

Region 4 NPDES Program and Permit Quality Review Mississippi

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Executive Summary

The Environmental Protection Agency (EPA) Region 4's National Pollutant Discharge Elimination System (NPDES) program's Permit Quality Review (PQR) for Mississippi 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, which assesses the quality of recently issued permits, supplements EPA's "real time review" process, which routinely reviews NPDES permits issued by Mississippi during the draft permit phase.

This PQR examined nine individual permits issued by the Mississippi Department of Environmental Quality (MDEQ), along with three general permits, several MDEQ permitting policies, and the statewide permit template. The PQR also focused on several national priority areas:

- Permit Controls for Nutrients in Non-Total Maximum Daily Load (TMDL) Waters;
- Effectiveness of Publicly Owned Treatment Works (POTW) NPDES Permits with Food Processor Contributions; and
- Small Municipal Separate Storm Sewer System (MS4) Permit Requirements.

PQRs may also focus on regional topics that address systemic permitting issues identified during real time review of draft permits. For this cycle of the PQR, Region 4 elected to look at Whole Effluent Toxicity (WET) as a regional topic.

The PQR report presents an overview of the Mississippi NPDES permitting program and identifies new areas where EPA and MDEQ will work together to strengthen NPDES permit language and documentation in all the state's permits. The PQR also recognizes there are state and region-specific challenges faced by Mississippi including staff retention and the need for constant training to meet the demand of technically complex permitting practices.

The reviewed permits routinely conformed to national requirements; however, the PQR identified five areas for permit quality improvement that are categorized as "essential" action items. EPA identified 17 other "recommended" action items. These are noted in detail in the PQR report and summarized in Section VIII.

The MDEQ reviewed and provided comments on the draft PQR report on August 18, 2022. 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.

I. PQR BACKGROUND

Program and Permit Quality Reviews (PQRs) are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, EPA promotes national consistency and identifies successes in implementation of the NPDES program as well as opportunities for improvement in the development of NPDES permits. EPA previously conducted a PQR of the Mississippi NPDES permitting program on April 4, 2017. The PQR summary report is available at:

<https://www.epa.gov/npdes/regional-and-state-npdes-program-and-permit-quality-review-pqr-reports>

From that review, the evaluation team proposed various action items to improve Mississippi's NPDES permitting program. As part of the current PQR, EPA discussed with MDEQ their progress in resolving the previous action items and EPA began a new review of their program. Of the 27 action items identified during the previous PQR, eight were categorized as essential¹ actions (see definition below). To date, the MDEQ has resolved six of the previous PQR essential action items and the remaining action items are still in progress. The recommended action items that are considered resolved have either been addressed by MDEQ or are no longer a priority and are not being pursued. Sections VI and VII of this report contain a status of the progress on action items identified during the 2017 PQR.

For this PQR, the review identified new or additional action items to improve MDEQ's NPDES permit program. The proposed action items are identified within Sections III, IV, and V of this report and are divided into two categories to identify the priority that should be placed on each item.

- **Essential Actions** - Proposed essential action items address noncompliance with respect to a federal regulation, which EPA has cited 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 NPDES permit program.

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

Eight members of the NPDES Permitting Section from EPA Region 4 made up the review team. The PQR was conducted virtually with MDEQ on May 11, 2022.

The Mississippi PQR included reviews of core permit components and national and regional topic areas, as well as discussions between the PQR review team and MDEQ staff addressing

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

their program status and permit issuance process. The permit reviews focused on core permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports or documents that provide the basis for the development of the permit conditions and related administrative process. The PQR also included conversations between EPA and the State on program status, the permitting process, responsibilities, organization, staffing, and program challenges the State is experiencing.

