FINAL

EPA Region 4 NPDES Permit Quality Review

Georgia

Review Date: April 8-9 and 25, 2019
Report Date: August 5, 2020

Environmental Protection Agency – Region 4
61 Forsyth Street SW
Atlanta, GA 30303

Contents

Executive Summary

The Environmental Protection Agency Region 4's National Pollutant Discharge Elimination System (NPDES) Program Permit Quality Review (PQR) for Georgia found that permits issued in the state were of sufficient quality and consistency to support and uphold the intent and resources of the NPDES permit program. The PQR supplements the EPA's routine review of Georgia's draft NPDES permits during the issuance process. The EPA's routine review of draft permits is referred to as "real time review".

The PQR examined 15 individual permits issued by the Georgia Environmental Protection Division (EPD) for discharges from municipal utilities or publicly owned treatment works (POTWs) and industrial facilities. In addition, the PQR evaluated the state's Municipal Separate Storm Sewer System (MS4) Stormwater Phase II General Permit and two small MS4s covered by that permit, as well as two pretreatment permits issued to significant industrial users and the two POTW permits for the facilities to which these significant industrial users discharge. The permit review focused on several national and regional priority areas, including:

- Permit controls for nutrients in non-Total Maximum Daily Load (TMDL) waters,
- Effectiveness of POTW NPDES permits with food processor contributions,
- Small MS4 permit requirements, and
- Whole effluent toxicity (WET) program implementation

The PQR identified two areas for permit quality improvement that are categorized as "essential" (i.e., application signatures and standard condition language that conforms to the federal language used in 40 C.F.R. 122.41). EPA identified eight other areas for permit improvement that are categorized as "recommended". EPA and Georgia will continue to work together to strengthen permit language and documentation in state NPDES permits. The EPD reviewed and provided comments on the draft PQR report in September 2019. The state agreed with many of the draft PQR's findings and recommendations and committed to take action to address many of the proposed action items. Several of the recommended actions to improve the review of permit applications are already underway.

I. PQR BACKGROUND

The NPDES Program PQRs are an evaluation of a 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 the NPDES regulations. Through this review mechanism, the 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. The EPA conducted a previous PQR of the Georgia NPDES permitting program on March 23–26, 2015. The previous PQR report is available at: *https://www.epa.gov/sites/production/files/2016-08/documents/final_ga_pqr_report.pdf.*

The 2015 PQR report included proposed action items to improve the Georgia NPDES permitting program. As part of the current PQR, the EPA requested updates from Georgia on progress made towards addressing previous action items. Of the seven action items identified during the last PQR as being Essential[1] tasks, four have been resolved and the remainder represent actions that are either longer-term activities or lower-level actions which the state is still addressing. In addition, the EPA identified 19 Recommended action items to improve Georgia's program, which Georgia is in the process of implementing. Sections VI and VII of this report contain a detailed review of the progress on action items identified during the last PQR.

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

- **Essential Actions -** Proposed essential action items address noncompliance with respect to a federal regulation. The EPA has provided the citation for each essential action item. The permitting authority must address these action items in order to come into compliance with federal regulations.

- **Recommended Actions -** Proposed recommended action items are recommendations to increase the effectiveness of the state's or the Region's NPDES permit program.

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

The EPA's review team, consisting of five staff persons from the EPA, conducted a review of the Georgia NPDES permitting program which included an on-site visit to the EPD offices in Atlanta, Georgia on April 8, 9, and 25, 2019.

The Georgia PQR included reviews of core permit components and national and regional topic areas. The permit reviews focused on core permit quality and included a review of the permit application,

[1] During the 2012-2017 PQR cycle, these action items were known as "Category 1" and address deficiencies or noncompliance with respect to federal regulations. The EPA is now referring to these action items going forward, as Essential. In addition, previous PQR reports identified recommendations as either "Category 2" or "Category 3" action items. The EPA is now consolidating these categories of action items into a single category: Recommended.

permit, fact sheet, and any correspondence, reports or documents that provided the basis for the development of the permit conditions and related administrative process.

A total of 16 permits were reviewed as part of the PQR.

GEORGIA NPDES No.	**Permit Name**
GA0026123	Donalsonville, WPCP
GA0047236	Fitzgerald WLB Comm.
GA0049336	International Paper Company Flint River Mill
GA0024082	Thomasville, City of
GA0048178	Meigs, City of
GA0038946	Dalton, Utilities
GA0030775	Milledgeville, City of
GA0000239	OMNOVA Solutions, Inc.
GA0047252	Colquitt, City of
GA0020168	Gainesville, City of
GA0031721	Newnan Utilities
GA0023191/GA0038776	Winder, City of (control for Alma, City of)
GA0047678/GA0021610	Rockdale, Quigg Branch (control for Almond Branch)
GAG610000	Small MS4 Phase II

All permits were reviewed for the core review, eight permits were reviewed for national topic areas, and six permits were reviewed for regional topic areas. Permits were selected based on issue date and the review categories that they fulfilled.

Core Review

The core permit review involved the evaluation of selected permits and supporting materials using basic NPDES program criteria. Reviewers completed the core review by examining selected permits and supporting documentation, assessing these materials using standard PQR tools, and talking with the permit writers and the EPD managers regarding the permit development process. The core review focused on the *Central Tenets of the NPDES Permitting Program*[2] to evaluate the Georgia 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 Georgia NPDES program were: 1. Permit controls for nutrients in non-TMDL waters; 2. Small MS4 permit requirements; and 3. Effectiveness of POTW NPDES permits with food processor contributions.

Regional topic area reviews target regionally specific permit types or aspects of permits. The regional topic area selected by the EPA was permitting requirements for Whole Effluent Toxicity (WET). These reviews provide important information to Georgia, the EPA Region 4, the EPA Headquarters, and the public on specific program areas.

II. STATE PERMITTING PROGRAM GENERAL OVERVIEW

The EPD currently has seven full time NPDES permit writers. In addition, staff that help support the NPDES permit development process include two-unit coordinators, one program manager, four staff who provide wasteload allocations and conduct water quality modeling, three staff who write TMDLs, and a secretary who provides both permitting and compliance support.

The EPD staff uses a variety of tools to support permit development and implementation, including permit and fact sheet templates, analytical and limit development spreadsheets, water quality models, and procedures or guidance. The EPD has developed several templates for different types of NPDES permits as well as for their [improved] fact sheets. In addition, the EPD has developed an Excel spreadsheet to calculate reasonable potential (RP) for whether a discharge will cause or have the reasonable potential to cause or contribute to an excursion above any state water quality criteria for metals and nonmetals based on chronic and acute water quality criteria. The RP spreadsheet allows for the input of reported data for comparison with the water quality criteria. It includes embedded calculations that can determine effluent limitations. The EPD has over 20 written procedures and guidance documents that are available to support NPDES permitting, covering topics such as RP procedures, antidegradation analysis guidelines, public notice procedures, the EPD's strategy for addressing phosphorus in NPDES permitting, and whole effluent toxicity.

