

Final

**Region 10 NPDES Program and Permit Quality
Review**

Oregon

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Contents

Executive Summary.....	3
I. PQR BACKGROUND.....	5
II. STATE PROGRAM BACKGROUND	7
A. Program Structure	7
B. Universe and Permit Issuance	10
C. State-Specific Challenges.....	11
D. Current State Initiatives	11
III. CORE REVIEW FINDINGS.....	12
A. Basic Facility Information and Permit Application	12
1. Facility Information	12
2. Permit Application Requirements	13
B. Developing Effluent Limitations	14
1. Technology-based Effluent Limitations.....	14
2. Reasonable Potential and Water Quality-Based Effluent Limitations	16
3. Final Effluent Limitations and Documentation	19
C. Monitoring and Reporting Requirements	21
D. Standard and Special Conditions.....	22
E. Administrative Process.....	24
F. Administrative Record and Fact Sheet	25
IV. NATIONAL TOPIC AREA FINDINGS.....	26
A. Permit Controls for Nutrients in Non-TMDL Waters.....	27
B. Effectiveness of POTW NPDES Permits with Food Processor Contributions	29
C. Small Municipal Separate Storm Sewer System (MS4) Permit Requirements	31
V. REGIONAL TOPIC AREA FINDINGS	32
VI. REVIEW OF PROGRESS ON ESSENTIAL ACTION ITEMS FROM LAST PQR	33
Table 1. Essential Action Items Identified During Last PQR <i>2015</i>	33
VII. RECOMMENDED ACTION ITEMS FROM LAST PQR.....	35
Table 2. Recommended Action Items Identified During 2015 PQR.....	35
VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE	39
Table 3. Essential Action Items from FY 2018-2022 PQR Cycle	39
Table 4. Recommended Action Items from FY 2018-2022 PQR Cycle.....	40
Appendix A: Review of Draft Permit Quality Review for 2020, Oregon DEQ NPDES Permit Program	41

Executive Summary

Purpose and Approach

This report presents results of a Program and Permit Quality Review (PQR) of the Oregon Department of Environmental Quality (DEQ) NPDES permitting program National Pollutant Discharge Elimination System (NPDES) in Region 10. U.S. Environmental Protection Agency (EPA) conducted the PQR in 2020 to provide oversight of the state NPDES program under the authority of the Clean Water Act (CWA). Helping states ensure that their NPDES permits are consistent with Federal requirements is a fundamental priority for EPA.

The review examined DEQ's NPDES administrative record for selected permits, gathered information from the State about their NPDES program structure and organization. As part of the review the EPA review team conducted a virtual visit during which the EPA review team collected additional information and shared preliminary findings with the State. The review followed EPA's national NPDES PQR Standard Operating Procedure (SOP), examining permit and program "core" elements, and permit requirements associated with national topic areas for the current PQR cycle. Core elements include permit administration, effluent limits, monitoring requirements, standard conditions, and special conditions. The national topic areas for the fiscal year (FY) 2018 – 2022 PQR cycle are:

- Permit Controls for Nutrients in Non-TMDL Waters,
- Effectiveness of POTW NPDES Permits with Food Processor Contributions,
- Small Municipal Separate Storm Sewer System (MS4) Permit Requirements

Region 10 did not elect to review any regional topic areas in this PQR.

Oregon administers 331 individual permits and 19 general permits that cover 3,346 permittees. As of July 20, 2020, 24 percent of Oregon's individual permits are current.

Major Findings

The PQR found permits issued by Oregon DEQ were generally well-developed and consistent with federal regulations. The Oregon DEQ has made significant improvements and forward progress towards improving permit and program quality, developing and implementing standard processes and templates, developing a unified and dedicated permit team, and reducing permit backlog.

The PQR recognizes the many state and region-specific challenges faced by the state of Oregon, including significant permit backlog. The PQR identified areas for improvement associated with the processing of permit renewal applications being submitted past due or incomplete in terms of effluent monitoring data requirements, nutrient permitting, and pretreatment inspections.

In addition to these items listed above, the report provides an overview of the Oregon NPDES permitting program.

Action Items

The PQR identifies four essential and four recommended action items. Essential action items must be addressed by DEQ to meet NPDES regulations and will be subject to agreed-upon milestones and due dates as a part of a workplan to be developed by both EPA and DEQ. Essential action items from this PQR concern permit application requirements and nutrient permitting. Essential and Recommended action items from this PQR are listed in Table 3 and 4 at the end of this document.

The state of Oregon reviewed and provided comments on the draft PQR report. The state has reviewed the draft PQR's findings and recommendations and committed to working with EPA on prioritizing and implementing solutions for essential action items. Several of these actions are already underway and are described later in this document.

I. PQR BACKGROUND

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

EPA conducted a PQR of the Oregon NPDES permitting program on September 14–18, 2015. The PQR summary report is available at: https://www.epa.gov/sites/production/files/2016-08/documents/npdes_permit_quality_review_for_oregon_feb_2016.pdf. The evaluation team proposed various action items to improve the Oregon NPDES permitting program. As part of the current PQR, EPA requested updates from Oregon on the progress on those action items. Of the 14 action items identified during the last PQR as being Essential¹ tasks, 11 have been resolved and the remainder represent actions that are either longer-term activities or lower-level actions which Oregon is still addressing. In addition, EPA identified Recommended action items to improve Oregon's program. Oregon has chosen to implement 18 of the Recommended actions. Sections VI and VII of this report contain a detailed review of the progress on action items identified during the last PQR.

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

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

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

EPA's review team, consisting of ten Region 10 staff and one EPA contractor staff person, conducted a review of the Oregon NPDES permitting program. The PQR was conducted remotely, meaning a review of materials was conducted off-site, for materials DEQ was able to provide electronically. Further, the remote PQR included interviews and discussions conducted via conference calls. An opening interview was held on July 20, 2020, a discussion with DEQ

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.

staff regarding specific permit questions on July 21 and 22, 2020, and a closing meeting on July 23, 2020.

The Oregon PQR included reviews of core permit components and national and regional topic areas, as well as discussions between the PQR review team and Oregon staff addressing their program status and permit issuance process. The permit reviews focused on core permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports or documents that provide the basis for the development of the permit conditions and related administrative process. The PQR also included conversations between EPA and the state on program status, the permitting process, responsibilities, organization, staffing, and program challenges the state is experiencing.

A total of ten individual permits and two general permits were reviewed as part of the PQR. Of these, all ten individual permits were reviewed for the core review, two individual permits and one general permit were reviewed for national topic areas. Some permits were reviewed for both the core review and one or more topic areas reviews. Permits were selected based on issue date and the review categories that they fulfilled. See summary table below.

NPDES No.	Permit Name	POTW	Non-POTW	Major	Minor	Nutrients in Non TMDL Waters	Pre-treatment Food Processors	Small MS4
OR0020354	BROOKINGS, CITY OF							
OR0001635	DYNO NOBEL INC.							
OR0001341	GEORGIA-PACIFIC TOLEDO LLC							
OR0020621	ONTARIO, CITY OF							
OR0020401	SEASIDE, CITY OF							
OR0020664	TILLAMOOK, CITY OF							
OR0020524	TROUTDALE, CITY OF							
OR0020605	JOSEPH, CITY OF							
OR0027219	SUNDOWN SANITARY SEWER DISTRICT							
OR0026905	COLUMBIA BOULEVARD WWTP							
	PHASE II GENERAL PERMIT							
	700PM GENERAL PERMIT							

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 Oregon NPDES program. Core topic area permit reviews are conducted to evaluate similar issues or types of permits in all states.

Topic Area Reviews

The national topics reviewed in the Oregon NPDES program were Permit Controls for Nutrients in Non-TMDL Waters, Small Municipal Separate Storm Sewer System (MS4) Permit Requirements, and Effectiveness of POTW NPDES Permits with Food Processor Contributions.

Regional topic area reviews target regional-specific permit types or particular aspects of permits. EPA did not select any regional topics for this PQR, as there were no systemic issues identified during routine real-time review of permits that elevated to the PQR review level.

II. STATE PROGRAM BACKGROUND

A. Program Structure

DEQ's water quality permitting program is located within the Water Quality Program (WQP). In 2018, DEQ underwent reorganization towards a media-specific administration (previously it was two programs: Environmental Solutions and Operations), divided into three programs: Air Quality, Land Quality, and Water Quality, in addition to a division for Lab Administration. Further, DEQ includes supporting groups focused on Implementation (facilitates collaboration between DEQ headquarters and regional offices), Policy and External Relations (supports communications, legislative, and budgetary proposals), and Central Services (supports internal administration and business functions for DEQ).

The WQP is led by a Division Administrator and Deputy Administrator. The WQP is comprised of the following sections: Watershed Management, Permitting and Program Development, Standards and Assessments, Community and Program Assistance, 401 Certifications and Water Quality Trading, Stormwater and Underground Injection Control (UIC), and Water Pollution Control Facilities. The WQP is also responsible for developing policy and implementing Oregon's state-specific programs, including groundwater protection, biosolids management, water reuse, and regulation of onsite sewage systems.

