued permits).

During the PQR, EPA examined 10 individual permits issued by NDDEQ, several NDPDES permitting policies, and the NDPDES statewide permit template. The national and regional priority areas of focus for the PQR included:

- Permit Controls for Nutrients in Non-Total Maximum Daily Load (TMDL) Waters,
- Effectiveness of Publicly Owned Treatment Works (POTW) NDPDES Permits with Food Processor Contributions,
- Small Municipal Separate Storm Sewer System (MS4) Permit Requirements,
- Facilities with Whole Effluent Toxicity (WET) testing requirements, and
- Permits with Steam Electric 316(b) requirements.

Overall, the PQR revealed that the NDDEQ-issued permits and fact sheets reviewed by EPA were well organized and adhered to a majority of the federal regulatory requirements. However, although these permits commonly conformed to most of the national NPDES requirements, EPA identified several concerns including: some POTW permits lacked minimum percent removal requirements and influent monitoring for specific pollutants; portions of certain standard conditions as well as requirements for the use of sufficiently sensitive analytical methods were absent from permits; a few permit applications lacked appropriate signatures and analytical data; aspects of NDDEQ's water quality standards were inconsistent with federal regulations; and fact sheets lacked sufficient discussion for certain permit conditions.

As part of its NDPDES program implementation, NDDEQ continually develops internal permitting protocols and standard operating procedures to support development of defensible permits and to provide permit writers with a solid foundation for permitting procedures. NDDEQ has also expanded fact sheet templates to provide consistency with content, organization, and improved documentation for permit limits and conditions. Since some of these deficiencies appeared to stem from the template language and standard processes used, EPA has recommended that NDDEQ update the permit template to include all federal standard conditions requirements, including the use of sufficiently sensitive analytical methods. EPA has also recommended that NDDEQ continue to update and develop protocols and standard operating procedures (e.g., to address application requirements), further develop justifications for permit conditions, and modify all applicable NDDEQ template documents to ensure regulatory requirements are met.

The PQR also identified many state and region-specific challenges faced by NDDEQ, including the labor and time intensive nature of responding to information requests under the Freedom of Information Act (FOIA). Additionally, NDDEQ struggled with implementing information and data system requirements to meet the e-Rule compliance date for receiving Discharge Monitoring Reports (DMRs) electronically. In particular, NDDEQ identified challenges meeting the e-Rule compliance date due to the difficulty of e-Rule implementation in the area of pretreatment, and because the EPA Integrated Compliance Information System (ICIS) was not going to be upgraded in time for states to have the nodes mapped within the confinements of the first timeline. Another issue identified by NDDEQ, regarding the original timeline, was the difficulty by states to use EPA grant dollars effectively. However, NDDEQ indicated that it continued to work diligently on upgrading its system to comply with the requirements of the e-Rule, as well as provided its waiver form as a model for the EPA to use. EPA has since extended the timeline to allow EPA and the states time to implement the e-Rule requirements.

In addition to the items listed in the paragraphs above, the report provides an overview of the NDPDES program and identifies specific areas where EPA and NDDEQ can work together to continue to strengthen permit language and documentation in NDPDES permits.

NDDEQ reviewed and provided comments on the draft PQR report on December 21, 2020. NDDEQ and EPA discussed the comments and agreed with the final draft PQR report's findings and recommendations. Upon receipt of the final PQR report, NDDEQ has indicated they will review and work to address the proposed action items.

I. PQR BACKGROUND

The NPDES PQRs are an evaluation of a select set of NDPDES 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, EPA promotes national consistency, and identifies successes in implementation of state implemented NPDES programs, as well as opportunities for improvement in the development of NPDES permits.

Prior to the 2019 PQR, EPA conducted a PQR of the NDPDES permitting program on June 24–27, 2013. The summary report for that PQR is available at:

https://www.epa.gov/sites/production/files/2017-09/documents/nd_pqr_final_report_formatted_9-23-14.pdf.

In the 2013 summary report, the evaluation team proposed various action items to improve the NDPDES permitting program. As part of the 2019 PQR, EPA requested updates from NDDEQ on the progress on the prior PQR action items. It should be noted that after the 2013 PQR, the North Dakota Department of Health (NDDH) underwent a name change and is now NDDEQ.

Of the nineteen action items identified during the 2013 PQR as being *Essential*¹ tasks, nine have been resolved and the remainder represent actions that are either longer-term activities or lower-level actions which NDDEQ is still addressing. In addition, EPA identified *Recommended*¹ action items to improve NDDEQ's program; NDDEQ has chosen to implement some of these recommendations and is in the process of implementing the remainder. Section VI (Review of Progress on Essential Action Items from Last PQR) and Section VII (Recommended Items from Last PQR) of this report contain detailed reviews of the progress on *Essential* and *Recommended* items identified during the 2013 PQR.

During the 2019 PQR, the evaluation team proposed action items to improve the NDPDES 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 EPA and NDDEQ.

- **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 NDDEQ's NDPDES permit program.

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.

The *Essential* actions are used to augment the existing list of “follow up actions” currently tracked by EPA Headquarters (HQ) on an annual basis and are reviewed during subsequent PQRs.

The 2019 PQR on-site review was conducted July 9–11, 2019 at the NDDEQ office in Bismarck, ND. The PQR on-site review team consisted of VelRey Lozano, Qian Zhang, and Erik Makus of EPA Region 8, and Ann LaDuca, an EPA HQ contractor with PG Environmental. Additional PQR report contributions were provided by Al Garcia (pretreatment program) and Amy Clark (small MS4 permit requirements) of EPA Region 8.

The on-site PQR activities included permit reviews, evaluation of national and regional topic areas, and discussions between the PQR review team and NDDEQ staff with regard to the NDPDES program status and the permit issuance process. The permit reviews focused on core permit quality and included the review of the following core permit components: 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 processes. The PQR also included conversations between EPA and NDDEQ on program status, the permitting process, responsibilities, organization, staffing, and program challenges NDDEQ is experiencing.

A total of 10 permits were selected and reviewed for the PQR and a core review was performed on each of them. In addition, three of these permits were reviewed for national topic areas, and eight were reviewed for regional topic areas. Permits were selected based on issue 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 NDPDES program. Core topic area permit reviews are conducted to evaluate similar issues or types of permits in all states.

Topic Area Reviews

National topic areas are topic areas that have been determined to be important on a national scale. The national topics areas at the time of the PQR were: Permit Controls for Nutrients in Non-TMDL Waters, the Effectiveness of POTW NPDES Permits with Food Processor Contributions, and Small MS4 Permit Requirements. EPA was not able to fully evaluate two of these national topic areas for the following reasons:

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

- The PQR did not include an evaluation of the Small MS4 Permit Requirements, as NDDEQ had not updated their Phase II MS4 general permit (GP) since the MS4 Remand Rule was finalized. Therefore, no review could be conducted on NDDEQ's Phase II MS4 GP.
- There were no permits chosen during the 2019 PQR that met the food processor initiative criteria, so the Effectiveness of POTW NPDES Permits with Food Processor Contributions was also not specifically evaluated.

Regional topic area reviews target regionally specific permit types or particular aspects of permits. The regional topic areas selected by EPA Region 8 included: Steam Electric 316(b) permits and permits containing WET requirements. These reviews provide important information to NDDEQ, EPA Region 8, EPA HQ and the public on these specific program areas.

II. STATE PROGRAM BACKGROUND

A. Program Structure

NDDEQ became an independent agency on April 29, 2019. During the 2017 legislative session, lawmakers passed Senate Bill 2327, splitting the Environmental Health Section from the NDDH to create a new NDDEQ. NDDEQ's Division of Water Quality (DoWQ) manages five programs: the Ground Water Protection Program, NDPDES Permits Program, Watershed Management, Spill Investigation, and Special Projects (e.g., water quality standards, Section 401 Water Quality Certifications, and interstate and international water issues). The DoWQ had one staff member who supported water quality standards development, including the mixing zone and antidegradation policies, and the Division of Municipal Facilities employed six inspectors that conducted joint drinking water/wastewater inspections at minor municipalities. EPA currently administers the biosolids program in North Dakota.

The DoWQ website has housed information organized by program area, which includes general permits, application forms (EPA and NDDEQ application forms) and regulatory information. In addition, information on all programs administered by the DoWQ, along with appropriate staff contact information, has been made available on the website. The website has also allowed for online reporting of spills.

The main NDDEQ office is located in Bismarck, North Dakota, and staff in the main office provide support for the program, including implementation of CWA and NPDES requirements. In addition, NDDEQ has field offices in Towner, Sawyer, Gwinner, and Fargo; however, these field offices did not provide specific support to the NDPDES program.

At the time of the PQR in July 2019, the NDPDES program had 11 full time positions assigned, including nine permit writers, two of which were new employees. Staff duties included permit writing, inspections, and enforcement. On average, permit writers were responsible for drafting three to four NDPDES permits annually. Permit writers received training as well as internal mentoring to support their development. At the time of the PQR, two staff members were in the process of learning permit writing.

All new permit writers completed the web-based U.S. EPA NPDES Permit Writers' Course and attended the 5-day U.S. EPA NPDES Permit Writers' Course when possible. In addition, the DoWQ developed protocol documents, addressing both administrative and technical issues, to assist new permit writers with the NDPDES permit development process.

NDPDES permits were assigned to staff based on complexity and staff workload. A senior staff member would send out an email with applicable permit assignments. To develop permits, DoWQ staff used a list of standard protocols that the DoWQ had in place, as well as templates to develop permits, fact sheets, public notices, etc. They also used databases and spreadsheets to compile, analyze, and generate permit data.

The DoWQ did not have a standardized quality assurance/quality control (QA/QC) process with a formal checklist; however, draft permits were reviewed by the program manager and two senior staff members prior to issuance for public notice. All permits were also reviewed before they were finalized. Staff were encouraged to work together on permit development for similar facilities and the DoWQ noted that they may reinstate the use of a workflow system during the permit development process.

The DoWQ developed various systems to manage files and data. The DoWQ utilized an internal electronic file (E-File) management system and tracked permitting (e.g. permit issuance and reissuance) and compliance activities in the NDPDES database (i.e., a Microsoft SQL server database designed specifically for the NDPDES program), which integrated with the E-File system. Data from the NDPDES database uploaded to ICIS in batches. The DoWQ also utilized an electronic system to accept any electronic reports, such as electronic Notice of Intent (eNOI) and electronic discharge monitoring report (eDMR) submittals.

Permit files were maintained primarily in electronic format, but some were retained in hard copy format and filed at the main office in Bismarck. DoWQ protocol required staff to print out a hard copy of the draft permit and fact sheet to include in the administrative record. For electronic files, once the permit was finalized, all files were moved to the "Facility" section within the "Permit Reissuance" folder in the E-File system. Electronic files were accessible to DoWQ staff through storage on a common network drive which was managed and accessible through the E-File system. The DoWQ ensured there was server redundancy and indicated that there was also permit record redundancy.

Each permit writer determined what information was maintained in the permit file, but information generally included the application, fact sheet, both draft and final versions of the permit, reasonable potential summary, copies of public comments and DoWQ responses on the draft permit, and administrative letters. Hard copy files were reviewed and periodically cleaned out, and terminated files were archived off-site (held by the State Historical Society of North Dakota). If there was a request for information from the permit record, DoWQ staff would scan the information and provide it to the requestor. The DoWQ also noted during the PQR that they receive numerous requests for information and file reviews.

