Tennessee Permit Quality Review Report

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U.S. Environmental Protection Agency
Region 4
Water Division
Permitting and Grants Branch
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List of Acronyms

1Q10	The lowest 1-day average flow that occurs on average once every 10 years
7Q10	The lowest 7-day average flow that occurs on average once every 10 years
AFO	Animal Feeding Operations
AML	Average Monthly Limit
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practice
BPJ	Best Professional Judgement
BOD	Biochemical Oxygen Demand
CAFO	Concentrated Animal Feeding Operation
CBOD	Carbonaceous Biochemical Oxygen Demand
C.F.R.	Code of Federal Regulations
CSO	Combined Sewer Overflow
CROMERR	Cross-media Electronic Reporting Rule
CWA	Clean Water Act
DO	Dissolved Oxygen
ECHO	Enforcement and Compliance History Online
ELG	Effluent Limitation Guideline
EPA	Environmental Protection Agency
FTE	Full Time Equivalent
GP	General Permit
IWC	Instream Waste Concentration
MDL	Maximum Daily Limit
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NOI	Notice of Intent
PCB	Polychlorinated Biphenyl
POTW	Publicly Owned Treatment Works
PQR	Permit Quality Review
QA/QC	Quality Assurance/Quality Control
RPA	Reasonable Potential Analysis
TBEL	Technology-based Effluent Limit
TN	Tennessee
TDEC	Tennessee Department of Environment and Conservation
TMDL	Total Maximum Daily Load
TIE	Toxicity Identification Evaluation
TNNRF	Tennessee Nutrient Reduction Framework
TNPOP	Tennessee Plant Optimization Program
TRE	Toxicity Reduction Evaluation
TSCA	Toxic Substances Control Act
TVA	Tennessee Valley Authority
WET	Whole Effluent Toxicity
WQBEL	Water Quality-based Effluent Limit
WQS	Water Quality Standards
WWTP	Wastewater Treatment Plant

1. Executive Summary

The U.S. Environmental Protection Agency (EPA) Region 4 Permit Quality Review (PQR) for Tennessee examined 10 National Pollutant Discharge Elimination System (NPDES) permits that were issued by the Tennessee Department of Environment and Conservation (TDEC). The PQR supplements the EPA's routine review of NPDES permits being issued by TDEC during the issuance process. This PQR report presents a cyclical overview of the Tennessee NPDES permitting program and identifies new areas where EPA and TDEC can work together to strengthen NPDES permit language and documentation in all permits.

The review included permits for major and non-major facilities that discharge municipal and industrial wastewater and stormwater. The PQR focused on national and regional topic areas including:

- Municipal permits with effluent limitations or restrictions for nutrients
- Small Municipal Separate Storm Sewer System (MS4) permit requirements
- Power plant permits
- Industrial permits containing whole effluent toxicity (WET) limits
- Mineral mining permits

The PQR found that permits issued by TDEC are of high quality and consistently support the intent of the NPDES permitting program. Although the reviewed permits conformed to national requirements, EPA identified several areas where TDEC should make changes to future permits to improve permit quality. These findings are addressed in more detail within the PQR report.

This final PQR report includes only the findings that remain actionable after considering TDEC's overall program implementation and reviewing the permits and all supporting documentation. TDEC agreed with many of the draft PQR findings and committed to take action to address many of the action items.

2. Introduction

PQRs for the NPDES program 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 implementing 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.

National and regional topic areas were selected to target specific permit types or aspects of the permits. A total of 10 permits representing municipal and industrial sectors were reviewed as part of the Tennessee PQR (see Table 1). Four permits were reviewed in two national topic areas: 1) municipal permits with nutrient conditions; and 2) small MS4 permit requirements. Six permits were reviewed in three regional topic areas: 1) power plants; 2) industrial permits containing WET limits; and 3) mineral mining.

All permits reviewed as part of the Tennessee PQR included a detailed review to evaluate similar issues in all states. The EPA reviewers completed the PQR process by examining the permits and supporting documentation such as permit application, permit, fact sheet, correspondence, reports, and documents that provide the basis for the development of the permit conditions. The PQR review involved assessing the supporting documents for each permit using standard PQR tools such as the EPA's *Central Tenets of the NPDES Permitting Program*.[1]

All action items are presented together in this report within the five sector-based national or regional priorities. This organizational structure allows all PQR findings for a particular sector to be consolidated. The action items for each topic area identified within this report are divided into two categories to identify the priority that should be placed on each action item to facilitate future discussions between the EPA and TDEC.[2]

- **Essential Actions –** Action items that address deficiencies or noncompliance with respect to a federal regulation. The permitting authority must address these action items in order to ensure compliance with federal regulations.
- **Recommended Actions –** Action items that are recommendations to increase the effectiveness of the State or the Region NPDES permitting program. The permitting authority may address recommended actions using flexible approaches allowed within the bounds of the NPDES implementing regulations.

EPA conducted a virtual PQR of the TDEC NPDES permitting program during April 14 – 15, 2020. A virtual meeting was used to perform the PQR because of the unprecedented coronavirus pandemic that precluded travel and limited in-person interactions. During the PQR, EPA's permit evaluation team discussed proposed action items with TDEC staff to determine if any of the proposed action items needed to be reevaluated or removed, based on clarifications provided by TDEC.

[1] EPA's *Central Tenants of the NPDES Permitting Program* is available at: www.epa.gov/npdes/central-tenets-npdes-permitting-program

[2] EPA categorized action items differently in the previous PQR cycle conducted during 2012-2017. Action items that were previously known as "Category 1" are now called Essential Actions. Similarly, previous PQR findings classified as either "Category 2" or "Category 3" are now consolidated and referred to as Recommended Actions.