As part of the EPD's Quality Assurance/ Quality Control process, unit coordinators review draft permit packages assembled for reissuance prior to public notice. In addition, the unit coordinator and program manager review draft packages for new discharges or expansion. Permit packages drafted by

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

new permit writers receive two levels of review: a peer review by senior permit writers and subsequent review by the unit coordinator. Permit discharges that are high priority or high profile may receive additional review by managers. New EPD staff use checklists as a training tool, but senior staff are not required to use them. New stormwater permit writers receive programmatic mentoring. Seasoned permit writers keep more detailed records of the permitting process to ensure that future permit writers can understand the process and make appropriate updates.

The EPD estimates that its current NPDES permit universe includes 789 permits. This includes NPDES permits for 369 POTWs (197 major permits, 172 non-major permits; 4 include CSOs) and 347 non-POTW facilities (37 major permits, 333 non-major permits; 24 are confined animal feeding operations (CAFOs)). The EPD also administers nine non-stormwater NPDES general permits, four stormwater general permits (including three MS4 permits (Phase II Municipal, Phase II Department of Defense, and Phase II Department of Transportation)), and an industrial stormwater general permit (GAR050000). The EPD administers all stormwater permits. The EPD estimates that as of July 19, 2019 there were 171 municipal stormwater permittees and 2,579 industrial permittees that submitted notices of intent to be covered (NOIs) and 696 have submitted no exposure exclusion forms. NOIs are tracked through upload to the Georgia Pollutant Discharge Elimination System (GAPDES) data system. NOIs are also available to the public through the Georgia Environmental Protection Division Online System (GEOS).

Significant industries within Georgia include pulp and paper, agribusiness, poultry, food processing, timber, clay, kaolin and fuller's earth production, crushed stone and stone building materials, manufacture of transportation equipment and energy production. For major individual NPDES permits 95.4 percent are current and 4.6 percent (46 permits) are administratively continued. For non-major permits, 94.2 percent are current and 5.8 percent (61 permits) are administratively continued. The EPA sets a goal in the CWA Section 106 grants funding workplan for Georgia that 85 percent or more of NPDES permits should be current for effective program administration. It is noteworthy that the EPD has significantly reduced its permit backlog rate despite enduring reductions in staff resources over several years.

The EPD is developing or implementing the following state initiatives that will strengthen the permitting program:

- Despite losing experienced permit writers, the EPD continues to reduce its permit backlog rate as the program has successfully been through several Lean Six Sigma processes to streamline internal permitting procedures. Within eight years, the EPD has greatly reduced its overall NPDES permit backlog rate from 28 percent.

- The EPD continues to improve its permit fact sheets by making them more robust. Specific details are better defined than in the past resulting in more consistent and enforceable permits. This is a result of the EPD implementing an action item identified in the previous PQR cycle.

- The EPD is currently developing a nitrogen permitting strategy and already has a well-established phosphorus permitting strategy in place.

- In 2016, the EPD began phasing out fecal coliform as the state's bacterial indicator and began phasing in E. coli and enterococci (for estuarine waters). The EPA considers these indicators to be better indicators of pathogen risk.

- The EPD developed a Coastal Stormwater Supplement to the Georgia Stormwater Management Manual to address the impacts of increased urban runoff in coastal areas on sensitive water resources, habitats, and wildlife.

- The EPD supported the 2016 update to the Georgia Stormwater Management Manual to reflect new findings in stormwater that included low impact design practices and better site design.

- The EPD is working with its non-MS4 communities to educate them on stormwater impacts to water quality and how to design stormwater management programs. The latest MS4 permits include a runoff reduction standard for new development and redevelopment projects that meet specific criteria.

- The EPD issued a new general permit for non-metallic mining operations and concrete and asphalt productions (GAG300000). This permit is the first of its kind in Georgia to streamline permitting for mining facilities. The general permit includes discharge limitations for total suspended solids (TSS), turbidity, and oil and grease, as well as monitoring requirements for flow, turbidity, and precipitation.

- The EPD sends permit reminder letters to all permittees one year in advance of their permit expiration date and the EPD calls the permittees three months prior to the application deadline. The EPD issues enforcement orders to permittees who fail to submit timely permit applications.

- The EPD initiated a compliance assistance program designed as an outreach tool for the regulated community. The program is focused on providing targeted services such as direct phone calls and electronic reminders for upcoming annual reports and application deadlines.

- The EPD's electronic online application system went live in 2016 for all industrial and construction stormwater applications, industrial stormwater annual reports. As a result, all wastewater and underground injection control applications are now received electronically. The EPD will transition MS4 forms and reporting to the electronic format as well. As funding allows, the EPD is working with contractors to meet the requirements of the Phase II e-Reporting Rule.

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 the NPDES permit application regulations (40 C.F.R. § 122.21). This information is essential for developing technically sound, complete, clear, and enforceable permits. Similarly, fact sheets must include a description of the type of facility or activity subject to a draft permit.

In accordance with 40 C.F.R. § 122.21(g)(1), for industrial applicants, and 40 C.F.R. § 122.21(j)(3)(i) for POTWs, applicants are required to include all outfall numbers and the latitude and longitude of every outfall location on the application. Applications reviewed inconsistently identified the latitude and longitude of outfalls, while other applications did not include or identify specific outfall number(s). For two permits issued before 2017, (Donalsonville WPCP and Winder/Marburg), the facility name on the permit/fact sheet did not match the name used in the application. During the exit interview, the EPD agreed with the observation and stated that the program has implemented new procedures since 2017 to address these concerns.

Program Strengths

- The EPD has modified their fact sheet template in response to action items from the first cycle of PQRs identifying data gaps.
- Permits that transitioned to the new fact sheet template in 2017 now include updated outfall location(s) and comprehensive facility names and descriptions, which has been evident in more recent EPA real-time reviews of permits.
- The EPD's new electronic permit builder system is capturing information as new applications are processed.

Areas for Improvement

- None. Issues identified during the current PQR have been addressed with a 2017 update to the fact sheet template.

Action Items

Essential	• None
Recommended	• None

2. Permit Application Requirements

Background and Process

Federal regulations at 40 C.F.R. §§ 122.21 and 122.22 specify application requirements for permittees seeking NPDES permits. Although federal forms are available, authorized states are permitted to use their own forms provided they include all information required by 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.