In addition to a location at DEQ's headquarters office in Portland, the WQP operates in three regions, each having additional offices: Northwest (Portland, and Tillamook), West (Salem, Eugene, Medford, and Coos Bay), and East (Pendleton, Klamath Falls, The Dalles, and Bend). WQP also includes a water quality monitoring and assessment group within DEQ's Laboratory and Environmental Assessment Division. Each regional office implements the permits program within the region by writing and administering permits, ensuring compliance through discharge monitoring report (DMR) review and inspections, initiating enforcement actions, responding to

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

complaints, and conducting plan reviews. Regional office staff also draft minor and major domestic and industrial wastewater permits and implement the general permits.

The previous PQR report cited an action item related to regional differences in permitting approaches. DEQ has addressed this issue as the agency no longer designates region-specific permit writers; rather, there is a focus on identifying the expertise and skill required for the specific permit assignment. In addition, DEQ has realized improved coordination between the headquarters office and regional offices. Further, the culture at DEQ has shifted away from a regionalized culture and towards a culture of “One DEQ.”

The WQP section has eight full-time equivalents (FTE) for NPDES individual wastewater permit writing and three FTE for stormwater permit writing. On average, each permit writer drafts five permits per year. In addition to permit writers, DEQ staff that also support NPDES permitting includes approximately nine other positions in headquarters that act as subject matter experts in a variety of fields (e.g., pretreatment, biosolids, reuse water, temperature, monitoring and data, mercury), a quality assurance (QA) team, a general permit coordinator, plus management and coordination staff. In addition, the regional offices employ compliance staff and engineering staff to conduct plan reviews; regional staff are not solely dedicated to NPDES support. Staff supporting stormwater permitting include 2.5 FTE for permit coordination work and 9 FTE for implementation support (e.g., inspections, compliance and enforcement, application review and approval).

DEQ trains new permit writers through internal mentoring with a more experienced permit writer, completing EPA’s NPDES Permit Writers’ Course online and when available, attending the course in person. Further, EPA Headquarters notes that DEQ permit writers have attended EPA’s NPDES Whole Effluent Toxicity (WET) training course (held at a neighboring state’s location). EPA also notes that an NPDES WET online training course is available to permit writers on EPA’s NPDES website. In addition, collaboration with the WQP’s subject matter experts and working through the WQP QA process offers a continuous training tool for DEQ permit writers. A team of individuals referred to in DEQ’s flow and process charts as “Direct Support” oversee permit writers and provides them with managerial, technical, and program support. In addition, WQP permit writers collaborate with subject matter experts who provide additional technical support for specialized program areas. For example, the WQP includes subject matter experts for biosolids, pretreatment, mixing zones, temperature water quality criteria implementation, reasonable potential analysis (RPA) and toxics criteria implementation, antidegradation, compliance and enforcement, and engineering, amongst other unique program areas.

DEQ uses several data systems to support the NPDES program. DEQ’s Water Quality Source Information System database (WQSYS) contains information on NPDES permits. The database is searchable by staff and the public and is available on DEQ’s website:

<http://www.deq.state.or.us/wq/sisdata/sisdata.asp>. In addition, DEQ’s Agency Wide Compliance and Enforcement System database (ACES) assists in managing compliance and enforcement information. DEQ manages permit monitoring data using NetDMR and EPA’s Integrated Compliance Information System (ICIS)–NPDES system. DEQ obtains stream and

effluent data related to toxic parameters and input values for the Copper and Aluminum Biotic Ligand Model (BLM) from the Ambient Water Quality Management System (AWQMS).

WQP permit writers use a variety of tools and document templates to develop individual NPDES permits to ensure consistency in permit writing and guide data requirements necessary for developing appropriate effluent limitations and permit conditions. For instance, DEQ developed a permit writing process flow chart to support permit writers and identify subject matter experts with whom they should collaborate during permit development. The flow chart illustrates the permit development process according to WQP role (e.g., permit writers, direct support, or subject matter expert) and permit component (e.g., mixing zone analysis, RPA, effluent limitation development, and public notice). Permit writers use templates for most permit components, including permits, fact sheets, public notices, and data request letters. In addition, general permit approval and acknowledgment letters and forms are developed based on templates. DEQ houses many permit tools and development templates on their website: <https://www.oregon.gov/deq/wq/wqpermits/Pages/NPDES-Individual-Permit-Template.aspx>. DEQ also uses other tools such as various RPA spreadsheets, the Streeter-Phelps model and CORMIX, and an extensive set of permitting resources. DEQ has developed numerous written guidance documents for permit development, including a variety of Internal Management Directives (IMDs), legal guidance and interpretation, policies, and specific SOPs prepared by WQP subject matter experts. DEQ's WQP IMDs address RPAs, implementing specific water quality criteria (e.g., mercury, temperature, bacterial indicators), implementing the State's antidegradation policy, compliance schedules, and mixing zones. IMDs are located on DEQ's website: <https://www.oregon.gov/deq/Get-Involved/Pages/imd.aspx>.

The previous PQR report indicated that DEQ did not use a standardized QA process for permit development and review; however, DEQ has made noteworthy strides in improving this program component. DEQ implements a formalized QA process that utilizes the WQP's extensive review checklist for the identifying specific permit, fact sheet, and public notice procedures for each permit. The checklist includes numerous questions and prompts, or guidance, for permit writers, to ensure the permit and fact sheet include correct information, appropriate permit conditions, and adequate rationale. In addition, DEQ supports WQP's permit writers collaboration with subject matter experts early in the permit development process. During review of the initial draft permit, direct support staff verify that communication between permit writer and subject matter experts has occurred using a checklist which is submitted with the draft permit to the internal QA review team. The internal QA review occurs prior to applicant review, the public comment period, and final permit issuance. Permits, including all major and minor modifications, are not issued unless they complete the QA process.

The previous PQR report indicated that DEQ does not have consistent file management procedures. However, DEQ has implemented consistent practices between the headquarters offices and regional offices. DEQ maintains all new permit development documentation on a common network drive. Historical permit documents as well as permit correspondence, monitoring and reporting, and compliance records may be stored on a common network drive, a regional office's network drive, or in a physical hard copy file. In addition, new permit

documents are stored in Oregon's Records Management System (ORMS).³ Further, DEQ retains official copies of record (wet signatures) for permits, fact sheets, and applications at the appropriate regional office, and all official copies of record are available through ORMS.

B. Universe and Permit Issuance

Based on information provided by DEQ, as of June 18, 2020, the universe of individual, non-stormwater NPDES permits includes the following (*Source: PQR Advance Questionnaire*):

- 197 POTWs
 - (50 major and 147 non-major)
- Individual Stormwater Permits
 - 12 permittees
- 122 non-POTWs
 - (17 major and 105 non-major)
- 19 general permits that cover numerous categories including:
 - 2,530 stormwater dischargers
 - 1,063 industrial
 - 1,450 construction permittees
 - 17 municipal
 - 816 non-stormwater general permittees.

DEQ reported in the PQR Advance Questionnaire that 57 major individual and 196 non-major individual permits are administratively continued, which equates to 24 percent of individual permits being current. In addition, 14 general permits, or 74 percent, are administratively continued. DEQ continues to make concerted efforts towards reducing the permit backlog.

Every October, DEQ publishes a permit issuance work plan to identify NPDES permits DEQ intends to issue in the upcoming federal fiscal year (October 1–September 30).⁴ The permit issuance plan provides permittees with a schedule of the permit development process, as well as the public, permittees, and legislators with progress updates. DEQ developed the first permit issuance work plan in 2018. In 2020, DEQ developed the first 5-year permit issuance work plan which incorporates the entire individual permit universe (addressing 331 permits). A key feature of the 5-year plan is conducting a high-level gap analysis of the permit file and data submitted by permittees, to identify data and information gaps, to allow DEQ to ensure each permit is ready for issuance according to the plan. This initial file and data review supports efficiency in the permit development process.

Significant industries in the state are related to lumber processing, mining, and agriculture.

³ <https://ormswd2.synergycds.com/HPRMWebDrawer/Search>

⁴ <https://www.oregon.gov/deq/FilterDocs/wqip-fs.pdf>

C. State-Specific Challenges

Oregon faces challenges common to other states; however, DEQ's individual NPDES permit backlog rate remains a challenge. DEQ is making widespread improvements to the permitting process, but currently, DEQ's primary focus is on reducing permit backlog. In addition, certain general permits are listed as priorities that DEQ is currently targeting for reissuance. DEQ noted that future staffing and budgets will be integral into addressing backlog issues.

D. Current State Initiatives

The previous PQR report indicated Oregon's NPDES permit backlog and timely issuance of permits was a significant concern and in need of improvement. Since the previous PQR, Oregon has made measurable positive developments resulting in program and permit quality improvements. Specifically, DEQ has implemented the NPDES Individual Permit Improvement Project, which is described in detail, including links to relevant resource documents, on DEQ's website: <https://www.oregon.gov/deq/wg/wqpermits/Pages/WQ-Permitting-Program-Review.aspx>. In 2015, the Oregon Legislature directed DEQ to hire an independent consultant to evaluate the NPDES permitting program and develop recommendations for improving the program and reduce permit backlog. DEQ received the Recommendations and Implementation Plan⁵ in December 2016. In 2017, Northwest Environmental Advocates (NWEA) filed litigation on DEQ for the permit backlog which resulted in DEQ entering into a Settlement Agreement⁶ in 2018. The Settlement Agreement identifies actions DEQ is implementing to take positive steps towards improving program operations and transparency, reducing permit backlog, and improving permit quality. In 2017, DEQ worked with a consultant to continue to evaluate the program and develop specific technical recommendations, actions, and implementation approaches for addressing the NPDES backlog systematically. In 2016, DEQ created a dedicated team of eight permit writers under central oversight, focused on permit writing, which provides staff with clearly defined and specialized roles. Prior to 2016, permit writers were responsible for a wide variety of tasks, including permit compliance and enforcement. WQP staff are dedicated to implementing consistency throughout the permit program and committed to reducing the permit backlog.