Table 1 – Permits Reviewed During the Tennessee PQR Process

#	NPDES Number	Permittee	Facility	Topic Area	Priority Area
1	TN0022888	City of Lewisburg	WWTP	Permits w/ Nutrient Limits	National
2	TN0075868	City of Spring Hill WWTP	WWTP	Permits w/ Nutrient Limits	National
3	TN0021857	City of Winchester WWTP	WWTP	Permits w/ Nutrient Limits	National
4	TNS000000	Phase II Small MS4 GP	Small MS4	Small MS4	National
5	TN0027481	Tennessee Valley Authority	Norris Hydro Dam	Power Plant	Regional
6	TN0082023	New Johnsonville	Combined Cycle	Power Plant	Regional
7	TN0002135	Tyson Farms	Shelbyville Processing Plant	Industrial Permits w/ WET Limits	Regional
8	TN0067199	Arconic Tennessee	North Plant	Industrial Permits w/ WET Limits	Regional
9	TN0069141	Rogers Group, Inc	Clinton Quarry	Mineral Mining	Regional
10	TN0079774	Lhoist North America of TN	Mine #34	Mineral Mining	Regional

3. State Permitting General Overview

TDEC currently has a NPDES permitting workforce of 12 full-time employees (FTEs) for industrial and municipal permitting activities. Many of these staff also are involved in compliance and enforcement activities. TDEC has four water quality modelers who provide support to the NPDES permitting program. Supplementary NPDES permitting program support includes staff in eight Field Offices who assist with various permitting issues including WET, mining, and compliance activities (inspections and general oversight).

To support the NPDES permitting program, TDEC has developed permit templates and technical guidance documents such as *Tennessee Division of Water Resource Reasonable Potential Procedures* and *Antidegradation Analysis Guidelines.* These items are designed to aid TDEC in maintaining uniformity and consistency in developing permits among all permit writers as well as serving as a training tool for new permit writers. TDEC uses an internet-based database that is available to the public to assist in tracking applications, draft permits, final permits, correspondence, and supporting documents.[3]

TDEC utilizes a peer review process as part of its Quality Assurance/Quality Control (QA/QC) process. During the peer review process, experienced staff review the draft permit conditions, reasonable potential analyses (RPAs) to ensure that the permit is protective of the receiving waterbody, and relevant supporting documents. TDEC's permitting group utilizes checklists as part of the QA/QC process. In addition, TDEC has a strong internal mentoring program for new permit writers and this provides additional consistency to permit development. All permits, including individual and general permits (GPs), are reviewed by management prior to issuance.

At the time of the virtual PQR, TDEC administered a total NPDES permit universe of 15,225 individual permits and GPs as described below:

Individual Permits – 1,082 individual NPDES permits for municipal and industrial facilities:

- 441 permits for various types of mineral, metal, and coal mining operations;
- 390 permits for publicly owned treatment works (POTWs) (118 major permits and 272 non-major permits);
- 218 permits for non-POTWs (37 major permits and 181 non-major permits);
- 14 permits for Concentrated Animal Feeding Operations (CAFOs); and
- 9 construction stormwater permits.

General Permits – 9 GPs for various industries with approximately 14,143 coverages:

- 10,652 coverages for construction activities;
- 2,988 coverages under the multi-sector General NPDES Permit for industrial activities;
- 250 coverages for storm water and wastewater associated with ready mixed concrete facilities;
- 157 coverages for filter backwash and sedimentation basin wash water at water treatment plants;
- 95 coverages under the TDEC's GP for Phase I and II small MS4s;
- 47 coverages for discharges of hydrostatic test water;

[3] TDEC DWR DataViewer located at: tdec.tn.gov:8080/pls/enf_reports/f?p=9034:34001:0:

- 27 coverages for discharges of treated groundwater associated with underground storage tank remediation; and
- 16 coverages for discharges from the application of pesticides.

TDEC estimated the current total of backlogged administratively continued municipal and industrial NPDES permits to be 15 major permits and 12 non-major permits. At the time of the review, none of the 9 GPs that TDEC administers were administratively continued. TDEC has maintained a low backlog rate and has consistently issued permits in a timely manner. Most of the delays to proceeding with permit drafting involve coordinating and receiving all application data to make permit applications complete.

The current Tennessee initiatives that will strengthen the NPDES permitting program include the following:

- TDEC has partnered with the Tennessee Association of Utility Districts, the Municipal Technical Advisory Service through the University of Tennessee, the Tennessee Technological University Industrial Assessment Centers, and the EPA in the Tennessee Plant Nutrient Optimization Program (TNPOP).[4] TNPOP is a free, voluntary program that supports water and wastewater operators in achieving optimization in energy use and nutrient removal in their facilities through low and no cost measures. The program provides:

    - technical assistance and loaned equipment for pursuing facility optimization;
    - significant cost-saving opportunities, which can be leveraged to support additional personnel, capital improvements and infrastructure needs through state revolving fund loans, avoidance of rate increases, avoidance of capital improvements and outlay;
    - reduced nutrients in effluent, which supports avoiding the need for implementation of nutrient limits in permits; and
    - flexible and informed regulatory oversight from TDEC's Division of Water Resources.

- Many stakeholders are actively working to manage nutrient inputs to Tennessee rivers, lakes, and streams. TDEC convened the Nutrient Strategy Task Force, made up of representatives from academic, state and local agencies, wastewater treatment plant operators, the private sector, and non-governmental organizations. Together, the task force is working to:

    - prioritize watersheds;
    - set watershed nutrient load reduction goals;
    - develop implementable watershed plans that maximize the effectiveness of Best Management Practices (BMPs);
    - encourage nutrient reductions from urban runoff;
    - establish watershed-based monitoring programs to evaluate effectiveness; and
    - document and report implementation activities.

- A work group was recently established by the Tennessee Water Advisory Council to discuss inflow and infiltration, overflows, and releases. This work group includes wastewater operators and TDEC representatives and is focused on discussing and evaluating current metrics, reporting, and actions associated with overflows and releases in Tennessee. As part of this effort, the work group plans to

[4] The TNPOP is available at: www.tn.gov/environment/program-areas/wr-water-resources/tn-plant-optimization-programs/tnpop.html

review approaches used to encourage inflow and infiltration reduction in other Region 4 states and elsewhere.