B. Universe and Permit Issuance

NDDEQ administered a universe of 95 individual NDPDES permits at the time of the PQR. Of these permits, 30 were POTWs (14 major and 16 non-major) and 65 were individual permits for non-municipal facilities (10 major and 55 non-major).

In addition to these individual permits, NDDEQ administered general permits covering 3,754 permittees as shown below:

NPDES Permit No.	Permit Name/Category	Number of Permittees
NDG120000	POTW (Class I and I-A)	56
NDG220000	POTW Class II	30
NDG320000	POTW Class III	196
NG420000	Mechanical Package Plants	20
NDG520000	Water Treatment Plants	19
NDG870000	Pesticide	47
NDG070000	Temporary Discharges (Dewatering and Hydrostatic Testing)	86
NDR100000	Construction Stormwater Discharges	2,797
NDR050000	Industrial Stormwater Discharges	273
NDR320000	Stormwater Discharges from Mining, Extraction, or Paving Material Preparation Activities	211
NDR040000	MS4 Stormwater	19

Significant industries within North Dakota included agriculture, grains/ranching operations, oil production, food processing, and metal finishing.

According to the responses provided by NDDEQ during the PQR, NDDEQ maintained no permits that were administratively continued or expired.

C. State-Specific Challenges

NDDEQ indicated that challenges existed with responding quickly to the number of public requests received by the program for FOIA documents. In addition, NDDEQ struggled with implementing information and data system requirements necessary to meet the e-Rule compliance date for receiving DMRs electronically.

D. Current State Initiatives

NDDEQ 's electronic filing system had been improved, thus making it easier to store and catalog files. In addition, NDDEQ permit writers strived to improve their fact sheet and permit content to provide more consistency, organization, and defensibility; the PQR team observed that the fact sheets were more robust than described in the 2013 PQR. NDDEQ also developed various protocols to support consistent development of permits and implementation of policy and standard practices, and permitting staff held biweekly program meetings to discuss permitting challenges and issues.

The NDDEQ permits program manager assigned permits to ensure that assignments were rotated, and staff received opportunities to develop a variety of permits, in terms of types of discharge and complexity, to increase cross training within the permitting program. Additionally, NDDEQ strived to develop and maintain strong relationships with permittees (e.g., regular communications, compliance support and training) and had been successful in improving its animal feeding/concentrated animal feeding operations (AFO/CAFO) programs.

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 C.F.R. 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

In general, NDDEQ fact sheets and permits provided clear identification of the facility names, addresses, type of facility and processes/operations, and receiving waters. NDDEQ's permits also contained all other basic permit information including issuance, effective and expiration dates, authorization-to-discharge information, a description of the activities/services carried out by the facilities, and to which outfalls those wastewaters discharge.

Areas for Improvement

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

Action Items

Essential

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

Recommended

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

2. Permit Application Requirements

Background and Process

Federal regulations at 40 C.F.R. 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.

NDDEQ was proactive during the permit renewal application process. Reminder letters were sent to permittees nine months prior to permit expiration, and permit writers followed up with calls to permittees to specify application and data submittal requirements to help avoid delays and incomplete application submittals. Applications were received by the program manager who determined if they are appropriately signed and dated, and then they were provided to the applicable permit writer. Once assigned, a permit writer would conduct a technical review and work with the permittee to fill in any missing data. Permit writers tracked the correspondence with permittees and the receipt of any additional information in the NDDEQ electronic filing system.

NDDEQ's website provided links to the most current EPA NPDES Application forms (Forms 1, 2A, 2C, and 2D). All non-municipal permittees submitted EPA Forms 1 and 2C, and major municipal permittees submitted EPA Forms 1 and 2A. Minor municipal permittees and any permittees who were covered under the domestic wastewater treatment general permits could also use NDDEQ's Short Form A (SFN 8317) as a permit application. The SFN 8317 was updated in 2014, and again near the time of the PQR. Permit records reviewed during the PQR were for major facilities and included the completed federal application forms.

Program Strengths

The PQR team observed that NDDEQ staff had an efficient proactive process for reaching out to permittees regarding their applications. Permit records reviewed during the PQR included the appropriate application forms, and permit applications were submitted in a timely manner. This helped to ensure that NDDEQ maintained no permits that were administratively continued or expired.

Areas for Improvement

The PQR team observed that certain permit applications appeared to lack proper signatures and adequate data. For example, five POTW applications (City of Wahpeton, City of Devils Lake, City of Mandan, City of Fargo, and City of Williston) lacked sufficient data, either by not reporting data for all required pollutant parameters or by reporting an insufficient number of samples as required by 40 C.F.R. 122.21(j)(4)(iv), and three non-POTW applications (Minn Dak Farms Cooperative, Basic Electric Power Cooperative, and Tesoro Refining and Marketing Company, LLC) appeared to lack sufficient facility information/analytical data consistent with 40 C.F.R. 122.21. In addition, three POTW applications (City of Wahpeton, City of Grand Forks, and City of Devils Lake) lacked appropriate signatures (as required by 40 C.F.R. 122.22).

Action Items

Essential

- NDDEQ must ensure that all permit applications satisfy the information and data requirements established in 40 C.F.R. Part 122.21(g)(7) and (j)(4).
- NDDEQ must ensure that all permit applications comply with the signatory requirements contained in 40 C.F.R. 122.22.

Recommended

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

B. Developing Effluent Limitations**1. Technology-based Effluent Limitations**

NPDES regulations at 40 C.F.R. 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 technology-based effluent limitations (TBELs) represent the minimum level of control that must be imposed in a permit.

*TBELs for POTWs**Background and Process*

POTWs must meet secondary or equivalent to secondary standards (including limits for biological oxygen demand (BOD₅), total suspended solids (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 C.F.R. Part 133. A total of six POTW permits were reviewed as part of the 2019 PQR. These included:

- 1) City of Wahpeton (ND0020320)
- 2) City of Grand Forks (ND0022888)
- 3) City of Williston (ND0022349)
- 4) City of Fargo (ND0022870)
- 5) City of Mandan (ND0022861)
- 6) City of Devils Lake (ND0020681)

For municipal permits, NDDEQ applied effluent limitations based on secondary treatment standards for TSS and BOD₅ with two significant exceptions. First, the average monthly effluent limitation for BOD₅ in permits for municipal facilities was 25 mg/L instead of 30 mg/L. NDPDES staff indicated this value was based on North Dakota Administrative Code (NDAC) Chapter 33-16-01-14 (3)(c)(1), which allowed for adjustment of the secondary treatment standards to reflect site-specific considerations. Second, permits for municipal facilities did not establish minimum percent removal requirements. North Dakota indicated during the PQR that they generally did not establish minimum percent removal requirements in permits for municipal facilities that discharge intermittently (e.g., lagoon treatment systems).

Consistent with statements made during the 2013 PQR, NDDEQ stated that based on the permit writers' knowledge of the quality of the waste streams entering the POTW and a facility's compliance with concentration-based effluent limitations, the discharge was presumed to be in compliance with the minimum percent removal requirements established by secondary treatment standards. EPA informed NDDEQ that this was inconsistent with the secondary treatment regulation percent removal requirements for lagoon systems. Fact sheets for POTW permits indicated effluent limitations were based on secondary treatment standards and listed the minimum percent removal requirements; however, they did not provide a rationale for the lack of minimum percent removal requirements in the permits.

Program Strengths

The permits and fact sheets reviewed for POTW facilities provided a brief description of the wastewater treatment processes. Effluent limitations tables clearly presented the applicable effluent limitations and fact sheets clearly indicated the regulatory basis for TBELs. NDDEQ's permits also appropriately established average weekly and monthly average effluent limitations for BOD₅ and TSS.

Areas for Improvement

The six POTW permits reviewed lacked minimum percent removal requirements for BOD₅ and TSS consistent with 40 C.F.R. 133.102(a) and (b) as required in 40 C.F.R. 122.44(a)(1) and 125.3(a)(1), including influent monitoring requirements to determine compliance with the removal requirements. The corresponding fact sheets for these POTW permits lacked a rationale for the omission of minimum percent removal requirements for BOD₅ and TSS. At the time of the PQR, EPA provided NDDEQ with sample language that could be referenced to assist with the development of rationales in the fact sheets.

Action Items

Essential

- NDDEQ must ensure that permits address applicable percent removal requirements for POTWs consistent with federal secondary treatment standards established at 40 C.F.R. 133.102.

Recommended

- NDDEQ should ensure that fact sheets provide a thorough discussion of applicable TBELs (e.g., percent removal requirements) and a rationale for the establishment, or omission, of applicable TBELs in permits.

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 C.F.R. 125.3(d).

Four non-POTW permits were reviewed as part of the 2019 PQR. These included:

- 1) Minn Dak Farmers Cooperative (ND0024368)
- 2) Tesoro Refining and Marketing Company, LLC (ND0000248)
- 3) Otter Tail Power Company (ND0024996)
- 4) Basin Electric Power Cooperative (ND0025232)

ELGs applicable to these discharges included 40 C.F.R. Part 419 (Petroleum Refining), 40 C.F.R. Part 409 (Sugar Processing; Beet Sugar Processing Subcategory), and 40 C.F.R. Part 423 (Steam Electric Power Generation). All TBELs in these permits, with the exception of oil and grease, were based on ELGs. Oil and grease limits were established on a case-by-case basis.

Pretreatment Permit Evaluation

As part of the PQR, the EPA also evaluated the status of the NDDEQ pretreatment program (see additional evaluation in Section IV. B. Effectiveness of POTW NPDES Permits with Food Processor Contributions and Pretreatment Program Evaluation) and assessed specific language in the NDPDES permits issued to POTWs as related to pretreatment and the control of non-POTW dischargers. The PQR evaluated the implementation of pretreatment boilerplate language in NDPDES permits of approved and non-approved programs, focusing on the following regulatory requirements for pretreatment activities and pretreatment programs:

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

The EPA evaluated pretreatment boilerplate language contained in NPDES permits issued to POTWs either with or without approved pretreatment programs to evaluate the implementation of the pretreatment regulations by the NDDEQ as an Approval Authority and Control Authority. In addition, the EPA evaluated control mechanisms for CIUs in non-approved programs.

As part of the PQR, EPA evaluated three NDPDES permits and associated fact sheets issued by the NDDEQ to POTWs with (City of Fargo and City of Mandan) and without (City of Wahpeton) approved pretreatment programs.

The City of Fargo and City of Mandan permits were evaluated to ensure that the approved pretreatment program requirements in 40 C.F.R. Part 403 were required as a condition of the permit. The Wahpeton permit was evaluated to ensure that, at a minimum, the permit contained the pretreatment requirements in 40 C.F.R. § 122.42(b) (i.e. POTW requirement to notify Director of new pollutants or change in discharge) and 40 C.F.R. § 122.44(j). 40 C.F.R. § 122.44(j) requires all POTWs to:

- (1) Identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 C.F.R. Part 403.
- (2) (i) Submit a local program when required by and in accordance with 40 C.F.R. part 403 to assure compliance with pretreatment standards to the extent applicable under section 307(b). The local program shall be incorporated into the permit as described in 40 C.F.R. Part 403. The program must require all indirect dischargers to the POTW to comply with the reporting requirements of 40 C.F.R. Part 403.
(ii) Provide a written technical evaluation of the need to revise local limits under 40 C.F.R. § 403.5(c)(1), following permit issuance or reissuance.
- (3) For POTWs which are “sludge-only facilities,” a requirement to develop a pretreatment program under 40 C.F.R. Part 403 when the Director determines that a pretreatment program is necessary to assure compliance with Section 405(d) of the CWA.