A total of 12 permits were reviewed as part of the PQR:

NPDES Number	Permit Name
MS0002381	Rex Brown Power Plant
MS0021962	Weyerhaeuser Timber, Bruce Facility
MS0000574	CF Industries Nitrogen, LLC
MS0028479	DCRUA, Metro Desoto WWTP
MS0025089	Shelby POTW
MS0024627	Batesville POTW
MS0000833	Baxter Healthcare Corporation
MSR15	Small Construction General Permit
MSR00	Industrial Stormwater General Permit
MSRMS4	Small MS4 General Permit
MSP090547/ MS0020303	Mar-Jac Poultry MS, LLC/ Hattiesburg S. Lagoon
MSP090721/ MS0042455	Peco Foods, Inc./ Canton Municipal

Of these, nine permits were reviewed for core criteria, five permits were reviewed for national topic areas, and five permits were reviewed for the regional topic area (whole effluent toxicity). Some permits were reviewed for both the core review and one or more topic area reviews. Permits were selected based on issuance or modification dates and the review categories that they fulfilled. All the reviewed permits were issued within the previous five calendar years and reflect current permitting practices at the time of the PQR review. The MDEQ provided all documents electronically in advance of the virtual PQR visit.

Core Review

The core permit review involved the evaluation of selected permits and supporting materials using basic NPDES program criteria. Reviewers completed the core review by examining selected permits and supporting documentation, assessing these materials using standard PQR tools, and talking with permit writers regarding the permit development process. The core review focused on the *Central Tenets of the NPDES Permitting Program*² to evaluate the MDEQ

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

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 MDEQ NPDES program were Permit Controls for Nutrients in Non-TMDL Waters, Small MS4 Permit Requirements, and Effectiveness of POTW NPDES Permits with Food Processor Contributions.

Regional topic area reviews target regional-specific permit types or aspects of permits. EPA looked at Whole Effluent Toxicity (WET) as a regional topic for this PQR.

II. STATE PERMITTING PROGRAM GENERAL OVERVIEW

All environmental permits are administered through the Environmental Permits Division (EPD) within the MDEQ main office in Jackson. The Water I Branch, Water II Branch, and Municipal Branch issue NPDES permits and are housed within EPD. MDEQ has regional offices in Oxford, Pearl, and Biloxi, which conduct compliance inspections, compliance monitoring inspections, and compliance investigations.

The NPDES permitting section comprises 10 staff who are divided into the following branches:

- **Municipal Branch:** takes a regional approach and assigns permit writers to a collection of counties to balance workload and group regional projects. This branch currently issues 71 major permits and 248 non-major permits.
- **Industrial Branch:** divided into two groups by industrial type. The Water I Branch focuses on chemical, energy, and the agriculture sectors. The Water II Branch focuses on timber, metals, construction, mining, pretreatment, and solid waste sectors. The Industrial Branch currently issues 24 major permits and 804 non-major permits.
- **Stormwater/401 Branch:** manages the industrial stormwater general permit, small and large construction general permits, and the small MS4 general permit. The responsibility to develop each general permit is assigned based on staff expertise.

As of 2022 there is a 5% backlog in non-major permits and a 7.5% backlog in major permits excluding the general stormwater universe. The MDEQ utilizes various permitting tools and systems in the NPDES permit development process. NPDES permit writers utilize TEMPO permitting software to generate boilerplate language and permit conditions. Specific permit conditions and limits are then developed by the permit writer. The MDEQ NPDES program also relies on other programs in the Surface Water Division (SWD) to develop water quality standards (WQS), TMDLs, and waste load allocations (WLAs). NPDES permit writers also coordinate with SWD staff to develop and interpret water quality modeling data. The MDEQ reasonable potential analysis (RPA) process and mixing zone analysis used by the permit writers are found in 11 Mississippi Administrative Code Pt. 6 Ch. 1. While performing an RPA for POTW permits, MDEQ uses a spreadsheet that assists in calculating reasonable potential. MDEQ does not use a uniformed spreadsheet to perform an RPA for industrial facilities due to the variability of the effluent. RPA procedures can be found in their regulations (11-Miss.-Admin.-Code-Pt.-6-Ch.-1). Once the permit is developed MDEQ uses enSite permitting system to facilitate public notice requirements.