- TDEC proposed amendments to the state rules related to permits, effluent limitations, and water quality standards (WQS). TDEC is currently working through the comments to these proposed amendments. The proposed amendments would:

    - remove state operating permits for non-discharging systems from the same chapter as individual NPDES permits;
    - simultaneously establish a new rule chapter for state operating permits;
    - include effluent limitations for postconstruction stormwater in response to 2018 legislation and include effluent limitations for postconstruction stormwater. These proposed amendments reflect the terms of a settlement agreement with the Homebuilders Association of Tennessee and several non-governmental organizations to resolve the appeal of the 2016 MS4 GP;
    - update provisions concerning reporting of releases in addition to sanitary sewer overflows and reconfirm that industrial discharges from any location other than a permitted outfall are prohibited;
    - better reflect the TDEC's implementation of federal NPDES permitting requirements by introducing terms "water quality-based effluent limitations" and "reasonable potential to cause or contribute" that are used in the NPDES permitting contexts;
    - reflect the EPA's new eReporting requirements;
    - revise conditions for animal feeding operations;
    - add language regarding water reuse; and
    - refine provisions for permit appeals and the public notice process for final permits.

- A focus on increasing the frequency of inspections at mining facilities located on streams that are impaired for sediment and siltation. This provides increased scrutiny on sites with streams that may be impaired due to impacts associated with mining activities.

- Given the recent eReporting initiative that has fundamentally changed the way that the NPDES programs receive permit applications and reporting information, TDEC is working on a customized portal that is compliant with the Cross-media Electronic Reporting Rule (CROMERR).

4. Municipal Permits with Nutrient Limits

Permits Reviewed

1. TN0022888 – City of Lewisburg wastewater treatment plant (WWTP)
2. TN0075868 – City of Spring Hill WWTP
3. TN0021857 – City of Winchester WWTP

Introduction

Nitrogen and phosphorus pollution has consistently ranked as one of the top causes of degradation of surface waters in the United States; however, permits often lack nutrient limits at the national level.[5] The EPA has worked to reduce the impacts of nutrient pollution and has provided support to states to encourage the development, adoption, and implementation of numeric nutrient criteria as part of their WQS. The NPDES implementing regulations at 40 Code of Federal Regulations (C.F.R.) § 122.44(d) require permit limits to be developed for any pollutant with the reasonable potential to cause or contribute to an excursion of a WQS, whether those standards are narrative or numeric. Therefore, it is vital that permitting authorities actively consider nutrient discharges in relation to WQS in their permitting decisions.

According to Tennessee's *Nutrient Reduction Framework* (NRF), Tennessee has over 3,000 miles of streams and over 15,000 acres of lake that are impaired due to nutrients.[6] Within the state there are approximately 53 POTWs with both phosphorus and nitrogen limits in their NPDES permits, and an additional 19 such facilities with phosphorus limits but no nitrogen limits.[7] Since narrative nutrient criteria are often challenging to interpret, permit conditions are derived using the NRF to determine the need for a water quality based effluent limits (WQBEL) related to nutrients. To assess how nutrients are addressed in the Tennessee NPDES program, EPA reviewed two permits for facilities that discharge into nutrient-impaired waters that do not have a total maximum daily load (TMDL) for a pollutant of concern and a facility that discharges into a reservoir that is not listed as impaired for nutrients. The three reviewed permits were WWTPs that include monitoring and reporting requirements for total phosphorous and nitrogen related parameters. Two of the three facilities also had effluent limits for total phosphorus and total nitrogen.

Sector Strengths

Based on EPA's real-time reviews in Tennessee, the TDEC consistently implements the NRF in permits for discharges to nutrient-impaired waterbodies without TMDLs. Additionally, TDEC has been a leader and early adopter of efforts to optimize the operation of facilities to further reduce impacts from nutrient discharges. Through the TNPOP, TDEC provides technical assistance and loaned equipment for plant optimization, which has, in many cases, resulted in significant cost-saving opportunities, reduced effluent nutrient loadings, and provided flexible and informed oversight. In addition to optimization efforts, TDEC formed a new task force comprised of representatives from many interested parties that was created to explore future strategies for nutrient management.

[5] According to the EPA's Enforcement and Compliance History Online (ECHO) pollutant loading tool, POTWs across the nation contain effluent limitations for phosphorus and nitrogen in 18 percent and 8 percent of NPDES permits, respectively. In EPA Region 4, 22 percent of permits have phosphorus limits and 13 percent contain nitrogen limits.

[6] Tennessee's NRF is available at: www.tn.gov/content/dam/tn/environment/water/tmdl-program/wr-ws_tennessee-draft-nutrient-reduction-framework_030315.pdf

[7] Based on EPA's ECHO, Tennessee's POTW permitting universe includes 20 percent of facilities with phosphorus and nitrogen limits, and another 5 percent contain phosphorus limits (but not nitrogen limits).

Essential Actions

1. Include limitations to control pollutants that cause, have the reasonable potential to cause, or contribute to an excursion of a WQS, including narrative criteria, pursuant to 40 C.F.R. § 122.44(d)(1)(i).[8]

   The fact sheet for the Winchester WWTP permit (TN0021857) has a limited discussion on how the RPA was performed for nutrients using the NRF. The fact sheet states that TDEC will use the quarterly nutrient monitoring data, that is required to be monitored and reported by the permit, to validate nutrient loading assumptions in a SPARROW model and implement the NRF. There is no discussion on how the determination was made that there was no reasonable potential to violate WQS. Additional explanation in the fact sheet of how implementation of Tennessee's NRF correlates with the determination of reasonable potential is needed to show that an RPA has been performed for nutrient related parameters.