Prior to transitioning to the GEOS, the EPD used EPA applications for all forms except Forms 2A and 2E, for which the State uses a hybrid EPD-EPA form, and Form 2S for sludge/biosolids reporting, which is a state form. During the development of the GEOS, the EPD created their own applications and is in the process of updating these forms to comply with the NPDES Applications and Program Updates Rule[3] as funding becomes available. The EPD stated that the new MS4 application forms are not yet in the GEOS because the EPA's *Implementation Technical Paper No. 9 - Data Entry Guidance for Stormwater Information*, which provides explicit information about data elements required under e-Reporting, had not been published until October 2018.

This PQR noted incomplete applications for POTWs, specifically Part 2.A., B.6. The PQR also identified facilities that had not completed the required number of priority pollutant scans to qualify as a

[3] On February 12, 2019, the EPA finalized revisions to the application requirements at 40 C.F.R. § 122.21 in the final NPDES Applications and Program Updates Rule. The final rule became effective on June 12, 2019. On and after this date, applicants for EPA-issued NPDES permits are required to meet the new application requirements. The EPA has updated each of the eight NPDES application forms to conform to the final rule and improve clarity and usability. The states that are authorized to administer the NPDES program might require use of the EPA's application forms or might have developed their own state-specific application forms. In either case, the final NPDES Applications and Program Updates Rule provides states up to one year to make conforming programmatic and regulatory changes, and up to two years if statutory changes are needed.

complete application[4]. Priority pollutant scans are required to be submitted as specified in 40 C.F.R. §122.21(g)(7). Publicly Owned Treatment Works are required to submit the information required by the EPA Application (Form 2A) in accordance with 40 C.F.R. §122.21(j).

Other application data deficiencies identified during the review were found on Form 2A, Table B-6, which requires current operational data to support new or renewal permit limit development. This table is not intended to reflect previous or current permit requirements. The EPD indicated it will actively address this issue during application review.

The review also found permit applications that were not signed by the responsible official per 40 C.F.R. § 122.22. The EPD stated in the exit interview that the E-Reporting rule and the transition to online applications should resolve these concerns.

Program Strengths

- Since the 2015 PQR, the EPD has overhauled their permit application process with exceptional progress in managing the way permittees are notified to re-apply and to correct incomplete or deficient applications, ensuring that applications are complete, and providing specific instructions on how to public notice the draft documents.
- The EPD updated the process they use for notifying permittees of the need to re-apply, procedures for processing and reviewing applications, and the method by which applications are assigned to staff for review.
- Georgia uses specific tools such as Compliance Orders and data systems (GEOS and the Georgia Pollutant Discharge Elimination System (GAPDES)) to track the application process.

Areas for Improvement

- Permit writers should ensure that applications are signed by the responsible official and review all application information to ensure a complete application is received on time.

[4] See 40 C.F.R. § 122.21(e); The regulations at § 122.21(e) state that the Director, "[must] not issue a permit before receiving a complete application..."

Action Items

Essential	• Ensure permit applications are signed by the responsible official per 40 C.F.R. §122.22.
Recommended	• Ensure facilities submit complete priority pollutant scans with applications. • Ensure permittees submit current operational data on the EPA application form 2A and table B-6.

B. Developing Effluent Limitations

1. Technology-based Effluent Limitations

40 C.F.R. § 125.3(a) requires 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 C.F.R. Part 133. A total of seven POTW permits were reviewed as part of the PQR. Each of the fact sheets for the reviewed POTW permits clearly addressed applicable TBELs.

Program Strengths

- In all of the reviewed POTW permits, TBELs were included, were consistent with federal regulations, and were in the appropriate units and forms.

Areas for Improvement

- None

Action Items

Essential	• None
Recommended	• None

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 established for a category of dischargers, the TBELs in a permit must reflect 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 basis using Best Professional Judgement (BPJ) in accordance with the criteria outlined at 40 C.F.R. § 125.3(d).

Program Strengths

- The EPD's procedures for determining and establishing appropriate TBELs for non-POTWs are consistent with federal statutes, policies, and guidance. The EPD typically does not grant variances to non-POTWs, and none of the reviewed permits contained variances. All reviewed non-POTW permits had TBELs based on applicable ELGs and BPJ.

Areas for Improvement

- None

Action Items

Essential	• None
Recommended	• None

2. Reasonable Potential and Water Quality-Based Effluent Limitations

Background

40 C.F.R. 122.44(d) requires 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 water quality-based effluent limits (WQBELs), the permitting authority must evaluate whether any pollutants or pollutant parameters cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.

The PQR for Georgia 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 permit writers consulted and developed limits consistent with the assumptions of applicable EPA-approved TMDLs.

Process for Assessing Reasonable Potential

The EPD permit writers conduct reasonable potential for each permit that is issued. The permit writers use the priority pollutant scan data from the application to run the reasonable potential calculations. The EPD's modeling section runs DOSAG models and provides this to the permit writer along with additional data for receiving water body specific issues. The Watershed Planning and Monitoring

Program Branch develops a waste load allocation for the permit writer. When permitting a new industrial discharge, EPD works extensively to find a facility with similar processes to develop representative sampling and effluent limits.

Process for Developing WQBELs

Fact sheets document the use of water quality modeling tools such as Georgia DOSAG, EFDC, and the WASP model in the development of WQBELs. The EPD water quality modelers, based in a separate section of the NPDES Permits program, develop the WQBELs for permit writers. Permit writers provide modeling staff with data for the permit they are drafting and insert the completed information into the final permit for issuance.

Program Strengths

Reasonable Potential and WQBEL Development

- New industrial facilities must submit an EPA Form 2D within two years of initial operations to perform a Reasonable Potential Analysis (RPA) and verify permit limits are appropriate.
- When permitting a new industrial discharge, the EPD works extensively to find a facility with similar processes to develop representative sampling and effluent limits.
- The EPD requires facilities to complete a long-term BOD test for new or planned upgrades on an annual or once per permit term to gather additional data for future TMDL modeling.

Areas for Improvement

Reasonable Potential

- The EPD stated that the RP calculations and results are well documented in the RPA narrative in fact sheets. The EPA suggested that numeric data also be presented to allow independent verifications during draft permit public notice review.

- The RPA for determining whether to include limits should be done based on data that is available at the time of permit issuance (see Donalsonville discussion below).

