Region 6

NPDES Program and Permit Quality Review

Oklahoma

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Report Date: March 2023

U.S. EPA Region 6
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Contents

Executive Summary

U.S. Environmental Protection Agency (EPA) Region 6's National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Review (PQR) for Oklahoma found that permits issued in the state were generally well-developed and consistent with federal regulations. However, we found that certain application requirements were not met, permit limits were not appropriately established after a reasonable potential determination, and fact sheets could be strengthened with additional documentation of effluent limitation development.

The PQR examined nine permits for discharges in Oklahoma along with one general permit issued by the Oklahoma Department of Environmental Quality (ODEQ); two individual permits issued by the Oklahoma Department of Agriculture, Food and Forestry (ODAFF); and several ODEQ permitting policies. The PQR also focused on several national and regional priority areas:

- Permit Controls for Nutrients in Non-Total Maximum Daily Load (TMDL) Waters,
- Effectiveness of POTW NPDES Permits with Food Processor Contributions,
- Small Municipal Separate Storm Sewer System (MS4) Permit Requirements, and
- Concentrated Animal Feeding Operations (CAFOs)

ODEQ issues 445 individual permits and 10 general permits. As of August 3, 2020, 91 percent of individual permits are current. Additionally, ODAFF administers three general permits.

The PQR recognizes the many state and region-specific challenges faced by the state of Oklahoma, including changes in management and recent changes to program processes in response to the COVID-19 pandemic. ODEQ also continues to improve its internal processes and systems to provide greater efficiency and consistency across the program. In addition, ODEQ is developing a more robust stormwater permitting program.

Although the permits reviewed commonly conformed to national requirements, we identified several concerns, including permit applications missing certain information required by 40 CFR 122.21. Since many of the deficiencies seem to stem from differences between Oklahoma's application forms and federal application requirements, we believe they can be best resolved if ODEQ updates the state application forms and ensures that applicants submit a complete application. Additionally, the PQR found that certain limit development practices are inconsistent with 40 CFR 122.44(d)(1)(iii). EPA advises ODEQ to revise its Continuing Planning Process (CPP) and/or water quality standards to address this issue.

In addition to the items listed above, the report provides an overview of the Oklahoma NPDES permitting program and identifies specific areas where EPA, ODEQ, and ODAFF can work together to continue to strengthen permit language and documentation in state NPDES permits. The state of Oklahoma reviewed and provided comments on the draft PQR report on October 21, 2022.

I. PQR BACKGROUND

The NPDES 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.

During this review, the evaluation team proposed action items to improve Oklahoma's NPDES permit program. The 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 -** "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 -** "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 five Region 6 staff and one EPA contractor staff person, conducted a review of the Oklahoma NPDES permitting program. The PQR was conducted remotely, meaning a review of materials was conducted off-site, for materials ODEQ was able to provide electronically. Further, the remote PQR included interviews and discussions conducted via conference calls during August 3–7, 2020. An opening interview was held on August 3, 2020, and a closing meeting on August 7, 2020.

The Oklahoma PQR included reviews of core permit components and national and regional topic areas, as well as discussions between the PQR review team and Oklahoma 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 nine individual permits, one general permit, and two general permit covered facilities (GPCFs) were reviewed as part of the PQR. Of the nine individual permits selected, all were reviewed for the core review and seven were reviewed for national topic areas. The general permit was reviewed for the MS4 national topic area. The two GPCFs were covered by the concentrated animal feeding operations (CAFOs) general permit issued by ODAFF, and were reviewed for the regional topic area. Permits were selected based on issue date and the review categories that they fulfilled.

Core Review

The core permit review involved the evaluation of selected permits and supporting materials using basic NPDES program criteria. Reviewers completed the core review by examining selected permits and supporting documentation, assessing these materials using standard PQR tools, and talking with permit writers regarding the permit development process. The core review focused on the *Central Tenets of the NPDES Permitting Program*[1] to evaluate the Oklahoma 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 Oklahoma 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 regionally-specific permit types or particular aspects of permits. The regional topic area selected by EPA Region 6 was Concentrated Animal Feeding Operations (CAFOs).

These reviews provide important information to Oklahoma, EPA Region 6, EPA Headquarters, and the public on specific program areas.

II. STATE PROGRAM BACKGROUND

A. Program Structure

ODEQ is authorized to implement all parts of the Oklahoma Pollutant Discharge Elimination System (OPDES) program that are subject to its jurisdiction (NPDES, Federal Facilities, Pretreatment, General Permits, Biosolids). ODAFF is authorized as of December 22, 2012, to administer the NPDES program regarding CAFOs, discharges from the application of biological or chemical pesticides that leave a residue, discharges resulting from silviculture activities, and point source discharges of storm water from agricultural activities. EPA Region 6 is the permitting authority for activities associated with oil and gas exploration, drilling, operations, and pipelines.

ODEQ's main office is located in Oklahoma City and it has 22 regional offices throughout the state. The main office is responsible for rulemaking, issuing permits, tracking compliance, conducting enforcement, responding to complaints (through referrals from the Environmental Complaints and Local Services [ECLS] Division), certifying operators and laboratories, developing Section 208 Plans, Total Maximum Daily Loads (TMDLs), and issuing CWA Section 401 certifications. Staff in the regional offices conduct inspections, enforcement, and complaint response activities. Regional offices are not responsible for drafting OPDES permits. CWA Section 401 certifications are developed by the ODEQ Watersheds Section.

[1] https://www.epa.gov/npdes/central-tenets-npdes-permitting-program

ODEQ's Water Quality Division (WQD) has 12 NPDES permit writers as well as 3 water quality modelers, 2 administrative assistants, 2 technical temporary staff, and 1 administrative temporary staff person supporting OPDES permitting. In addition, permit writers are supported by enforcement and compliance staff. ODEQ permit writers draft an average of six individual permits per year. To support professional development and provide training, permit writers attend the EPA Permit Writers' Course and EPA Water Quality Standards Academy, and they learn the permitting process through internal mentoring by experienced permit writers as well as section managers.

Permit writers develop all aspects of the draft permit and fact sheet and are responsible for the analyses that form the basis for the permit. Permit writers verify that analytical data in the application complies with the ODEQ Minimum Quantification Levels (MQLs) promulgated in Appendix B of Oklahoma Administrative Code (OAC) 252:690 or specified in the permit. Permit writers categorize the facility, identify relevant standards and receiving water criteria, screen effluent data, determine reasonable potential (RP), calculate limitations, and determine monitoring and reporting as well as other permit conditions.

ODAFF's main office is also located in Oklahoma City and is responsible for overseeing CAFOs, registered poultry feeding operations (PFOs), registered poultry waste applicators, and agricultural compost facilities; administering the state inspection program; and complaint resolution. CAFO field inspectors each operate from a home office and are assigned one of five regions across the state. ODAFF employs three permit writers who draft, on average, six permits per year. ODAFF's permit writers are supported by a division director, agricultural engineer, professional engineer, and a waste management consultant. These support staff conduct technical reviews and draft authorization letters for facilities. An administrative staff person supports records management. CAFO and poultry field inspectors conduct all required field inspections. ODAFF permit writers new to the program are trained similarly to new ODEQ permit writers, through mentoring, EPA's NPDES Permit Writers' Training courses, and written guidance and training materials.

ODEQ's WQD uses the NPDES Management System (NMS), an in-house database system, to support permit development and tracking, and storage for permit and compliance data. WQD also stores historical permit documents in the eDOCTUS system. Further, ODEQ implements an Electronic Reporting System (ERS) and Environmental Electronic (E2) Discharge Monitoring Reporting (e-DMR) application to allow permittees to submit Discharge Monitoring Reports (DMRs) electronically. DMR data flows from the E2/eDMR system into NMS, and then to EPA's Integrated Compliance Information System (ICIS)–NPDES. ODEQ and ODAFF permit writers utilize a geographic information system (GIS) DataViewer to identify facility and outfall locations, CWA Section 305(c) Integrated Report water bodies, 303(d) list impairments, and completed TMDLs. In addition, ODEQ's enforcement coordinators use ICIS to identify permit violations.

ODEQ maintains a detailed Continuing Planning Process (CPP) document that describes the water quality programs implemented in the state. In addition, WQD has developed template documents for various types of permits, fact sheets, authorizations, public notices, and

correspondence. The NMS database houses these template documents. Permit writers use NMS to generate portions of draft permits by populating the template document with facility and permit data stored in NMS. Permit writers then edit the document to add specific permit requirements such as permit limitations and monitoring requirements, delete any permit conditions which are not applicable to the facility, and then finalize the document.

ODEQ WQD develops NPDES permits in compliance with:

- 27A Oklahoma Statutes §2-6-201 et seq. - OPDES Act;
- OAC 252:606, DEQ - OPDES Standards;
- OAC 252:690, DEQ - Oklahoma Water Quality Standards (WQS) Implementation;
- OAC 785:45, Oklahoma Water Resources - Oklahoma's WQS; and
- OAC 785:46, Oklahoma Water Resources Board - Implementation of Oklahoma's WQS, and Oklahoma CPP.

Chapter 3 of the Oklahoma CPP (2012) document, entitled “Permitting Procedures,” describes key elements of the permit development process such as developing effluent limitations including technology-based effluent limits (TBELs) and water quality-based effluent limits (WQBELs), reasonable potential evaluation, mixing zones, toxics controls, whole effluent toxicity (WET), and public participation.

For quality assurance/quality control (QA/QC), permits drafted by new permit writers receive peer review by an experienced permit writer before being routed for manager review. Various levels of managers (e.g., Section Manager, group Manager, Chief Engineer, Assistant Division Director) review draft NPDES permits. Draft permits go through QA/QC review at each state of permit issuance—courtesy review draft, EPA review draft, public notice draft, and final permit. Certain permit elements also receive QA/QC review by a subject matter expert before being routed for manager review (e.g., WET, pretreatment, and CWA Section 316(b)). If permits have specific enforcement or legal issues associated with them, the enforcement District Engineer and legal staff will also review the permits. In addition, permit data entry into NMS also receives QA/QC review and queries (or reports) are run to identify any errors in the data entered that require correction. In general, checklists are not used as part of the QA/QC process; however, checklists have been developed for QA/QC of certain general permits.