   The Winchester WWTP permit (TN0021857) outfall discharges into Tims Ford Reservoir. The fact sheet documents the use of the lowest 1-day average flow that occurs on average once every 10 years (1Q10) stream flow to calculate the dilution allowable for determining if the effluent causes, has the reasonable potential to cause, or contributes to an excursion of a WQS. Using the 1Q10 stream flow in a reservoir setting assumes stream-like conditions presuming rapid and complete mixing at the point of discharge. Where there is not rapid and complete mixing, TDEC may elect to allow for a zone of initial dilution (mixing zone) as allowed by TDEC WQS. Dilution allowances from such a mixing zone could be estimated using field surveys and/or mixing models. Reservoirs are unique water systems where conditions may change dependent on rainfall and controlled releases. Due to the application of stream conditions in a reservoir for determining the amount of dilution available for the reasonable potential analysis (RPA), it is difficult to determine if a WQBEL is necessary.

Recommended Actions

1. The fact sheet should include calculations and explain the derivation of specific effluent limitations and conditions in accordance with 40 C.F.R. § 124.56(a).[9]

   The fact sheet for the Winchester WWTP permit (TN0021857) contained an unclear explanation of the 5-day carbonaceous biochemical oxygen demand ($CBOD_5$) and dissolved oxygen (DO) effluent limits. The fact sheet describes an attempt to use a Streeter-Phelps model. The Streeter-Phelps model describes how DO decreases in a river or stream as the biochemical oxygen demand (BOD) is exerted over time, and this model was determined to be insufficient by TDEC because it does not translate well to modeling the DO as a result of the expression of BOD in lakes or reservoirs. The fact sheet then explains how best available technology (BAT) was used to determine appropriate effluent limits. While these limits may be protective of WQS, further documentation is needed to translate how a limit based on BAT is protective of WQS.

[8] 40 C.F.R. § 122.44(d)(1)(i): Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State Water quality standard, including State narrative criteria for water quality.

[9] 40 C.F.R. § 124.56(a): Any calculations or other necessary explanation of the derivation of specific effluent limitations and conditions or standards for sewage sludge use or disposal, including a citation to the applicable effluent limitation guideline, performance standard, or standard for sewage sludge use or disposal as required by § 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

5. Small Municipal Separate Storm Sewer System Permits

Permits Reviewed

1. TNS000000 – Phase II Small MS4 GP

Introduction

The NPDES program requires stormwater discharges from certain MS4s, industrial activities, and construction sites to be authorized. Generally, the EPA and the NPDES-authorized states issue individual permits for medium and large MS4s and GPs for smaller MS4s, industrial activities, and construction activities. The EPA's 1990 Phase I regulation requires medium and large cities or certain counties with populations greater than 100,000 to obtain NPDES permit coverage for their stormwater discharges. The 1999 Phase II regulation requires small MS4s in urbanized areas (as determined by census data) to obtain NPDES permit coverage for their stormwater discharges. Phase II permits may also include non-traditional MS4s such as public universities, departments of transportation, hospitals and prisons.

In Tennessee, approximately 100 cities and counties are required to obtain coverage under the Phase II MS4 GP, and one Phase II MS4 has an individual permit.[10] EPA reviewed Tennessee's Phase II MS4 GP and two Notices of Intent (NOI) to be covered by the MS4 GP for consistency with the Phase II regulatory requirements.[11] Note that the "Permanent Stormwater Management at New Development and Redevelopment Projects" section of the permit and NOIs were not reviewed due to ongoing litigation issues. EPA will monitor this legal situation to ensure that final permit terms for the post-construction program ensure maximum extent practicable pollutant reductions.

Sector Strengths

Overall, Tennessee's administration of the NPDES stormwater program and its permits continue to be consistent with regulatory expectations. Many aspects of Tennessee's small MS4 GP could be listed as strengths. For instance, the special conditions regarding the receiving water's attainment status and associated actions under Section 3.1 of the GP apply to discharges into impaired waterbodies, but also to stormwater discharges to streams designated as Exceptional Tennessee Waters. The permit's public education and outreach control measures include a detailed list of minimum targeted educational campaigns addressing specific issues that the MS4s must address. Lastly, the permit requires an MS4 monitoring program which consists of specific analytical and non-analytical monitoring components, as well as a process to evaluate the results and take corrective action as appropriate. TDEC plans to provide future flexibilities to its small MS4 permittees, allowing them to propose their own monitoring plans that target data collection based on local considerations and needs.

Recommended Actions

1. TDEC should consider ways the GP can be updated during the next permit cycle to be consistent with the GP requirements of the Remand Rule and 40 C.F.R. § 122.28(d).[12, 13]

[10] www.tn.gov/content/dam/tn/environment/water/water-based-systems-unit/wr-wq_stormwater-ms4-list-010916.pdf

[11] The two NOIs reviewed were the City of Gallatin (TNS007534) and Hamilton County (TNS075566).

[12] EPA revised the regulations governing regulated small MS4 permits to respond to a remand from the U.S. Court of Appeals for the Ninth Circuit in Environmental Defense Center, et al. v. EPA, 344 F.3d 832 (9th Cir. 2003). The final rule establishes two alternative approaches a permitting authority can use to issue NPDES GPs for small MS4s and meet the requirements of the court remand.

The EPA recently updated the small MS4 permitting regulations to clarify the procedures that apply when using GPs. Given that the small MS4 GP was reissued prior to the effective date of the Remand Rule, TDEC will need to consider ways in which the permit can be updated to be consistent with the requirements of the Rule. EPA is available to assist the state in suggesting specific permit changes that would be consistent with the Remand Rule.