III. CORE REVIEW FINDINGS

A. Basic Facility Information and Permit Application

1. Facility Information

Background and Process

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

Program Strengths

The reviewed permits included pertinent facility information, such as permit issuance dates, effective dates, authorized signatures, and specific authorization-to-discharge information.

Areas for Improvement

In some of the reviewed permits, EPA found that there was no reference to the specific receiving water discharge locations. While outfall coordinates were provided in the applications, EPA recommends providing the stream segment or outfall coordinates in the permit and/or rationale to provide clarity to the public during the public comment period.

In the Industrial Stormwater General Permit (MSR00), language in section ACT2 T-4(1)(C) first states that facilities that have effluent limitation guidelines (ELGs) for stormwater are not to be covered under this permit. To clarify which facilities should not receive general permit coverage, the general permit then lists specific ELGs for stormwater. This list of ELGs is incomplete. EPA recommends including 40 CFR Part 455 and Part 449 (pesticide chemicals and airport deicing, respectively) on the list.

Action Items

Essential	<ul style="list-style-type: none">• None
Recommended	<ul style="list-style-type: none">• Provide the stream segment and/or outfall coordinates in the permit/rationale.• The state should add language in ACT2 T-4(1)(C) to clarify that facilities covered under 40 CFR Part 455 and Part 449 (pesticide chemicals and airport deicing) are not covered under this industrial stormwater general permit.

2. *Permit Application Requirements*

Background and Process

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

Program Strengths

Permit applications were generally submitted 180 days prior to expiration for the permits reviewed. The applications were signed by the appropriate officials.

Areas for Improvement

For some of the permits, EPA found that applications were missing the results of the valid WET tests for acute and/or chronic toxicity. While the data were available by request, the MDEQ must ensure that all required data from the WET tests are included in the application in order for the application to be considered complete.

MDEQ does not require the automatic submittal of Notices of Intent (NOIs) for coverage under its Small Construction General Permit (SCGP). The underlying reason, as explained in the permit rationale, is “reduction in the duplication of effort for small construction in Phase II urbanized areas and burden reduction for the regulated community, as well as MDEQ.” NPDES regulations allow the State Director to use its discretion to authorize certain discharges under a general permit without the submittal of an NOI where the Director finds that a NOI requirement would be inappropriate, but the Director must meet the procedural requirements. MDEQ must provide in the public notice of the SCGP the reasons for not requiring an NOI (40 CFR § 122.28(b)(2)(v)), or MDEQ must require submittal of NOIs for coverage under its SCGP. The public notice for this permit did not mention that NOIs would not be required in all circumstances, nor did it provide the required rationale.

EPA recommends that language be added to the NOIs for Stormwater GPs informing the applicant that they are certifying that their discharge will not jeopardize any threatened or endangered species and/or critical habitat. Example language can be found in condition T-5(4) of ACT2 of the Industrial Stormwater GP where it states that the permit does not authorize “discharges or discharge related activities that is likely to jeopardize the continued existence of any species listed as endangered or threatened under the Endangered Species Act (ESA) or result in adverse modification or destruction of habitat designated as critical under ESA.”

Action Items

Essential

- Applicants must submit to the Director the results of valid whole effluent toxicity tests for acute or chronic toxicity for samples taken from each outfall through which effluent is discharged to surface waters, except for combined sewer overflows (40 CFR § 122.21(j)(5)(ii)).
- Provide in the public notice reasons for not requiring an NOI or require submittal of NOIs for coverage or require that MS4s submit NOIs to obtain permit coverages (40 CFR § 122.28(b)(2)(v)).

Recommended

- EPA recommends that language be added to the NOIs for Stormwater GPs informing the applicant that they are certifying that their discharge will not jeopardize any threatened or endangered species and/or critical habitat.