For the City of Fargo and the City of Mandan permits, NDDEQ adequately implemented the pretreatment requirements in 40 C.F.R. Part 403 for a POTW with an approved pretreatment program, included the NPDES requirement at 40 C.F.R. § 122.42(b)(1-3) regarding notification of new introduction of pollutants and new industrial users in Part V.A.1 and Part H of the permits, and included the NPDES requirement at 40 C.F.R. § 122.44(j)(2)(ii) to provide a written technical evaluation of the need to revise local limits under 40 C.F.R. § 403.5(c)(1) following permit issuance or reissuance. In addition, page 34 of the fact sheet for the City of Fargo listed the approval date, June 15, 1985, of the pretreatment program. However, the fact sheet for the City of Mandan did not include an approval date for the City of Mandan’s pretreatment program.

In the City of Wahpeton permit, NDDEQ also included the NPDES requirement at 40 C.F.R. § 122.42(b)(1-3) regarding notification of new introduction of pollutants and new industrial users in Part V.A.1 and Part H of the permit. The pretreatment language for municipalities without an approved pretreatment program contained in the permit was adequate including an evaluation of the service area and whether the POTW is required to implement an approved pretreatment program. However, NDDEQ needs to establish the ability to modify the permit to require the City of Wahpeton, if necessary, to develop a pretreatment program and submit to NDDEQ for approval in Part IV.E – Permit Actions. This modification for cause should be included in all permits issued to municipalities without an approved pretreatment program.

Program Strengths

NDDEQ’s fact sheets for non-municipal facilities had been improved since the 2013 PQR. They consistently included a description of facility operations, expected pollutants, and wastewater treatment processes. In addition, the fact sheets consistently identified the applicable federal ELGs and state technology standards that were considered in the development of TBELs for the facility and described the applicability of ELGs. For the City of Fargo and the City of Mandan permits, NDDEQ has adequately implemented the pretreatment requirements, and the City of Wahpeton permit contained suitable pretreatment language for municipalities without an approved pretreatment program.

Areas for Improvement

Two of the four non-municipal fact sheets (Tesoro Refining and Marketing Company, LLC and Otter Tail Power Company) lacked discussion of the determination of appropriate ELG categorization and performance levels.

Based on the pretreatment permit evaluation, it is recommended that language be included in the City of Wahpeton’s permit specifying the ability to modify the permit to develop a pretreatment program, if necessary, and submission to the NDDEQ for approval in Part IV.E – Permit Actions. This modification for cause is recommended to be included in all permits issued to municipalities without an approved pretreatment program to provide advanced notice to the Permittee(s), should this action ever be necessary. It is also recommended that the fact sheet for the City of Mandan include an approval date for the City of Mandan’s pretreatment program.

Action Items

Essential

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

Recommended

- NDDEQ should ensure that fact sheets provide a thorough discussion of applicable ELGs, including the determination of appropriate ELG categorization and performance levels applicable to establishing TBELs.
- It is recommended that an approval date for the City of Mandan’s pretreatment program be included in the fact sheet for the City of Mandan.
- It is recommended that language be included in the City of Wahpeton’s permit, specifying the ability to modify the permit to develop a pretreatment program, if necessary, and submission to the NDDEQ for approval in Part IV.E – Permit Actions. This modification for cause is recommended to be included in all permits issued to municipalities without an approved pretreatment program to provide advanced notice to the Permittee(s), should this action ever be necessary.

2. Reasonable Potential and Water Quality-Based Effluent Limitations

Background

The NPDES regulations at 40 C.F.R. 122.44(d) require permits to include any requirements in addition to or more stringent than technology-based requirements where necessary to achieve state water quality standards, including narrative criteria for water quality. To establish such “water quality-based effluent limits” (WQBELs), the permitting authority must evaluate whether any pollutants or pollutant parameters cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.

The PQR for NDDEQ 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; and
- 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 total maximum daily loads (TMDLs).

Process for Assessing Reasonable Potential

NDDEQ permit writers conducted a reasonable potential analysis (RPA) and developed WQBELs for the discharge. Permit writers also identified the receiving stream, applicable water quality criteria and TMDLs, and evaluated facility monitoring data. There was no official NDDEQ guidance for conducting RPAs, so procedures were based upon EPA’s Technical Support Document for Water Quality-based Toxics Control (TSD). NDDEQ permit writers used standardized spreadsheets to calculate reasonable potential (RP) for metals, WET, and to calculate hardness-dependent water quality criteria (WQC). NDDEQ permit writers evaluated priority pollutants as the pollutants of concern list (POC) and reviewed permittee applications for available data. Permit writers would also consider additional pollutants based on the discharge type and expected waste stream.

NDDEQ permit writers preferred to have a minimum of 10 data points to conduct an RPA. In some cases, permit writers would conduct an RPA with fewer than 10 data points; however, for many facilities that contained fewer than 10 data points for a given pollutant, a statistical analysis was not performed and permit writers conducted a basic review of the data that was available to identify any obvious cases where RP was demonstrated. EPA informed NDDEQ that EPA’s guidance provided a default coefficient of variation to allow for statistical analysis of

smaller data sets. NDDEQ indicated during the PQR that, where the data set contains fewer than 10 data points, the permit would require continued monitoring to collect additional data. The RPA took into account effluent variability, ephemeral streams, and other considerations to address RP. In addition to facility monitoring data, NDDEQ permit writers considered other ambient data and utilized STORET and United States Geological Survey (USGS) data. All calculations and results of the RPA were included in the permit Appendices with the administrative record and fact sheet.

Process for Developing WQBELs

NDDEQ permit writers developed WQBELs following the results received from the RPA. Permit writers also implemented the mixing zone policy established in the State's water quality standards found at NDAC 33-16-02.1-09 (Appendix III). The policy provided a maximum size of a mixing zone and outlined the specific criteria for determining when a mixing zone was allowed. NDDEQ's fact sheets and accompanying appendices contained discussions of mixing zones and the applicability to the discharge and resulting WQBELs. In addition, the fact sheets contained a narrative discussion, and the accompanying appendices included technical calculations related to mixing zone implementation. Where appropriate, the fact sheet also indicated the permit writer reviewed CORMIX modeling and used the model results to apply the mixing zone and calculate WQBELs. NDDEQ staff indicated that while a mixing zone had never been denied, permit staff could decide to reduce the size of the mixing zones moving forward to account for safety factors.

NDDEQ utilized the 303(d) list and TMDL lists to determine if impairments existed in their waterbodies. Permit writing staff also reviewed the North Dakota watershed management website and checked for any applicable impairments as well as consulted watershed management staff for TMDL related guidance. Permits included implemented TMDLs or wasteload allocations (WLAs).

Program Strengths

Reasonable Potential

NDDEQ's fact sheets were improved from the 2013 PQR in that they clearly and consistently identified receiving water streams, designated uses, and applicable water quality criteria. The fact sheets also addressed each parameter, that was either limited or monitored, and included appendices that contained discussions on specific pollutants of concern, the RPA procedure, and RPA results.

WQBEL Development

NDDEQ's fact sheets and accompanying appendices contained documentation of the development of WQBELs. In addition, where there were TMDLs applicable, NDDEQ's fact sheets and accompanying appendices contained a discussion of the applicability of TMDLs and how the permit established the effluent limitations based on the WLA included in the TMDL.

*Areas for Improvement***Reasonable Potential**

The PQR review team noted that the City of Wahpeton fact sheet indicated there was not enough data to conduct an RPA; therefore, RP was not evaluated during the permit renewal. The PQR team informed NDDEQ that the EPA's TSD provided guidance on conducting statistical analyses, including a coefficient of variation and multiplication factors to account for effluent variability. The PQR team also informed NDDEQ that they may want to consider increasing the monitoring frequency for pollutants of concern to ensure that data is sufficient to meet NDDEQ's RPA criteria to evaluate RP during the next permit renewal cycle.

In addition, the Minn Dak Farmers Cooperative fact sheet mentioned review of monitoring data for mercury and the intent to remove monitoring requirements because only one value was above the detection limit (0.013 µg/L) and all others were ND (i.e., non detect). However, the fact sheet did not mention evaluation of RP for mercury for that single detected value. NDDEQ should ensure that permit writers consider single detected values and include a discussion in the fact sheet that provides rationale for the permit writer's decision on whether a WQBEL is required.

WQBEL Development

The Minn Dak Farmers Cooperative fact sheet appeared to indicate that there was RP for sulfate and chloride; however, the permit did not include effluent limits for either parameter, and the fact sheet did not include a sufficient explanation for the lack of effluent limitations. Additionally, the City of Devils Lake permit allowed up to 10 percent exceedances of pH limits provided that lethal conditions were avoided. Allowing these exceedances was inconsistent with federal regulations at 40 C.F.R. Part 133.

Action Items

Essential	<ul style="list-style-type: none"> • Reasonable Potential <ul style="list-style-type: none"> • NDDEQ must ensure that all pollutants are evaluated for reasonable potential and that documentation of the analysis is in the administrative record, in accordance with 40 C.F.R. 122.44(d). • WQBEL Development <ul style="list-style-type: none"> • NDDEQ must develop WQBELs for all pollutants that demonstrate RP, in accordance with 40 C.F.R. 122.44(d)(1)(i). • NDDEQ must ensure that permit limits comply with federal regulations found in 40 C.F.R. Part 133.
Recommended	<ul style="list-style-type: none"> • Reasonable Potential <ul style="list-style-type: none"> • NDDEQ should consider increasing the monitoring frequency to ensure sufficient data are available to conduct RPAs. • WQBEL Development <ul style="list-style-type: none"> • NDDEQ should provide a sufficient explanation for the inclusion or omission of WQBELs where the discharge demonstrates RP.

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 C.F.R. 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.

NDDEQ fact sheets and administrative records appropriately documented the facility operations, expected waste streams and pollutants of concern, and provided discussion on applicable treatment standards and effluent limitations. In addition, fact sheets reviewed identified receiving streams, applicable designated uses, impairment status, water quality criteria, and applicable TMDLs. Permit writers identified and discussed specific pollutants of concern and detailed the RP procedures and results. They also provided greater detail in the appendices that accompanied the fact sheets.

NDDEQ considered antidegradation requirements if the permittee was unable to meet their mixing zone requirements. NDDEQ's Antidegradation Procedure was contained in NDAC 33-16-02.1 (Appendix IV), which in part stated (regarding Category 1 Waters):

"Regulated activities that result in a new or expanded source of pollutants to this category of water are subject to the review process, unless the source would have no significant permanent effect on the quality and beneficial uses of those waters, or if the effects will be appropriately minimized and temporary. Proposed activities that would lower the ambient quality in a water body of any parameter by more than fifteen percent, reduce the available assimilative capacity by more than fifteen percent, or increase permitted pollutant loadings to a water body by more than fifteen percent will be deemed to have significant effects."

If a permittee cannot meet the water quality standards, an official antidegradation review will be triggered. Fact sheet appendices included a discussion of NDDEQ’s antidegradation policy and any applicable analysis conducted for the discharge. Only one permit reviewed during the PQR underwent an antidegradation review.