2. Site plan review procedures should incorporate consideration of potential water quality impacts in accordance with 40 C.F.R. § 122.34(b)(4)(i)(D).[14]

   Under the Construction Site Stormwater Runoff Pollutant Control Section of Tennessee's permit, the MS4s must develop procedures for site plan review and approval, but potential water quality impacts are not necessarily considered during such reviews. As the next Phase II GP is being drafted, TDEC should include an explicit requirement for site plan review procedures to consider potential water quality impacts, if such impacts are not already accounted for in other aspects of an MS4's construction runoff control program.

b. All permit provisions should be expressed in a clear, specific, and measurable manner as required by 40 C.F.R. § 122.34(a).[15]

   The next iteration of Tennessee's Small MS4 GP should be improved with permit provisions that are clear, specific, and measurable. The Remand Rule places emphasis on having "clear, specific, and measurable" terms and conditions by emphasizing that it is the permitting authority's responsibility, and not that of the small MS4 permittee, to establish permit conditions that meet the MS4 regulatory standard, and to delineate the requirements for implementing the six minimum control measures and any terms and conditions deemed necessary to protect water quality. EPA recommends that the state review and consider the EPA's MS4 *Compendium of Clear, Specific, and Measurable Permitting Examples*[16] and extensive permit examples provided on the EPA's website.[17]

   For example, the Pollution Prevention/Good Housekeeping for Municipal Operations Section should be

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[13] 40 C.F.R. § 122.28(d): Small municipal separate storm sewer systems (MS4s) (Applicable to State programs). For general permits issued under paragraph (b) of this section for small MS4s, the Director must establish the terms and conditions necessary to meet the requirements of § 122.34 using one of the two permitting approaches in paragraph (d)(1) or (2) of this section. The Director must indicate in the permit or fact sheet which approach is being used.

[14] 40 C.F.R. § 122.34(b)(4): Construction site storm water runoff control. (i) The permit must identify the minimum elements and require the development, implementation, and enforcement of a program to reduce pollutants in any storm water runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the Director waives requirements for storm water discharges associated with small construction activity in accordance with § 122.26(b)(15)(i), the permittee is not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites. At a minimum, the permit must require the permittee to develop and implement: (D) Procedures for site plan review which incorporate consideration of potential water quality impacts;

[15] 40 C.F.R. § 122.34(a): General requirements. For any permit issued to a regulated small MS4, the NPDES permitting authority must include permit terms and conditions 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. Terms and conditions that satisfy the requirements of this section must be expressed in clear, specific, and measurable terms. Such terms and conditions may include narrative, numeric, or other types of requirements (e.g., implementation of BMPs, BMP design requirements, performance requirements, adaptive management requirements, schedules for implementation and maintenance, and frequency of actions).

[16] U.S. Environmental Protection Agency. 2018. Compendium of Clear, Specific, and Measurable Permitting Examples. EPA-830-S-16-002. U.S. Environmental Protection Agency, Office of Water, Washington, DC.
< www.epa.gov/sites/production/files/2018-11/documents/final_compendium_intro_document_rev-11-15-18.pdf >

[17] Many MS4 documents are available on EPA's website: www.epa.gov/npdes/municipal-sources-resources

expanded to include more clear, specific, and measurable provisions to meet the new regulatory requirements. A good reference for potential permit provisions is the EPA's *MS4 Permit Improvement Guide*.[18] The Guide provides sample permit language for the development of a municipal facility and stormwater control inventory, which requires the permittee to continually update and maintain an inventory of specific municipally owned or operated facilities and stormwater controls.

The Construction Site Stormwater Runoff Pollutant Control Section of the permit should also be modified to specify a minimum inspection frequency for all active construction sites. TDEC should include a minimum inspection frequency of at least once per month, similar to what the permit requires for priority construction sites.

[18] U.S. Environmental Protection Agency. 2010. MS4 Permit Improvement Guide. EPA-833-R-10-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC. < www3.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf >

6. Power Plant Permits

Permits Reviewed

1. TN0027481 – Tennessee Valley Authority (TVA) Norris Hydro Dam (hydroelectric power plant)
2. TN0082023 – New Johnsonville Combined Cycle (natural-gas fired combined cycle power plant)

Introduction

Many power plants, which generate electricity for sale and distribution, are stand-alone industrial facilities that generate electricity using a steam-cycle or mechanical energy from flowing water. Power plants that are steam driven are covered under the EPA Effluent Limitation Guidelines (ELGs) for the Steam Electric Power Generating Point Source Category at 40 C.F.R. Part 423. Steam electric power plant permits must comply with a level of treatment performance equivalent to the BAT or the Best Conventional Pollutant Control Technology (BCT) for existing sources and be consistent with the New Source Performance Standards (NSPS). Power plants which do not have a steam cycle (i.e., hydroelectric power plants), must have technology based effluent limits (TBELs) as stringent as BAT/BCT developed on a case-by-case basis using best professional judgement (BPJ) in accordance with the criteria outlined at 40 C.F.R. § 125.3(d).

There are approximately 21 power plants subject to the Steam Electric ELGs and 16 hydro-electric plants in Tennessee. The permits selected for the PQR process are minor power plants not subject to the Steam Electric ELGs. Permits, fact sheets, and other supporting documentation for two power plants were reviewed to assess whether TDEC used the appropriate pollutants of concern that must be imposed in a permit.

Sector Strengths

Overall, the reviewed TDEC power plant permits included the following elements that were sufficient regarding facility information in permit documents:

- a clear description of the facility in the fact sheet, including a discussion of proper categorization based on processes and whether the facility is an existing or a new source;
- a description of the treatment processes conducted by the facility and expected waste streams and pollutants in the discharge;
- identification of applicable ELGs and an adequate discussion about implementing TBELs and resulting effluent limitations development including the calculation of effluent limitations based on ELGs;
- explanation of case-by-case considerations used for BPJ limitations; and
- effluent limitations in appropriate units and forms (i.e., concentration or mass).

Essential Actions

1. The permit application is required to include a physical location of all outfalls in accordance with 40 C.F.R. § 122.21(g)(1).[19]

   Both power plant permits that were reviewed contained outfalls that were authorized without identifying the location of the outfall. The TVA Norris Hydro Dam permit (TN0027481) did not include a

[19] 40 C.F.R. § 122.21(g): Application requirements for existing manufacturing, commercial, mining, and silvicultural dischargers. Existing manufacturing, commercial, mining, and silvicultural dischargers applying for NPDES permits, except for those facilities subject to the requirements of § 122.21(h), shall provide the following information to the Director, using application forms provided by the Director.
(1) Outfall location. The latitude and longitude to the nearest 15 seconds and the name of the receiving water.

physical location of the following discharges: stormwater from the Polychlorinated Biphenyl (PCB)-contaminated area mentioned on page five of the permit; strainer backwash discharges directly to the receiving stream; fire protection system test water; storm water runoff from the areas with PCB-contaminated soils as defined by and regulated by the Toxic Substances Control Act (TSCA); discharge of water used in drilling or slot cutting the dam; and pressure washing of painted structures. The application for the New Johnsonville permit (TN0082023) flow schematic identifies the discharge of "Emergency Diesel Fire Pump Test" wastewater without providing the location of the outfall, nor is it addressed in the permit. TDEC must require the physical location of all outfalls to be submitted with the application in order for the NPDES permit application to be complete.