WQBEL Development

- The City of Donalsonville (GA0026123) WQBEL analysis demonstrated RP to exceed 50 percent of the WQS for 4,4-DDT, Dieldrin, and Heptachlor in Attachment B of the fact sheet. Attachment B states that if the calculated instream concentration is over 50 percent of the WQS then a permit limit for that parameter will be placed in the permit. These parameters appear in the final permit as monthly “report only” with a condition that after 10 months of data collection, the EPD will determine whether there is RP and reopen the permit to include effluent limits for these parameters, as necessary based on the RP determination. The fact sheet for this permit lacks an explanation for why additional monitoring for these parameters is required as opposed to a limit at the time of permit issuance.

Action Items

Essential	• Resonable Potential Analysis • None • WQBEL Development • None
Recommended	• Resonable Potential Analysis • RPA for determining whether limits are needed should be based on any data that is available per 40 C.F.R. § 122.44(d)(1)(iii). • WQBEL Development • None.

3. Final Effluent Limitations and Documentation

Background and Process

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

In addition, permit records for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations. Technology-based effluent limits should include assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for determining the need for water quality-based effluent limitations as well as the procedures explaining the basis for establishing, or for not establishing, water quality-based effluent limitations 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.

The EPD's fact sheet(s) have improved since the previous PQR with more informative facility and treatment process description; discussion of expected waste streams and pollutants in the discharge;

comparisons of TBELs and WQBELs and selection of the most stringent limit; and, identification of applicable treatment standards, or alternate limitations.

Program Strengths

- The EPD recently changed the format of their fact sheets. This revision includes a table with all effluent limitations and states the TBEL and WQBEL associated with that parameter. The lowest limit is bolded and can be cross referenced with the effluent limit table.

Areas for Improvement

- The City of Donalsonville (GA0026123) has an effluent limitation for BOD_5, but under their special conditions (Part A.1.a) they discuss monitoring for Carbonaceous Biochemical Oxygen Demand $(CBOD)_5$. It is recommended that the state ensure that all parameter names are consistent throughout the permit and fact sheet.

Action Items

Essential	•None
Recommended	•Maintain consistency in parameter names throughout the permits and the fact sheets.

C. Monitoring and Reporting Requirements

Background and Process

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

Specifically, 40 C.F.R. § 122.44(i) requires NPDES permits to establish, at minimum, annual reporting of monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 C.F.R. § 122.48 requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data which are representative of the

monitored activity. The regulations at 40 C.F.R. § 122.44(i) also require reporting of monitoring results with a frequency dependent on the nature and effect of the discharge. 40 C.F.R. § 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 should include a description and justification for all monitoring locations required by the permit. The 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 methods.

Monitoring Requirements

The EPD has a policy document that helps the permit writer identify what monitoring requirements are required for each parameter. Monitoring requirements follow the EPA guidelines in the NPDES Permit Writers Manual. Review of the Donalsonville WPCP permit package revealed documentation of the EPD responding to an inquiry from the facility about appropriate methodology for mercury sampling. The mercury monitoring requirement in the permit did not specify the most sensitive method available. The EPA commends the EPD for bringing the issue to the attention of the permittee and requiring new tests be done with the more sensitive method.

Reporting Requirements

Reporting requirements are made standard among all Georgia NPDES wastewater permits. DMRs require monthly reporting on the 15th of the month. Annual reports are due in June and semi-annual reports are due in June and December. Variations may occur due to the issuance date of the permit. In the stormwater sector, permits outline reporting requirements. Reports are identified to be sent to the appropriate group (i.e., permitting, compliance, TMDLs, etc.) to review if data is reported in a timely manner.

All reviewed non-stormwater NPDES permits required long-term average BOD (LTA_BOD) tests to be submitted. The EPD stated that this data is used to calculate F-ratios and to compute the dissolved oxygen deficit that the pollutant loading imposes on receiving waters in coordination with other permits discharging pollutants in the same watershed.

Program Strengths

- The EPD has a policy document that helps the permit writer decide what monitoring requirements are required for each parameter.

- The EPD requires the permittees to submit monitoring data using the most sensitive analytical test method.
- The EPD requires long-term average BOD (LTA_BOD) tests to be submitted in some permits and uses these data to support dissolved oxygen deficit modeling in streams receiving pollutants.

Areas for Improvement

- None.

Action Items

Essential	• None
Recommended	• None.

D. Standard and Special Conditions

Background and Process

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

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

In all of the reviewed permits, the Standard Conditions language did not match the federal requirements. In response to this finding, EPD indicated potential to update boilerplate standard conditions in the coming year. Standard language is not included verbatim because the Georgia state regulations reference 40 C.F.R. § 122.41 for compliance with the standard conditions and this is

included on the cover page of the permits. The EPD explained in the PQR exit interview that this is the reason the language in the permits is shortened.

In two reviewed permits (Rockdale and Donalsonville), compliance schedule endpoints were not addressed. This information is necessary to ensure completion of the activity for which the compliance schedule was established and for assurance the associated compliance dates are established for DMR reporting. The Donalsonville WPCP permit did not include a "reopener clause". This standard condition clause authorizes reopening a permit to include technical standards if new technical standards are more stringent or more comprehensive than the conditions in the permit [see 40 C.F.R. § 122.44(c)].

Program Strengths

- None

Areas for Improvement

- There are inconsistencies in the standard conditions language when compared to the federal requirements. It is recommended that all state permits include standard condition language that matches the federal language used in 40 C.F.R. § 122.41.

Action Items

Essential	•Include standard condition language that conforms to the federal language used in 40 C.F.R. § 122.41.
Recommended	•Include compliance endpoints clearly in the permit and fact sheet. •POTW permits should contain a reopener clause per 40 C.F.R. § 122.44(c)

E. Administrative Process

Background and Process

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

The EPD mails public notice documents via U.S.P.S. mail in accordance with the state regulations, but this practice will be phased out once the EPD updates the state rules to incorporate the EPA's new NPDES Updates Rule. Public notice documents were found in paper records reviewed at the state offices, while others were found on the internet or the EPD website where they are transferring their permit records.

When the EPD holds public hearings, video is recorded and stored on a CD-ROM in the permit file as well as on a server in the Atlanta office. Comments on draft permits are managed by the staff developing the draft permits with the oversight of senior managers.

Due to the new permit template developed by the EPD in 2017, permits are being drafted with more detailed fact sheets with references to regulatory and statutory requirements. The EPD is commended for these improvements.

Permits are public noticed for 30 days and posted on the EPD website. For major permits and non-major permits with sludge management plans, the permittee is responsible for public noticing the draft permit in their local newspaper and a public location in the area. All general permits are public noticed in Georgia's five major newspapers. The Stormwater Unit does all the public notices for the permits they issue. Individual permits are noticed in the appropriate local newspaper. When comments are received, they are recorded verbatim into a spreadsheet. The comments are reviewed, with duplicate comments removed. EPD reports that there has been a recent decrease in public comments received because of the new more detailed fact sheets. The EPD also provides a cursory pre-draft permit to the permittee several days in advance of the notice period, which has reduced comments from the permittees because this process has been able to resolve issues before the public notice period begins. While most comments are received online, there are occasional paper comments, which are kept in the paper permit file or scanned into electronic files.