Essentially, all permits undergo the same QA/QC process; however, the level of manager review is tied to the permit tier, which is a measure of the level of permit complexity and need for public involvement. General permit authorizations are Tier I and are reviewed by the Section Manager. Individual discharge permits are considered Tier II and III and receive the highest level of permit review. In subsequent draft permit stages (e.g., courtesy review draft to public notice draft), if no comments have been received and no changes have been made to the permit, the level of management review is flattened and, in most cases, only the Section Manager will review the draft permit. However, all final individual discharge permits receive the full range of management review before issuance.

While WQD's central files (i.e., the official permit files) are primarily electronic, managed and maintained in the eDOCTUS electronic document system, those central files which have not yet been scanned into eDOCTUS are managed and maintained in paper format by ODEQ's Central Records Section, and are in the process of being scanned into eDOCTUS as time and resources allow. Electronic copies of these documents and the associated facility and permit data are also stored in NMS. OPDES enforcement records and documents are scanned, indexed, and stored in eDOCTUS. Enforcement actions are also tracked in ODEQ's NEXUS database system. ODEQ is in the process of developing the capability to store and track compliance (i.e., inspection, violation, and enforcement) data in NMS.

ODAFF scans notices of intent (NOIs), nutrient management plans (NMPs), and hard copy correspondence upon receipt, places them in a Laserfiche document system, then routes them to technical staff for review. Technical staff maintain all technical review documents. The administrative assistant retains hard copy documents and files until the end of the calendar year, at which time they are moved to a central storage area and retained until the expiration of the general permit.

B. Universe and Permit Issuance

As of August 2020, the ODEQ NPDES program administers 445 individual permits and 10 general permits covering 218 dischargers. Most individual permits are non-major permits issued to publicly owned treatment works (POTWs). ODEQ administers 105 major permits (70 POTWs and 35 non-POTWs) and 338 non-major permits (240 POTWs and 98 non-POTWs). In addition, the state administers two individual MS4 stormwater permits. ODAFF administers three general permits: Agriculture Pollutant Elimination System (AgPDES) General Permit for Discharges from CAFOs (36 permittees), AgPDES General Permit for Discharges from Construction Activities (32 permittees), and the AgPDES Pesticide General Permit for Discharges from the Application of Pesticides (14 permittees).

ODEQ reported in the PQR Advance Questionnaire that 18 major individual permits and 22 non-major individual permits are administratively continued; therefore, 9 percent of ODEQ's individual permits are backlogged.

ODEQ indicated that significant industries in the state include rock, sand, and gravel quarries, concrete batch plants, steam electric power plants, coal mines, and refineries. Additionally, ODAFF indicated that significant industries impacting agricultural facilities include aerospace and defense; agriculture and biosciences; energy, information and financial services; and transportation and distribution.

C. State-Specific Challenges

Oklahoma indicated that recent changes in management, in addition to challenges introduced by the COVID-19 pandemic, have required the agency to implement certain changes to program processes to ensure that the OPDES program continues to move forward without interruption.

D. Current State Initiatives

As a result of the COVID-19 and the sudden need to change how WQD operates during remote work conditions, WQD realized the need for a structured and consistent process for routing internal documents for review and receipt of records in electronic format. In addition, ODEQ stated that they are continually evaluating options for updating their NMS system to implement the NPDES Updates Rule and provide overall enhancements to the database system. Further, WQD continues to review and update permit conditions to ensure permits are consistent with current eReporting requirements. Oklahoma stated that they are working to build out their stormwater program to become a more robust program. The state is also incorporating new permit requirements for water reuse in permits where the disposition of water includes land application.

III. CORE REVIEW FINDINGS

A. Basic Facility Information and Permit Application

1. Facility Information

Background

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

Program Strengths

The permits reviewed appropriately identify authorization to discharge information, location information relative to receiving waters, physical location of facility and discharge outfalls. The fact sheets reviewed provide a clear description of the facility and a good understanding of facility and treatment processes as well as expected waste streams associated with each permitted outfall.

Areas for Improvement

One permit cover page contained a typographical error listing the facility name where the receiving water should have been listed. ODEQ should ensure typographical errors are corrected during the various stages of permit reviews.

Action Items

Essential	•The PQR did not identify any essential action items for this section.
Recommended	•Ensure typographical errors are corrected during the various stages of permit reviews.

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.

WQD uses state NPDES permit application forms, available on WQD's OPDES website (https://www.deq.ok.gov/divisions/wqd/#opdes). The municipal permit application forms (DEQ Forms 2M1 for major POTWs and 2M2 for non-major POTWs) are interactive, fillable forms that can be completed online but must be printed to be submitted. The municipal application forms are dated July 2013. Industrial permit application forms and other forms are non-fillable, non-interactive, and must be printed to be completed and submitted. WQD updated DEQ Forms 1 (General Information), 2C (for existing manufacturing, commercial, and mining operations), 2D (for new manufacturing, commercial, and mining operations) in August 2019.

ODEQ's municipal application forms appear to contain different data requirements from the federal application requirements prescribed at 40 CFR 122.21(j)(4). ODEQ Form 2C appears to track with federal application requirements.

Following a reminder triggered by the NMS database, WQD sends an application request letter, by mail, to permittees at 270 days before permit expiration. WQD sends permittees follow-up letters every 30 days until the application is received.

WQD assigns industrial permits based on geography; each permit writer is assigned one of five regions. However, certain permit assignments are made for specific facility types, based on permit writer experience and subject matter expertise. Municipal permits are assigned to permit writers based on staff workload and experience.

Once an application is received by WQD it is scanned and logged into NMS, and receipt of the appropriate fee is confirmed. The application is then routed to the appropriate manager and assigned to a permit writer. Initially, the permit writer reviews the application for administrative completeness, then conducts a full technical review of the information provided. Oklahoma regulations require that permit applicants post a public notice when submitting their application. If a permit application is not complete, a request is sent to the applicant for the missing information.

Program Strengths

Applications were available in all the administrative records reviewed during the PQR. In addition, the correct ODEQ permit applications were observed in the permit files.

Areas for Improvement

Two applications reviewed during the PQR were received late; one was received 3 days after the permit expired. Two applications for POTWs were not signed by the appropriate signatory, consistent with 40 CFR 122.22(a)(3). The DEQ Form 2M1 appears to lack testing requirements for ammonia, oil and grease, and hardness. Also, DEQ Form 2M1 instructions (#20) direct applicants to *"Submit quantitative data on pollutants listed in 40 CFR 122, Appendix D, Table IV and Table V that are known or reasonably expected to be discharged."* 40 CFR 122.21(j)(4)(iv) and (vi) require at least 3 samples for pollutants listed in Part 122, Appendix J, Tables 1A, 1, and 2. Further, DEQ Form 2M2 appears to lack testing requirements for any pollutants that are required by 40 CFR 122.21(j)(4)(ii) and (iii). Both DEQ Forms 2M1 and 2M2 appear to lack testing requirements for WET, in accordance with 40 CFR 122.21(j)(5).

Action Items

Essential	•Ensure that individual major and non-major municipal application forms comply with federal application requirements detailed in 40 CFR 122.21(j)(4), including for WET as required under 40 CFR 122.21(j)(5). •Appropriately address individual permit applications that are submitted fewer than 180 days prior to permit expiration, including documenting where ODEQ has granted permission for submittal of an application at a later date, as required by 40 CFR 122.21(d).
Recommended	•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 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 biochemical oxygen demand (BOD), total suspended solids (TSS), pH, and percent pollutant removal), and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of six POTW permits were reviewed as part of the PQR.

For all six POTW permits reviewed, the fact sheets adequately described the facility and treatment process. The fact sheets also identified applicable standards (e.g., secondary treatment standards). POTW permits reviewed included numerical BOD and TSS limits that were consistent with state secondary treatment requirements, including appropriate units and forms. Minimum percent removal requirements are contained in Section C of Part III (Standard Conditions for OPDES Municipal/Domestic Permit, Other Conditions, Percent Removal).. However, these conditions also indicate that the percent removal requirement "may be waived in permits containing mass loading limits for BOD and TSS." Certain fact sheets explain that for *"influent waste streams comprised primarily of domestic sewage, compliance with the 85 percent minimum monthly average percent removal criteria for BOD/CBOD and TSS is implied if the effluent is in compliance with the concentration standards for secondary treatment."* Not all fact sheets reviewed specifically discuss percent removal.

During the PQR discussion, ODEQ maintained that compliance with 85 percent removal is implicit in the secondary treatment limits that are included in its permits; therefore, influent monitoring of TSS and BOD/CBOD in POTW permits to ensure compliance is unnecessary.

Program Strengths

The POTW permits reviewed appear to be consistent with state and federal secondary treatment requirements for concentration-based effluent limitations for TSS and BOD/CBOD and effluent limitations are established in appropriate units and forms. In addition, fact sheets provide useful descriptions of the facility and wastewater treatment process. Fact sheets also identify standards applicable to POTW discharge permits.

Areas for Improvement

The secondary treatment standards at 40 CFR 133.102 specify that "all requirements for each parameter shall be achieved", which includes the percent removal parameters, with percent

removal defined in 40 CFR 133.101 as "determined from the 30-day average values of the raw wastewater influent pollutant concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period." The regulation language does not allow for a waiver of the percent removal requirement, or compliance with the requirement based on "implied" compliance through meeting the concentration parameters. The permit must include appropriate monitoring requirements to ensure compliance with the percent removal parameter. The action item for this finding is included in Section III.D of this report. It is also recommended that the percent removal condition be moved from Part III of the permit to the "Effluent Limitations and Monitoring Requirements" table in Part I of the permit, in order to make the requirement more explicit.