2. The permit application requires a line drawing of all operations contributing wastewater to the discharge pursuant to 40 C.F.R. § 122.21(g)(2).[20]

   The TVA Norris Hydro Dam permit (TN0027481) contained outfalls that were not identified on the flow schematic. The fact sheet for the New Johnsonville permit (TN0082023) mentions the discharge of intake screen backwash in the fact sheet's appendix; however, this waste stream is not included on the flow schematic and it is not addressed in the permit. NPDES applications submitted to TDEC must be complete with a line drawing that adequately characterizes the wastewater that is discharged at the facility.

Recommended Actions

1. The fact sheet should contain a clear basis for the final effluent limits pursuant to 40 C.F.R. § 124.8(b)(4).[21]

   The fact sheet for TVA's North Hydro Dam permit (TN0027481) did not explain the CWA § 303(d) status of the receiving waterbody to determine if the appropriate WQBELs or other conditions were included in the permit. Additionally, the fact sheet should include a discussion for the basis of all limits in the permit including PCBs and settleable solids. EPA suggests that the fact sheet should include a clear explanation of how the effluent limits were developed to be consistent with the implementing regulations.

2. The permit should include BMPs to control certain discharges as allowed by 40 C.F.R. § 122.44(k).[22]

   The New Johnsonville permit (TN0082023) does not include BMPs for various chemicals stored and used at the facility. When establishing effluent limitations and conditions, the NPDES regulations allow the use of non-numeric effluent limitations expressed as BMPs under certain circumstances that are applicable to this facility (see 40 C.F.R. § 122.44(k)(1) and (4)). EPA recommends that the permit include site-specific BMPs for leaks or spills of various chemicals not covered by a TBEL or WQBEL.

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[20] 40 C.F.R. § 122.21(g): Application requirements for existing manufacturing, commercial, mining, and silvicultural dischargers. Existing manufacturing, commercial, mining, and silvicultural dischargers applying for the NPDES permits, except for those facilities subject to the requirements of § 122.21(h), shall provide the following information to the Director, using application forms provided by the Director. (2) Line drawing. A line drawing of the water flow through the facility with a water balance, showing operations contributing wastewater to the effluent and treatment units.

[21] 40 C.F.R. § 124.8(b): The fact sheet shall include, when applicable: (4) A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by § 124.9 (for EPA-issued permits);

[22] 40 C.F.R. § 122.44(k): The Best management practices (BMPs) to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

3. The public notice should include the location of each outfall as required by 40 C.F.R. § 124.10(d)(1)(vii).[23]

   Neither of the public notices for these permits included a general location of the outfall. The public notices for each permit contained the facility address, receiving stream names, and the latitude/longitude of the facility. EPA encourages TDEC to provide more information in the public notice, including the location of each existing or proposed discharge point. EPA also recommends including the outfall locations in the permit.

[23] 40 C.F.R. 124.10(d)(1)(vii): For the NPDES permits only (including those for "sludge-only facilities"), a general description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge use and disposal practice(s) and the location of each sludge treatment works treating domestic sewage and use or disposal sites known at the time of permit application.

7. Industrial Permits with Whole Effluent Toxicity Limits

Permits Reviewed

1. TN0002135 – Tyson Farms, Shelbyville Processing Plant (Poultry Processing Plant)
2. TN0067199 – Arconic Tennessee, North Plant (Aluminum Sheeting and Processing Plant)

Introduction

WET testing is a vital component to implementing WQS under the NPDES permitting program. It supports meeting the goals of the CWA § 101 with respect to restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters and "…the protection and propagation of fish, shellfish, and wildlife". WET testing in permits also implements the EPA's national policy of "no toxics in toxic amounts." The statutory basis for requiring the implementation of WET limits in the NPDES permits is in CWA § 301(b)(1)(C), which requires that permits include limits as stringent as necessary to meet state WQS.

WET describes the cumulative toxic effect of a discharge as measured by an organism's response when exposed to an effluent sample (e.g., lethality, impaired growth, or reproduction). The EPA's WET tests replicate the total effect of environmental exposure of aquatic life to toxic pollutants in a discharge without requiring the identification of the specific pollutants. It can be used to assess municipal and industrial effluent toxicity, impairment of surface waters, storm water impacts, WQS development, and the TMDL targets. The short-term chronic sublethal WET endpoints such as growth and reproduction, as reflected in the state's WQS, are used in the NPDES program to protect aquatic life.

The potential to cause or contribute to an excursion of a state's WET WQS is the provision that provides protection before there is an impact to aquatic organisms at a level that would result in an excursion of a state's WET WQS. The RPA for toxic impacts to aquatic life is used to determine whether controls are necessary for wastewater discharges to surface waters due to permitted effluent discharges at a level that would result in an excursion of a states WQS in accordance with 40 C.F.R. § 122.44(d)(1)(i).

Out of a total universe of 1,096 individual NPDES permits in Tennessee, 213 contain WET limits or monitoring (195 individual permits contain WET limits and 18 contain monitoring only for WET). The focus of the review of WET testing conditions was to verify that TDEC's permits are correctly implementing the WET testing program.