B. Developing Effluent Limitations

1. Technology-based Effluent Limitations

NPDES regulations at 40 CFR § 125.3(a) require that permitting authorities develop technology-based requirements where applicable. Permits, fact sheets and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether technology-based effluent limitations (TBELs) represent the minimum level of control that must be imposed in a permit.

TBELs for POTWs

Background and Process

POTWs must meet secondary or equivalent-to-secondary-standards (including limits for BOD, TSS, pH, and percent BOD and TSS pollutant removal), and POTW permits must contain numeric limits for all these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of three POTW permits were reviewed as part of the PQR.

Program Strengths

All the reviewed POTW permits include TBELs. The limits were consistent with federal regulations and included the appropriate units and forms.

Areas for Improvement

One of the POTW permits reviewed (MS0025089) implements the equivalent to secondary treatment standards in the permit. The rationale mistakenly states that the permit has secondary treatment standards. EPA recommends in the permit rationale’s “Summary of Discharge Limitations” that the effluent limitations in the rationale match the final permit effluent limitations, and that the rationale explain how the facility meets the qualifications for treatment equivalent to secondary treatment (40 CFR § 133.101(g)).

Action Items

Essential	<ul style="list-style-type: none">• None
Recommended	<ul style="list-style-type: none">• Ensure the summary of discharge limitations in the rationale match the effluent limitations in the final permit.• Explain in the rationale how a facility meets the qualifications for treatment equivalent to secondary treatment (40 CFR § 133.101(g)).

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 limitation guidelines (ELGs) have been developed for a category of dischargers, the TBELs in a permit must be based on the application of these guidelines. If ELGs are not available, a permit must include requirements at least as stringent as BAT/BCT developed on a case-by-case basis using best professional judgment (BPJ) in accordance with the criteria outlined at 40 CFR § 125.3(d).

The MDEQ’s procedures for determining and establishing appropriate TBELs for non-POTWs are consistent with federal statutes, policies, and guidance. The four reviewed non-POTW permits had TBELs based on applicable ELGs and TBELs based on BPJ.

Program Strengths

The MDEQ correctly identified and implemented applicable ELGs in permits for industrial facilities based on the expected waste streams and pollutants in the discharge. The calculations of TBELs from ELGs were correct in the reviewed permits, and the calculations were displayed in the rationale.

Areas for Improvement

No areas for improvement were noted.

Action Items

Essential	• None
Recommended	• None

2. Reasonable Potential and Water Quality-Based Effluent Limitations

Background

The NPDES regulations at 40 CFR § 122.44(d)(1)(i) require permits to include any requirements in addition to or more stringent than technology-based requirements where necessary to achieve state water quality standards, including narrative criteria for water quality. To establish such “water quality-based effluent limits” (WQBELs), the permitting authority must evaluate whether any pollutants or pollutant parameters could cause or contribute to an excursion above any applicable water quality standard.

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

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

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

Program Strengths

Rationales clearly identify the receiving stream(s) along with the designated use and 7Q10 low flow. The rationale also provides documentation of any WLA for the discharge along with a chemical specific screening calculation sheet and corresponding water quality criteria.

Areas for Improvement

40 CFR §122.44(d)(1)(vii)(B) requires that the permitting authority ensure that effluent limits developed to protect a narrative WQC, a numeric WQC, or both, are consistent with the assumptions and requirements of any available wasteload allocation (WLA) for the discharge prepared by the State and approved by EPA pursuant to 40 CFR §130.7. The Batesville POTW (MS0024627) discharges into the Little Tallahatchie River which has a TMDL for nutrients. The TMDL includes a sentence before the WLA that allows monitoring and reporting of total nitrogen (TN) and total phosphorus (TP), therefore the facility does not implement the nutrient wasteload allocation included in the TMDL. While EPA approved the TMDL with the sentence allowing monitoring and reporting of TN and TP, to satisfy 40 CFR §122.44(d)(1)(vii)(B), MDEQ should include effluent limits consistent with the requirements of the WLA.