NDDEQ permit writers also evaluated anti-backsliding when a facility underwent a modification; for example, if a waste stream was removed from the discharge. NDDEQ fact sheets included a general statement regarding anti-backsliding and a specific discussion when an anti-backsliding analysis was conducted.

Permits reviewed appeared to contain the most stringent applicable effluent limitation(s) and the accompanying fact sheets provided adequate rationale for most effluent limitations.

Program Strengths

NDDEQ permits reviewed included effluent limitations that were appropriate for the discharge and generally consistent with the rationale presented in the fact sheets.

Areas for Improvement

It appeared that the Minn Dak Farmers Cooperative permit removed the selenium effluent limit at an outfall (003) because of no RP; however, the fact sheet did not appear to address anti-backsliding as applicable to the specific scenario. In general, the fact sheets for some of the permits also included a general statement about antidegradation but did not appear to address antidegradation specific to each permit. In addition, some fact sheets reviewed lacked rationale for effluent limitations that were continued from previous permits.

Action Items

Essential

- NDDEQ must ensure that effluent limitations are as stringent as those established in the previous permit, consistent with 40 C.F.R. 122.44(l), unless an exception is applicable in accordance with 40 C.F.R. 122.44(l)(2)(i).

Recommended

- NDDEQ should ensure that fact sheets address anti-backsliding and antidegradation evaluations specific to the permit and discharge.
- NDDEQ should ensure that fact sheets discuss the basis for effluent limitations, especially those that are continued from the previous permit.

C. Monitoring and Reporting Requirements

Background and Process

NPDES regulations at 40 C.F.R. 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 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 C.F.R. 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 C.F.R. 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 C.F.R. 122.44(i) also require reporting of monitoring results with a frequency dependent on the nature and effect of the discharge. 40 C.F.R. 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 C.F.R. Part 136 analytical method.

NDPDES permit writers established monitoring requirements based on the previous permit requirements, requirements for similar facilities and discharge types, and considered the guidance in EPA's TSD. Fact sheets also discussed monitoring requirements. NDDEQ indicated that permit writers could determine if an increased monitoring frequency was appropriate in order to collect sufficient data or due to compliance issues. Additionally, NDDEQ could submit a formal request directly to the permittee to support the collection of additional data. In certain cases, NDDEQ could reduce monitoring frequencies based on compliance history.

All permits reviewed indicated sample collection and analysis were to be in compliance with approved procedures established in 40 C.F.R. Part 136. Some of the NDDEQ permits that were reviewed included a special condition that required the use of sufficiently sensitive 40 C.F.R. Part 136 analytical methods; however, this was not consistently observed. Further, certain reviewed fact sheets included a specific discussion regarding the requirement to use sufficiently sensitive analytical methods.

Program Strengths

The reviewed permits consistently identified appropriate monitoring locations, frequencies, and sample types; based on the facility, discharge type and corresponding limit bases. In addition,

permits reviewed appropriately required the electronic submittal of DMRs starting no later than December 21, 2016, if the permits were effective prior to that deadline. The City of Fargo permit was effective after this deadline and contained a condition that DMRs must be submitted electronically unless a waiver for electronic reporting was obtained, based on specific criteria listed in the permit.

Areas for Improvement

NDDEQ permits did not consistently require the use of sufficiently sensitive EPA approved methods. In addition, at the time of the review, NDDEQ application forms and request letters did not require the use of sufficiently sensitive analytical methods.

Action Items

Essential

- NDDEQ must include requirements for permittees to use sufficiently sensitive EPA approved analytical methods in all NDPDES permits, in accordance with 40 C.F.R. 122.44(i).
- Per 40 C.F.R. 122.21(e), NDDEQ must ensure that application data are collected using sufficiently sensitive EPA approved analytical methods.

Recommended

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

D. Standard and Special Conditions

Background and Process

Federal regulations at 40 C.F.R. 122.41 require that all NPDES permits, including NPDES general permits, contain certain “standard” permit conditions. Further, the regulations at 40 C.F.R. 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 C.F.R. 122.44(k)]; or permit compliance schedules [see 40 C.F.R. 122.47]. Where a permit contains special conditions, such conditions must be consistent with applicable regulations.

The NDPDES boilerplate language for standard conditions was updated in early 2019 with NDDEQ transition and the electronic reporting (E-rule) updates. Boilerplate language was used for all standard condition sections, and NDDEQ permits consistently organized standard conditions across three sections after the section containing effluent limitations and monitoring requirements. NDDEQ used the special conditions section of permits to establish narrative conditions for compliance schedules and mercury minimization plans.

Program Strengths

NDDEQ permits included standard conditions in consistent organization, which allowed for easy identification of specific standard permit requirements. The use of boilerplate language for standard conditions ensured consistency across permits, including consistent updates to boilerplate language due to regulatory revisions. Generally, the special conditions included in NDDEQ's permits were appropriate for the permitted discharge.

Areas for Improvement

The PQR review team identified numerous issues regarding the standard conditions for NDDEQ permits, some of which were identified during the last PQR. In the permits reviewed, some of the standard conditions appeared to include language that created a less stringent requirement than in 40 C.F.R. 122.41:

- Permits lacked language addressing CWA penalties for standard conditions related to the Duty to Comply, and Monitoring and Records (40 C.F.R. 122.41(a)(2) and (3), and 40 C.F.R. 122.41(j)(5), respectively). Additionally, the Signatory requirements in the City of Mandan permit lacked language regarding penalties for making a “...false statement, representation, or certification...,” in accordance with 40 C.F.R. 122.41(k)(2).
- The Twenty-four hour reporting condition lacked language referring to the additional information requirements for combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), or bypasses from 40 C.F.R. 122.41(l)(6)(i). Further, permits reviewed lacked the standard condition for compliance schedules (40 C.F.R. 122.41(l)(5)).
- The Duty to Reapply provision appeared less stringent than federal requirements. 40 C.F.R. 122.41(b)(1) states, “If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.” In addition, 40 C.F.R. 122.21(d) states, “Any POTW with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)” However, the corresponding NDPDES permit condition only indicated, “Any request to have this permit renewed should be made six months prior to its expiration date”, which could suggest there is flexibility with the timing of submittal of a renewal application without the provision requiring Director permission.
- The Transfers permit condition lacked the following language from 40 C.F.R. 122.41(l)(3): “The Director may require modification or revocation and reissuance of the

permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.”

- The Proper operation and maintenance permit condition lacked the following language from 40 C.F.R. 122.41(e): “Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.”
- Permits for non-municipal facilities appeared to lack the additional standard condition at 40 C.F.R. 122.42(a)(1)– (2) regarding notification levels for toxics.

Action Items

Essential

- As per the details provided in the section above, NDDEQ must ensure that permits include all standard conditions consistent with the federal standard provisions established in 40 C.F.R. 122.41 and 122.42.

Recommended

- The PQR did not identify any recommended action items for this section.

E. Administrative Process

Background and Process

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

NDDEQ provided public notice for all its permits. The appendices that accompany the fact sheets described the public notice process and included a copy of the public notice that was published in the newspaper. As part of its process, NDDEQ would send an email with the public notice to a newspaper association who would then distribute the public notice to the appropriate newspaper. The draft permit was also published on NDDEQ’s website and distributed to interested parties via an email listserv. NDDEQ has also mailed hard copies of the public notice and draft permit to local health departments, the permittee, EPA Region 8, and other interested parties, as needed. NDDEQ received both comments electronically and written comments submitted in hard copy and would compile all comments in the working permit file. The permit writer would then provide written responses to all comments received. Public comments and responses were included in the permit Appendices. Permit writers indicated changes to the draft permit in the comment response document as well as a discussion in the comment response appendix accompanying the fact sheet. The number to call in public comments was the general phone number for the DoWQ.

NDDEQ’s public notice web page was under development but included instructions on how to submit comments. At the time of the PQR, NDDEQ staff commented that no permits had ever gone to a public hearing and no permits had been appealed.

Program Strengths

Permit records reviewed appeared to include complete documentation demonstrating that public notice procedures are implemented appropriately and contained complete public notice documents, including confirmations of publication. Permit records, including the fact sheets, provided adequate documentation of comments received and responses provided to commenters.

Areas for Improvement

NPDES regulations at 40 C.F.R. 124.10(d)(vii) require a general description of the location of each existing or proposed discharge point, the name of the receiving water and the sludge use and disposal practices. The public notice for the City of Wahpeton lacked a clear description of the proposed discharge points. In addition, the public notices reviewed for municipal permits and Minn Dak Farmers Cooperative lacked a statement regarding sludge disposal practices, even though the state of North Dakota does not manage the program.

Action Items

Essential

- NDDEQ must ensure that all public notices contain the minimum information stipulated in 40 C.F.R. 124.10(d), including the discharge point(s) and any sludge disposal practices.

Recommended

- NDDEQ should consider updating the template for public notices to address each item detailed in 40 C.F.R. 124.10(d).

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 C.F.R. 124.9 identifies the required content of the administrative record for a draft permit and 40 C.F.R. 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;³ 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

³ Per 40 C.F.R. 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.

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.

NDPDES permit files were maintained primarily in electronic format, but some were retained in hard copy format and were filed at the main office in Bismarck, ND. DoWQ protocol required staff to print out a hard copy of the draft permit and fact sheet to include in the administrative record. Each permit writer determined what information was maintained in the permit file, but information generally included the application, fact sheet, both draft and final versions of the permit, RP summary, copies of public comments and DoWQ responses on the draft permit, and administrative letters. Hard copy files were reviewed and periodically cleaned out, and terminated files were archived off-site (held by the State Historical Society of North Dakota).

For electronic files, once the permit is finalized, all files were moved to the “Facility” section within the “Permit Reissuance” folder in the E-File system. Electronic files were accessible to DoWQ staff through storage on a common network drive which was managed and accessible through the E-File system. The DoWQ ensured there was server redundancy and indicated that there was also permit record redundancy.

Program Strengths

NDDEQ’s administrative records and fact sheets appeared to contain the required elements and both were well organized. NDDEQ maintained and utilized templates to develop fact sheets and, since the 2013 PQR, had bolstered the content of the fact sheets to provide a more thorough supporting document for consistency across different permit writers. Fact sheets were accompanied by various appendices that provided additional justification and discussion of the basis for water quality evaluations and subsequent development of effluent limitations.

Areas for Improvement

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

Action Items

Essential

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

Recommended

- The PQR did not identify any recommended action items for this section.

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 and are reviewed during state PQRs. The national topics areas at the time of the PQR were: Permit Controls for Nutrients in Non-TMDL Waters, Effectiveness of POTW NPDES Permits with Food Processor Contributions, and Small 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 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. In addition, for the purposes of this program area, ammonia is considered a toxic pollutant, not a nutrient.

Regarding nutrients, it should be noted that the state of North Dakota's shared border with Minnesota consists of the Bois de Sioux River to the south, which eventually forms the Red River. The Red River is a shared waterway that flows from the United States (along the border of North Dakota and Minnesota) north into Manitoba, Canada and Lake Winnipeg. This waterway is subject to the Boundary Waters Treaty of 1909, a bilateral agreement between the U.S. and Canada, and is the center of considerable state, federal, and international efforts to address nutrient concentrations and loads. This agreement to protect water quality on both sides of the border is managed through the International Joint Commission (IJC). The IJC has recommended that the concentration of nutrients be kept to a minimum or reduced to the extent possible by economically feasible technology processes. Specifically, the Red River has been identified as a major source of phosphorus loading to Lake Winnipeg in Manitoba. The IJC has recently asked for public comment on establishing concentration and load limits for nutrients at the international border. Additionally, both Minnesota and Manitoba have begun implementing phosphorus permit limits for facilities discharging to the Red River.