Action Items

Essential	•All POTW permits must contain the percent removal parameters from the secondary treatment standards for BOD/CBOD and TSS, even if the permit includes concentration or mass loading limits (40 CFR 133.102).
Recommended	•The percent removal condition, along with the influent monitoring requirement, should be moved from Part III of the permit to the "Effluent Limitations and Monitoring Requirements" table in Part I of the permit, in order to make the requirement more explicit.

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).

Three non-POTW permits were reviewed during the core permit review. Oklahoma has adopted the federal ELGs and many of the NPDES permit regulations by reference (refer to: OAC 252:690-1-4). In addition, section 3 of the CPP addresses effluent limitation development, including TBELs based on ELGs and BPJ. Fact sheets for the permits reviewed provide useful descriptions of the facilities and facility categorization for purposes of applying ELGs. The fact sheets also include descriptions of the effluent associated with each outfall and a summary of

effluent data and associated treatment processes. Fact sheets clearly identify applicable ELGs and present the application of each ELG in an understandable format.

Where an ELG does not exist or does not address a pollutant of concern, BPJ-based limits may be developed. In many cases, these BPJ-based limits have been carried forward through several permit cycles. ODEQ sometimes applies BPJ and develops case-by-case TBELs when the facility has experienced WET test failures and if an individual chemical is the cause of the test failure; ODEQ works with dischargers to develop chemical-specific effluent limitations based on facility discharge data. ODEQ's fact sheets include documentation of this type of analysis.

Program Strengths

The non-POTW permits reviewed included limits that were consistent with applicable ELGs, as well as limits based on BPJ that were based on prior permits, similar treatment systems, and Region 6 recommendations. Fact sheets provide clear discussions of ELGs applicable to the discharge, or the application of BPJ and accompanying rationale for BPJ-based limitations in the absence of ELGs. Further, fact sheets present applicable TBELs in a summary table, including the applicable standards and the proposed TBELs.

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.

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 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 WQS.

The PQR for ODEQ 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 total maximum daily loads (TMDLs).

Process for Assessing Reasonable Potential

In developing WQBELs, ODEQ's WQD applies the Oklahoma Water Resources Board (OWRB) rules (Title 785) addressing WQS (Chapter 45). Because each Oklahoma state agency with environmental responsibilities is obligated by statute to develop and maintain a WQS implementation plan, ODEQ has promulgated OAC 252:690 for WQS implementation with Appendix A specifically containing the WQS Implementation Plan (WQSIP). However, OWRB's implementation procedures found at OAC 785:46 are overarching and applicable to all state environmental agencies. Since the CPP is not promulgated by ODEQ as a rule, implementation procedures found in OAC 785:46 and OAC 252:690 take precedence over those outlined in the CPP if inconsistencies arise.

Oklahoma methods for determining RP are codified in Chapter 3 of OAC 252:690, described in the ODEQ WQS implementation plan, and described in Chapter 3 of the 2012 CPP. The ODEQ WQSIP includes methodology and equations that account for effluent variability and background conditions, and prescribes WET procedures.

Oklahoma's WQSIP, codified as rules at OAC 785:46 and OAC 252:690, evaluates RP following both an EPA Region 6 approach and the method prescribed in EPA's *Technical Support Document for Water Quality-Based Toxics Control* (TSD). To determine the need for WQBELs, the WQD screens for pollutants that cause, have the reasonable potential to cause, or contribute to an exceedance of water quality criteria. The 95th percentile level of the effluent is used to determine RP. The 95th percentile is calculated based on effluent data if there are 10 or more data points and estimated based on the arithmetic mean effluent concentration multiplied by a factor of 2.135 when there are fewer than 10 data points. WQD's OWQScreen-S spreadsheet is used to determine RP and limits for pollutants of concern. When fewer than 10 data points are available, data are screened for RP using EPA's published TSD approach. The coefficient of variation is calculated for 10 or more data points and assumed to be a value of 0.6 when fewer than 10 data are available. Where RP is indicated, WQD establishes an effluent monitoring requirement (in accordance with OAC 252:690-3-90) so that 10 or more data points

will be collected within 12 months during the permit term. Permit writers use a standard Excel spreadsheet (OWQScreens) to calculate RP for discharges to lakes and streams. The same spreadsheet is used to calculate WQBELs where necessary.

ODEQ and ODAFF permit writers utilize a GIS DataViewer to identify facility and outfall locations, CWA Section 305(c) Integrated Report water bodies, 303(d) list impairments, and completed TMDLs. Permit writers generally consider the last 3 years of data for POTW discharge permits and the last 2 years of data for industrial discharges, unless the discharge is intermittent, in which case data from the entire permit term may be considered.

Where available, background data are used for evaluating RP and developing WQBELs. WQD includes permit requirements for background monitoring permit requirements when measured effluent pollutant levels are high enough that background pollutants mixed with effluent might lead to an instream water quality excursion. Published background values for chloride, sulfate, and TDS are always prescribed when determining RP for receiving waters with irrigation designated use. Receiving stream hardness is also considered when developing RP. Currently, ODEQ's NPDES implementation approach is that if RP is determined based on a few data points, even if an excursion has already occurred (e.g., WET), ODEQ may require additional monitoring during the permit term, but may or may not establish a WQBEL.

Process for Developing WQBELs

Fact sheets indicate that WQBELs are calculated for each pollutant exhibiting RP for all applicable criteria and the most stringent of the resulting monthly average effluent limitations is established in the draft permit. WQD permit writers use the same RP tool to calculate WQBELs. WQBEL development follows EPA's TSD procedures.

A permit-specific OWQScreen-S file, which is an extensive Excel spreadsheet with imbedded formulas, was available during the remote PQR. The OWQScreen-S displayed the individual calculations used to determine RP and WQBELs for each permit.

State regulations authorize mixing zones described by the Water Resource Board's rules on mixing zones (OAC 785:45-5-26). Stream flows for different uses are codified in implementation documents (e.g., OAC 785:46). Fact sheets reference mixing zone equations in OAC 785.46 and the water quality spreadsheet includes pollutant discharge concentration calculations.

Program Strengths

Reasonable Potential

WQD's fact sheets clearly identify the receiving water, including its designated uses, and discuss whether the receiving water was impaired and, if so, for which pollutants and how the permit addressed impairment concerns. Fact sheets typically describe the methodology used by WQD to assess RP, including a summary of the data considered in the RP analysis, and the results of each component of the RP analysis. Fact sheets typically include a sufficient narrative discussion of ODEQ's decision-making for each pollutant of concern.

WQBEL Development

Fact sheets typically describe the methodology used by WQD to develop WQBELs. Fact sheets reviewed contain a stepwise template including equations ODEQ used for WQBEL development and tables displaying all or part of initial data and relevant final permit limits. Fact sheets reviewed thoroughly discuss the results of the WQBEL development process. Regarding mixing zones, the fact sheets reference mixing zone equations in OAC 785.46 and the water quality spreadsheet includes pollutant discharge concentration calculations. The WQBELs in the core permits reviewed are consistent with the RP and limits analyses in the OWQScreen-S spreadsheets and accompanying fact sheets.

Areas for Improvement

Currently, ODEQ's NPDES implementation approach in cases where a small data set results in a determination of RP is that ODEQ may require additional and representative (per 40 CFR 122.21(j)) effluent monitoring during the permit term but may or may not establish a WQBEL when RP has been demonstrated. However, the EPA NPDES regulations at 40 CFR 122.44(d)(1)(iii) require the establishment of effluent limitations for pollutants (including WET) where valid monitoring data indicate that the permitted effluent is discharged at a level which will cause, have the reasonable potential to cause, or contributes to an in-stream excursion above any state WQS. In some cases, such as for WET, even where data show that an excursion of a WQS has already occurred, ODEQ may not include a limit in the permit. If ODEQ determines that a sample is no longer representative of the permittee's operations and discharge due to changes in treatment, processes, or other Best Management Practices (BMPs) that have resolved toxicity, and a limit is not needed, ODEQ must provide detailed documentation explaining the basis for their determination in the permit fact sheet.

Additionally, how TMDLs are represented in the fact sheet could likely be improved by developing a consistent format/template to use and modify as necessary. A suggestion would be to work with the Region 6 TMDL Program to develop a process to ensure TMDL WLAs are not overlooked. The permit fact sheet should document that the limit is consistent with the assumptions and requirements of the TMDL and describe the process for translating WLAs into limits, or address situations where deviation from that process is necessary. ODEQ should also ensure that once a TMDL is approved, it is implemented into permits in a timely manner – by reopening and modifying the permit, or addressing in the next permit issuance.

Oklahoma's Water Quality Management Plan (WQMP), which is a comprehensive document aimed at systematically managing water quality in the various watersheds within the state, is not a publicly available document. WQD should update the WQMP regularly, such as when a new TMDL is adopted, and make it available to the public.

Action Items

Essential	•ODEQ must establish WQBELs where data indicate that the permitted discharge causes, has the reasonable potential to cause, or contributes to an excursion above any state WQS, in accordance with 40 CFR 122.44(d)(1)(i) - (vii). If representative data show that an excursion of any criteria, including narrative WET criteria, has already occurred or indicates that the discharge has the reasonable potential to cause or contributes to an excursion, a limit must be included in the permit, even where the data set used in the reasonable potential analysis is limited or no data exists. If data are determined not to be or are no longer representative of the permitted discharge, then ODEQ must document the basis for this determination in the fact sheet. ODEQ should revise its CPP and/or water quality standards if needed, upon the next triennial review no later than 2024, to address these items. •Ensure that permits include effluent limitations consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL (122.44(d)(1)(vii)(B)).
Recommended	•Ensure approved TMDLs are represented in the fact sheet - suggest developing a consistent format/template to use and modify as necessary. •Document that the limit is consistent with the assumptions and requirements of the TMDL. If there is an accepted consistent process for translating WLAs into limits, be transparent about the process and address situations where deviation from that process is necessary. •Update the WQMP regularly and make it available to the public. •Ensure that once a TMDL is approved, it is implemented into permits in a timely manner – by reopening and modifying the permit, or including in the next permit issuance.