Sector Strengths

TDEC included WET limits in both reviewed permits based on an appropriate RPA, rather than implementing a less stringent approach of WET monitoring. The fact sheets included a strong discussion of WET limit development and took into consideration the past five years of WET testing results, ambient data, and TDEC's WET strategy. The permits included WET limits with an appropriate frequency of testing with clear reference of the most recent methods and procedures for WET failures and retesting. The reviewed permits correctly required toxicity identification evaluations (TIE) or toxicity reduction evaluations (TRE) following a WET testing failure. EPA also identified many other WET program strengths as provided below:

- Detailed TRE/TIE discussion with clear directions and endpoints that clearly state when follow up action must occur and submittal of a detailed plan to address toxicity failures;
- Appropriate test methods used and cited in the permits;
- Appropriate vertebrate and invertebrate test species used;

- Clear testing protocol including the instream waste concentration (IWC);
- The IWC is tested against a wide range of effluent concentrations;
- A follow up WET test does not negate a failed test;
- Permits clearly stated WET test endpoints, test requirements, and discussed reference toxicant tests; and
- Evaluation of real-time WET data during the permit term that helps inform WET testing limitation/monitoring provisions when permits are renewed.

Action Items

The EPA did not identify any action items for the industrial permits with reviewed WET limits.

8. Mineral Mining Permits

Permits Reviewed

1. TN0069141 – Rogers Group, Clinton Quarry (Crushed and Broken Limestone Mine)
2. TN0079774 – Lhoist North America of TN, Mine #34 (Ball Clay Mine)

Introduction

The mineral mining category includes various processing and mining of minerals such as kaolin, crushed stone, construction sand and gravel, industrial sand, and many others. Mineral mining wastewater is generated from discharges from mine drainage, mineral processing operations, equipment cooling, and stormwater runoff at mines and processing plants. Mineral mining operations often involve the disturbance of large surface areas of land. The precipitation that falls on the disturbed land is a major source of wastewater and industrial stormwater that primarily includes sand, silt, clay, and other suspended solids in the discharge.

Tennessee has approximately 450 mineral mines that are covered under general and individual NPDES permits for process wastewater and stormwater discharges. The two types of mineral mines reviewed by this PQR are a portion of a permit universe in Tennessee of about 230 mining operations - 190 crushed stone mines and 43 ball clay mines.

Sector Strengths

TDEC incorporates the mineral mining regulatory requirements into NPDES permits. TDEC's mineral mining permits and supporting documents contain a robust fact sheet that explains many relevant topics including facility description, applicability of industry ELGs, existing and the NSPS, antidegradation, impaired water checklists, and previous water quality monitoring results. TDEC evaluates all mineral mining discharges against its mining related numeric WQS based on the current and historical effluent and in-stream water quality data. TDEC uses case-by-case BPJ limitations as needed when an ELG has not been established for a particular subcategory of mineral mining. The waste load allocations or more stringent conditions from siltation/habitat alteration TMDLs were appropriately included in the permit requirements.

Essential Actions

1. All continuous discharges must contain a maximum daily limit (MDL) and an average monthly limit (AML) as required by 40 C.F.R. § 122.45(d).[24]

   The Rogers Group permit (TN0069141) contains a WQBEL for total suspended solids (TSS). The NPDES application notes process wastewater outfalls are continuous (not intermittent or seasonal). If the application was completed accurately by the permittee, the permit must contain a MDL and an AML for all effluent limits including limitations necessary to achieve WQS as required by the NPDES implementing regulations.

[24] 40 C.F.R. § 122.45(d): Continuous discharges. For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as: (1) Maximum daily and average monthly discharge limitations for all dischargers other than publicly owned treatment works; and (2) Average weekly and average monthly discharge limitations for POTWs.

Recommended Actions

1. Improve the analysis and rationale for effluent limits in the fact sheet in accordance with 40 C.F.R. § 124.8(b)(4).[25]

   The Lhoist North America permit (TN0079774) contains a TBEL expressed as a MDL for the TSS based on the BPJ because ELGs have not been promulgated for the ball clay mining industry. The fact sheet notes that TDEC applied a MDL and AML for the TSS; however, elsewhere in the fact sheet TDEC states that having a MDL is more stringent than including both types of effluent limits (MDL and AML) without providing justification. While the TBEL requirement for a MDL and AML are not applicable to BPJ limits, it is suggested that TDEC add a AML for the TSS to increase the enforceability of the 30-day averaging period.

   Both permits require the permittee to use BMPs to control the contribution of sediments to surface waters. The fact sheet for both reviewed permits did not contain a justification for the requirement to develop BMPs. EPA suggests that the fact sheet include an explanation that BMPs are required as non-numeric effluent limitations pursuant to 40 C.F.R. § 122.44(k).[26] Additionally, EPA recommends the permit require the development and implementation of a BMP plan to increase the enforceability of the BMPs used at the facility.

2. The public notice should include the location of each outfall as required by 40 C.F.R. § 124.10(d)(1)(vii).[27]

   Neither of the public notices for these permits included a general location of the outfall. The public notices for each permit contained the facility address, receiving stream names, and the latitude/longitude of the facility. EPA suggests providing more information in the public notice, including the location of each existing or proposed discharge point. EPA also recommends including the outfall locations in the permit.

[25] 40 C.F.R. § 124.8(b): The fact sheet shall include, when applicable: (4) A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by § 124.9 (for EPA-issued permits);

[26] 40 C.F.R. § 122.44(k): Best management practices (BMPs) to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

[27] 40 C.F.R. 124.10(d)(1)(vii): For NPDES permits only (including those for "sludge-only facilities"), a general description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge use and disposal practice(s) and the location of each sludge treatment works treating domestic sewage and use or disposal sites known at the time of permit application.

9. Review of Standard Conditions for All Individual Permits

Permits Reviewed

The PQR review included an evaluation of all standard conditions associated with the individual permits selected for the PQR. The standard conditions for each municipal and industrial reviewed permit are substantially similar; therefore, the action items are grouped together in this section.

Introduction

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

Program Strengths

TDEC's permits included all federally required standard conditions with language as stringent as the federal language. TDEC consistently seeks to improve the standard conditions for all NPDES permits.