As discussed in section II.B, in 2018, DEQ developed its first permit issuance plan, and a subsequent annual plan followed in 2019, and a 5-year plan issued in 2020. DEQ finds significant internal value to the permit issuance plan, as it allows for greater communication within DEQ and invites participation from external partners and stakeholders. In addition, the permit issuance plan sets expectations for program areas beyond the NPDES program, such as the water quality standards and total maximum daily loads (TMDLs) programs. Further, communicating the plan with permittees provides them an opportunity to consider the permit

⁵ <https://www.oregon.gov/deq/FilterDocs/wqp-FinalReport.pdf>

⁶ Oregon DEQ Water Quality Report: 2019 Annual Report – NPDES Permit Program <https://www.oregon.gov/deq/FilterDocs/WQNPDESProgramUpdateFY2019.pdf>; 2020 Annual Report – NPDES Permit Program <https://www.oregon.gov/deq/FilterDocs/WQ-NPDESAnnualReport2020.pdf>

reissuance cycle with respect to any facility changes they have planned and work with DEQ on timing of permit reissuance, to the extent possible.

DEQ received unanimous approval from the Environmental Quality Commission to increase permitting fees, which is a positive sign of support for DEQ's progress, especially in times of budget uncertainties.

DEQ reported the agency is in the process of developing and implementing an agency-wide electronic web-based permit filing system, EDMS/YourDEQ, which will house all future permitting and compliance-related documents and eventually much of the facility monitoring data. DEQ is planning for phased-in implementation to begin in 2020, with the phase for monitoring data to begin after 2021.

III. CORE REVIEW FINDINGS

A. Basic Facility Information and Permit Application

1. Facility Information

Background

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

Program Strengths

Permits clearly identify the necessary authorization-to-discharge information, including facility location and identification of outfalls. Fact sheets include a good description of the facility activities, wastewater treatment process, and identify the name of the receiving water.

Areas for Improvement

Permits do not consistently identify the physical location of outfalls; some permits provide latitude and longitude coordinates and others specify the river mile. The previous PQR report identified this as a recommended action item. Permits would be strengthened with consistent identification of outfall locations.

*Action Items***Essential**

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

Recommended

- Consider updating permit and fact sheet templates to consistently identify the physical location of outfalls using specific site descriptions, latitude/longitude, NHD codes, and/or pictures.

2. Permit Application Requirements*Background and Process*

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

DEQ uses EPA's application forms in addition to a general state form (NPDES-R). DEQ's NPDES-R form requests general identification information and requires submittal of EPA's application forms (EPA Form 2A, 2B, 2C, 2E, or 2F) in conjunction with the state form NPDES-R. DEQ's website includes links to EPA's website for the application forms as updated in 2019.

Previously, managers in each region assigned permits to be developed based on factors such as complexity of the facility and discharge, workload, and permit writer experience. As part of the permit program improvement process, DEQ revised the permit assignment process—permits are assigned based on DEQ's permit issuance work plan. In August of each year, DEQ begins working on the permit issuance plan for the upcoming federal fiscal year and at that time assigns permits to permit writers.

DEQ staff send letters to permittees, 240 days prior to permit expiration, reminding them of permit application requirements. DEQ Permit Coordinators, located in each of the regional offices, lead the permit application process, ensure correct information is submitted (administrative), and assist with the administrative process. Permit Coordinators receive applications and conduct a review for administrative completeness and will send the applicant a letter indicating the application is complete or is incomplete and requires additional information. For applications determined to be incomplete, DEQ sends a letter and email to the applicant identifying the missing information and requires submittal of the missing information by a specific date. DEQ retains these letters in the permit administrative record.

Upon assignment, permit writers conduct a technical completeness review. As part of that review, DEQ also examines the permit file to identify available facility monitoring data (i.e., compliance monitoring data and wastewater characterization data) to determine whether sufficient data exist to move forward with permit reissuance. If DEQ identifies missing data,

staff notify the permittee and request the missing data so that DEQ can proceed with the permit development process.

Program Strengths

Permit administrative records consistently included permit application packages. Applications reviewed are submitted on the correct forms, given the time of application. DEQ’s website directs applicants to the current EPA NPDES application forms (updated as of 2019). Applications reviewed include appropriate signatories, topographic maps, and process flow diagrams.

Areas for Improvement

One POTW application was submitted after the permit expired. In addition, two permits reviewed appear to lack certain pollutant testing data; one is a POTW application that lacks effluent testing data from EPA Form 2A, Part D.

Action Items

The graphic consists of two horizontal bars. The top bar has a blue rounded rectangle on the left containing the word 'Essential' in white. To its right, in a light blue rounded rectangle, are two bullet points: '•Ensure permit applications are submitted timely and complete in accordance with 40 CFR 122.21(d).' and '•Ensure applications include data requirements consistent with EPA regulations at 40 CFR 122.21 as part of the application process.' The bottom bar has a blue rounded rectangle on the left containing the word 'Recommended' in white. To its right, in a light blue rounded rectangle, is one bullet point: '•The PQR did not identify any recommended action items for this section.'

B. Developing Effluent Limitations

1. Technology-based Effluent Limitations

NPDES regulations at 40 CFR 125.3(a) require that permitting authorities develop technology-based requirements where applicable. Permits, fact sheets and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether 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 BOD, TSS, pH, and percent pollutant removal), and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment

regulations at 40 CFR Part 133. A total of eight POTW permits were reviewed as part of the PQR.

WQP permit writers apply federal secondary treatment standards and confer with TBEL subject matter experts to verify the permit includes appropriate effluent limitations for POTWs. POTW permit fact sheets include a description of the treatment system, wastewater treatment process, and applicability of federal secondary treatment standards.

Program Strengths

POTW permits reviewed include appropriate effluent limitations based on federal secondary treatment standards. Effluent limitations are established in appropriate units and forms. POTW permit fact sheets contain a useful description of facility and treatment processes and identify applicable effluent limitation standards and the basis for final effluent limitations.

Areas for Improvement

The review team did not identify any areas for improvement in this core area.

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.

TBELs for Non-POTW Dischargers

Background and Process

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

WQP permit writers review facility information, application information, and conduct site visits ahead of permit reissuance (COVID protocols greatly reduced site visits for the 2020 and 2021 permit issuance plans), to confirm an understanding of current facility operations and

treatment processes. Permit writers establish TBELs for industrial facilities based on applicable ELGs and standards. Permit writers may use template spreadsheets to calculate ELG-based TBELs. Permit writers collaborate with TBEL subject matter experts during permit development and the QA process to confirm that appropriate TBELs are implemented correctly. DEQ indicated it is rare that effluent limitations are based on BPJ, but in those scenarios, permit writers will document the BPJ in a memorandum and the permit fact sheet.

Program Strengths

Permit fact sheets for non-POTW facilities include a description of the facility operations and resulting waste streams. In addition, the fact sheets clearly identify the applicable ELGs and categorization. The two permits reviewed establish appropriate TBELs based on the applicable ELGs and in appropriate units and forms. Fact sheets also identify the previous TBELs and provide a comparison to the proposed TBELs, demonstrating that the permit writer evaluated the stringency of proposed final effluent limitations.

Areas for Improvement

The review team did not identify any areas for improvement in this core area.

Action Items

The graphic consists of two horizontal bars. The top bar has a blue rounded rectangle on the left containing the word 'Essential' and a light blue rounded rectangle on the right containing the text '•The PQR did not identify any essential action items for this section.' The bottom bar has a blue rounded rectangle on the left containing the word 'Recommended' and a light blue rounded rectangle on the right containing the text '•The PQR did not identify any recommended action items for this section.'

2. Reasonable Potential and Water Quality-Based Effluent Limitations

Background

The NPDES regulations at 40 CFR 122.44(d)(1)(i) 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 State water quality standard (WQS).

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

- determined the appropriate water quality standards applicable to receiving waters,

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

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

Process for Assessing Reasonable Potential

Oregon's WQS for toxic pollutants are established in Oregon's Administrative Rules (OAR) at OAR-340-041-0033. In 2017, Oregon updated the aquatic life freshwater criterion for copper, based on EPA's BLM.

Oregon's RPA IMD provides step-by-step guidance for identifying pollutants of concern, conducting the RPA, calculating WQBELs, and addresses certain technical and policy topics. Oregon's RPA methodology is based on that contained in EPA's *Technical Support Document for Water Quality-based Toxics Control (TSD)*. Streeter-Phelps dissolved oxygen modeling, CORMIX, and other models are available to determine the reasonable potential of the discharge to cause, have the reasonable potential to cause or contribute to an excursion above any State water quality standard. DEQ developed unique template RPA spreadsheets for toxic parameters, copper, dissolved oxygen, temperature, pH, and ammonia.