3. Final Effluent Limitations and Documentation

Background and Process

Permits must reflect all applicable statutory and regulatory requirements, including technology and water quality standards, and must include effluent limitations that ensure that all applicable CWA standards are met. The permitting authority must identify the most stringent effluent limitations and establish them as the final effluent limitations in the permit. In addition, for reissued permits, if any of the limitations are less stringent than limitations on the same pollutant in the previous NPDES permit, the permit writer must conduct an anti-backsliding analysis, and if necessary, revise the limitations accordingly. In addition, for new or increased discharges, the permitting authority should conduct an antidegradation review, to

ensure the permit is written to maintain existing high quality of surface waters, or if appropriate, allow for some degradation. The WQS 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.

ODEQ's permit writers describe facility operations, expected waste streams, pollutants of concern, and wastewater treatment processes in fact sheets. In addition, flow schematic diagrams are available in permit records to offer additional understanding of treatment processes and effluent discharged. ODEQ's fact sheets reliably identify applicable treatment standards or alternate limitations for both POTW and non-POTW discharges. Permits and fact sheets clearly identify TBELs applicable to the discharge and established in the permit.

ODEQ's fact sheets provide consistent and thorough documentation of the RP analysis and subsequent WQBEL development. Fact sheets clearly identify outfall locations, receiving streams, designated uses, impairment status, and applicable WQS and TMDLs. In addition, fact sheets discuss pollutants of concern specifically, including the regulatory basis for their effluent limitations. ODEQ offers an informative and thorough discussion of the RP analysis in fact sheets, including illustration of the stepwise process permit writers follow to evaluate RP and develop WQBELs, where appropriate. OWQScreen-S spreadsheets are retained in electronic format and are a component of the permit administrative record.

ODEQ's permit writers provide documentation in the fact sheet that they considered TBELs and WQBELs applicable to the discharge and evaluated which was most stringent and established as the final effluent limitation. Permit writers illustrate this evaluation using a summary table that lists applicable TBELs, WQBELs, the effluent limitations from the previous permit, and a final set of columns listing the proposed effluent limitations included in the draft permit.

Chapter 3 of the 2012 CPP addresses anti-backsliding considerations and Figure 10 in the CPP illustrates an anti-backsliding decision tree. WQD implements the federal anti-backsliding requirements and fact sheets document any instances of effluent limitations that are less stringent than those in the previous permit, in a section that specifically discusses changes from the previous permit.

Antidegradation requirements are addressed in a state regulation (OAC 785:45-3-1) and written implementation procedures (785:46-13). The WQS provides a three-tiered antidegradation

policy designating levels of protection. Each fact sheet discusses applicable antidegradation provisions and how state antidegradation requirements have been met.

Program Strengths

ODEQ's fact sheets consistently include a thorough discussion of the basis for effluent limitation development and include in-depth justification for TBELs, expected waste streams and pollutants of concern, receiving stream information, RP analysis, and resulting WQBELs. Fact sheets clearly identify facility operations and applicable ELGs, including a straightforward presentation of ELG standards and resulting TBELs. Fact sheets provide useful discussions, appropriate justification, and a clear illustration of the comparison between applicable effluent limitations to demonstrate the most stringent effluent limitation is established in the final permit. ODEQ's fact sheets offer a thorough discussion of the basis for WQBELs, including a detailed progression of the full RP analysis procedures. In addition, fact sheets specifically provide a summary of changes from the previous permit and will include a discussion of how the permit change satisfies federal anti-backsliding requirements.

Areas for Improvement

In cases where the previous permit was identified as the basis for a limit, the fact sheet lacked clear discussion of the technical basis for the limits and the factors considered. Fact sheets would be strengthened if permit writers were able to determine the original technical basis for the effluent limitation that is carried forward from the previous permit.

Action Items

Essential	•The PQR did not identify any essential action items for this section.
Recommended	•Ensure fact sheets provide the technical basis for effluent limitations identified as being carried forward from the previous permit.

C. Monitoring and Reporting Requirements

Background and Process

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

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

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

Under the OPDES program, discharge monitoring requirements are specified in regulations (OAC 252:690-3-88) and permit writers have tools to increase or decrease monitoring frequencies based on facility performance. Permit writers discuss the basis for monitoring requirements in fact sheets, including specific discussions regarding any performance-based monitoring frequency reductions.

Permits require use of EPA-approved 40 CFR Part 136 analytical methods. Further, Minimum Quantification Levels (MQLs) are specified in the WQSIP (OAC 252:690, Appendix B) and the CPP. Permits specify MQLs for pollutants for which effluent limitations exist and refer permittees to reference current state rules for updated MQLs. ODEQ also identifies the required MQLs for applicants during the permit application process.

Program Strengths

Permits reviewed clearly present monitoring requirements such as monitoring frequency and type. Further, permits provide a clear identification and description of the monitoring location. Monitoring requirements appear appropriate to determine compliance with effluent limitations. Permits establish WET monitoring requirements and include sufficient details regarding sampling, testing, analysis, and reporting requirements. Permits establish clear reporting requirements, such as due dates, and require electronic submission of DMRs.

Areas for Improvement

As discussed in Section III.B.1., POTW permits did not include influent monitoring requirements necessary to ensure compliance with percent removal secondary treatment standards.

Action Items

Essential	•ODEQ must ensure that POTW permits specifically identify influent monitoring requirements for BOD/CBOD and TSS, to ensure compliance with permit limitations, consistent with 40 CFR 122.44(i).
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; BMPs [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.

WQD has developed boilerplate standard conditions for several types of permits:

- Municipal dischargers
  - Part III – Municipal/Domestic Standard Conditions (rev 5/2006);
  - Part IV – Biosolids (rev 2/2006);
- Industrial dischargers
  - Part III – Industrial Discharge Permit Standard Conditions;
  - Part IV – Non-Discharge Requirements;
- State permit industrial wastewater treatment system
  - Part III – Total Retention Systems; and
- Industrial Users Indirect Dischargers

- Part III – Indirect Industrial User Discharge Permit Standard Conditions.

The core permits reviewed include standard conditions as sections III and IV of the respective permits. As discussed above, ODEQ has developed several templates of standard conditions including one for POTWs and one for non-POTWs. These standard conditions are posted on the ODEQ website and are incorporated into permits through general language on the permit cover pages. WQD staff indicated that copies of these conditions are also provided with each permit. Oklahoma also adopts 40 CFR 122.41 by reference (252:606-1-3. Adoption of U.S. EPA regulations by reference).

Regarding special conditions, municipal permits typically included conditions that addressed contributing industries and pretreatment, and biosolids. Non-POTW permit special conditions varied and included conditions that addressed surface impoundment requirements, lab certifications, reopener provisions, methods provisions, and monitoring frequency reduction.

Oklahoma's WQS at OAC 785:45-5-4(f) allow for compliance schedules. In addition, OAC 785-5-4(e) allows for water quality variances. The Oklahoma Water Resources Board grants water quality variances following submittal, and subsequent approval, of a variance application package. OAC 785-5-4(e)(1) states that variances are limited to a maximum 3 years in duration and are not subject to renewal.

Program Strengths

Overall, ODEQ's standard conditions appear to be consistent with federal requirements. In addition, Oklahoma adopts 40 CFR 122.41 by reference, in OAC 252: 606-1-3, and permits incorporate compliance with standard conditions through general language on the cover page with the authorization to discharge. Oklahoma's standard conditions are easy to access on ODEQ's website and are organized in a logical manner, generally following the organization of 40 CFR 122.41. Special conditions are established appropriate to the facility and discharge type and are well organized within Part II of the permit.

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 Oklahoma, and reviewed materials from the administrative process as they related to the core permit review.

ODEQ has developed a tier system, detailed in Appendix C of OAC 252.004, to prescribe requirements for public participation in the water discharge permitting program. For Tier I permits, there is no required notice for filing an application or publishing a draft permit. For Tier II permits (e.g., new discharge permit for minor facility, individual storm water permit, reissued permit, major permit modification), notice is required for permit applications and a draft permit must be developed. Tier III permits include new discharge permits for major facilities and require an administrative hearing in addition to the same notices as Tier II permits. WQD provides permittees with a courtesy review draft permit to enable an efficient permit review process; this draft is provided to major dischargers prior to the issuance of the draft permit for public comment. WQD retains comments provided during the courtesy review draft process and provides the permittee with responses to its comments. The draft permit is provided to EPA for review and comment and then the draft permit is publicly noticed for a 30-day public review and comment period. ODEQ posts draft permits on its website and the permittee is required to post a copy of the draft permit in a public location for the duration of the comment period. ODEQ receives comments in both electronic and hard copy format and provides written responses to all who submitted comments. ODEQ includes clear statements in the permit cover letter indicating whether comments were submitted on the draft permit. When comments were submitted, the permit file will include written responses to all comments.

WQD holds relatively few hearings as WQD aims to resolve issues early in the permit development process. As a result, few objections and permit appeals are received. Permit appeals are heard by an administrative law judge or in district court. Administrative permit records are kept in ODEQ headquarters. Relevant items from the permit record are listed in the permit fact sheet.

Program Strengths

The fact sheets routinely list the primary documents in the administrative record, and materials in the core permit files reviewed for this PQR support the respective permit. OWQScreen-S spreadsheets are included in the administrative record and the program output was typically presented in the fact sheets. The permit files include the public notices for the draft permits, and the cover letter indicates whether comments on the draft permit were submitted. Where comments were submitted, written responses addressing those comments were included in the file.