NDDEQ has been doing ongoing development of a nutrient reduction strategy since 2013 (a published draft document was released in 2018). The strategy included a planning team and stakeholder group, nutrient criteria development workgroup, watershed prioritization workgroup, agriculture and nonpoint source workgroup, and a municipal and industrial point source workgroup. The NDPDES program had been involved with this nutrient reduction strategy. NDDEQ's approach for including nutrient limitations involved review of receiving

streams for impairments, development of loads and limitations, and the establishment of protocols for including nutrient criteria within permits. During the development of the strategy and criteria, NDDEQ had agreed to include nutrients monitoring in all major permits.

To evaluate how nutrients were addressed in NDPDES permits, EPA reviewed all major permits selected for the PQR to assess the implementation of nutrient monitoring as agreed to by NDDEQ. North Dakota did have a narrative standard for nutrients, which is listed below in the *Program Strengths* section, and federal regulations at 40 C.F.R. 122.44(d)(vii)(A) required permit limits to be developed for any pollutant with RP to cause or contribute to an impairment of water quality standards, whether those standards are narrative or numeric.

The NDPDES program had one permitted facility, the City of Devils Lake wastewater treatment facility (WWTF), with a permitted nutrient effluent limitation. The City of Devils Lake's NDPDES permit included a total phosphorus effluent limitation of 1.7 mg/L. The fact sheet indicated that this nutrient effluent limit had been included since at least 1995, but the rationale for inclusion of the effluent limitation and the basis for this permit limit was unclear. The City of Devils Lake WWTF, which serves approximately 7,500 people, had consistently met the phosphorus effluent limitation (averaging 0.9 mg/L total phosphorus).

Most of the permits reviewed during the PQR discussed TMDLs and none of the permits reviewed had impairments for nutrients.

Program Strengths

NDDEQ published a draft version of its *Nutrient Reduction Strategy for Surface Waters* in 2018. The strategy included a planning team and stakeholder group, nutrient criteria development workgroup, watershed prioritization workgroup, agriculture and nonpoint source workgroup, as well as a municipal and industrial point source workgroup. During development of the strategy and criteria, NDDEQ agreed to include monitoring of nutrients in all major permits. The development of the *Nutrient Reduction Strategy for Surface Waters* helped NDDEQ target and prioritize watersheds and best management practices (BMPs) to achieve cost effective water quality improvements. All POTW permits reviewed during the PQR had at least monthly monitoring requirements for total nitrogen (TN) and total phosphorus (TP). Relevant industrial permits that were reviewed also had nutrient monitoring requirements (e.g., Minn Dak Farms Cooperative had monthly monitoring requirements for TN and TP).

Additionally, the NDPDES and NDDEQ Water Quality Standards programs implemented a general narrative water quality standard. This narrative standard can be found in NDAC Title 33.1-16-02.1-08(1)(a)(6) and indicates that all waters of the state, except for class II ground waters, shall be:

Free from nutrients attributed to municipal, industrial, or other discharges or agricultural practices, in concentrations or loadings which will cause accelerated eutrophication resulting in the objectionable growth of aquatic vegetation or algae or other impairments to the extent that it threatens public health or welfare or impairs present or future beneficial uses.

The narrative nutrient criteria rule became effective January 1, 2019.

Areas for Improvement

Based on the nutrient reduction strategy, the reduction strategy process would begin with stakeholder groups and monitoring but could progress to an analysis of whether a TMDL was necessary. The strategy also included evaluating larger wastewater treatment facilities for financial feasibility of additional nutrient removal technologies and determining whether major point source dischargers demonstrate RP to impair a receiving water. However, the document lacked a clear timeline that would allow EPA to evaluate the progress being made on the strategy. It was unclear where NDDEQ was in this process, how long the collection of monitoring data would last before the next steps are taken, etc.

As mentioned above, the North Dakota water quality standards had a general narrative water quality standard for nutrients (NDAC 33.1-16-02.1-08[1][a][6]). This narrative water quality standard was not discussed in any fact sheet or included in any permit that was reviewed; however, as noted above, the narrative nutrient criteria rule had only become effective a few months prior to the PQR, on January 1, 2019. Per 40 C.F.R. 122.44(d): *Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.* Including a discussion of RP in the fact sheet and the general standard in the permit would strengthen the nutrient protections afforded by the general narrative water quality standard.

NDDEQ's *Nutrient Reduction Strategy for Surface Waters* (page 18) identified one hurdle to overcome was the lack of nutrient monitoring data for most lagoon systems, and it was included as an "action item in this strategy to monitor nutrient concentrations in the discharges from these systems." The inclusion of nutrient monitoring requirements in both minor individual permits and general permits for minor municipal facilities (NDG12xxx, NDG22xxx, NDG32xxx, and NDG42xxx) would help achieve this goal.

EPA is currently revising its water quality trading policy to add greater versatility and highlight its applicability to both TMDL and non-TMDL scenarios. NDDEQ could re-visit this policy to determine whether it may provide a useful tool in North Dakota's *Nutrient Reduction Strategy for Surface Waters* and overall nutrient strategy.

As previously mentioned, the Red River is a shared waterway that flows from the U.S. (along the border of North Dakota and Minnesota) north into Manitoba, Canada and Lake Winnipeg, and is subject to the Boundary Waters Treaty. It is recommended that NDDEQ continue to work with Minnesota, Manitoba, EPA (both Regions 5 and 8), and the International Red River Board to address nutrient concerns in the shared Red River watershed.

Action Items

Essential

- Per 40 C.F.R. 122.44(d), NDDEQ fact sheets need to address whether or not a discharge has reasonable potential to cause an excursion of the narrative nutrient standard.

Recommended

- Develop a timeline associated with the *Nutrient Reduction Strategy for Surface Waters*.
- Include nutrient monitoring in minor individual and relevant general permits if lack of nutrient data is an impediment to developing nutrient criteria or a nutrient reduction strategy.
- Incorporate aspects of water quality trading into the North Dakota *Nutrient Reduction Strategy for Surface Waters*.
- Continue to work with Minnesota, Manitoba, EPA (both Regions 5 and 8), and the International Red River Board to address nutrient concerns in the shared Red River watershed.

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions and Pretreatment Program Evaluation

The general pretreatment regulations (40 C.F.R. 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).

An anticipated 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 were included in the receiving POTW's NPDES permit and documented in the associated fact sheet. Another anticipated PQR goal was compiling information to develop or improve permit writers' tools to be used to improve both POTW and industrial user compliance. Unfortunately, there were no permits chosen during the PQR that met the food processor initiative criteria, so this area was not specifically evaluated.

Additionally, the purpose of the PQR was to evaluate the status of the NDDEQ pretreatment program. In addition to the NDPDES permit evaluations previously discussed in Section III.B.1

(TBELS for Non-POTWs) of the report, the PQR evaluated the following areas of the NDDEQ pretreatment program:

- State pretreatment rules found in NDAC Chapter 33.1-16-01.1 – Pretreatment Regulations.
 - Status of implementation of changes to the general pretreatment regulations at 40 C.F.R. Part 403 adopted on October 14, 2005 (known as the Pretreatment Streamlining Rule).
- Approval Authority implementation, including,
 - Program Oversight;
 - Number of audits and inspections conducted; and
 - Number of SIUs in approved pretreatment programs.
- Control Authority implementation for significant industrial users (SIUs), including categorical industrial users (CIUs), in non-approved programs.
 - Including the number of CIUs discharging to municipalities that do not have approved pretreatment programs.
- Adherence of the Compliance Monitoring Strategy (CMS) program policy for frequency of NDDEQ reviews of approved POTW pretreatment programs and sampling for CIUs/SIUs in non-approved pretreatment programs.

The EPA evaluated information in the ICIS database during the PQR to summarize the data elements related to the NDDEQ's authorization to implement the pretreatment program as an Approval Authority and a Control Authority.

Approval Authority Implementation			
Number of approved pretreatment programs	5 (Bismarck, Grand Forks, Fargo, Mandan, West Fargo)		
Number of SIUs in approved pretreatment programs	37		
Number of field audits and performance compliance inspections (PCIs) conducted	2016	2017	2018
	2	2	3
Control Authority Implementation			
Number of categorical industrial users (CIUs) discharging to municipalities that do not have approved pretreatment programs	18		
Number of CIUs/SIUs inspected	2016	2017	2018
	9	9	10

State Pretreatment Authorization and Memorandum of Agreement (MOA):

NDDEQ was authorized by EPA to administer the NPDES program, including the pretreatment program; this authorization was memorialized in an MOA signed in 1975. NDDEQ was authorized by EPA to implement the pretreatment program pursuant to Sections 307, 402, and 403 of the CWA, 33 U.S.C. Section 1251 et seq., and 40 C.F.R. § 123.24 on September 9, 2005. An addendum to the 1975 MOA was signed to memorialize the 2005 pretreatment

authorization and the establishment of policies, responsibilities, and procedures of the NDDEQ in carrying out the establishment, implementation, and enforcement of the National Pretreatment Program under Sections 307 and 402(b) of the CWA.

Approval Authority Responsibilities:

The NDDEQ has established the pretreatment regulations in Chapter 33.1-16-01.1 of the NDAC. The NDDEQ updated their pretreatment rules to incorporate the 2005 Pretreatment Streamlining Rule promulgated by the EPA. The NDDEQ's amendments to its pretreatment rules were public noticed in fifty-two local newspapers in North Dakota in March 2018 and held a public hearing on May 18, 2018 to allow the public an opportunity to participate in the rule-making. The amendments to the pretreatment rules were adopted and effective on January 1, 2019.

NDDEQ Approval Authority Resources and Implementation Procedures:

EPA evaluated the NDDEQ's implementation as an Approval Authority for the locally-approved pretreatment programs within North Dakota, including resources devoted to the pretreatment program. The NDDEQ had an FTE devoted to the implementation of the pretreatment program, the Pretreatment Coordinator, that also served as a permit writer within the NDPDES program.

The NDDEQ is the Approval Authority for five POTWs with approved pretreatment programs. According to information gathered during the PQR and in the 2018 Pretreatment Annual Reports, 37 SIUs are controlled through these approved pretreatment programs

Program Modification Review and Approvals:

At the time of the PQR, it did not appear that the NDDEQ had received or approved program modifications in the previous three years, and the EPA was unable to evaluate this process during the PQR. The state of North Dakota adopted the 2005 Pretreatment Streamlining Regulations into its state rules, effective January 2019, and the local programs must be required to adopt the required provisions of these regulations into their legal authorities and submit to the NDDEQ for approval.

Approved Pretreatment Program Audits and Performance Compliance Inspections (PCI): Section 1.C of the October 17, 2007 CWA NPDES CMS for the Core Program and Wet Weather Sources Memorandum establishes inspection frequency goals for pretreatment audits, PCIs, and industrial user (IU) inspections.