General stormwater permit public hearings are scheduled before issuance to accommodate citizen interest. For stormwater permits only, hearings are always scheduled at least seven days before the close of the public notice period to allow time to collect comments and then make any necessary changes before the end of the public notice period. Permit appeals are rare.

Program Strengths

- Requests for public hearings are rare, but when they do occur, the hearings are video recorded. Public hearing records are kept at the central office.
- Pre-application meetings are held when necessary.
- The provision of pre-draft permits is decreasing the time needed to address comments and it is improving permitting results.

Areas for Improvement

- None

Action Items

Essential	• None
Recommended	• None.

F. Administrative Record and Fact Sheet

Background and Process

The administrative record is the foundation that supports the NPDES permit. When EPA issues an NPDES permit, 40 C.F.R. § 124.9 identifies the required content of the administrative record for a draft permit and 40 C.F.R. § 124.18 identifies the requirements for a final permit. Authorized state programs should have equivalent documentation. The record should contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit should contain the permit application and supporting data; draft permit; fact sheet or statement of basis;[5] 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.

Administrative Records

The official Georgia NPDES permit files are paper and are maintained in the main EPD office building. Many permit documents are scanned and uploaded into GAPDES for ease of access. Compliance records are maintained in district offices. The general public has direct access to the permit

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

applications and draft and final permits through an internet website, GEOS, without having to log in or obtain permissions. It is referred to as the GEOS public portal. The public also has access to information on a limited number of enforcement actions on the EPD website.

Fact Sheets

The EPD staff permit writers use a newly developed electronic template to develop the fact sheet that supports the draft permit. The fact sheet is generally written before the permit is drafted and additional data is added as the permit is edited. Most permits include a summary page attachment to the fact sheet to document addendums, revisions, or changes recorded from the previously issued permit. A fact sheet is written for permit applicants of non-major wastewater facilities as well.

Program Strengths

- Newly developed electronic templates have streamlined the permitting process and increased the amount of information included in the fact sheet, including clear demonstration of changes to the previous permit.

Areas for Improvement

- Include even more detail in the fact sheet pertaining to the basis for permit decisions.

Action Items

Essential	• None
Recommended	• Improve documentation in fact sheets on the bases for final permit decisions.

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: 1. Permit controls for nutrients in non-TMDL waters; 2. Effectiveness of POTW NPDES permits with food processor contributions; and 3. Small MS4 permit requirements.

A. Permit Controls for Nutrients in Non-TMDL Waters

Background

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

Federal regulations at 40 C.F.R. § 122.44(d)(vii)(A) require permit limits to be developed for any pollutant that 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 Georgia NPDES program, the EPA reviewed three permits. The EPA also obtained background information about this topic through EPA staff familiar with the Georgia nutrients and modeling program. The EPD has numeric nutrient criteria for six lakes and major lake tributaries. The EPD's water quality standards contain causal (nitrogen and phosphorus) and response parameters (chlorophyll a).

For all POTW permits, the EPD includes (at a minimum) monitoring requirements to collect data for future water quality modeling and permit limit development. Of the reviewed POTW permits, they all required monthly monitoring for Total Phosphorus, Nitrate-Nitrite (as N), Organic Nitrogen (as N), and Total Kjeldahl Nitrogen.

In streams and lakes without numeric nutrient criteria, the EPD has implemented a phosphorus strategy that establishes a total phosphorus monthly average limit of 1.0 mg/l in any major POTW that is new or expanding. The total phosphorus limit is considered a performance based effluent limit and can be seen implemented in the Donalsonville WPCP permit. This facility discharges to Lake Seminole, and to Florida. Currently, there are no numeric criteria for Lake Seminole, and the lake remains listed for low dissolved oxygen and pH issues.

Program Strengths

- Pursuant to the EPD's phosphorus implementation policy, performance-based phosphorus limits are included in all new or expanding domestic wastewater permits greater than 1.0 MGD.

Areas for Improvement

- None

Action Items

Essential	• None
Recommended	• None

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

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

Background

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

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

EPD is the Pretreatment Program authority and chooses to implement their program by a combination of being the control authority as well authorizing some POTWs to be the control authority. EPD manages 72 approved POTW pretreatment programs which control 563 Significant Industrial Users (SIUs), along with 79 SIUs with State issued Industrial User permits. EPD defines SIU in its state regulations similarly to that in 40 C.F.R. § 403.3(v).

Municipal NPDES Permits reviewed:

Permittee	**Permit No.**	**Approved Pretreatment Program?**	**Design Flow (MGD)**	**No. of SIUs[1]**	**No. of Food Processors[1]**
City of Gainesville-Linwood WRF	GA0020168	Yes	3.0	1	1
Rockdale County POTW – Quigg Branch	GA0047678	Yes	7.0	1	1

[1] Based on the information provided in the permit application.

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

Facility Name	Permit Number	Receiving POTW	Type of Food Processor	Classification by EPD	Average Process Wastewater Discharge (gallons per day)	Monitored Pollutants
Fieldale Farms Corporation-Murrayville	0045	City of Gainesville-Linwood WRF	Poultry Slaughter and Processing	SIU	1,500,000[1]	Flow, BOD, FOG, pH, TP, TKN, TSS
Golden State Foods	GFS0621QS	Rockdale County POTW- Quigg Branch	Frozen Beef Patties	SIU	174,8821	Flow, pH, BOD, COD, TSS, TP, NH3

[1] Based on information included in POTW's permit application.

Program Strengths

- All POTW permits reviewed as part of this PQR contain requirements to implement the general and specific prohibitions established in 40 C.F.R. § 403.5(a)(1) and (b). The POTW permits state that permittees must operate a POTW pretreatment program in accordance with the federal General Pretreatment Regulations at 40 C.F.R. Part 403, state, and local laws and regulations, and the approved pretreatment program and any approved modifications. All POTW permits contain the requirements for notification and impact assessment of significant changes in industrial flow and character in accordance with 40 C.F.R. § 122.42(b).

- The EPD has demonstrated transparency in implementation of the dental amalgam rule. The EPD has taken the initiative in making this rule a priority and has made access to information easy by highlighting it on the EPD's Pretreatment website.

Areas for Improvement

- Require each pretreatment program to incorporate a fact sheet for all the industrial pretreatment permits. Of the two pretreatment permits reviewed for the PQR, only one contained a fact sheet in addition to their industrial pretreatment permits. A fact sheet would provide information as to how local limits were developed as well as explain pass through calculations performed by the POTW to determine the capacity of their POTW to accept industrial waste.