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;[2] all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant and regulatory personnel; all other items supporting the file; final response to comments; and, for new sources where EPA issues the permit, any environmental assessment, environmental impact statement, or finding of no significant impact.

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

[2] 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.

As discussed in section II.A, WQD's official permit files are primarily electronic and are managed and maintained in the eDOCTUS electronic document system; however, there are certain files which have not yet been scanned into eDOCTUS that are retained in paper format by ODEQ's Central Records Section, in the process of being scanned into eDOCTUS. Most OPDES permit related files are maintained in electronic copies and stored in NMS or eDOCTUS. ODAFF maintains scans of relevant file records in a Laserfiche document system and then ODAFF technical staff maintain most permit documents. Permit files maintained by ODEQ and ODAFF appeared complete.

ODEQ prepares fact sheets for all individual OPDES permits, based on a template document. ODEQ's fact sheets are organized consistently and discussions follow a logical flow. Fact sheets include an up-front summary of permitting activities, documenting the entire permit development process from application submittal through EPA review and comment. Fact sheets include a useful description of facility activities and wastewater treatment processes, a summary of facility monitoring data generated during the permit term, a summary of changes from the previous permit, clear identification of authorized outfalls, sampling points, and receiving streams. Fact sheets discuss the basis for effluent limitation development and include in-depth justification for TBELs, expected waste streams and pollutants of concern, receiving stream information, RP analysis, and WQBELs. In addition, ODEQ's fact sheets present the basis for monitoring requirements, WET requirements, special conditions, and compliance schedules. Permit writers prepare the fact sheet ahead of the draft permit.

Program Strengths

Fact sheets contain all required elements. Further, fact sheets are organized consistently and logically, including specific headings identifying the rationale for all aspects of the permit. Fact sheets provide useful discussions and sufficient justification, and they illustrate a comparison between applicable effluent limitations to demonstrate the most stringent effluent limitation is established in the final permit. ODEQ's fact sheets offer a high-quality discussion of the basis for WQBELs, including a detailed progression of the RP analysis procedures. Administrative records reviewed during the PQR appeared complete and readily accessible by ODEQ.

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.

IV. NATIONAL TOPIC AREA FINDINGS

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

A. Permit Controls for Nutrients in Non-TMDL Waters

Background

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

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

To assess how nutrients are addressed in the Oklahoma NPDES program, EPA Region 6 reviewed one permit, the Wilburton Public Works Authority - Industrial Park Wastewater Treatment Facility (OK0021881). The facility treats domestic sewage and has an average daily design flow of 0.75 million gallons per day (MGD). The facility is listed in Appendix C of the 2018 Integrated Report, which indicates that Bandy Creek in Segment 2200100 of the Lower Arkansas River Basin is impaired with a listed cause of fish bioassessments but does not yet have a Total Maximum Daily Load (TMDL). This impairment indicates that the waterbody is not meeting Fish & Wildlife Propagation criteria, but the cause is not identified. The permit contains both monthly (2 mg/l) and weekly (3 mg/l) average permit limits for phosphorus, which are monitored 3 times per month by a 3-hour composite sample. These limits are required by the WQMP which states that where DO-demanding substances are present in an effluent at significant levels, a wasteload allocation (WLA) must be established according to certain seasonal criteria dependent on the receiving water's aquatic community subcategory. In determining the WLA for DO-demanding substances, the prescribed level of secondary treatment for the facility is modeled to determine if it meets the seasonal criteria. If the model indicates that a more stringent WLA than secondary is required to meet these criteria, then the more stringent wasteload allocation (often referred to as a "tertiary" level of treatment) may be used once it is granted technical approval by EPA Region 6. It is then promulgated as an amendment to the state WQMP.

There was some difficulty in finding permits that met the review criteria, so EPA Region 6 also reviewed the Oklahoma Administrative Code, the 2018 Water Quality in Oklahoma Integrated Report, the Oklahoma Nutrient Criteria Development Plan, and the 2019 Oklahoma Lakes Report Beneficial Use Monitoring Program to get a more comprehensive view of how the state addresses nutrient pollution.

Development and adoption of nutrient or other water quality criteria in Oklahoma falls under the authority of the OWRB, while implementation of water quality criteria under the NPDES permits program is shared between OWRB and ODEQ. OWRB last updated its Oklahoma Nutrient Criteria Development Plan in September 2006. The plan describes Oklahoma's efforts to address nutrient impairment in state waters since the first Oklahoma Water Quality Standards in 1959 that included narrative criteria "prohibiting nutrients from impairing beneficial uses by excessive algae." The plan further discusses that narrative criteria implementation resulted in over 200 waterbody segments being listed as impaired by nutrients in Oklahoma's 1994 303(d) list. In response to new rules and additional study between 1996 and 1998, Oklahoma pared its list of impaired waters to ten listed for phosphorus and one listed for nitrate on the 1998 303(d) report. According to the OWRB plan, waterbodies previously identified as impaired were reclassified as threatened and required additional study. In response, OWRB initiated a process and a definition in the WQS to identify Nutrient Limited Watersheds (NLWs).

Currently, Oklahoma addresses nutrients in wastewater discharges through narrative nutrient criteria and limited numeric criteria in state WQS. Oklahoma Administrative Code (OAC) 785:45-5-9 general narrative water quality criterion requires:

> "Nutrients from point source discharges or other sources shall not cause excessive growth of periphyton, phytoplankton, or aquatic macrophyte communities which impairs any existing or designated beneficial use."

Nutrient criteria for the protection of the Aesthetic designated use of Oklahoma waters is found in OAC 785:45-5-19, and establishes a thirty (30) day geometric mean total phosphorus concentration that shall not exceed 0.037 mg/L for waters designated as "Scenic River" in Appendix A of the WQS. A "nutrient-limited watershed" is defined by the WQS as a watershed of a waterbody with a designated beneficial use which is adversely affected by excess nutrients as determined by Carlson's Trophic State Index (using chlorophyll-a) of 62 or greater, or is otherwise listed as "NLW" in Appendix A of the WQS. OAC 785:45-5-29 designates lakes with watersheds as NLW, and states that these are the only areas which are subject to limitations applicable to nutrient limited watersheds.

OAC 785:45-5-10, assigns criteria to protect public and private water supplies and requires that long-term average concentration of chlorophyll-a at a depth of 0.5 meters below the surface shall not exceed 0.010 milligrams per liter in Wister Lake, Tenkiller Ferry Reservoir, nor any waterbody designated Sensitive Water Supply in Appendix A. The WQS states that numerical phosphorus or nitrogen criteria or both may be promulgated wherever the chlorophyll-a

criterion is exceeded. Additionally, the WQS requires that the long-term average total phosphorus concentration at a depth of 0.5 meters below the surface shall not exceed 0.0168 milligrams per liter in Lake Eucha and 0.0141 milligrams per liter in Spavinaw Lake. Lake Spavinaw, Lake Eucha (Upper Spavinaw), Tenkiller Ferry Lake, Illinois River Arm, and Wister Lake are currently listed as impaired for chlorophyll-a and/or phosphorus on Oklahoma's 2018 303(d) list. The list also includes 33 waterbodies that are impaired for chlorophyll-a. Oklahoma has already addressed or will be addressing these impairments through TMDL development. Once WLAs have been established through the TMDL process, ODEQ will incorporate these WLAs into the OPDES permits it issues, as applicable.

Program Strengths

To synchronize Oklahoma's water quality monitoring efforts, the State Legislature appropriated funds in 1998 to create the Beneficial Use Monitoring Program (BUMP) under the direction of the Oklahoma Water Resources Board, who promulgates the WQS and WQS Implementation Rules. As part of the Beneficial Use Monitoring Program, the OWRB conducts sampling on lakes and reservoirs across the state of Oklahoma through a fixed station monitoring approach. This design allows the state's objectives to be met, as well as ensure various sized waterbodies are represented adequately. Study results from 2018- 2019 indicate that 80% of the waters (73% by area) sampled were exhibiting high to excessive levels of primary productivity and nutrient rich conditions characteristic of eutrophic and hypereutrophic waterbodies.
The OWRB has also implemented probabilistic monitoring, which involves random selection of river and stream reaches across the entire state to be sampled. The goal of the OWRB's probabilistic monitoring program is to provide statistically sound, unbiased information on the health of Oklahoma's rivers and streams. At each site, staff collect a broad suite of parameters to assess the condition of the river or stream as well as the organisms that live there. The BUMP Report provides ODEQ with the information/data needed for determining if lakes and streams are in compliance with water quality standards, tracking general water quality trends, and identifying pollution problems.

Areas for Improvement

ODEQ should develop implementation procedures for addressing narrative nutrient criteria in permits. Primarily, ODEQ should consider numeric translation of the narrative criteria stated in OAC 785:45-5-9 using section 304(a) of the CWA, which was one of the methods recommended by EPA in the November 2001 Memorandum WQSP-01-01 to incorporate nutrient criteria into water quality standards. These criteria are intended to represent least-impacted stream conditions and as such, are presumed to protect multiple designated uses.

Action Items

Essential	• The PQR did not identify any essential action items for this section.
Recommended	•Translate the narrative criteria in OAC 785:45-5-9 into a numeric criteria based on CWA Section 304(a) criteria.

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

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

Background

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

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

The PQR also assessed the status of the pretreatment program in Oklahoma 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).

Of the 69 major POTWs with OPDES permits, 27 facilities have pretreatment programs (Table 1). EPA reviewed the pretreatment language in two major POTW permits (OK0026051 and OK0042935) during the PQR. These pretreatment programs range from many SIUs and CIUs to few SIUs and CIUs and accordingly captures the range of high to low effluent volumes. Additionally, we reviewed the pretreatment requirements in one other major individual permit (OK0022870) without an established pretreatment program and found that appropriate permit language was included in Part II to address indirect dischargers. See Appendix (Section IX) for the pretreatment language in permits.