WQP permit writers or subject matter experts conduct the RPA. In accordance with the RPA IMD, permit writers identify pollutants of concern as follows:

- Pollutants with effluent limitations in the current NPDES permit;
- Pollutants with monitoring requirements in the current NPDES permit;
- Pollutants contributing to an impairment for the receiving water (303(d) listed);
- Pollutants "known" to be present in significant concentrations in the source/intake water;
- Pollutants "known" or otherwise expected to be present in significant concentrations in the effluent; and
- Pollutants identified through the permit application process.

Pollutants of concern are identified for POTWs through a priority pollutant effluent scan submitted with the permit renewal application; the data are then evaluated for RP through a comparison to applicable WQS. Pollutants of concern in discharges from existing non-POTWs are evaluated based on monitoring data submitted through pollutant scans required by the permit renewal application. In addition, for discharges for which ELGs apply, permit writers review ELGs to identify potential pollutants of concern. For discharges from new non-POTWs,

regional permit writers may evaluate permits for similar facilities to identify potential pollutants of concern.

DEQ uses all effluent data collected during the permit term for the RPA, unless there were treatment system upgrades during the permit term which would render the data unrepresentative of the discharge. Data are not censored unless after analysis data are considered an outlier; in these scenarios, permit writers will document the analysis in the fact sheet. Effluent data, including compliance monitoring and wastewater characterization data, are retrieved from the Electronic Data Delivery (EDD) System and input into the RPA template. In addition, permit writers consider ambient data from the AWQMS and any other monitoring reports required by the previous permit.

Permit fact sheets clearly identify the receiving waterbody, applicable water quality standards, the receiving stream's impairment status, applicable TMDLs, and pollutants of concern. Permit writers include a summary of the RPA and rationale for RPA results in an appendix to the permit fact sheet. Further, fact sheets discuss the rationale for each WQBEL.

Process for Developing WQBELs

Permit writers or the RPA subject matter expert calculate WQBELs. The RPA template spreadsheets also calculate WQBELs consistent with the procedures in the TSD. The methodology to calculate WQBELs accounts for allowable dilution, background concentration, effluent variability, and sampling frequency. Mixing zones are allowed by Oregon's WQS, at OAR 340-041-0053. In addition, DEQ has developed an IMD for allocating regulatory mixing zones, as well as a separate IMD addressing how to ensure consistency during review of mixing zone studies. WQP also has a mixing zone subject matter expert on staff to support appropriate implementation of Oregon's mixing zone policy. The mixing zone subject matter expert typically provides a memorandum discussing the mixing zone considerations to the permit writer to justify WQBELs development and include in the permit administrative record.

Program Strengths

Reasonable Potential

DEQ maintains extensive guidance and procedural documents related to conducting RPAs. DEQ's permit fact sheets include useful and well-organized supporting documentation of RPAs conducted. Fact sheet appendices clearly present RPA results and identify those pollutants of concern for which reasonable potential exists. Fact sheets adequately identify the receiving stream, applicable water quality standards, impairment status, and applicable TMDLs.

WQBEL Development

DEQ has developed thorough IMDs that describe the methodology for calculating WQBELs, allocating mixing zones, and reviewing mixing zone studies. DEQ's fact sheets and supporting appendices provide sufficient documentation of WQBELs development. WQBELs appear to be appropriately calculated and implemented. WQBELs are established in appropriate units and forms.

Areas for Improvement

The review team did not identify any areas for improvement in this core area.

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.

3. Final Effluent Limitations and Documentation

Background and Process

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

In addition, permit records for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations. Technology-based effluent limits should include assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for determining the need for WQBELs as well as the procedures explaining the basis for establishing, or for not establishing, WQBELs should be clear and straight forward. The permit writer should adequately document changes from the previous permit, ensure draft and final limitations match (unless the basis for a change is documented), and include all supporting documentation in the permit file. The permit writer should sufficiently document determinations regarding anti-backsliding and antidegradation requirements.

Permits reviewed during the PQR included effluent limitations appropriate to the facility and discharge and included effluent limitations that are at least as stringent as those in the previous permit. Fact sheet appendices discuss pollutants of concern and summarize the RPA and

WQBEL development. The RPA and WQBEL calculations are retained in electronic format but summaries of both are included in the permit fact sheet as appendices. Fact sheets discuss applicable standards and effluent limitations and identify the most stringent effluent limitation which is then established in the permit.

As required by 40 CFR 124.8, DEQ's fact sheets describe the facility operations and wastewater treatment processes; the description is adequate. DEQ's fact sheets clearly and consistently identify the regulatory basis for each effluent limitation. Further, fact sheets identify the applicable basis of effluent limitations (i.e., TBELs or WQBELs) and provide the regulatory basis for TBELs.

Anti-backsliding is triggered if there is a change in an effluent limitation where it becomes less stringent than the limitation in the previous permit. A justification is required to change the effluent limitation, sometimes justified by the consideration of new information during a reasonable potential evaluation. Permit fact sheets will include a justification for a change in effluent limitations.

Oregon's antidegradation policy and implementation plan are contained in the WQS at OAR 340-041-0004. An IMD has been developed for implementing DEQ's antidegradation policy. An antidegradation review must be performed for every DEQ water quality action and the results documented in the fact sheet, providing transparency to the agency's consideration of antidegradation. In general, permit writers complete an antidegradation checklist and generally include in at as appendix to the fact sheet.

Program Strengths

Final effluent limitations are clearly presented in DEQ's permits and are established in appropriate units and forms. Permit fact sheets adequately document the development of TBELs for POTWs and non-POTWs, including a useful description of facility operations, treatment processes, and pollutants expected in the discharge. Further, fact sheets adequately identify receiving stream information and discuss the RPA procedures and results. Permit writers and subject matter experts develop appropriate documentation of TBELs, WQBELs, and proposed effluent limitations, in the fact sheet, fact sheet appendices, or standalone memos included in the administrative record. Permit fact sheets consistently and clearly demonstrate the permit writer applied the most stringent of TBELs and WQBELs.

Areas for Improvement

The review team did not identify any areas for improvement in this core area.

*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.

C. Monitoring and Reporting Requirements*Background and Process*

NPDES regulations at 40 CFR 122.41(j) require permittees to periodically evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. NPDES regulations at 40 CFR Part 122.41(j)(1) requires that “Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.” NPDES regulations at 40 CFR Part 122.41(j)(4) requires that “Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR subchapters N or O.” Monitoring and reporting conditions require the permittee to conduct routine or episodic self-monitoring of permitted discharges and where applicable, internal processes, and report the analytical results to the permitting authority with information necessary to evaluate discharge characteristics and compliance status.

Specifically, 40 CFR 122.44(i)(2) requires NPDES permits to establish, at minimum, annual reporting of monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 CFR 122.48(b) requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data which are representative of the monitored activity. The regulations at 40 CFR 122.44(i)(2) also require reporting of monitoring results with a frequency dependent on the nature and effect of the discharge. 40 CFR Part 127 requires NPDES-regulated entities to submit certain data electronically, including discharge monitoring reports and various program-specific reports, as applicable.

NPDES permits should specify appropriate monitoring locations to ensure compliance with the permit limitations and provide the necessary data to determine the effects of the effluent on the receiving water. A complete fact sheet will include a description and justification for all monitoring locations required by the permit. States may have policy or guidance documents to support determination of appropriate monitoring frequencies; documentation should include an explicit discussion in the fact sheet providing the basis for establishing monitoring frequencies, including identification of the specific state policy or internal guidance referenced.

Permits must also specify the sample collection method for all parameters required to be monitored in the permit. The fact sheet should present the rationale for requiring grab or composite samples and discuss the basis of a permit requirement mandating use of a sufficiently sensitive Part 136 analytical method.

DEQ staff have developed a matrix for standard monitoring and reporting frequency based on the facility type, volume discharged, and other factors. DEQ recommends different frequencies for lagoons, trickling filter plants, and activated sludge treatment plants and for industrial wastewater treatment facilities. Permit writers implement a standardized approach to establishing monitoring requirements; however, they may tailor requirements in certain scenarios. Monitoring results are reported electronically, and noncompliance events are reported at the time monitoring reports are submitted. Permits specify when monitoring reports are due.

Program Strengths

DEQ's permits consistently establish clear monitoring requirements, including identifying the monitoring location, minimum sampling frequency, and sample type. DEQ's permits consistently require the use of sufficiently sensitive EPA-approved analytical methods and require the electronic submittal of monitoring reports. Permits clearly identify reporting requirements.

Areas for Improvement

The review team did not identify any areas for improvement in this core area.

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.

D. Standard and Special Conditions

Background and Process

Federal regulations at 40 CFR 122.41 require that all NPDES permits, including NPDES general permits, contain certain "standard" permit conditions. Further, the regulations at 40 CFR 122.42 require that NPDES permits for certain categories of dischargers must contain additional standard conditions. Permitting authorities must include these conditions in NPDES permits and may not alter or omit any standard condition, unless such alteration or omission results in a requirement more stringent than those in the federal regulations.