- Increase transparency by including information in a POTW's fact sheet on industrial user (IU) flow and identification of the ratio of the industrial flow to the POTW capacity.

- For the reviewed permits, the monitoring frequencies for the IU and corresponding receiving POTW are very different. The higher the percentage of organic capacity that an IU contributes,

the more vulnerable the POTW process is to fluctuations of the IU quality and volume. More closely pairing the monitoring frequency of IUs and POTWs may identify if IU quality and/or volume fluctuations correlate to POTW inhibition or compliance issues.

Action Items

Essential	• None
Recommended	• Include more information as to the development of local limits and the POTW capacity determination within industrial permit fact sheets.

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

Background

As part of this PQR, the EPA reviewed the state's small MS4 permit (Georgia's Phase II MS4 Permit (GAG610000)) for consistency with the Phase II stormwater permit regulations. The EPA recently updated the small MS4 permitting regulations to clarify: (1) the procedures to be used when coverage is by general permits (see 40 C.F.R. § 122.28(d)); (2) the requirement that the permit establish the terms and conditions necessary to meet the MS4 permit standard (i.e., "to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act"), including conditions to address the minimum control measures, reporting, and, as appropriate, water quality requirements (see 40 C.F.R. § 122.34(a) and (b)); and (3) the requirement that permit terms must be established in a "clear, specific, and measurable" manner (see 40 C.F.R. § 122.34(a)).

Consistency of Phase II MS4 permits to the EPA Remand Rule

The final MS4 General Permit Remand Rule, was signed into law on November 17, 2016. The final MS4 General Permit Remand Rule established two alternative approaches an NPDES permitting authority can use to issue and administer small MS4 general permits that address a partial remand of the Phase II stormwater regulations by the U.S. Court of Appeals for the Ninth Circuit. These approaches are meant to ensure that the permitting authority identifies and establishes what is necessary for the MS4 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." Moreover, the remand also required that states develop a process to ensure that the public participation requirements of the CWA were met.

The Remand Rule provided three options to address the regulatory requirements. The EPD selected the comprehensive general permit option, also known as Option 1. Under this option, the EPD issued a small MS4 general permit that includes the full set of requirements necessary to meet the MS4 permit standard of MEP, protect water quality, and to satisfy the appropriate water quality requirements of the CWA. The comprehensive general permit contains all requirements, and no additional requirements are established after permit issuance.

Georgia's Phase II MS4s Permit

Currently, there are approximately 106 small MS4s within the State of Georgia covered under the Georgia Phase II MS4 permit. Six additional non-traditional entities are also covered by Georgia's Phase II general permits (one Department of Transportation permit; six facilities under the Georgia Department of Defense Phase II permit). These permits were not reviewed for this report.

Phase II MS4s are responsible for developing and implementing local stormwater management programs by requiring the SWMP to consist of six minimum control measures (MCMs). These MCMs entail the following:

- public education and outreach;
- public participation/involvement;
- illicit discharge detection and elimination;
- construction site runoff control;
- post-construction runoff control; and
- pollution prevention/good housekeeping.

During the PQR, the permit terms and conditions associated with each of these MCMs were reviewed and evaluated to determine whether they were consistent with the small MS4 permit regulations at 40 C.F.R. § 122.34. More importantly, the narrative language in the permit itself relating to each of the MCMs was assessed in terms of the EPD enforcing SWMPs designed to reduce the discharge of pollutants from their MS4 to the "maximum extent practicable," to protect water quality, and for enforceability to satisfy the appropriate water quality requirements of the CWA. Moreover, the permit was reviewed to determine if the EPD had met the regulatory requirement of having clear, specific, and measurable goals expressed in the permit provisions.

Program Strengths

- The EPD staff provides extensive reviews of the SWMPs and annual reports and these documents are updated accordingly.

- The State maintains an extremely low backlog for stormwater permits, and proactively issues expiring stormwater permits to ensure timely reissuances.
- The EPD initiates a stakeholder involvement process prior to the early draft phases of the MS4 Phase II permit prior to permit reissuance. This process is designed to address any potential issues and concerns that may be raised by the regulated entities, and to make and address changes fostered by the State itself.
- The EPD's current Phase II permit was one of the first issued in the country to address the EPA's Remand Rule.

Areas for Improvement

- The PQR identified several best practices as recommendations for improving the transparency of MS4 permits and these include adding a timetable for submittal of SWMPs and providing information in fact sheets for how Option 1 of the Remand Rule was incorporated into the permit.

Action Items

Essential	• None
Recommended	• Identify actions to implement best practices that may improve the program. • Provide information that the EPD selected Option 1 for the rule, and indicate how it has been incorporated into the permit.

V. REGIONAL TOPIC AREA FINDINGS

A. Whole Effluent Toxicity

Background

Whole Effluent Toxicity (WET) describes the aggregate toxic effect of an aqueous sample (e.g., whole effluent wastewater discharge) as measured by an organism's response when exposed to the 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 an effluent without requiring the identification of the specific pollutants. WET testing is a cost-effective approach, using one test to assess all chemical and additive effects. It can be used to assess municipal and industrial effluent toxicity, impairment of surface waters, storm water impacts, water quality criteria development and TMDL targets.

WET testing is a vital component to implementing water quality standards under the NPDES permits program in accordance with the CWA Section 402. It supports meeting the goals of the CWA Section 101(a) and (2), especially 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 implements the USEPA's national policy and states' narrative criteria of "no toxics in toxic amounts" Chapter 391-3-6-.03(5)(e).

The statutory basis for requiring the implementation of WET or WET limits in NPDES permits is section 301(b)(1)(C) of the Act, which requires that permits include limits as stringent as necessary to meet state water quality standards. Most state water quality standards include chronic sublethal endpoints to meet the CWA's statutory goal for the protection and propagation of fish, shellfish and wildlife. The chronic sublethal WET endpoints such as growth and reproduction as reflected in the state water quality standards, are used in the NPDES permits program to protect the propagation of aquatic life.

The EPA's NPDES permit regulations located in the U.S. Code of Federal Regulations (C.F.R) at Title 40 interpret and implement the CWA. Based on the CWA provisions to protect the biological integrity of the nation's waters, the EPA regulations require that all effluent discharges to the waters of the US be assessed to determine whether there is the reasonable potential for an excursion of the state water quality standards, such as the aquatic life protection criteria. The RPA for toxic impacts to aquatic life due to permitted effluent discharges at a level that would result in an excursion of a state's WET water quality standards is used to determine whether controls are necessary for wastewater discharges to surface waters. 40 C.F.R. § 122.44(d)(1)(i) requires limitations to control all pollutants or pollutant parameters that 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. The potential to cause or contribute to an excursion of a states WET water quality standard is the provision that provides preventive protection before there is an impact to aquatic organisms at a level that would result in an excursion of a state's WET water quality standard.