Table 1. Major POTWs with Pretreatment Programs

POTW	NPDES	PLANT FLOW (MGD)	SIU	CIU	DESIGN FLOW (MGD)	INDUSTRIAL FLOW (MGD)
ADA	OK0026115	2.28	6	3	3.2	0.05
ALTUS (SE)	OK0028037	2.5	2	0	4	0.6
ARDMORE	OK0038440	4.5	4	1	5.9	0.4
BARTLESVILLE	OK0030333	7.5	4	1	7	0.33
BROKEN ARROW	OK0040053	4	7	4	8	0.104
CHICKASHA	OK0026018	2.7	4	3	6	0.11
CLAREMORE	OK0027049	1.89	3	2	3.5	0.052
DUNCAN	OK0026638	3.599	7	5	4.5	0.106
DURANT	OK0039063	3	5	2	3.55	0.125
ENID	OK0021628	6.429	15	0	12	0.601
LAWTON	OK0035246	8.7	5	2	18	1.5
McAlester (WEST)	OK0026093	1.6	5	2	2.5	0.14
MIAMI-SOUTH	OK0031798	2.045	0	0	3.5	0
MIDWEST CITY	OK0026841	5.2	2	0	10.2	0.1
MOORE	OK0027391	5.9	1	0	9	0.22
MUSKOGEE	OK0029131	5.65	13	3	13.74	0.53
NORMAN	OK0029190	9.9	5	2	12	0.327
OKC-DEER CREEK	OK0027561	12	75	22	15	1.7
OKLA ORD WORKS	OK0034568	1.82	5	2	3.65	1.6
OKMULGEE	OK0028134	1.5	1	1	4.15	0.1
PONCA CITY	OK0026069	3.63	6	5	6.5	0.3901
RMUA-HAIKEY CRK	OK0034363	10.7	7	2	16	0.23162
SAND SPRINGS	OK0030864	2	6	2	3.1	0.2
SAPULPA-REGIONL	OK0043974	3.46	3	1	3.5	0.16
SHAWNEE (South)	OK0026051	1.63	7	6	3	0
STILLWATER	OK0027057	5	5	2	10	0.8
TULSA MUA, NORTH	OK0026221	22.03	57	41	42.6	1.1

ODEQ coordinates with the authorized POTW to determine appropriate pretreatment conditions for the permit. During the process of permit renewal, POTWs are required to list any contributing industrial facilities as part of their permit renewal application. POTWs use a form found on Page 9 of the 2M1 Form for Major Discharge Permits and Page 7 of the 2M2 Form for Minor Discharge Permits, which are available at https://www.deq.ok.gov/water-quality-division/wastewater-stormwater/municipal-permitting/. Review of these permit applications is coordinated through the Municipal Discharge Section, State Pretreatment Coordinator, and the Industrial Discharge Section in assessing the need for the listed industries to obtain a permit from the state or if a pretreatment program is necessary for the POTW. When the POTW has a pretreatment program, review of the draft permit and fact sheet is coordinated between the Municipal Discharge Section and the State Pretreatment Coordinator to ensure all related permit requirements are included. The determination for the development of a pretreatment program is again coordinated through the Pretreatment Coordinator, Municipal Discharge Permit Section, Industrial Discharge Permit Section, and other Water Quality Division Management Staff.

Permit conditions incorporate the federal regulations by reference. The permit conditions used are the Federal code requirements through adoption and i The Administrative Code can be found at https://www.deq.ok.gov/wp-content/uploads/deqmainresources/606.pdf. Section 1-1 references the state statutes and section 1-3 incorporates the federal requirements by reference.

ODEQ relies primarily on the POTW to report the need for permitting of an SIU. Once that need is identified the Industrial Permitting Section contacts the SIU in writing to begin the permitting process. The ODEQ State Pretreatment Coordinator is responsible for the POTW Pretreatment Program oversight. The State Pretreatment Coordinator coordinates with the Municipal Enforcement/Inspection Staff to conduct Pretreatment Compliance Inspections and Pretreatment Audits and to take enforcement. Oklahoma has 1 State Pretreatment Coordinator, 5 Municipal OPDES Inspectors to assist conduct PCI/PAs and enforce on the POTW's permit requirements, 7 Municipal OPDES Permit Writers for the POTW Permits, and 5 Industrial Permit Writers for the non-pretreatment program SIU permits.

For this PQR, the following materials were reviewed:

- Five POTWs (Table 2): two that have approved Pretreatment programs (OK0026051 and OK0042935), and three that do not have approved Pretreatment programs (OK0022861, OK0031992, and OK0022870)
- One Industrial User permit (Table 3): (Bar-S Foods Company)
- Sewer use ordinances (SUOs) for the Cities of Shawnee, Tulsa, Seminole, and Hartshorne

Table 2. POTWs Selected for Review

Permittee	Permit No.	Approved Pretreatment Program?	Design Flow Average (MGD)	No. of SIUs	No. of Food Processors	Controls on Conventional Pollutants or Nutrients in SUO?
City of Shawnee	OK0026051	Yes	3.0	7	0	BOD, TSS, O&G, and pH,
Tulsa Lower Bird Creek Wastewater Treatment Plant	OK0042935	Yes	4	5	0	BOD, COD, TSS, O&G, pH
City of Seminole	OK0022870	No	2.38	2	1	BOD, COD, TSS, O&G, pH
City of Hartshorne	OK0022861	No	.50	0	0	BOD, TSS, O&G, and pH
City of Tishomingo	OK0031992	No	.88	0	0	Not Reviewed

One food processing industrial user permit was also reviewed as part of the PQR (Table 4).

Table 3. Food Processing IU Selected for Review

Facility Name	Permit Number	Receiving POTW	Type of Food Processor	Classification by POTW	Average Process Wastewater Discharge (gallons per day [gpd])	Monitored Pollutants[1]
Bar-S Foods Company	OKPO03068	City of Seminole	Meat Processor	SIU	283,000	Flow, BOD, TSS, Total Nitrogen, Oil & Grease, Chloride, Sulfate, TDS, and pH

[1]Based on information included in the industrial user's permit.

Program Strengths

Permits for all POTWs include requirements to identify significant industrial users (SIUs). Permits for POTWs with approved pretreatment programs contain requirements to provide a written technical evaluation of the need to revise local limits following permit issuance or reissuance (40 CFR 122.44(j)(2)(ii). Permits for POTWs include the federal standard condition

requirement for notification and impact assessment of significant changes in industrial flow or character (40 CFR 122.42(b)). Permits and fact sheets for POTWs identify pretreatment program approval and modification dates as applicable. Fact sheets for POTW permits describe the industrial contributions (e.g., number of noncategorical SIUs and CIUs). Industrial user control mechanisms/permits include appropriate effluent limitations and monitoring requirements for conventional pollutants and other pollutants of concern. Fact sheets for industrial user control mechanisms/permits identify the basis for limits or monitoring frequencies.

Oklahoma is the only state in EPA Region 6 that issues permits to SIUs in non-pretreatment cities. There are currently 29 SIUs permitted in cities without an approved pretreatment program.

Areas for Improvement

It is recommended that the permit writer continue to work with the pretreatment coordinator to ensure that SIUs are identified and permitted accordingly.

Action Items

Essential	• The PQR did not identify any essential action items for this section.
Recommended	•The permit writer should continue to work with the Pretreatment coordinator to ensure that SIU's are identified and permitted accordingly.

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

Background

As part of this PQR, EPA reviewed Oklahoma's small MS4 general permit for consistency with the Phase II stormwater permit regulations. EPA recently updated the small MS4 permitting regulations to clarify: (1) the procedures to be used when coverage is by general permits (see 40 CFR 122.28(d)); (2) the requirement that the permit establish the terms and conditions necessary to meet the MS4 permit standard (i.e., "to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act"), including conditions to address the minimum control measures, reporting, and, as appropriate, water quality requirements (see 40 CFR 122.34(a) and (b)); and (3) the requirement that permit terms must be established in a "clear, specific, and measurable" manner (see 40 CFR 122.34(a)).

Currently, DEQ is proposing the 2020 OKR04 permit to replace the 2015 OKR04 permit that will expire on October 31, 2020. EPA reviewed the new preliminary draft small MS4 general permit, for consistency with the Phase II Stormwater permit regulations. At the time of the PQR, there were 51 NOIs for facilities covered under the small MS4 general permit.

Program Strengths

ODEQ's proposed small MS4 general permit is consistent with the Phase II Stormwater permit regulations. It requires implementation of the six minimum measures and monitoring under certain circumstances. DEQ's small MS4 permit implements the Remand Rule. The state chose to develop a general permit that includes all permit terms and conditions to require the MS4 operator to reduce the discharge of pollutants from its MS4 to the MEP to protect water quality and to satisfy the appropriate water quality requirements of the CWA in one comprehensive general permit.

The general permit would rely on permittees to certify that they meet the eligibility conditions and implement requirements that will ensure compliance with the conditions of the permit. The proposed permit requirements ensure that those seeking coverage under this permit select, implement and maintain BMPs for their stormwater management program (SWMP). These BMPs will reduce the discharge of pollutants to the MEP and will be adequate and sufficient to meet water quality standards. The proposed permit provided a list of goals which apply to discharges from small MS4s and must be considered in development of the SWMP.

New discharges located within the watershed of any waterbody designated as an Outstanding Resource Water (ORW) in the Oklahoma WQS, with the exception of temporary construction activities, would not be allowed or authorized by this permit. Discharges to ORW waters from MS4s existing as of June 25, 1992, are allowed but such stormwater discharges are prohibited from increasing the load of any pollutant. If any part of the MS4 discharges to an ORW waterbody, the MS4 must document in their SWMP how they will comply with this prohibition.