MDEQ should consider adding language clarifying that the Industrial Stormwater GP does not cover facilities that discharge to TMDL waters. ACT2 T-2(2) of the Industrial Stormwater GP could lead one to believe that facilities discharging to a TMDL water can be covered by the permit.

Action Items

Essential	<ul style="list-style-type: none">• None
Recommended	<ul style="list-style-type: none">• The permitting authority shall ensure that effluent limits developed to protect a narrative WQC, a numeric WQC, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR § 130.7 (40 CFR §122.44(d)(1)(vii)(B)).• Consider language in the Industrial Stormwater GP clarifying that any facility with a WLA from a TMDL cannot be covered under the Industrial Stormwater GP.

3. Final Effluent Limitations and Documentation

Background and Process

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

if necessary, revise the limitations accordingly. In addition, for new or increased discharges, the permitting authority should conduct an antidegradation review, to ensure the permit is written to maintain existing high quality of surface waters, or if appropriate, allow for some degradation. The water quality standards regulations at 40 CFR § 131.12 outline the common elements of the antidegradation review process.

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

Program Strengths

In many of the industrial permits the rationales provided the calculations used to calculate the TBELs implemented in the permits.

Areas for Improvement

In many of the permits reviewed, the fact sheets/rationales have limited information on how specific effluent limits were calculated. Additional information on how limits were calculated would add clarity on the development of the limits to the public and aid in transparency. In the POTW permits reviewed, there was no discussion regarding the comparison of TBELs and WQBELs and the choice and implementation of the most stringent effluent limitation.

Action Items

Essential	<ul style="list-style-type: none">• None
Recommended	<ul style="list-style-type: none">• Fact sheets/rationales should contain any calculation or other necessary explanation of the derivation of a specific effluent limit (40 CFR § 124.8(b)(4)).• Permit rationales should include a comparison of TBELs and WQBELs and show where implementation of the most stringent effluent limitation is applied based on the comparison.

C. Monitoring and Reporting Requirements

Background and Process

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

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

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

Program Strengths

MDEQ's permits included appropriate monitoring requirements based on the facility type, type of discharge, and corresponding limit basis. The permits included language specifying sampling consistent with 40 CFR Part 136 and requirements for the use of sufficiently sensitive analytical methods. The permits reviewed also contain the e-reporting requirements found in 40 CFR 127.

Areas for Improvement

The SCGP must require that Small Construction NOIs (SCNOIs) and Stormwater Pollution Prevention Plans (SWPPPs) be submitted to an MS4 (if within its jurisdiction) prior to construction. This information is necessary to an MS4's oversight of its construction stormwater program and compliance with its Phase II MS4 permit requirements, as well as MDEQ's oversight of small construction activities between one to five acres. The SCGP requires SCNOIs to be submitted to MDEQ only when requested. However, the small MS4 permit requires the

MS4 to develop a construction program that includes requirements for construction site operators to provide a copy of their SWPPP and proof of issuance of MDEQ approvals/permits.

As explained in the SCGP permit rationale, MDEQ believes they can assess the universe of small construction because most of the small construction activity will be in the Phase II urbanized/high growth areas. Further, the rationale states that Phase II entities will have reporting mechanisms (i.e., annual reports) to assess the universe of small construction activity. Therefore, MDEQ should facilitate the transfer of this information to the MS4s, especially if MDEQ is relying on MS4s to provide information on the universe of small construction activities in Mississippi.

Action Items

Essential	<ul style="list-style-type: none">• None
Recommended	<ul style="list-style-type: none">• The Small Construction GP must require that Small Construction NOIs and Stormwater Pollution Prevention Plans be submitted to a MS4 (if within jurisdiction prior to construction).