The 2007 CMS memorandum establishes the pretreatment audit frequency for POTWs with approved pretreatment programs as one audit every five years with oversight IU inspections conducted on at least two IUs discharging to the POTW. The 2007 CMS memorandum also establishes a PCI frequency as at least two PCIs every five years.

The NDDEQ was meeting the CMS goals by performing two audits/PCIs in 2016-2017 and three audits/PCIs in 2018. The EPA was not able to evaluate the contents of the audit reports.

Annual Pretreatment Reports:

Annual reports are submitted to the NDDEQ by the POTWs with approved pretreatment programs, as required in their NPDES permit conditions. These reports are evaluated by NDDEQ and entered into ICIS. The EPA Region 8 is copied on all Pretreatment Annual Reports, as required in the MOA.

Evaluation of Industrial Contributions to POTWs Without Approved Pretreatment Programs:

According to the NDDEQ Pretreatment Coordinator, the service area of POTWs without approved pretreatment programs were evaluated during permit application and permit writing activities. For example, the Town of Casselton was removed from the State's general permit to an individual permit because of the presence of a CIU in the service area. Part F of the EPA NPDES permit application requires permittees to provide information regarding industrial contributions from the service area that may impact the POTW by causing pass-through and interference, including the number of SIUs and CIUs. The NDDEQ will further evaluate these potentially significant industrial users to determine if they need to be permitted.

Control of CIUs/SIUs in POTWs Without Approved Pretreatment Programs:

EPA evaluated the NDDEQ's direct implementation of the pretreatment regulations as the Control Authority for CIUs/SIUs in POTWs without approved pretreatment programs. The evaluation consisted of a conference call and did not consist of a review of pretreatment records. Therefore, the 2019 evaluation of North Dakota's role as a Control Authority was limited. The components of a Control Authority in 40 C.F.R. Part 403.8 of the General Pretreatment Regulations include: Legal Authority, Industrial User Characterization and Inventory, Control Mechanisms for CIUs/SIUs in Municipalities Without Approved Pretreatment Programs, Inspections/Sampling, and Enforcement. These were evaluated as follows:

- *Legal Authority:* The NDDEQ has established the appropriate authority to control SIUs/CIUs in POTWs without approved pretreatment programs in the NDAC. Section 33.1-16-01.1-01(7) defines NDDEQ as the Control Authority, if the POTW does not administer an approved pretreatment program.
- *Industrial User Characterization and Inventory and Control Mechanisms:* It appears that NDDEQ provided adequate coverage for the state of North Dakota in identifying, characterizing, and, if necessary, controlling CIUs and SIUs in POTWs without approved pretreatment programs. The CIUs and SIUs are identified in part by querying if there are any IUs in the service area during POTW inspections or by evaluating the NPDES permit application. There are 19 IUs in a total of 10 municipalities without approved pretreatment programs that are controlled by a control mechanism.
- *Inspections/Sampling:* 40 C.F.R. 403.8(f)(2)(v) of the General Pretreatment Regulations require that the Control Authority "...inspect and sample the effluent from each Significant Industrial User at least once per year..." Based on information gathered during the PQR, the NDDEQ is not meeting the inspections or sampling requirements in 40 C.F.R. 403.8(f)(2)(v). NDDEQ is required, as the control authority, to meet the inspection and sampling frequency of 1/year, as required in 40 C.F.R. 403.8(f)(2)(v) of

the pretreatment regulations. The permitted CIUs/SIUs in the state of North Dakota are a significant distance from the NDDEQ offices. Therefore, EPA recommends NDDEQ collaborate with the local POTWs to share the inspection and sampling duties of SIUs in municipalities without approved pretreatment programs.

- *Enforcement:* It appeared that NDDEQ had an adequate enforcement response plan to address noncompliance that may occur. In addition, it appeared that the Pretreatment Coordinator had the appropriate procedures and support from other NDPDES personnel to carry out either informal or formal enforcement actions. During the PQR pretreatment conference call, the NDDEQ was in the process of evaluating some permittee compliance issues but there did not appear to be any significant pretreatment enforcement cases.

Program Strengths

Many of the strengths of the NDDEQ pretreatment program are highlighted above. These include:

- NDDEQ appeared to have provided adequate coverage of the state of North Dakota for the CIUs/SIUs in POTWs without approved pretreatment programs; 18 CIUs/SIUs were controlled by the NDDEQ. The control of these facilities provided a significant benefit to the POTWs without approved pretreatment programs.
- NDDEQ was adequately meeting the 2007 CMS goals for audit/PCI frequency for approved pretreatment programs.
- NDDEQ had an adequate enforcement response plan to address noncompliance that may occur, and the Pretreatment Coordinator had the appropriate procedures and support from other NDPDES personnel to carry out either informal or formal enforcement actions.

Areas for Improvement

Areas of improvement for the NDDEQ pretreatment program, as mentioned in the *Background* section above, include:

- At the time of the PQR, it did not appear that the NDDEQ had received or approved program modifications in the previous three years and EPA was unable to evaluate this process during the PQR. The state of North Dakota adopted the 2005 Pretreatment Streamlining Regulations into its state rules, effective January 2019, and the local programs must be required to adopt the required provisions of these regulations into their legal authorities and submit to the NDDEQ for approval.
- NDDEQ is required, as the control authority, to meet the inspection and sampling frequency of 1/year for the CIUs/SIUs in municipalities without approved pretreatment programs in 40 C.F.R. 403.8(f)(2)(v).
- To assist with the challenge of permitted CIUs/SIUs in the state of North Dakota that are a significant distance from the NDDEQ offices, EPA recommends NDDEQ collaborate with the local POTWs to share the inspection and sampling duties of SIUs in municipalities without approved pretreatment programs.

Action Items

Essential

- NDDEQ is required, as the control authority, to meet the inspection and sampling frequency of 1/year for the CIUs/SIUs in municipalities without approved Pretreatment programs, as required in 40 C.F.R. 403.8(f)(2)(v) of the pretreatment regulations.
- The state of North Dakota adopted the 2005 Pretreatment Streamlining Regulations into its state rules, effective January 2019, and the local programs must be required to adopt the required provisions of these regulations into their legal authorities and submit to the NDDEQ for approval.

Recommended

- EPA recommends NDDEQ collaborate with the local POTWs to share the inspection and sampling duties of SIUs in municipalities without approved pretreatment programs, for SIUs/CIUs that are a significant distance from the NDDEQ offices.

C. Small MS4 Permit Requirements*Background*

EPA recently updated the small MS4 permitting regulations to clarify: (1) the procedures to be used when coverage is by general permits (see 40 C.F.R. 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 C.F.R. 122.34(a) and (b)); and (3) the requirement that permit terms must be established in a “clear, specific, and measurable” manner (see 40 C.F.R. 122.34(a)).

EPA did not evaluate the Small MS4 Permit Requirements during the PQR as NDDEQ had not updated its Phase II MS4 GP since the MS4 Remand Rule was finalized. Therefore, no review could be conducted on NDDEQ’s Phase II MS4 GP.

Program Strengths

Not evaluated.

Areas for Improvement

NDDEQ needs to update the Phase II MS4 GP to meet the requirements of the MS4 Remand Rule.

*Action Items***Essential**

- NDDEQ needs to update the Phase II MS4 GP to meet the requirements of the MS4 Remand Rule.

Recommended

- The PQR did not fully evaluate this program area, so no recommended action items were identified for this section.

V. REGIONAL TOPIC AREA FINDINGS**A. Whole Effluent Toxicity**

Whole Effluent Toxicity (WET) is a term used to describe the aggregate toxic effect of an aqueous sample (e.g., whole effluent wastewater discharge) as measured by an organism's response upon exposure to the sample (e.g., lethality, impaired growth or reproduction). WET tests replicate the total effect and actual environmental exposure of aquatic life to toxic pollutants in an effluent without requiring the identification of the specific pollutants. WET testing is a vital component of the water quality standards implementation through the NPDES permitting process and supports meeting the goals of the CWA (Section 402), "...maintain the chemical, physical and biological integrity of the nation's waters."

WET tests are designed to predict the impact and toxicity of effluents discharges from point sources into waters of the U.S. WET limits developed by permitting authorities are included in NPDES permits to ensure that the state or tribal water quality criteria for aquatic life protection (WET) are met. WET monitoring requirements that are representative of the discharge effluent (40 C.F.R. Part 122.44(d)(1)(ii)) are included in NPDES permits to generate WET data used to determine whether RP for WET has been demonstrated. If RP has been demonstrated, then a WET limit must be included in the permit (40 C.F.R. Part 122.44(d)(1)(iv) and (v)). WET test results are also used in determining compliance with NPDES WET permit limits.

Background:

NDDEQ implemented the WET program through NDPDES permits. The state had been working on a WET Implementation plan but had not submitted a draft document to the EPA for review. The in-process draft document was intended to assist permit writers with understanding of the implementation of WET in North Dakota issued NDPDES permits. NDDEQ had been developing their WET program over the years, took advantage of regional EPA WET trainings, and had been engaging with the Region 8 WET Coordinator.

For the PQR, reviews of WET implementation were performed on the permits and fact sheets for the selected majors: City of Fargo, City of Mandan, City of Grand Forks, and City of Williston.

Program Strengths

NDDEQ hired a new staff member with WET laboratory testing experience to fill the WET Coordinator role, which was previously filled by the current NDDEQ NDPDES Program Administrator.

Implementation of WET in the NDPDES program included EPA R8 recommended modifications of permit language to include specifications to assist in maintaining WET test parameter controls by laboratories. Overall, NDDEQ implemented changes to WET language in its permits that supported clearer controls for laboratories to ensure consistent and reproducible WET testing data, such as specifications on required species, dilution series, dilution water, temperature, etc. It is recommended that permits include a specified hardness for dilution water which is similar to the instream receiving water hardness. This added specification will assist in ensuring that laboratories do not have the ability to alter the hardness of dilution waters. Having dilution water that is not representative of instream receiving water hardness may keep effluent parameters in solution, where they may otherwise act differently if the water hardness was representative of instream conditions.

NDDEQ had specific WET data elements to be utilized by permit writers to ensure program consistency. Standardization in their database parameters allowed NDDEQ to pull WET parameters with standardized data pulls, which assisted permit writers in making RP determinations. In addition to the specified WET testing datapoints, “W” was used (as of 2017) for denoting outfalls where WET monitoring/limitations are required in permits. This permitting and DMR coding change assisted in improved WET data management.

Regarding the permits reviewed for the PQR, majors were required to submit WET testing results with NDPDES permit applications. For facilities with WET testing requirements already in place, NDDEQ utilized facility data to make WET RP determinations.

Areas for Improvement

It was unclear how RP decisions were made on data that was reported as toxicity units for acute toxicity (TUa) or toxicity units for chronic toxicity (TUc). Due to limitations in reporting of WET data nationally from laboratories, it is recommended that the NDDEQ utilize bench data or raw data supplied by permittees to perform RPA, as well as decisions on monitoring frequency reductions for facilities.

Review of permit fact sheets did not provide clear information on assessments to determine selection of acute WET testing vs. chronic WET testing requirements in permits. Each permit writer made a determination for their assigned permit; however, the selection parameters were not documented well in fact sheets. It is recommended that permit writers provide more information on how WET RP is determined, how species modifications are approved, and how testing reductions are determined and approved.