Areas for Improvement

DEQ's proposed small MS4 general permit is consistent with the Phase II stormwater permit regulations; therefore, no areas of improvement are identified.

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

V. REGIONAL TOPIC AREA FINDINGS

A. Concentrated Animal Feeding Operations (CAFOs)

NPDES Program Delegation Authority

Section 402 of the CWA created the NPDES program under which EPA may issue permits for the point source discharge of pollutants to waters of the United States under conditions required by the Act. Section 402(b) requires EPA to authorize a state to administer an equivalent state program upon the Governor's request, provided the state has appropriate legal authority and a program sufficient to meet the Act's requirements. Major category partial permit program approval is provided for under section 402(n)(3) of the CWA. Pursuant to that Section, EPA may approve a partial permit program covering a major category of a state's discharges if the program represents a complete permit program and covers all the discharges under the jurisdiction of the agency seeking approval, and if EPA determines that the partial program represents a significant and identifiable part of the state program required by Section 402(b) of the Act.

Oklahoma Department of Agriculture, Food and Forestry (ODAFF) Program Background

On December 20, 2012, the Regional Administrator for EPA Region 6 approved the request of the state of Oklahoma for authorization of the Agriculture Pollutant Discharge Elimination System (AgPDES) program pursuant to Section 402(b) of the CWA. The AgPDES program is administered by the ODAFF and is a major category partial NPDES permit program under Section 402(n)(3) of the Act for all discharges of pollutants into waters of the United States within ODAFF's jurisdiction.

The discharges subject to regulation under the federal NPDES program and the AgPDES program administered by ODAFF are discharges associated with CAFOs, discharges from the application of biological pesticides or chemical pesticides that leave a residue, discharges from silviculture activities, and discharges of storm water from agricultural activities.

The general permits administered by ODAFF are described in Table 4.

Table 4. General Permits Administered by ODAFF

NPDES General Permit No.	Permit Name/Category	Number of Permittees
OKG010000	Agriculture Pollutant Elimination System (AgPDES) General Permit for Discharges from Concentrated Animal Feeding Operations (CAFOs) in Oklahoma	36
OKR140000	Agricultural Pollutant Elimination System (AgPDES) General Permit for Discharges from Construction Activities	32
OKG87A000	Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) Agriculture Pollutant Discharge Elimination System (AgPDES) Pesticide General Permit (PGP) for Discharges from the Application of Pesticides	14

ODAFF's Permit Process

When NOIs are received, information contained on the NOI is: (1) entered into the Kelly Registration system to be assigned a consecutive number; (2) added to an Excel status spreadsheet; and (3) entered into ICIS. More information regarding ODAFF's permits can be located using ODAFF's online website. The 2017-2022 General Permits for all three of the AgPDES programs (CAFOs, Construction Storm Water, and Pesticides) are posted on the ODAFF website under a separate AgPDES web page[3] for the Agricultural Environmental Management Services (AEMS) Division. There are currently 9 permit authorizations under the 2012-2016 AgPDES CAFO General Permit that have been administratively continued until completion of an application review and public notice period. Permit authorizations will then be reissued under the 2017-2022 AgPDES CAFO General Permit.

ODAFF permitting authority structure

ODAFF's main office is located at AEMS Division, Oklahoma Department of Agriculture, 2800 North Lincoln Boulevard, Oklahoma City, OK 73105. The AEMS Division oversees: Concentrated Animal Feeding Operations & Swine Feeding Operations (CAFO), Registered Poultry Feeding Operations (PFO), Registered Poultry Waste Applicators, Agricultural Compost Facilities, State Inspection Program, and Complaint Resolution. The CAFO field inspectors each operate a home office and are assigned 1 of 5 regions across the state of Oklahoma. The CAFO field inspectors also complete all paperwork for various inspections and technical assistance in their home office to submit to the AEMS Division in Oklahoma City.

Regional offices do not draft or issue permits; the permit authorizations under the AgPDES Program are only issued by the main office. ODAFF provides its technical staff with the

[3] http://app.ag.ok.gov/agpdes/

materials, mentorship, and EPA training/guidance materials necessary to do technical reviews of facility documents. Additional guidance documents have been written by previous permit writers and are available for reference and training in hard copy at ODAFF. Documents may not be accessible during the current COVID crisis.

State Data-Systems and Compliance Reporting

The state has in-house data systems to support permit development. ODAFF uses Oklahoma DEQ GIS Maps & Data viewer as well as the Oklahoma Water Resource Board GIS & Data systems during permit development. The state primarily uses an in-house permit and compliance data system using Access and Excel databases. ODAFF also submits information through ICIS as required. The AEMS Division has drafted templates for consistency and updates them as needed. These templates include: authorization letters, fact sheets for the web page (also used for handouts), incompleteness letters to obtain additional information, and public notice documents. ODAFF also updates its AgPDES forms as needed for NOIs, NOTs, Change of Name, and Owner Transfer documents. All permits undergo the same QA/QC process.

Administrative records and related files are maintained as both paper and electronic files. NOIs, NMPs, and any correspondence by mail are scanned when they are received and placed in the Laserfiche document system, where electronic correspondence is also stored. Files are then given to technical staff for review. All technical review documents are maintained by the technical staff. All paper documents and files are maintained in the administrative assistant's work area in a file cabinet until the end of the year and then moved to storage file boxes to be retained until the expiration of the 5-year General Permit.

AEMS may request additional information from the CAFO owner or operator if additional information is necessary to complete the NOI and NMP or clarify, modify, or supplement previously submitted material. If AEMS makes a preliminary determination that the NOI and NMP is complete, AEMS will submit the draft permit terms to the facility for review before AEMS proceeds to the public notice process. The facility has seven days to submit any revisions to AEMS. Then the NOI, NMP and draft terms of the NMP to be incorporated into the permit will be made available for a 30-day public review and comment period. AEMS will respond to comments received during this period and, if necessary, require the CAFO owner or operator to revise the NMP. If determined appropriate by ODAFF, CAFOs will be granted coverage under the CAFO General Permit. A written permit authorization notice will be provided to the permittee and the authorization notice will incorporate the terms of NMP.

State CAFO and EPA CAFO requirements are combined for annual inspections of CAFO facilities. AgPDES CAFO annual reports are due by March 31st of each year, reviewed by technical staff, and posted to ICIS. Administrative assistants maintain a status spreadsheet to track events and deadlines for each CAFO facility.

Program Strengths

Two general permit covered facilities (GPCFs) under the CAFO GP were reviewed for this PQR.

All 9 minimum measures per 40 CFR Parts 122 and 412 were reflected in both CAFO GPCF coverages. The specific BMPs, equations, and diagrams were detailed and documented appropriately.

Areas for Improvement

The PQR review indicated that some permittees are not submitting the required analytical data. Since this is an enforcement and compliance issue, and not directly associated with ODAFF's permit development, it has been identified below as a recommended action item.

Out of the two CAFO GPCFs reviewed, only one had employee training requirements. Coverages were also missing receiving stream data (name, segment ID). EPA advises ODAFF to ensure that "Employee Training" and receiving stream information is included in all CAFO permits.

Ensure CAFO permittee information in EPA's ICIS-NPDES database is accurate. EPA will work with ODAFF on any updates, as needed.

On September 23, 2020, EPA Administrator Andrew Wheeler signed the final "Phase 2 Extension Rule," which provides states and EPA additional time to implement electronic reporting for certain Clean Water Act discharge permitting requirements. In this final rule, EPA is extending the compliance deadline for implementation of Phase 2 of the eRule by five years from December 21, 2020, to December 21, 2025. This is not currently a deficiency in ODAFF's program, but EPA reminds ODAFF of this deadline and encourages ODAFF to start working towards achieving implementation of the eRule in a timely manner.

Action Items

Essential	• The PQR did not identify any essential action items for this section.
Recommended	•Ensure CAFO permittee information in EPA's ICIS-NPDES database is accurate. •ODAFF should begin work toward complying with Phase II of the eRule by December 21, 2025. •Ensure that "Employee Training" and receiving stream information is included in all CAFO permits.

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

EPA's review team, consisting of Region 6 staff, Headquarters staff, and contractor support, conducted a review of the Oklahoma NPDES permitting program, which included an on-site visit to the Oklahoma Department of Environmental Quality (ODEQ) in Oklahoma City on June 4th and 5th, 2014. A total of seventeen individual permits and three general permits were reviewed as part of the Oklahoma PQR. Eleven permits were reviewed for the core review, 19 permits were reviewed for the national topic review, and 20 permits were reviewed as part of the regional topic review. Some permits may have been reviewed for more than one aspect of the PQR assessment. Permits were selected based on issuance date and the review categories that they fulfill. However, an official report of findings was not finalized. Therefore, no action items are tracked from that PQR.

VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

Findings of recommended action items from the last PQR on-site visit in June 2014 were not finalized. See Section VI for additional details.

VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE

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

The 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 -** "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 5 below.
- **Recommended Actions -** "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 6 below.

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

Table 5. Essential Action Items from FY 2018-2022 PQR Cycle

Topic	Action(s)
Permit Application Requirements	• Ensure that individual major and non-major municipal application forms comply with federal application requirements detailed in 40 CFR 122.21(j)(4), including for WET as required under 40 CFR 122.21(j)(5). • Appropriately address individual permit applications that are submitted fewer than 180 days prior to permit expiration, including documenting where ODEQ has granted permission for submittal of an application at a later date, as required by 40 CFR 122.21(d).
Technology-based Effluent Limitations	All POTW permits must contain the percent removal parameters from the secondary treatment standards for BOD/CBOD and TSS, even if the permit includes concentration or mass loading limits (40 CFR 133.102).
Monitoring and Reporting	ODEQ must ensure that POTW permits specifically identify influent monitoring requirements for BOD/CBOD and TSS, to ensure compliance with permit limitations, consistent with 40 CFR 122.44(i).
Reasonable Potential and Water Quality-Based Effluent Limitations	• ODEQ must establish WQBELs where data indicate that the permitted discharge causes, has the reasonable potential to cause, or contributes to an excursion above any state WQS, in accordance with 40 CFR 122.44(d)(1)(i) - (vii). If representative data show that an excursion of any criteria, including narrative WET criteria, has already occurred or indicates that the discharge has the reasonable potential to cause or contributes to an excursion, a limit must be included in the permit, even where the data set used in the reasonable potential analysis is limited or no data exists. If data are determined not to be or are no longer representative of the permitted discharge, then ODEQ must document the basis for this determination in the fact sheet. ODEQ should revise its CPP and/or water quality standards if needed, upon the next triennial review no later than 2024, to address these items. • Ensure that permits include effluent limitations consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL (122.44(d)(1)(vii)(B)).