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

Oregon’s permits include standard permit conditions in Schedule F. DEQ uses boilerplate language for standard conditions that was last updated in 2015. The POTW permits reviewed include the additional standard condition regarding notification of new introduction of pollutants and new industrial users. Similarly, the non-POTW permits contain the additional standard condition regarding notification levels.

DEQ’s permits include compliance schedules, when granted, in Schedule C. One permit reviewed includes a compliance schedule for chlorine and ammonia and the compliance schedule appears appropriate, with a schedule consistent with 40 CFR 122.47.

DEQ’s permits establish special conditions in Schedule D and generally address spill response plans, operator certification, and biosolids. Schedule D also addresses WET testing protocols which are in addition to the WET testing requirements contained in Schedule B of the permit. The permit condition in Schedule B addresses the type of WET test required (i.e., acute or chronic), the minimum frequency, sample type and location, and information required for reporting WET test results. The WET permit condition in Schedule D is specific to testing protocols, addressing organisms and protocols, sampling requirements, evaluation of causes and exceedances, quality assurance and reporting, and a reopener clause if WET testing data indicate acute and/or chronic toxicity, a change in the RPA for WET, or if the facility undergoes any process changes. Pretreatment special conditions are established in Schedule E.

Program Strengths

DEQ’s permits include standard conditions that are consistent with federal requirements established at 40 CFR 122.41 and 122.42. Permit special conditions were clearly presented. The compliance schedule included in one permit reviewed appears appropriate for the discharge.

Areas for Improvement

The review team did not identify any areas for improvement in this core area.

*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.

E. Administrative Process*Background and Process*

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

Following DEQ's internal review of the draft permit, the applicant receives a copy of the draft permit for a 14-day applicant review. Following receipt of the applicant's comments, DEQ may revise the draft permit. The draft permit is then distributed for public comment, for a 35-day period. Public notice regulations for NPDES permits are specified in OAR 340-45-0027. Public notices are provided electronically on the DEQ website and major and critical permits are also published in a newspaper. Notices for minor permits are posted on the respective region's website and distributed to interested parties via a mailing list. Public notices are available at <http://www.oregon.gov/deq/Pages/publicnotice.aspx> and available to receive via listserv. DEQ receives comments in electronic and hard copy format. DEQ's communications group monitors interested parties and will conduct outreach to stakeholder groups, including tribal groups. As part of that outreach, DEQ provides the permit issuance plan to offer transparency and engagement in the permitting process.

During and following the public notice period, the permit writer is responsible for reviewing and responding to public comments. DEQ provides a response to comments document and a copy of the signed final permit to the permittee and anyone who submitted comments on the draft permit. DEQ staff indicated permit appeals are rare; one permit has been appealed in the last 4 years.

Program Strengths

Permit files reviewed included comments submitted on the draft permit as well as DEQ's responses to comments. DEQ's public notice procedures appear appropriate. Permit writers

maintain the QA checklist throughout the public comment period to continue tracking of the permit development process.

Areas for Improvement

The review team did not identify any areas for improvement in this core area.

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.

F. Administrative Record and Fact Sheet

Background and Process

The administrative record is the foundation that supports the NPDES permit. If EPA issues the permit, 40 CFR 124.9 identifies the required content of the administrative record for a draft permit and 40 CFR 124.18 identifies the requirements for a final permit. Authorized state programs should have equivalent documentation. The record should contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit should contain the permit application and supporting data; draft permit; fact sheet or statement of basis;⁷ all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant and regulatory personnel; all other items supporting the file; final response to comments; and, for new sources where EPA issues the permit, any environmental assessment, environmental impact statement, or finding of no significant impact.

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

⁷ Per 40 CFR 124.8(a), every EPA and state-issued permit must be accompanied by a fact sheet if the permit: Incorporates a variance or requires an explanation under 124.56(b); is an NPDES general permit; is subject to widespread public interest; is a Class I sludge management facility; or includes a sewage sludge land application plan.

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

As described in section II.A, DEQ retains the administrative record for NPDES permits in the respective regional office, or at headquarters for general permits that are issued from that office. DEQ maintains all new permit development documentation on a common network drive. In addition, new permit documents are stored in ORMS. Historical permit documents as well as permit correspondence, monitoring and reporting, and compliance records may be stored on a common network drive, a regional office's network drive, or in a physical hard copy file. Further, DEQ retains official copies of record for permits, fact sheets, and applications at the appropriate regional office, and all official copies of record are available through ORMS.

Permit writers develop fact sheets in tandem with permit development. DEQ develops fact sheets for all individual NPDES permits, including non-major permits. Permit writers use a template to develop fact sheets.

Program Strengths

DEQ's electronic permit files are well organized, clearly named, and easy to understand; the permit records reviewed are complete. DEQ develops consistent and complete fact sheets for both industrial and municipal permits. In addition, the fact sheets and supporting appendices are well organized and make useful information readily available.

Areas for Improvement

One permit reviewed appears to have had language related to groundwater removed from the current permit whereas it was included in the previous permit.

Action Items

Essential

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

Recommended

- Ensure that fact sheets include all relevant discussions from previous permit cycles, especially when they directly relate to potential impacts to surface water (in this case, via groundwater).

IV. NATIONAL TOPIC AREA FINDINGS

National topic areas are aspects of the NPDES permit program that warrant review based on the specific requirements applicable to the selected topic areas. These topic areas have been determined to be important on a national scale. National topic areas are reviewed for all state

PQRs. The national topics areas are: Permit Controls for Nutrients in Non-TMDL Waters, Effectiveness of POTW NPDES Permits with Food Processor Contributions, and Small MS4 Permit Requirements.

A. Permit Controls for Nutrients in Non-TMDL Waters

Background

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

Federal regulations at 40 CFR 122.44(d)(1)(i) require permit limits to be developed for any pollutant with the reasonable potential to cause or contribute to an excursion of any state water quality standard, including state narrative criteria for water quality.

To assess how nutrients are addressed in the Oregon NPDES program, EPA Region 10 reviewed the City of Tillamook Wastewater Treatment Plant permit. The permit requires monthly (from May – October) sampling of total Kjeldahl nitrogen (TKN), nitrate nitrogen, nitrite nitrogen, nitrate plus nitrite nitrogen, and total phosphorus. RPA was not conducted for any of these nutrient parameters and there are no nutrient effluent limits. DEQ acknowledged that the monitoring of these nutrient parameters is required to fulfill the permit renewal application requirements and that the data may be used for future RPA if numeric nutrient criteria are available. Further, DEQ noted that the data may be used in future evaluations if and when nutrient impairments are identified in the receiving water and subsequent numeric criteria are developed or to inform the development of a TMDL.

In addition to the Tillamook permit, EPA reviewed Oregon's Nutrient Management Program⁸ and the Analysis of Oregon Preliminary Nutrient and Biological Data (Periphyton) for the Nutrient Scientific Technical Exchange Partnership Support (N-STEPS).⁹ In DEQ's review of the PQR report, DEQ noted that the Oregon Nutrient Management Program was developed to report on the current progress of nutrient projects in Oregon and is not intended to direct any future actions related to nutrients.

As outlined in Oregon's Nutrient Management Program, DEQ's primary tools for managing nutrients are to establish TMDLs for waters identified in DEQ's 303(d) water quality assessment as not meeting one or more of the following water quality standards: chlorophyll *a*, dissolved oxygen, pH, deleterious algal growth, biocriteria, and site-specific phosphorus. Through the

⁸ An updated report is available. Oregon's Nutrient Management Plan, June 2014, <https://www.oregon.gov/deq/FilterDocs/NutrientManageRep.pdf>

⁹ <https://www.epa.gov/nutrient-policy-data/n-steps>

TMDL, DEQ identifies the causes of the water quality impairment. If nutrient loading is a contributing factor, the sources of nutrients are identified, and a pollution-reduction plan is developed. Nitrogen and phosphorus targets and load and waste load allocations are established and assigned to the contributing sources to reduce the pollutant load.

In general, prior to development of a TMDL, Oregon permits do not address nutrients. Numeric WQBELs for nitrogen and phosphorus are uncommon. When a numeric WQBEL is included for these nutrients, it is likely the outcome of a completed TMDL.

Oregon does not have numeric criteria for phosphorus or nitrogen. Oregon does have multiple narrative criteria pertaining to possible responses to excess nutrients to prevent deleterious algal bloom formation, which are typically used to assess nutrient impacts to fresh and marine waters. In addition, Oregon has numeric criteria for chlorophyll *a*, dissolved oxygen, and pH, which are used to assess nutrient impacts to rivers and streams. In their review of the PQR report, DEQ noted that they perform RPA and/or require monitoring when a point source discharges into a stream impaired for these pollutants. However, that evaluation is not conducted within the context of nutrients impairments. DEQ highlighted that the relationship between these specific pollutants and nutrients is very site-specific and is best evaluated through a TMDL.

Program Strengths

As discussed above, Oregon does have multiple narrative criteria pertaining to possible responses to excess nutrients. These criteria have been used to assess nutrient impacts to fresh and marine waters as part of the 303(d) listing program and TMDL development.