The focus of the WET review is to verify that permits and facts sheets are implementing WET. Fact sheets should include a robust discussion of WET limit development and take into consideration the past five years of WET testing results, ambient data, and the state's WET strategy. Permits should include WET limits or monitoring along with frequency of testing with clear reference of the most recent methods and procedures for WET failures and retesting. The permit should also include Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE) requirements upon WET testing failure. Thirteen permits selected for the PQR included reviews of applications to determine whether WET data was provided with the application. Six final permits out of the total thirteen were reviewed using the Region 4 PQR WET checklist for the Georgia PQR. Three of the permits reviewed were non-major facilities and three of the permits reviewed were classified as major facilities. Of the six permits reviewed specifically for WET, five were POTWs and one was an industrial facility.

Program Strengths

The EPD published a Whole Effluent Toxicity Strategy in April 2001. The strategy outlines clearly when to utilize an acute or chronic test, how to write a WET limit into a NPDES permit, the use of compliance schedules for WET compliance, state minimum data requirements for determining reasonable potential and which facilities should submit WET testing data with their applications. The strategy requires the results of the last five years of WET data for reasonable potential to ensure that current data is used. The strategy also outlines when acute or chronic WET testing should be included. Further, the strategy requires major industrial facilities and municipal facilities to conduct one chronic WET test and submit it with their permit application. POTWs with a design flow rate greater than or equal to 1 MGD, POTWs with a pretreatment program, or any POTW that already has a WET limit or WET monitoring requirement in its permit will be required to submit a year of quarterly WET testing with the permit application. In place of the quarterly testing, the permittee may submit the results from four tests performed at least annually in the four- and one-half years prior to the application. This ensures that the EPD will have a minimum of four WET tests to determine reasonable potential upon permit renewal. A clearly outlined strategy helps to ensure all permit writers are certain of the state's WET requirements. All of the applications submitted by major facilities reviewed included the required WET testing. Permits reviewed contained TIE/TRE language even in permits without WET limits or monitoring.

Areas for Improvement

Three permits reviewed for the PQR include the following permit condition entitled Effluent Toxicity and Biomonitoring Requirements:

"*The permittee shall comply with effluent standard or prohibitions established by Section 307a of the Federal Act and with Chapter 391-3-6-.03(5)(e) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals or aquatic life. If toxicity is suspected in the effluent, the EPD may require the permittee to perform any of the following actions: acute biomonitoring tests, chronic biomonitoring tests, stream studies, priority pollutant analyses, Toxicity reduction evaluations (TRE) or any appropriate study."*

The EPD will specify the requirements and methodologies for performing any of their tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the permitted monthly average flow of the facility and the critical flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 50 percent of the test organisms (LC50) if the test is for acute toxicity and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

Permittees must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination. The WET testing permit condition has "if toxicity is suspected" as a trigger, but does not define toxicity. While the permit includes conditions that specify the use of a TRE consistent

with federal regulations, test requirements including using the IWC as a test concentration and endpoints, it is only applicable if "toxicity is suspected in the effluent". There are no specified criteria that define "suspected toxicity". During the exit interview, the EPD stated that they rely on fish kills, algal blooms, or other indicators of negative environmental impacts to indicate toxicity. The EPA notes that the use of "may" in the condition could cause confusion and weaken the permit condition. There should also be more detail in the permit regarding what constitutes "suspected toxicity".

In one of the reviewed permits, the dilution ratio for WET testing was not included in the permit and/or fact sheet (Gainesville). It is recommended that this should always be defined and included in the fact sheet or the permit.

Action Items

Essential	• None
Recommended	• Add detail to the TIE/TRE WET testing permit condition pertaining to data submittal and define what triggers toxicity. • Make sure all fact sheets discuss the WET, when applicable, including the basis for the chosen dilution ratio.

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

This section provides a summary of the main findings from the last PQR and provides a review of the status of the state's efforts in addressing the action items identified during the last PQR, conducted March 23–26, 2015. As discussed previously, during the 2012–2017 PQR cycle, the EPA referred to action items that address deficiencies or noncompliance with respect to federal regulations as "Category 1". The EPA is now referring to these action items going forward, as "Essential". In addition, previous PQR reports identified recommendations to strengthen the state's program as either "Category 2" or "Category 3" action items. The EPA is consolidating these two categories of action items into a single category called "Recommended".

Table 1. Essential Action Items Identified During Last PQR [*2015*]

Program Area	Action Item Title	Status Update
Document BPJ-and Limits Basis	Document in the fact sheet or permit file the basis for BPJ-based limits including how the criteria in 40 C.F.R. 125.3(c) &(d) are considered.	**(In progress)**
	The EPD should clarify in the fact sheets the basis for the effluent limit (e.g., TMDL, WQS, WQBEL, etc.) per 4 C.F.R. 124.56.	**(Resolved)**
Standard Conditions	Review and update permit language to ensure inclusion of all aspects of the standard condition's language at 40 C.F.R. 122.41, including compliance schedule requirements contained in the State regulation 391-3-6-.06(10)(c) and separate Duty to Comply conditions for non-POTW permits rather than relying on language at the front of the permit.	**(Resolved)**
	Amend the penalty provisions used in the permits to be consistent with 40 C.F.R. 122.41(a) or to reference the State authority for criminal penalties or the possibility of imprisonment.	**(Not started)**
	Include any calculation or other necessary explanation of the derivation of specific effluent limitations and conditions in the fact sheets per the criteria in 40 C.F.R. 124.56.	**(Resolved)**
Document RPA	The EPD should document in the fact sheets how reasonable potential analyses was conducted for nutrients that have the potential to cause and/or contribute to a water quality impairment (40 C.F.R. 122.44(d)(1)(ii)).	**(In progress)**
Document in Factsheets Basis	The EPD should document in the fact sheets how downstream protection of waters was considered when allocating limits and/or monitoring requirements for pollutants of concern (40 C.F.R. § 122.4(d) and 40 C.F.R. 122.44(a)).	**(Resolved)**

VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

This section provides a summary of the recommendations from the last PQR, conducted March 23–26, 2015, and notes any state efforts to act on those recommendations. As discussed previously, during the 2012–2017 PQR cycle, the EPA referred to action items that are recommendations to strengthen the state's program as either "Category 2" or "Category 3" action items. The EPA is consolidating these two categories of action items into a single category: Recommended. Note that some findings from the previous PQR appear to be repetitive and were shortened or edited to fit this template.