NDDEQ included language in their permits which provided permittees with the ability to request alternating species for sampling reduction. The alternating species requirements

specified in the permit caused concern, since it would not require testing of both species simultaneously to evaluate potential toxicity impacts that could impact either species during a given timeframe. It is recommended that NDDEQ reinstate testing on two species. The EPA Duluth, Minnesota Office of Research and Development (ORD) laboratory currently recommends that WET requirements for all permitted facilities include performing tests on two species to ensure that protections are in place, since the species utilized in WET testing are sensitive to different parameters and the alternating species regimen does not provide complete information on the WET impacts from the facilities functioning discharges. Barring the two species recommendation, if NDDEQ does opt to utilize only one species to reduce testing burden for facilities, it is recommended that the most sensitive species be chosen and utilized for all WET testing and that there be a caveat for the species reduction that the facility requesting a reduction has no other compliance issues, no uncontrolled industrial users, and a consistent effluent quality.

Action Items

Essential

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

Recommended

- It is recommended that the NDDEQ utilize bench data or raw data supplied by permittees to perform RPA, as well as decisions on monitoring frequency reductions for facilities.
- It is recommended that permit writers provide more information on how WET RP is determined, how species modifications are approved, and how testing reductions and methods are determined and approved.
- EPA ORD recommends that WET requirements for all permitted facilities include performing tests on two species to ensure that protections are in place. However, if NDDEQ does opt to utilize only one species to reduce testing burden for facilities, it is recommended that the most sensitive species be chosen and utilized for all WET testing and that there be a caveat for the species reduction that the facility requesting a reduction has no other compliance issues, no uncontrolled industrial users, and a consistent effluent quality.

B. Steam Electric 316(b)

Background

EPA promulgated the Steam Electric Power Generating Effluent Guidelines and Standards (40 CFR Part 423) in 1974, and amended the regulations in 1977, 1978, 1980, 1982 and 2015. The Steam Electric regulations cover wastewater discharges from power plants operating as utilities and are incorporated into NPDES permits.

Steam electric plants use nuclear or fossil fuels (such as coal, oil and natural gas) to heat water in boilers, which generates steam to drive turbines connected to electric generators. The plants

generate wastewater in the form of chemical pollutants and thermal pollution (heated water) from their water treatment, power cycle, ash handling and air pollution control systems, as well as from coal piles, yard and floor drainage, and other miscellaneous wastes. These activities are included within the following NAICS codes:

- 221112 – Fossil Fuel Electric Power Generation
- 221113 – Nuclear Electric Power Generation

The Steam Electric Power Generating Effluent Guidelines apply to a major portion of the electric power industry. NDDEQ has implemented these regulatory requirements in its 316(b) permits. Prior to the PQR, EPA had provided comments on previously issued NDPDES 316(b) permits and worked with NDDEQ to address those comments.

Program Strengths

Based on EPA's review of the Otter Tail Power Company and Basin Electric Power Cooperative permits, EPA determined these permits met all the items outlined in the PQR NPDES Core Review Checklist. Specifically, these permits satisfied the following key requirements:

- 40 C.F.R. Part 423 – Steam Electric Effluent Limitation Guidelines; and
- 40 C.F.R. Part 125, Subpart J – Requirements Applicable to Cooling Water Intake Structures for Existing Facilities Under Section 316(b) of the CWA and the accompanying permit application and supporting information requirements under 40 C.F.R. 122.21(r).

Areas for Improvement

The PQR review team did not identify any specific essential or recommended actions for this PQR component. This is mainly due to EPA's work with NDDEQ prior to the 2019 PQR; to review and address issues on its 316(b) permits during permit development/issuance.

Action Items

Essential

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

Recommended

- The PQR did not identify any recommended action items for this section.

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 June 24–27, 2013. 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 Last PQR [2013]

Program Area	Action Item Title	Status Update
Basic Facility Information and Permit Application	Ensure that permit applications are complete including proper signatures, attachments, and adequate data consistent with 40 C.F.R. Part 122, Appendix D, that they are submitted on-time, and that they are included in the administrative record. (Category 1)	(In progress)
	Review North Dakota Short Form A to consider revisions clarifying which applicants may submit Short Form A and requiring submittal of additional information, including data analyses, facility location map and process flow diagram, to comply with NPDES regulations at 40 C.F.R. 122.21. (Category 1)	(Resolved) Will print and put in Dropbox. NDDEQ updated Short Form A.
Technology-based Effluent Limitations	Provide description of facility operations, clearly describe facility treatment processes, and discuss the applicability of federal technology standards to the discharge and basis for final effluent limitations. (Category 1)	(Resolved) NDDEQ has made requested changes
	Include information on the basis and/or rationale for all technology-based and water-quality based effluent limitations as required.	(In progress) Rationale included in table with justification.

Program Area	Action Item Title	Status Update
	Including state or regional variances or NDDoH policies. (Category 1)	
Water Quality-Based Effluent Limitations	Ensure that effluent limitations are established for all parameters for which RP exists, specifically for ammonia limitations. (Category 1)	(In progress) NDDEQ utilizes calculation in permits.
	Ensure that the fact sheet and other permit documents provide rationale for, and articulate, anti-backsliding requirements, especially in cases where an effluent limitation is less stringent than the limitation contained in the previous permit. (Category 1)	(In progress) NDDEQ will change/add standardized language noted in PQR findings.
Standard and Special Conditions	Work with the Region to ensure standard conditions reflect the correct requirements. (Category 1)	(In progress) PQR findings noted some needed updates. NDDEQ will address.
Documentation (including fact sheet)	Ensure that permit documentation clearly indicates the basis and/or rationale for all TBELs and WQBELs. (Category 1)	(In progress) NDDEQ updated boilerplates and will update any additional findings noted.
	Ensure that the permit record, including the fact sheet, document how ELG-based effluent limitations are developed. Information that would strengthen the fact sheet and permit record include a detailed facility description, categorization as it relates to the ELG, identification and illustration of any factors that are involved in calculating production-based effluent limitations, and an illustration of the calculation of final ELG-based effluent limitations. Further, the fact sheet <i>should</i> describe the permit writer's evaluation when WQBELs are more appropriate than TBELs for a specific discharge. (Category 1)	(In progress) NDDEQ has established training, as well as a review process to ensure permits contain information.

Program Area	Action Item Title	Status Update
Pretreatment - For general program management:	At a minimum, update NDDOH’s Pretreatment legal authority in Chapter 33.16-01.1 of the State Rules to include the required provisions in EPA Pretreatment Streamlining Rule. Additionally, EPA recommends the NDDoH incorporate all provisions – both required and optional - to allow the local Pretreatment programs to adopt them. The deficiencies in the NDDoH’s State Pretreatment Regulations are provided in the attached State of North Dakota – Legal Authority Review. (Category 1)	(In progress)
Pretreatment - For POTWs without Approved Pretreatment Programs:	Ensure that NDPDES permits for POTWs without approved program contain a reopener clause that the permit can be reopened to require development of a local Pretreatment program, if determined necessary. (Category 1)	(Resolved), Boilerplate updated
	Meet the inspection and sampling frequency of 1/year, as required by 403.8(f)(2)(v) of the Pretreatment regulations. (Category 1)	(Resolved) Completed, in inspection plan.
	Ensure the Pretreatment records are in good order and complete, including Pretreatment annual reports, correspondence, PCA/PCI reports, and applicable enforcement records. (Category 1)	(Resolved), Based on PQR follow-up correspondence
Pretreatment - For POTWs with Approved Pretreatment Programs:	Update the Pretreatment boilerplate language to implement the NPDES requirement at 40 C.F.R. 122.44(j)(2)(ii), which requires a POTW to “Provide a written technical evaluation of the need to revise local limits under 40 C.F.R. 403.5(c)(1), following permit issuance or reissuance.” Include a time frame of 12 months	(Resolved), boilerplate updated

Program Area	Action Item Title	Status Update
	after permit issuance or reissuance to submit the written technical evaluation. (Category 1)	
	Perform pretreatment program audits for POTWs with approved Pretreatment programs. Perform a Pretreatment program audit at one POTW each year in place of a PCI. (Category 1)	(Resolved) On workplan.
	Submit all program audit, PCIs, and facility inspection reports to EPA, per Section IV.a of the 2005 MOA. (Category 1)	(In progress)
Stormwater	The current permit does not include all of the requirements from the Effluent Guidelines for the Construction and Development Point Source Category at 40 C.F.R. Part 450. These regulations were revised and finalized in 2014 and the requirements therein will need to be included in the reissuance of the permit. Of specific note, the permit does not have procedures or control measures designed to provide stream buffers. (Category 1)	(Resolved) Done, updated stormwater construction permit.
WET	Clearly describe and document permitting decisions in fact sheets and administrative records of permits. (Category 1)	(In progress) NDDEQ has included additional supporting information on WET decisions in permits.
CAFO	Update the state CAFO rules to be in compliance with the 2008 regulatory changes by submitting a final authorizing package for EPA approval that includes: 1) final state CAFO regulations; 2) a revised state program description; and 3) an Attorney General statement outlining the authorities of the state program (40 C.F.R. 123.62). North Dakota's CAFO program revision will become effective for purposes of the CWA, upon EPA's approval. (Category 1)	(Resolved) Completed with 2017 legislative session.

VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

This section provides a summary of the recommendations from the last PQR, conducted June 24–27, 2013, 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” or “Category 3” action items. EPA is consolidating these two categories of action items into a single category: Recommended.

Table 2. Recommended Action Items Identified During 2013 PQR

Program Area	Action Item Title	Status
<p>Basic Facility Information and Permit Application</p>	<p>Include greater detail in permit applications regarding facility operations and treatment processes, in particular for non-municipal facilities. Greater detail enables straightforward facility categorization and identification of applicable ELGs. (Category 2)</p>	<p>(Resolved) Based on EPA’s review of the Otter Tail Power Company, ND-0024996 and Basin Electric Power Cooperative Lelands Olds Station, ND-0025232 permits, EPA determined these permits meet all the items outlined in the PQR NPDES Core Review Checklist. Specifically, these permits meet the following key requirements:</p> <ul style="list-style-type: none"> • 40 C.F.R. Part 423 – Steam Electric Effluent Limitation Guidelines. • 40 C.F.R. Part 125, Subpart J – Requirements Applicable to Cooling Water Intake Structures for Existing Facilities Under Section 316(b) of the CWA and the accompanying permit application and supporting information requirements under 40 C.F.R. 122.21(r).
<p>Technology-based Effluent Limitations</p>	<p>Ensure the permit record demonstrates how the permit writer considered applicable ELGs. NDDoH should also consider developing boilerplate language for fact sheets to address the applicability of ELGs to industrial facilities. (Category 3)</p>	<p>(In progress)</p>
<p>Water Quality-Based Effluent Limitations</p>	<p>Consider developing boilerplate language describing how pollutants of concern are identified and clarifying that this evaluation is to</p>	<p>(In progress) May add a paragraph, may not call it “pollutants of concern”.</p>