Once a TMDL is developed, DEQ includes WQBELs consistent with wasteload allocations from the TMDLs to address nutrient impairments.

Areas for Improvement

The 2015 Oregon PQR also reviewed nutrients as a national topic area; the findings made in 2015 continue to apply. The 2015 PQR recommended that DEQ:

- Conduct RPA for nutrients if the type of facility is known to have discharges that contain nitrogen or phosphorus, or the receiving waters are known to have nutrient impairments.
- Include monitoring requirements for phosphorus and nitrogen in permits for such facilities where the receiving waters are known to have nutrient impairments.

For nutrients, the RPA can be either qualitative or quantitative. Section 3.2 of EPA's TSD provides discussion of considerations for a permit writer in conducting a qualitative RPA. EPA is committed to continue engaging with DEQ on an approach for evaluating nutrients when a TMDL or numeric criteria are unavailable.

The regulations at 40 CFR 122.44(i)(1)(iii) provide authority to include monitoring requirements in permits to yield data for development of a permit in the next permit cycle. Being proactive in collecting effluent data allows for the permit writer to be better informed about nutrient problems associated with certain types of facilities, provide data for RPA in subsequent permit cycles, and aid in the development and implementation of nutrient TMDLs.

Action Items

Essential	<ul style="list-style-type: none">• Conduct RPA for nutrients if the type of facility is known to have discharges that contain nitrogen or phosphorus or the receiving waters are known to have nutrient impairments.• Include monitoring requirements for phosphorus and nitrogen in permits for such facilities where the receiving waters are known to have nutrient impairments.
Recommended	<ul style="list-style-type: none">• The PQR did not identify any recommended action items for this section.

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

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

Background

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

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

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

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

Oregon received authorization from EPA to implement the pretreatment program on March 13, 1981. Oregon Laws, ORS 454.020, 468B035 and 468B.101, authorize DEQ to implement the CWA, NPDES program and pretreatment program. Acting on this authority, the Environmental Quality Commission (EQC) adopted rules for implementing the pretreatment program under OAR 340-045-0063.

DEQ has added an NPDES permit requirement for all municipalities to conduct Industrial User Surveys and submit results to the Pretreatment Program. Upon identification of a significant industrial user, DEQ works with municipalities to develop an approved program and comply with the federal pretreatment standards and requirements. The pretreatment staff coordinates with DEQ permit writers in reviewing pretreatment requirements prior to permit issuance.

DEQ oversees 25 approved POTW programs. DEQ reported in the 2019 Pretreatment Annual Report that there are a total of 298 significant industrial users (SIUs). Out of 298 SIUs, 109 are categorical industrial users (CIUs), 176 non CIUs and 13 No Discharge CIU (NDCIUs). DEQ does not have any POTWs without an approved pretreatment program that have SIUs. EPA noted that the POTW permits consistently include the requirements at 40 CFR 122.44(j)(1) and 40 CFR 122.44(j)(2)(ii). DEQ requires POTWs with SIUs to develop and implement pretreatment programs.

As part of this PQR, EPA reviewed the following:

- Columbia Boulevard permit with an approved pretreatment program and SIU food processors;
- Information and data provided by the Columbia Boulevard permittee and DEQ (including the state dental amalgam program); and
- Adherence to the Compliance Monitoring Strategy program policy for frequency of regional and state reviews of POTW pretreatment programs.

Program Strengths and Areas for Improvement

EPA’s Compliance Monitoring Strategy¹⁰ recommends one pretreatment compliance audit (PCA) every five years and one pretreatment compliance inspection (PCI) every other year for approved pretreatment programs. The state has conducted 15 PCAs and zero PCIs from 2016 – 2019. DEQ received assistance from a contractor (PG Environmental) to conduct three PCAs: Gresham, Clean Water Services and Salem. Compliance monitoring is an essential component of EPA’s program to protect and restore water quality and adherence to the Compliance Monitoring Strategy helps EPA and DEQ to achieve this goal.

EPA reviewed the NPDES permit and other pretreatment documents for this PQR. The Columbia Boulevard permit contains standard pretreatment boilerplate language that meets all federal requirements. Under the Industrial User Survey, the permit requires the permittee to determine the presence of any industrial users discharging to the POTW. For all permittees, including minor permittees with design flows less than 1 million gallons per day (mgd), the permit’s standard conditions include the requirements at 40 CFR 122.42(b) (DEQ Standard Condition under D10) with the permit language taken directly from the federal regulations. Permittees must notify DEQ of the new introduction or substantial change in pollutant into the POTW.

Action Items

Essential	•The PQR did not identify any essential action items for this section.
Recommended	•DEQ should ensure adherence to the latest Compliance Monitoring Strategy: one PCA every 5 years and one PCI every other year of approved pretreatment programs.

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

Background

As part of this PQR, EPA reviewed the state’s MS4 Phase II General Permit (as issued on November 30, 2018 and effective March 1, 2019) for consistency with the Phase II municipal stormwater permit regulations. In 2017, EPA updated the Phase II small MS4 permitting regulations to clarify: (1) the procedures to be used when using general permits (see 40 CFR 122.28(d)); (2) the requirement that the permit establish the terms and conditions necessary to meet the MS4 permit standard (i.e., “to reduce

¹⁰ Clean Water Act National Pollutant Discharge Elimination System Compliance Monitoring Strategy, 2014, <https://www.epa.gov/sites/default/files/2013-09/documents/npdescms.pdf>

the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act”), including conditions to address the minimum control measures, reporting, and, as appropriate, water quality requirements (see 40 CFR 122.34(a) and (b)); and (3) the requirement that permit terms must be established in a “clear, specific, and measurable” manner (see 40 CFR 122.34(a)).

Program Strengths

The state has a comprehensive general permit with prescriptive expectations addressing the six minimum control measures. The permit includes enhanced requirements to address all MS4 discharges to impaired waters with applicable EPA approved TMDLs, and at least one section of unique TMDL-derived requirements specific to an individual MS4 permittee. The permit also successfully incorporates the use of tiered requirements and deadlines for ‘new vs. existing’ and ‘large population’ vs. ‘small population’ MS4 permittees. All permit terms are expressed in clear, specific, and measurable terms and the permit was written in accordance with the updated small MS4 permitting regulations.

Areas for Improvement

When planning for the next permit term, the state should consider adding more explicit stormwater monitoring or assessment expectations for the MS4 permittee(s), perhaps organized by watershed or applicable TMDL.

Action Items

The graphic consists of two horizontal bars. The top bar has a blue rounded rectangle on the left containing the word 'Essential' and a light blue rounded rectangle on the right containing a bullet point: '•The PQR did not identify any essential action items for this section.' The bottom bar has a blue rounded rectangle on the left containing the word 'Recommended' and a light blue rounded rectangle on the right containing a bullet point: '•Consider including additional specificity in the permit text for stormwater monitoring by MS4 permittee(s) based on applicable TMDL requirements by watershed/receiving water.'

V. REGIONAL TOPIC AREA FINDINGS

EPA Region 10 has elected not to include the optional Regional Topics in this review.

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

This section provides a summary of the main findings from the last PQR and provides a review of the status of the state’s efforts in addressing the action items identified during the last PQR, conducted *September 14-18, 2015*. 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 2015

Program Area	Action Item Title	Status Update
<i>Basic Facility Information and Application</i>	<i>Address all outfalls from which pollutants are or may be discharged including emergency outfalls, in the permit.</i>	(Resolved) DEQ implemented their permit quality review process, ensuring consistency between the permit and fact sheet (PFS)
	<i>Ensure permit applications are submitted in a timely manner.</i>	(Resolved) DEQ updated expectations and procedures with permit coordinators. DEQ also ensure permittees receive a letter reminding them of the application due date a minimum of 240 days prior to the permit expiration date. DEQ review the reminder letter templates for both clarity and completeness.
	<i>Ensure that permit applications are current and complete, including all required data and information.</i>	(Resolved) DEQ updated expectations and procedures with permit coordinators. DEQ also ensure permittees receive a letter reminding them of the application due date a minimum of 240 days prior to the permit expiration date. DEQ review the reminder letter templates for both clarity and completeness.
<i>Technology-based Effluent Limitations</i>	<i>Ensure a complete understanding of when processes began operation in order to correctly apply the applicable technology basis (BPT, BCT, BAT, NSPS).</i>	(Resolved) DEQ developed training materials for determining how to correctly apply the applicable technology basis. This material will be included in the training program for Permit Writers. (ELG is a component of the training)
	<i>For facilities subject to multiple subcategories within an ELG, effluent limitations should be derived using all applicable subcategories proportioned based on flow or production. In no circumstance should only</i>	(Resolved) DEQ developed training materials for determining how to correctly apply the applicable technology basis. This material will be included in the training program for Permit Writers. (ELG is a component of the training)