Table 2. Recommended Action Items Identified During [*2015*] PQR

Program Area	Action Item Title	Status
Reasonable Potential Analysis	Ensure that reasonable potential analyses are well documented in the fact sheets. (Category 2) Include in the fact sheets documentation and calculations for wasteload allocations. (Category 2)	(Resolved)
	Develop boilerplate documentation to include in fact sheets or the permit files that provides additional explanation regarding how WQBELs are based on both wasteload allocations and reasonable potential analyses, the pollutants addressed by each of these analyses, and the basic process for each. (Category 3)	**(** Resolved **)**
Designated Uses	For each permit identify the designated uses of the receiving water in the relevant fact sheet. (Category 2)	**(** Resolved **)**
Identify the Monitoring Locations	For POTW permits identify the monitoring location in a more specific manner either through a description of the location or reference to documents that identify the monitoring location. (Category 2)	**(** In progress **)**
	Number the outfalls in each permit to clearly link discharge points with discharge limits, and to clearly identify the location for monitoring. (Category 3)	**(** In progress **)**
Selection of Pollutants of Concern/ Basis of Limit Derivation	The EPD should clarify in the fact sheets how the pollutants of concern were selected. (Category 2) Include in the fact sheets the calculations for ELG-based and WQBEL limits or indicate where these calculations are documented. (Category 2).	**(** In progress **)**

Program Area	Action Item Title	Status
	The EPD should include information in permits and fact sheets that indicate whether limits are based on TMDLs, WQBELs or WQS. (Category 2) Describe in the fact sheet or reference an explanation of how TBELs and WQBELs are compared and the most stringent limits are selected for final permits. (Category 2)	**(** In progress **)**
Nutrients	The EPD should consider at a minimum, monitoring requirements for nitrogen-based constituents in all POTW permits and where appropriate numerical limits for these constituents. (Category 3) The fact sheet should set an expectation for when the public can anticipate data collection sufficient to evaluate the iterative approach to nutrient management. If a waterbody is monitored every five years, the permit cycle may be near completion before information exists to determine if phosphorus controls in lieu of nitrogen controls are sufficient. (Category 3) The EPD should consider monitoring and, or effluent limits for both nitrogen- and phosphorus-based constituents rather than controlling one nutrient only. (Category 3)	**(** Resolved **)**
Stormwater/MS4	MS4 permits and fact sheets should address anti-degradation and where appropriate include effluent limits in the permits and not just monitoring and reporting requirements. (Category 2) MS4 permits should require new and redevelopment post construction BMPs to control the first 1.2 inches of stormwater runoff through infiltrate, evapotranspiration, harvest and reuse. (Category 3) Strengthen the language in the MS4 permits to include public education and participation on illicit discharge detection and elimination. (Category 3) MS4 permits should provide a specific minimum frequency for catch basin cleaning, street sweeping, and maintenance of municipally-owned structural controls. (Category 3)	**(** In progress **)**

Program Area	Action Item Title	Status
	Construction stormwater permits should also include standard language establishing the transfer or responsibility for long-term maintenance of permanent stormwater controls to the MS4, if applicable. (Category 3) Construction stormwater permits could include language to require staging construction to limit the acreage of soil exposure at any one time. (Category 3)	
Process Appeals/Challenges	In cases where limits are affected by permit appeals or challenges ensure that the fact sheet or permit record fully explains the basis for the final limit. (Category 2)	**(** Resolved **)**

VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE

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

The proposed action items are divided into two categories to identify the priority that should be placed on each item and facilitate discussions between the Region and the state.

- **Essential Actions -** Proposed "Essential" action items address noncompliance with respect to a federal regulation. The EPA has provided the citation for each Essential action item. The permitting authority is expected to address these action items in order to comply with federal regulations. As discussed earlier in the report, prior PQR reports identified these action items as Category 1. Essential actions are listed in Table 3 below.
- **Recommended Actions -** Proposed "Recommended" action items are recommendations to increase the effectiveness of the state's or the Region's NPDES permit program. Prior reports identified these action items as Category 2 and 3. Recommended actions are listed in Table 4 below.

The following tables summarize only those action items that were identified in Sections III, IV, and V of the report. This section will be completed after all review and editing is complete.

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

Topic	Action(s)
Facility Information	
Permit Application Requirements	Ensure permit applications are signed by the responsible official (40 C.F.R. § 122.22).
TBELs for POTWs	
TBELs for Non-POTW Dischargers	
Reasonable Potential	
WQBELs Development	
Final Effluent Limitations and Documentation of Effluent Limitations Development	
Establishing Monitoring and Reporting Requirements	
Documentation of Monitoring and Reporting Requirements	
Standard and Special Conditions	Include standard condition language that conforms to the federal language used in 40 C.F.R. 122.41.
Administrative Process	
Administrative Record and Fact Sheet	
Nutrients	
Pretreatment: Food Processing Sector	
Municipal Separate Storm Sewer Systems (MS4s)	
Regional Topic Area = Whole Effluent Toxicity	

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

Topic	Action(s)
Facility Information	
Permit Application Requirements	Ensure facilities submit complete priority pollutant scans with applications. Ensure permittees submit current operational data on the EPA application form 2A and table B-6.
TBELs for POTWs	
TBELs for Non-POTW Dischargers	
Reasonable Potential	RPA for determining whether limits are needed should be based on any data that is available per 40 C.F.R. § 122.44(d)(1)(iii).
WQBELs Development	
Final Effluent Limitations and Documentation of Effluent Limitations Development	Maintain consistency in parameters throughout the permit and factsheets
Establishing Monitoring and Reporting Requirements	
Documentation of Monitoring and Reporting Requirements	
Standard and Special Conditions	Include compliance endpoints clearly in the permit and factsheet. POTW permits should contain a reopener clause per 40 C.F.R. §122.44(c)
Administrative Process	
Administrative Record and Fact Sheet	Improve documentation in fact sheets on the bases for final permit decisions
Nutrients	
Pretreatment: Food Processing Sector	Include more information as to the development of local limits and POTW capacity determination within industrial permit fact sheets.
Municipal Separate Storm Sewer Systems (MS4s)	Identify actions to implement best practices that may improve the program. Provide information that the EPD selected Option 1 for the rule and indicate how it has been incorporated into the permit.
Regional Topic Area = Whole Effluent Toxicity	Add detail to the TIE/TRE WET testing permit condition pertaining to data submittal and define what triggers toxicity. Ensure all fact sheets discuss the WET when applicable including the basis for the chosen dilution ratio.