Table 6. Recommended Action Items from FY 2018-2022 PQR Cycle

Topic	Action(s)
Basic Facility Information and Permit Application	Ensure typographical errors are corrected during the various stages of permit reviews.
Technology-Based Effluent Limitations	The percent removal condition, along with the influent monitoring requirement, should be moved from Part III of the permit to the "Effluent Limitations and Monitoring Requirements" table in Part I of the permit, in order to make the requirement more explicit.
Reasonable Potential and Water Quality-Based Effluent Limitations	• Ensure approved TMDLs are represented in the fact sheet - suggest developing a consistent format/template to use and modify as necessary. • Document that the limit is consistent with the assumptions and requirements of the TMDL. If there is an accepted consistent process for translating WLAs into limits, be transparent about the process and address situations where deviation from that process is necessary. • Update the WQMP regularly and make it available to the public. • Ensure that once a TMDL is approved, it is implemented into permits in a timely manner – by reopening and modifying the permit, or including in the next permit issuance
Final Effluent Limitations and Documentation	Ensure fact sheets provide the technical basis for effluent limitations identified as being carried forward from the previous permit.
Permit Controls for Nutrients in Non-TMDL Waters	Translate the narrative criteria in OAC 785:45-5-9 into a numeric criteria based on CWA Section 304(a) criteria.
Effectiveness of POTW NPDES Permits with Food Processor Contributions	The permit writer should continue to work with the Pretreatment coordinator to ensure that SIU's are identified and permitted accordingly.
Concentrated Animal Feeding Operations (CAFOs)	• Ensure CAFO permittee information in EPA's ICIS-NPDES database is accurate. • ODAFF should begin work towards complying with Phase II of the eRule by December 21, 2025. • Ensure that "Employee Training" is included in CAFO permits.

IX. APPENDIX

A. Permit Conditions for POTWs with Non-approved Pretreatment Programs

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The following pollutants shall not be introduced into a Publicly Owned Treatment Works (POTW) facility, defined in 40 CFR 403.3(q) "as any devices and systems used in storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and from such treatment works."

    a. Pollutants which create a fire or explosion hazard in the POTW facility, including, but not limited to, wastestreams with a closed cup flashpoint of less than 60°C (140°F) using the test methods specified in 40 CFR 261.21;

    b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

    c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in interference;

    d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

    e. Heat in amounts which will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;

    f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

    g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

3. The permittee shall provide adequate notice of the following:

   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act and/or Sections 40 CFR 405-499 if it were directly discharging those pollutants; and

   b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

   c. Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

B. Permit Conditions for POTWs with Approved Pretreatment Programs

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The permittee shall operate an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403) and the provisions of the subsequently approved industrial pretreatment program submitted by the permittee. A Publicly Owned Treatment Works (POTW) facility is defined in 40 CFR 403.3(o) as any devices and systems used in storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature. It includes sewers, pipes and other conveyances if they convey wastewater to a POTW. The term also means a municipality as defined in the Act, which has jurisdiction over the Indirect Discharges to and from such treatment works. This POTW pretreatment program was approved on [Date] and modified on [Date], to incorporate the latest 40 CFR Part 403 regulations adopted by DEQ effective June 15, 2007. Any non-substantial modifications [as defined under 40 CFR 403.18(b)] to the POTW pretreatment program received and implemented in accordance with 40 CFR 403.18(d) shall be considered incorporated as of the date of approval by DEQ. The current POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

a. Industrial user information shall be updated at a frequency adequate to ensure that all IUs are properly characterized at all times;

b. The frequency and nature of industrial user compliance monitoring activities by the permittee shall be commensurate with the character, consistency and volume of waste. The permittee must inspect and sample the effluent from each Significant Industrial User in accordance with 40 CFR 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;

c. The permittee shall enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements;

d. The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable pretreatment standards and requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3(v), this control shall be achieved through individual or general control mechanisms in accordance with 40 CFR 403.8(f)(1)(iii). Both individual and general control mechanisms must be enforceable and contain, at a minimum, the following conditions:

(1) Statement of duration (in no case more than five years);

(2) Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;

(3) Effluent limits and/or Best Management Practices based on applicable general and categorical Pretreatment Standards, local limits, and State and local laws;

(4) Self-monitoring, sampling, reporting, notification and record keeping requirements, including an identification of the pollutants to be monitored (including the process for seeking pollutant waivers in accordance with 403.12(e)(2)), sampling location, sampling frequency, and sample type, based on the applicable general and categorical Pretreatment Standards, local limits, and State and local laws; and

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

(6) Requirements to control slug discharges, if determined by the POTW to be necessary.

e. The permittee shall evaluate whether each Significant Industrial User needs a plan or other action to control slug discharges in accordance with 40 CFR 403.8(f)(2)(vi);

f. The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program; and

g. The approved program shall not be modified by the permittee without the prior approval of the DEQ.

2. The permittee shall establish and continue to develop and enforce technically based local limits (TBLL) to implement the provisions of 40 CFR Part 403.5. POTWs may develop Best Management Practices (BMPs) to implement paragraphs 40 CFR 403.5 (c)(1) and (c)(2). Such BMPs shall be considered local limits and Pretreatment Standards. All specific prohibitions or limits developed under this requirement are deemed to be conditions of this permit. The general and specific prohibitions set out in 40 CFR Parts 403.5(a)(1) and (b) shall also be enforced by the permittee unless modified under this provision.

   The permittee shall, within sixty days of the effective date of this permit, (1) submit a WRITTEN CERTIFICATION that a technical evaluation has been performed demonstrating that the existing technically based local limits (TBLL) are based on the current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination, OR (2) submit a WRITTEN NOTIFICATION that a technical evaluation revising the current TBLL and a draft sewer use ordinance which incorporates such revisions will be submitted within 12 months of the effective date of this permit.

3. The permittee shall analyze, at a minimum the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table II at least annually (Frequency) and the toxic pollutants in Table III plus molybdenum at least semi-annually (Frequency). If, based upon information available to the permittee there is reason to suspect the presence of any toxic or hazardous pollutant listed in Table V, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least semi-annually (once per six months) on both the influent and the effluent.

   The influent and effluent samples collected shall be flow-composite samples consisting of at least 12 aliquots collected at approximately equal intervals over a representative 24 hour period. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR 136. The effluent samples shall be analyzed to a level as required in item 6 below. Where composite samples are inappropriate, due to sampling, holding time, or analytical constraints, grab samples shall be taken.

4. The permittee shall prepare annually a list of Industrial Users which during the preceding pretreatment year were significantly noncompliant with applicable pretreatment requirements. For the purposes of this Part, significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part 403.8(f)(2)(viii) or criteria established in the approved POTW pretreatment program. This list is to be published annually in a newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW during the month of [Month].

   In addition, during the month of [Month], the permittee shall submit an updated status report to DEQ containing the following information:

   a. An updated list of all Significant Industrial Users identifying those that are Categorical Industrial Users; Non-significant Categorical Industrial Users defined under 40 CFR 403.3(v)(2) if applicable and Categorical Industrial Users subject to reduced reporting under 40 CFR 403.12(e)(3) if applicable. For each industrial user listed the following information shall be included:

      (1) Standard Industrial Classification (SIC) or NAICS code and categorical determination;

      (2) Control document status. Whether the user has an effective control document, and the date such document was last issued, reissued, or modified, (indicate which industrial users were added to the system (or newly identified) within the previous year);

      (3) A summary of all monitoring activities performed within the previous year. The following information shall be reported:

         - total number of inspections performed;
         - total number of sampling visits made;

      (4) Status of compliance with both effluent limitations and reporting requirements. Compliance status shall be defined as follows:

         - Compliant (C) - no violations during the previous pretreatment year;
         - Non-compliant (NC) - one or more violations during the previous pretreatment year but does not meet the criteria for significant non-compliance;
         - Significantly Noncompliant (SNC) - in accordance with requirements described above; and

      (5) For significantly noncompliant industrial users, indicate the nature of the violations, the type and number of actions taken (notice of violation,

administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. If ANY industrial user was on a schedule to attain compliance with effluent limits, indicate the date the schedule was issued and the date compliance is to be attained.

b. A list of all significant industrial users whose authorization to discharge was terminated or revoked during the preceding pretreatment year and the reason for termination;

c. A report on any interference, pass through, upset or POTW permit violations known or suspected to be caused by industrial contributors and actions taken by the permittee in response;

d. A copy of the newspaper publication of the significantly non-compliant industrial users giving the name of the newspaper and the date published;

e. The results of all influent and effluent analyses performed pursuant to above requirements;

f. A comparison of the influent and effluent analyses performed pursuant to above with maximum allowable headwork loadings developed in the approved technically based local limits and water quality based effluent concentrations necessary to meet state water quality standards.

5. The permittee shall provide adequate notice of the following:

   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the CWA and/or Sections 40 CFR 405-499 if it were directly discharging those pollutants; and

   b. Any substantial change in-the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

      Adequate notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

6. All effluent monitoring conducted pursuant to above requirements shall meet the Minimum Quantification Levels (MQLs) shown in the tables at the end of this permit.