Program Area	Action Item Title	Status Update
	<i>the most stringent limitation from multiple subcategories be used as the basis for determining the appropriate effluent limitation to use.</i>	
Monitoring and Reporting	<i>Ensure that all limits must be subject to at least annual monitoring.</i>	(Resolved) Completed 9/16/2016
	<i>Ensure appropriate monitoring type for different parameters (e.g., temperature whether continuous vs grab is appropriate in given permit).</i>	(Resolved) DEQ revised the monitoring matrix to ensure that the appropriate monitoring type is applied for any given monitoring parameter and develop training program for Permit Writers.
	<i>Update permit and PFS template to implement requirements of the Electronic Report Rule.</i>	(Resolved) DEQ developed and incorporated language into the permit template to instruct permittees on complying with the E-Reporting rule.
Standards and Special Conditions	<i>Under standard conditions, ensure penalty provisions are consistent with 40 CFR 122.41(a).</i>	(Resolved) DEQ revised standard conditions, ensuring penalty provisions are consistent with 40 CFR 122.41(a).
Nutrients	<i>Conduct reasonable potential analysis for nutrients if the type of facility is known to have discharges that contain nitrogen or phosphorus or the receiving waters are known to have nutrient impairments.</i>	(In progress) No facilities with discharges into DO, pH or chlorophyll <i>a</i> , algal nuisance impaired waters have been drafted.
Pretreatment	<i>The DEQ should ensure adherence to the Compliance Monitoring Strategy (CMS): one PCA every five years and one PCI every approved pretreatment program. 40 CFR 403.8(f)(3) states: "The POTW shall have sufficient resources and qualified personnel to carry out the authorities and procedures described in paragraph (f)(1) and (2) of this section."</i>	(Resolved) DEQ will continue to implement the Performance Partnership Agreement with U.S. EPA Region 10 and implement the pretreatment program following the Compliance and Monitoring Strategy.
	<i>DEQ must require all approved pretreatment programs to adopt the mandatory provisions of the Streamlining Rule as soon as possible</i>	(Resolved) All Oregon approved pretreatment programs have adopted the mandatory provisions of the Streamlining Rule.

Program Area	Action Item Title	Status Update
Stormwater	<i>EPA recommends that all NPDES Permit cover pages should indicate the permit's issuance date, effective date and expiration date.</i>	(Resolved) DEQ revised permit template cover pages to indicate the permit's issuance date, effective date, and expiration date.
Combined Sewer Overflows (CSOs)/Sanitary Sewer Overflows (SSOs)	<i>DEQ should ensure that the permits require event-based reports for each CSO discharge and that these report elements are addressed in terms of the electronic reporting rule requirements.</i>	(Resolved) DEQ updated the template specifically for CSOs event reporting.

VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

This section provides a summary of the recommendations from the last PQR, conducted September 14-18, 2015, 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 2015 PQR

Program Area	Action Item Title	Status
Basic Facility Information and Application	<i>Clarify the location of permitted outfalls by including latitude and longitude in the permit or fact sheet</i>	(Resolved) Resolved for permits issued after the 2015 PQR.
	<i>Clarify the effective date of NPDES permits or that the effective is upon signature</i>	(Resolved)
Technology Based Effluent Limits	<i>Understand the processes at a facility resulting in process wastewater discharges and ensure those processes are applicable to the ELG being considered</i>	(Resolved)

Program Area	Action Item Title	Status
Water Quality- Based Effluent Limitations	<i>Follow the instructions in the RPA IMD to determine pollutants of concern. Update the fact sheet template to include a discussion of pollutants of concern.</i>	(Resolved)
	<i>In the fact sheet, provide a comparison of TBELs and WQBELs for each pollutant to ensure the most stringent effluent limitation is contained in the permit. This can be either in a table or narrative discussion.</i>	(Resolved)
	<i>Thoroughly describe the data used in the RPA and where it was obtained for both effluent and ambient data.</i>	(Resolved)
	<i>Ensure a robust set of ambient water quality data is available for use in permit development or required ambient monitoring as a requirement in permits.</i>	(Resolved)
Monitoring and Reporting	<i>Improve consistency in identifying monitoring locations for each outfall from which discharge is authorized under the permit.</i>	(Resolved)
	<i>Ensure that permits are clear that quantitation limit must be at or below limit.</i>	(Resolved)
Administrative Processes (including public notice)	<i>Consider explicitly documenting whether public comments are received or whether no comments are received, and where responses to comments are maintained.</i>	(Resolved)
	<i>Consider providing a consolidated response to comments document for all permits that is made publicly available upon permit issuance.</i>	(Resolved)
Documentation (including fact sheet)	<i>Establish procedures and processes that ensure complete and consistent permit records across regions for all permits.</i>	(In progress)
	<i>Ensure that there is documentation of the public notice process in all permit files.</i>	(Resolved)
	<i>Ensure that permit files include all significant documentation of the basis for limits and permit conditions, including the documents referenced in the applicable fact sheet.</i>	(Resolved)
	<i>Document in the fact sheet whether and why significant changes have been made to outfalls from the prior permit to the current permit.</i>	(Resolved)

Program Area	Action Item Title	Status
	<i>Document when current permit data/information is used to supplement older permit application data.</i>	(Resolved)
<i>Nutrients</i>	<i>Include monitoring requirements for phosphorus and nitrogen in permits for such facilities where the receiving waters are known to have nutrient impairments.</i>	(In progress) DEQ continues to follow a monitoring approach for conventional and non-convention pollutants that follows existing TMDL's and water quality standards but has not finalized a permitting approach to nutrient impaired waters.
<i>Pretreatment</i>	<i>DEQ should insert the following condition to all the permits of all approved pretreatment programs: "The permittee shall submit a complete proposal of mandatory and voluntary streamlining program modifications to the Department for approval within one year from the date of re-issuance of this NPDES permit. This includes proposed changes to the City of Portland's pretreatment-related municipal ordinance and operating procedures to reflect the revisions to 40 CFR 403 that became effective November 14, 2005, and to attain consistency with Schedule E of this permit. The Department may extend the submission date if requested by the permittee. These proposed modifications will be considered non-substantial pretreatment program modifications under 40 CFR 403.18 unless otherwise determined by the Department to be significant." This permit language is from the City of Portland.</i>	(Resolved)
<i>Stormwater</i>	<i>If a NPDES Permit is modified after its effective date, EPA recommends that the Permit cover page, and all relevant modified pages, be revised to reflect the modified provisions, in order to inform readers of the final enforceable provisions resulting from the permit modifications process.</i>	(Resolved)
	<i>DEQ should earnestly continue its efforts to provide current permit coverage for the City of Ashland, and other Phase II MS4 communities in Oregon, under a statewide MS4 General Permit.</i>	(Resolved)

Program Area	Action Item Title	Status
	<i>Oregon would benefit from developing a stand-alone BMP manual or similar to augment the permit. Oregon has clearly tried to keep the permit short and simple. The result is simultaneously too specific in suggested BMPs and not comprehensive enough in the assessment approach suggested for operators to use to figure out what BMPs might work.</i>	(Not pursuing)
Combined Sewer Overflows (CSOs)/Sanitary Sewer Overflows (SSOs)	The MOA's are a weak enforcement tool that do not ensure that permittees reduce CSO discharges and meet performance targets on a timely schedule. EPA recommends that permits incorporate compliance schedule to ensure timely implementation of the LTCP where the permittee is not yet under an enforcement mechanism such as a consent decree or state-issued order or where progress to control CSOs is insufficient.	(In progress)
	DEQ should strive to keep CSO permits current by reducing the time permits are administratively extended to as short as possible to ensure that permittees are making swift progress toward controlling CSO discharges.	(In progress)
	DEQ should ensure that the permits require event-based reports for each CSO discharge and that these report elements are addressed in terms of the electronic reporting rule requirements.	(In progress)
Total Maximum Daily Loads (TMDLs)	The high permit backlog has delayed implementation of TMDLs into permits.	(In progress)
	WLA's in TMDLs are complicated and are carried into permits as equations and calculated limits especially for temperature TMDLs where thermal load is used as a surrogate for temperature. Excess thermal load (ETL) limits in permits provide a variety of options for the permittee to calculate ETL. Permits that provide the option for calculated limits rather than containing final effluent limits or compliance schedules lack transparency and hinder the "due process" requirements for public notice of permit conditions. DEQ permit writers should avoid including such calculated limit options in permits.	(Not pursuing)
	Permit writers must work closely with TMDL staff during development of the TMDL to ensure that the WLA can be adapted into water quality-based effluent limits in the permit.	(In progress)

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 Oregon 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"> • Ensure permit applications are submitted timely and complete in accordance with 40 CFR 122.21(d). • Ensure applications include data requirements consistent with EPA regulations at 40 CFR 122.21 as part of the application process.
Nutrients	<ul style="list-style-type: none"> • Conduct RPA for nutrients if the type of facility is known to have discharges that contain nitrogen or phosphorus or the receiving waters are known to have nutrient impairments. • Include monitoring requirements for phosphorus and nitrogen in permits for such facilities where the receiving waters are known to have nutrient impairments and the facilities are known to discharge nitrogen and phosphorous.