Recommended Actions

1. Consider clarifying that the permittee must use "sufficiently sensitive" test methods for all pollutants limited or monitored in accordance with 40 C.F.R. § 122.44(i)(1)(iv).[28]

   The reviewed individual permits reference 40 C.F.R. § 136.1(c)[29] which contains "sufficiently sensitive" requirements; however, the permits do not specifically state that "sufficiently sensitive" test procedures are required. The EPA suggests that the permits should be clearer about using the lowest applicable levels when analyzing pollutants in the effluent. Rather than referencing the regulatory requirement that contains "sufficiently sensitive" test methods, the permit should also specifically express the requirement to use the lowest applicable levels for the analysis of pollutants or pollutant parameters to ensure that the permittees comply.

[28] 40 C.F.R. § 122.44(i)(1)(iv): According to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or required under 40 C.F.R. chapter I, subchapter N or O. (A) For the purposes of this paragraph, a method is "sufficiently sensitive" when: (1) The method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or (2) The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

[29] 40 C.F.R. § 136.1(c): For the purposes of the NPDES program, when more than one test procedure is approved under this part for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv).

10. Summary of Action Items

This section provides a summary of the PQR action items to improve Tennessee's NPDES permitting program, as discussed throughout Sections 4 – 9 of this report.

Municipal Permits with Nutrient Limits Action Items

- Include limitations to control pollutants that cause, have the reasonable potential to cause, or contribute to an excursion of a WQS, including narrative criteria, pursuant to 40 C.F.R. § 122.44(d)(1)(i).
- The fact sheet should include calculations and explain the derivation of specific effluent limitations and conditions in accordance with 40 C.F.R. § 124.56(a).

Small MS4 Action Items

- The TDEC should consider ways the GP can be updated during the next permit cycle to be consistent with the GP requirements of the Remand Rule and 40 C.F.R. § 122.28(d).
- The MS4 permit site plan review procedures should incorporate consideration of potential water quality impacts in accordance with 40 C.F.R. § 122.34(b)(4)(i)(D).
- All permit provisions should be expressed in a clear, specific, and measurable manner as required by 40 C.F.R. § 122.34(a).

Power Plant Permits Action Items

- Permit applications are required to include a physical location of all outfalls in accordance with 40 C.F.R. § 122.21(g)(1).
- Permit applications must include a line drawing of all operations contributing wastewater to the discharge pursuant to 40 C.F.R. § 122.21(g)(2).
- Fact sheets should contain a clear basis for the final effluent limits pursuant to 40 C.F.R. § 124.8(b)(4).
- Power plant permits should include BMPs to control certain discharges as allowed by 40 C.F.R. § 122.44(k).

Industrial Permits with WET Limits Action Items

There were no action items identified for this regional priority topic.

Mineral Mining Permits Action Items

- All continuous discharges must contain an MDL and AML as required by 40 C.F.R. § 122.45(d).
- The TDEC should improve the analysis and rationale for effluent limits in the fact sheet in accordance with 40 C.F.R. § 124.8(b)(4).
- Public notices should include the location of each outfall as required by 40 C.F.R. § 124.10(d)(1)(vii).

Standard Conditions Action Items

- The TDEC should consider clarifying that the permittee must use "sufficiently sensitive" test methods for all pollutants limited or monitored in accordance with 40 C.F.R. § 122.44(i)(1)(iv).

11. Review of Action Items from the Previous PQR

The previous Tennessee PQR report was finalized in 2016 and focused on four national topics (nutrients, pesticides, pretreatment, and stormwater) and two regional topics (TMDL implementation and combined sewer overflows).[30] The Action Items identified in the previous PQR report serve as the basis for continuous discussions between EPA and TDEC to improve the NPDES permitting program in Tennessee. These discussions focus on eliminating program deficiencies to improve program performance by enabling defensible permits issued in a timely fashion. The essential action items (previously category 1 findings) identified in the prior PQR report and the status of resolving the action items are summarized below in Table 2. EPA continues to monitor and evaluate the previous PQR findings within the real-time permit reviews and may include certain PQR findings within CWA § 106 workplans as needed, as well as continue to have dialogue with TDEC on resolution of the findings.

Table 2 – Summary of Action Items from the Previous (2015) PQR report and Status

Program Area	Action Item	Status
Nutrients	TDEC should ensure that intermediary effluent limits for nutrients reflect TBELs and are not misconstrued as true WQBELs pursuant to 40 C.F.R. § 124.56.	In progress
	TDEC should conduct an RPA for nutrients in all POTW permits regardless of the impairment status of the receiving stream pursuant to 40 C.F.R. § 122.44(d).	Resolved
	TDEC should assign WQBELs to nutrients in POTW permits, where appropriate pursuant to 40 C.F.R. § 122.44(d).	In progress
Stormwater Discharges Associated with Industrial Activity	TDEC should not permit temporary stream of process water from discharging through a permitted stormwater outfall without any additional monitoring requirements pursuant to 40 C.F.R. § 122.45(h).	In progress
	TDEC should ensure that all individual industrial stormwater permits contain provisions requiring visual assessments of stormwater discharges pursuant to 40 C.F.R. § 122.41(i).	In progress
	MS4 permits should incorporate clear, specific, measurable, and enforceable permit requirements pursuant to 40 C.F.R. § 122.26.	In progress
Combined Sewer Overflows (CSO)	The record should include a topographic map or sketch identifying the locations of the CSO discharges as well as a description of the physical location of these outfalls pursuant to 40 C.F.R. § 122.21.	In progress
	Language in the permit should state that CSO discharges that have *E.coli* concentrations in excess of the daily maximum WQS are violations unless TDEC can demonstrate that its existing WQS allow for these excursions pursuant to 40 C.F.R. § 122.41(a).	In progress
Pesticides	None	-
Pretreatment	None	-
TMDL Implementation	None	-

[30] The previous TN PQR report is available on the EPA's website:
www.epa.gov/sites/production/files/2016-08/documents/final_tn_pqr_report.pdf