D. Standard and Special Conditions

Background and Process

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

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

Program Strengths

Except for the item noted below, MDEQ’s permits included standard conditions with language as stringent as the federal regulations.

Areas for Improvement

In two of the POTW permits reviewed (MS0024627 and MS0028479) the standard condition for advance notification of noncompliance is incomplete. MDEQ must update this condition to add in language from 40 CFR § 122.41(l)(2) which states that “the permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.”

Action Item

Essential	• Update standard condition language to ensure advance notification of anticipated noncompliance is sufficiently covered (40 CFR § 122.41(l)(2)).
Recommended	• None

E. Administrative Process

Background and Process

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

Program Strengths

MDEQ provides a Project Awareness Checklist in the administrative files for each permit. The purpose of this checklist is to allow early identification of “big picture” items that could affect EPD’s permitting decisions. The checklist is filled out by the permit manager with input from the permit applicant during the pre-application meeting. Doing this at the same time the completeness of the permit application is assessed leads to identification of possible delays in the process.

Areas for Improvement

No areas for improvement were noted.

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. If EPA issues the permit, 40 CFR § 124.9 identifies the required content of the administrative record for a draft permit and 40 CFR § 124.18 identifies the requirements for a final permit. Authorized state programs should have equivalent documentation. The record should contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit should contain the permit application and supporting data; draft permit; fact sheet or statement of basis;³ all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant 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.

Program Strengths

MDEQ provides a permit action form (PAF) within each permit's administrative file. The PAF documents details of the permit, any comments received, administrative task completion dates, all existing permits, and proof of public notice.

³ Per 40 CFR § 124.8(a), every EPA and state-issued permit must be accompanied by a fact sheet if the permit: Incorporates a variance or requires an explanation under 124.56(b); is an NPDES general permit; is subject to widespread public interest; is a Class I sludge management facility; or includes a sewage sludge land application plan.

Areas for Improvement

Include a responsiveness summary in the permit’s administrative record, and/or include information in the fact sheet/rationale on whether comments were received. As stated above, MDEQ provides a permit action form which outlines if any comments were received and if so the nature of the comments. It would add clarity if the information were also included in the final permit package.

Action Items

Essential	• None
Recommended	• Include a responsiveness summary in the permit's administrative record, and/or information in the fact sheet on whether comments were received.

IV. NATIONAL TOPIC AREA FINDINGS

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

A. Permit Controls for Nutrients in Non-TMDL Waters

Background

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

Federal regulations at 40 CFR 122.44(d)(1)(i) require permit limits to be developed for any pollutant that causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a state’s water quality standard. Mississippi’s current standards contain narrative criteria that apply to nutrients. The criteria state “Waters shall be free from materials attributable to municipal, industrial, agricultural, or other discharges producing color, odor, taste, total suspended or dissolved solids, sediment, turbidity,

or other conditions in such degree as to create a nuisance, render the waters injurious to public health, recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated use.”

To assess how nutrients are addressed in the Mississippi NPDES program, EPA Region 4 reviewed three permits: two POTW facilities (MS0024627, MS0028479) and one industrial facility (MS0025089). Since many Mississippi waters that are listed as impaired for nutrients are already subject to a TMDL, only one of these facilities discharged into nutrient-impaired waters without a TMDL (MS0028479).

The three permits reviewed all included nutrient monitoring for total nitrogen (TN) and total phosphorus (TP). The industrial facility’s permit (MS0025089) implemented an existing TMDL by including limits for both TP and TN based on that TMDL’s wasteload allocation.

Program Strengths

MDEQ’s NPDES permits require effluent nutrient data monitoring in their POTW permits to develop baseline loading data for facilities that discharge to nutrient-impaired waters. These data could, in the future, inform RPAs to determine if WQBELs are necessary to mitigate nutrient-impaired waters.