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

Topic	Action(s)
Facility Information	<ul style="list-style-type: none"> Consider updating permit and fact sheet templates to consistently identify the physical location of outfalls using specific site descriptions, latitude/longitude, NHD codes, and/or pictures.
Administrative Record and Fact Sheet	<ul style="list-style-type: none"> Ensure that fact sheets include relevant discussions from previous permit cycles, especially when they directly relate to potential impacts to surface water (in this case, via groundwater).
Pretreatment: Food Processing Sector	<ul style="list-style-type: none"> DEQ should ensure adherence to the EPA's CWA NPDES Compliance Monitoring Strategy: one PCA every 5 years and one PCI every other year of approved pretreatment programs
Municipal Separate Storm Sewer Systems (MS4s)	<ul style="list-style-type: none"> Consider including additional specificity in the permit text for stormwater monitoring by MS4 permittee(s) based on applicable TMDL requirements by watershed/receiving water.

Appendix A: Review of Draft Permit Quality Review for 2020, Oregon DEQ NPDES Permit Program



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August 6, 2021

Susan Poulson
 U.S. EPA Region 10 Permitting Program

RE: Review of DRAFT Permit Quality Review Report for 2020
 Oregon DEQ NPDES Permit Program

Dear Susan:

Thank you for the opportunity to provide comments on the draft Permit Quality Review (PQR) of Oregon’s Department of Environmental Quality (DEQ) National Pollutant Discharge Elimination System (NPDES) Program. We appreciate the time you and the PQR team spent reviewing our permit program. Addressing both the Essential and Recommended Action Items is a priority for Oregon’s NPDES program. Our comments on the draft report have been included in the attached document, and the following table will provide the actions taken or to be taken by DEQ on the 2015 Action Items not indicated as resolved and the 2020 Action Items:

2015 Remaining Essential Action Items	DEQ Actions
<i>Ensure a complete understanding of when processes began operation in order to correctly apply the applicable technology basis (BPT, BCT, BAT, NSPS).</i>	This has been developed and fully implement by DEQ as part of its permit writer training. Further, DEQ has identified an ELG Subject Matter Expert as part of the permit development process.
<i>For facilities subject to multiple subcategories within an ELG, effluent limitations should be derived using all applicable subcategories proportioned based on flow or production. In no circumstance should only the most stringent limitation from multiple subcategories be used as the basis for determining the appropriate effluent limitation to use.</i>	This has been implement by DEQ as part of its continuous process improvement and addressed within permit writer training. Further, DEQ has identified an ELG Subject Matter Expert as part of the permit development process.
<i>Conduct reasonable potential analysis for nutrients if the type of facility is known to have discharges that contain nitrogen or phosphorus or the receiving waters are known to have nutrient impairments.</i>	DEQ is working with EPA to utilize Oregon’s established narrative biocriteria standard to assess site specific nutrient impairments, when and where appropriate. Performing reasonable potential analyses for nutrients at all facilities that contain nitrogen or phosphorous, without a TMDL, is

Program and Permit Quality Review



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	important. Developing a statewide process for nutrient evaluation continues to be a high priority for the agency. DEQ is working diligently to have the proper, protective processes in place to address nutrients in permits.
2015 Remaining Recommended Action Items	DEQ Actions
<i>Clarify the location of permitted outfalls by including latitude and longitude in the permit or fact sheet</i>	Resolved for permits issued after the 2015 PQR. Administratively extended permits are being addressed during the renewal process.
<i>Clarify the effective date of NPDES permits or that the effective is upon signature</i>	Permit effective dates are clearly enumerated on the cover page of the permit.
<i>Ensure a robust set of ambient water quality data is available for use in permit development or required ambient monitoring as a requirement in permits.</i>	The data gap analysis process ensures ambient monitoring is requested and utilized prior to permit development when necessary. Ambient monitoring is also included in permit renewals when necessary.
<i>Establish procedures and processes that ensure complete and consistent permit records across regions for all permits.</i>	Your DEQ Online will fully address this action item. YDO is expected to be fully operational in 2022.
<i>Document in the fact sheet whether and why significant changes have been made to outfalls from the prior permit to the current permit.</i>	In 2020, DEQ developed a new fact sheet template that includes instruction for identifying significant changes to outfalls. This new fact sheet is currently in use.
<i>Include monitoring requirements for phosphorus and nitrogen in permits for such facilities where the receiving waters are known to have nutrient impairments.</i>	DEQ is actively engaged in productive discussion with EPA on ways to address nutrients concerns with NPDES wastewater permits through the existing state permitting framework. Site specific approaches are being utilized because of the complexity of nutrient impairments.
<i>Oregon would benefit from developing a stand-alone BMP manual or similar to augment the permit. Oregon has clearly tried to keep the permit short and simple. The result is simultaneously too specific in suggested BMPs and not comprehensive enough in the assessment approach suggested for operators to use to figure out what BMPs might work.</i>	For stormwater permits DEQ no longer includes prescriptive BMPs within the stormwater permits. This allows permittees to utilize existing industry specific manuals to address the required performance standards.



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<p><i>The MOA's are a weak enforcement tool that do not ensure that permittees reduce CSO discharges and meet performance targets on a timely schedule. EPA recommends that permits incorporate compliance schedule to ensure timely implementation of the LTCP where the permittee is not yet under an enforcement mechanism such as a consent decree or state-issued order or where progress to control CSOs is insufficient.</i></p>	<p>DEQ has renewed 1 of 3 CSO permits and intends to renew the remaining two in the next five years, Astoria STP (2022) and Corvallis (2025). Renewal of these permits will incorporate any MAO's and include development of compliance schedules where applicable.</p>
<p><i>DEQ should strive to keep CSO permits current by reducing the time permits are administratively extended to as short as possible to ensure that permittees are making swift progress toward controlling CSO discharges.</i></p>	<p>This is being addressed in the overall approach to reducing the current backlog of permits.</p>
<p><i>DEQ should ensure that the permits require event-based reports for each CSO discharge and that these report elements are addressed in terms of the electronic reporting rule requirements.</i></p>	<p>This is being addressed and implemented as the permits are being renewed.</p>
<p><i>The high permit backlog has delayed implementation of TMDLs into permits.</i></p>	<p>The permit backlog is a top agency priority that is being actively addressed and reduced in a deliberate and prescriptive manner.</p>
<p><i>WLAS in TMDLs are complicated and are carried into permits as equations and calculated limits especially for temperature TMDLs where thermal load is used as a surrogate for temperature. Excess thermal load (ETL) limits in permits provide a variety of options for the permittee to calculate ETL. Permits that provide the option for calculated limits rather than containing final effluent limits or compliance schedules lack transparency and hinder the "due</i></p>	<p>Not pursuing: DEQ believes that the current process is appropriate and ensures that effluent limitations, as required by NPDES regulation, are consistent with the assumptions and requirements of the TMDL WLAs. While the flow-based equations used for the ETL limits are more involved than the static limits, they still ensure that the discharges will comply with the applicable water quality standards. All of the data used to calculate these limits, along with the calculated limits, are required to be reported in discharge monitoring reports. This reporting ensures a transparent process that is available for public review and consideration.</p>



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<i>process” requirements for public notice of permit conditions. DEQ permit writers should avoid including such calculated limit options in permits.</i>	
<i>Permit writers must work closely with TMDL staff during development of the TMDL to ensure that the WLA can be adapted into water quality-based effluent limits in the permit.</i>	Permit writing and TMDL work closely on both TMDL development and permit development with respect to WLAs. Further, DEQ created and filled a new position to support and perpetuate the discussions between the water quality sections.
2020 Essential Action Items	DEQ Actions
Ensure permit applications are submitted timely and complete in accordance with 40 CFR 122.21(d).	While this issue only occurred with a few facilities, YDO will address the timeliness of renewal applications.
Ensure applications include data requirements consistent with EPA regulations at 40 CFR 122.21 as part of the application process.	Active DMR and permit data gap analysis are fully addressing this issue since 2020.
Include monitoring requirements for phosphorus and nitrogen in permits for such facilities where the receiving waters are known to have nutrient impairments and the facilities are known to discharge nitrogen and phosphorous.	DEQ is actively engaged in productive discussion with EPA on ways to address nutrients concerns with NPDES wastewater permits through the existing state permitting framework. Site specific approaches are being utilized because of the complexity of nutrient impairments.
DEQ should ensure adherence to the Compliance Monitoring Strategy: one PCA every five years and one PCI every other year of approved pretreatment programs	The DEQ pretreatment program has met its commitment as identified in the DEQ-EPA Performance Partnership Agreement for the years 2016-2019. The PCI requirement was not identified in the PPA until 2020. DEQ will continue to implement the Performance Partnership Agreement with U.S. EPA Region 10.
2020 Recommended Action Items	DEQ Actions
Consider updating permit and fact sheet templates to consistently identify the physical location of outfalls.	The updated and implemented permit and fact sheet templates address this concern
Ensure that fact sheets include relevant discussions from previous permit cycles, especially when they directly relate to potential impacts to	DEQ will continue to include references to previous permit cycle discussions when applicable to the renewed permit. The updated permit and fact sheet templates support this endeavor.



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surface water (in this case, via groundwater).	
Consider including additional specificity in the permit text for stormwater monitoring by MS4 permittee(s) based on applicable TMDL requirements by watershed/receiving water.	The upcoming Phase I MS4 permits will include this in them.

Should you have any further questions about DEQ's comments on the draft PQR report or our described approach to address the action items, please do not hesitate to contact me at your convenience.

Thank you,

Geoff
 Rabinowitz

Digitally signed by Geoff Rabinowitz
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