Program Area	Action Item Title	Status
	be conducted for each permit renewal. (Category 2)	
Monitoring and Reporting	Clearly identify the location for effluent and influent monitoring in all permits. (Category 2)	(Resolved) Noted/reviewed and discussed during 2019 PQR- permits consistently identified appropriate monitoring locations
Administrative Process (including public notice)	Consider including clear evidence in fact sheets and the permit record indicating whether or not NDDoH received comments on the permit. (Category 2)	(Resolved) Based on 2019 PQR- comments/responses are recorded in fact sheets per NDDEQ procedures.
	Continue developing tools and protocols to bolster internal quality assurance/control processes to ensure both permit quality and procedural consistency. (Category 2)	(In progress)
Documentation (including fact sheet)	Provide a rationale for the lack of minimum percent removal requirements for BOD ₅ at municipal facilities. (Category 2)	(Resolved) Utilizing R8 language based on periodic flows and lack of adequate calculation.
	Ensure permit files include complete documentation of RP analyses and effluent limitation calculations. (Category 2)	(Resolved) Appendix C of permits
National Topic Areas - Nutrients	No specific action items were recommended by EPA Region 8; however, R8 would appreciate updates on the progress of the stakeholder meetings, as well as updates on how the region can support the NDPDES program in making progress on nutrient management (Category 3).	(In progress) Nutrient reduction applies to majors and select minors (industrial minors, TN & TP)
Pretreatment - For general program management:	Evaluate NDDoH pretreatment program staffing to ensure appropriate coverage when the current Pretreatment Coordinator is out of the office for extended periods for duty in the National Guard. (Category 2)	(Resolved) new Pretreatment Coordinator hired
Pretreatment - For POTWs without Approved	Update the Fact Sheets for POTWs without approved Pretreatment programs to designate and justify whether a Pretreatment program is required or not. (Category 2)	(Resolved), fact sheet boilerplate updated

Program Area	Action Item Title	Status
Pretreatment Programs:		
	Determine whether there are CIUs/SIUs that have not been identified for POTWs without approved Pretreatment programs by having the Pretreatment Coordinator collaborate with NDPDES inspectors. Use data submitted in Part F of EPA NPDES permit application which requires permittees to provide information regarding industrial contributions that may impact the POTW by causing pass-through and interference, including the number of SIUs and CIUs. (Category 2)	(Resolved), SOP updated
	Develop inspection reports that provide adequate detail on the facility, its process, operating practices, chemical storage, wastewater generation, and wastewater management practices (including treatment, recycling, and offsite management). Include in inspection reports digital photos of these areas relevant to Pretreatment to supplement narrative information. (Category 2)	(In progress)
	Issue permits to the other identified CIUs/SIUs in POTWs without approved programs. The permit-by-letter control mechanism establishes enforceable permit conditions and provides adequate notification to the permittee regarding discharge limits, and requirements for monitoring, notification, and reporting. (Category 2)	(In progress)

Program Area	Action Item Title	Status
	Evaluate collaboration with the local POTWs to share the inspection and sampling duties of CIUs/SIUs and meet the required inspection and monitoring frequencies of 1/year, as required in the Pretreatment regulations. (Category 2)	(In progress)
	Evaluate the City of Wahpeton to determine if it needs an approved Pretreatment program. This will help the NDDoH resources by requiring the City of Wahpeton to provide local control of the Bobcat, Com Del Innovations, and Heartland Precision LLC facilities. EPA is available to help the NDDoH for this evaluation. (Category 2)	(In progress)
Pretreatment - For POTWs with Approved Pretreatment Programs:	Update the fact sheets for Mandan and Fargo to provide a date when the Pretreatment program was approved and if there have been any program modifications since then. (Category 2)	(In progress)
Stormwater	Applicants would benefit from the inclusion of a notice on the permit application form of eligibility for coverage along with a certification that the applicant is aware of eligibility requirements for permit coverage. (Category 3)	(Resolved) Automatic coverage after 7 days. Email confirmation of submittal.
WET	Ensure proper implementation of both chronic and acute testing where dilution factors indicate chronic conditions. (Category 2)	(In progress) NDDEQ updating WET procedures to address suggestions made by R8 during WET training.
	Provide more information in fact sheets on how WET RP is determined, how species modifications are approved, and how testing reductions are calculated and approved. (Category 2)	(In progress) NDDEQ updating WET procedures to address suggestions made by R8 during WET training.
	Finalize the North Dakota WET RP Policy and provide it to Region 8 for review. (Category 2)	(In progress) In draft

Program Area	Action Item Title	Status
	When permittees are placed on reduced monitoring, include reference to lab report and summary of WET analysis data, not DMR data alone, in permit records. (Category 3)	(In progress) NDDEQ will update WET implementation plan and has hired new staff to address WET.
Septage	EPA requests that the NDPDES program provide EPA R8 with Septage Program needs so the region can support progress in this area. (Category 3)	(Resolved) January 1, 2014 Permittees have to have septage sign off.
CAFO	Use the CAFO regulatory crosswalk that EPA shared with NDDoH to assist in adoption of the 2008 CAFO rule, and submit it along with the final regulatory package. (Category 2)	(Resolved) CAFO updates completed with 2017 legislative session.

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 North Dakota’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)
Permit Application Requirements	<ul style="list-style-type: none"> • NDDEQ must ensure that all permit applications satisfy the information and data requirements established in 40 C.F.R. Part 122.21(g)(7) and (j)(4). • NDDEQ must ensure that all permit applications comply with the signatory requirements contained in 40 C.F.R. 122.22
TBELs for POTWs	<ul style="list-style-type: none"> • NDDEQ must ensure that permits address applicable percent removal requirements for POTWs consistent with federal secondary treatment standards established at 40 C.F.R. 133.102.
Reasonable Potential and WQBELs Development	<ul style="list-style-type: none"> • <u>Reasonable Potential</u> <ul style="list-style-type: none"> • NDDEQ must ensure that all pollutants are evaluated for reasonable potential and that documentation of the analysis is in the administrative record, in accordance with 40 C.F.R. 122.44(d). • <u>WQBEL Development</u> <ul style="list-style-type: none"> • NDDEQ must develop WQBELs for all pollutants that demonstrate RP, in accordance with 40 C.F.R. 122.44(d)(1)(i). • NDDEQ must ensure that permit limits comply with federal regulations found in 40 C.F.R. 133.
Final Effluent Limitations and Documentation of Effluent Limitations Development	<ul style="list-style-type: none"> • NDDEQ must ensure that effluent limitations are as stringent as those established in the previous permit, consistent with 40 C.F.R. 122.44(l), unless an exception is applicable in accordance with 40 C.F.R. 122.44(l)(2)(i).
Establishing Monitoring and Reporting Requirements	<ul style="list-style-type: none"> • NDDEQ must include requirements for permittees to use sufficiently sensitive EPA approved analytical methods in all NDPDES permits, in accordance with 40 C.F.R. 122.44(i). • Per 40 C.F.R. 122.21(e), NDDEQ must ensure that application data are collected using sufficiently sensitive EPA approved analytical methods.
Standard and Special Conditions	<ul style="list-style-type: none"> • As per the details provided in this section, NDDEQ must ensure that permits include all standard conditions consistent with the federal standard provisions established in 40 C.F.R. 122.41 and 122.42.
Administrative Process	<ul style="list-style-type: none"> • NDDEQ must ensure that all public notices contain the minimum information stipulated in 40 C.F.R. 124.10(d), including the discharge point(s) and any sludge disposal practices.

Nutrients	<ul style="list-style-type: none"> Per 40 C.F.R. 122.44(d), NDDEQ fact sheets need to address whether or not a discharge has reasonable potential to cause an excursion of the narrative nutrient standard.
Pretreatment	<ul style="list-style-type: none"> NDDEQ is required, as the control authority, to meet the inspection and sampling frequency of 1/year for the CIUs/SIUs in municipalities without approved Pretreatment programs, as required in 403.8(f)(2)(v) of the pretreatment regulations. The state of North Dakota adopted the 2005 Pretreatment Streamlining Regulations into its state rules, effective January 2019, and the local programs must be required to adopt the required provisions of these regulations into their legal authorities and submit to the NDDEQ for approval.
Municipal Separate Storm Sewer Systems (MS4s)	<ul style="list-style-type: none"> NDDEQ needs to update the Phase II MS4 GP to meet the requirements of the MS4 Remand Rule.

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

Topic	Action(s)
TBELs for POTWs	<ul style="list-style-type: none"> • NDDEQ should ensure that fact sheets provide a thorough discussion of applicable TBELs (e.g., percent removal requirements) and a rationale for the establishment, or omission, of applicable TBELs in permits.
TBELs for Non-POTW Dischargers	<ul style="list-style-type: none"> • NDDEQ should ensure that fact sheets provide a thorough discussion of applicable ELGs, including the determination of appropriate ELG categorization and performance levels applicable to establishing TBELs. • It is recommended that an approval date for the City of Mandan’s pretreatment program be included in the fact sheet for the City of Mandan. • It is recommended that language be included in the City of Wahpeton’s permit, specifying the ability to modify the permit to develop a pretreatment program, if necessary, and submission to the NDDEQ for approval in Part IV.E – Permit Actions. This modification for cause is recommended to be included in all permits issued to municipalities without an approved pretreatment program to provide advanced notice to the Permittee(s), should this action ever be necessary.
Reasonable Potential and WQBELs Development	<ul style="list-style-type: none"> • <u>Reasonable Potential</u> <ul style="list-style-type: none"> • NDDEQ should consider increasing the monitoring frequency to ensure sufficient data are available to conduct RPAs. • <u>WQBEL Development</u> <ul style="list-style-type: none"> • NDDEQ should provide a sufficient explanation for the inclusion or omission of WQBELs where the discharge demonstrates RP.
Final Effluent Limitations and Documentation of Effluent Limitations Development	<ul style="list-style-type: none"> • NDDEQ should ensure that fact sheets address anti-backsliding and antidegradation evaluations specific to the permit and discharge. • NDDEQ should ensure that fact sheets discuss the basis for effluent limitations, especially those that are continued from the previous permit.
Administrative Process	<ul style="list-style-type: none"> • NDDEQ should consider updating the template for public notices to address each item detailed in 40 C.F.R. 124.10(d).
Nutrients	<ul style="list-style-type: none"> • Develop a timeline associated with the <i>Nutrient Reduction Strategy for Surface Waters</i>. • Include nutrient monitoring in minor individual and relevant general permits if lack of nutrient data is an impediment to developing nutrient criteria or a nutrient reduction strategy.

	<ul style="list-style-type: none"> • Incorporate aspects of water quality trading into the North Dakota <i>Nutrient Reduction Strategy for Surface Waters</i>. • Continue to work with Minnesota, Manitoba, EPA (both Regions 5 and 8), and the International Red River Board to address nutrient concerns in the shared Red River watershed.
Pretreatment	<ul style="list-style-type: none"> • EPA recommends NDDEQ collaborate with the local POTWs to share the inspection and sampling duties of SIUs in municipalities without approved pretreatment programs, for SIUs/CIUs that are a significant distance from the NDDEQ offices.
WET	<ul style="list-style-type: none"> • It is recommended that the NDDEQ utilize bench data or raw data supplied by permittees to perform RPA, as well as decisions on monitoring frequency reductions for facilities. • It is recommended that permit writers provide more information on how WET RP is determined, how species modifications are approved, and how testing reductions and methods are determined and approved. • EPA ORD recommends that WET requirements for all permitted facilities include performing tests on two species to ensure that protections are in place. However, if NDDEQ does opt to utilize only one species to reduce testing burden for facilities, it is recommended that the most sensitive species be chosen and utilized for all WET testing; and that there be a caveat for the species reduction that the facility requesting a reduction has no other compliance issues, no uncontrolled industrial users, and a consistent effluent quality.