Areas of Improvement

40 CFR § 122.44(d)(1)(i) requires that an RPA be performed and that effluent limits be included in permits to 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. For each of the municipal permits reviewed for this topic area, the fact sheets did not provide adequate information to determine if there is reasonable potential for discharges of nitrogen to cause violations of MDEQ’s narrative nutrient criteria. If reasonable potential exists to result in an excursion of the state’s nutrient criteria, limits must be included in the permit. This includes criteria from downstream states if the facility causes, has the reasonable potential to cause, or contributes, to an excursion of the state’s water quality standards. The Metro DeSoto WWTP (MS00028479) discharges into an unnamed tributary to Nonconnah Creek, which crosses into Tennessee. While Nonconnah Creek is not listed on the MDEQ 303(d) list, it is included in Tennessee’s 303(d) list for bacteria, low oxygen, nitrogen and/or phosphorus and sediment. The facility’s permit only requires monitoring for TN. MDEQ must perform an RPA for TN to ensure that this facility’s TN discharge will not cause, have the reasonable potential to cause or contribute to an excursion of the water quality standard for Tennessee’s impaired waterbody.

Action Items

Essential	<ul style="list-style-type: none">• Limitations must control all pollutants or pollutant parameters that will cause, have the reasonable potential to cause, or contribute to an excursion of a state's water quality standards (40 CFR § 122.44(d)(1)(i)).
Recommended	<ul style="list-style-type: none">• None

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

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

Background

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

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

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

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

- 40 CFR § 403.12(i) (Annual POTW Reports); and
- 40 CFR § 403.18 (Modification of POTW Pretreatment Program).

To identify permits to review for this topic, EPA used information provided from MDEQ in addition to the information from the Toxics Release Inventory (TRI) custom query function within EPA’s Enforcement and Compliance History Online (ECHO) system. EPA reviewed the different lists and selected two POTWs that appeared to have food processing Industrial Users (IUs).

Mississippi implements the pretreatment program per 40 CFR § 403.10(e). This regulation provides a State with an approved Pretreatment Program the responsibility for implementing the POTW Pretreatment program requirements in 40 CFR § 403.8 in lieu of requiring the POTW to develop a Pretreatment Program.

Municipal NPDES Reviewed Permits:

Permittee	Permit No.	Approved Pretreatment Program?	Design Flow Average (MGD)	No. of SIUs ¹	No. of Food Processors ¹
Hattiesburg South Lagoon	MS0020303	State implements as § 403.10(e)	9.5	6	3
Canton Municipal Utilities, HCR	MS0042455	State implements as § 403.10(e)	2.2	1	1

¹ Based on the information provided in the POTW NPDES permit application.

Two food processing IU 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 POTW	Average Process Wastewater Discharge (gallons per day)	Monitored Pollutants
Mar-Jac Poultry MS, LLC	MSP090547	Hattiesburg South Lagoon	Poultry Slaughter and Processing	SIU	1,107,900	Flow, Oil and Grease, BOD, pH, TSS
Peco Foods, Inc.	MSP090721	Canton Municipal Utilities, HCR	Poultry Processing	SIU	1,530,000	Ammonia Nitrogen, Flow, Oil and Grease, BOD, pH, TSS

Program Strengths

As the pretreatment control authority, MDEQ maintains an extensive administrative record for the pretreatment permits. Each pretreatment permit reviewed had a record that includes the final permit, permit application, permit action form, permit rationale, Project Awareness Checklist, and public notice letters.

Areas for Improvement

40 CFR § 122.42(b) requires that POTWs provide adequate notice to the Director when there are significant changes to the industrial flow or character. Since the NPDES regulations do not define the term “adequate,” EPA recommends that MDEQ provide a more precise definition in the permit. MDEQ must also ensure that standard permit conditions include the notification conditions in 40 CFR § 122.42(b). Currently, permits only contain approval dates for the pretreatment programs.

Action Items

Essential

- Ensure that standard permit conditions include the notification conditions in 40 CFR § 122.42(b).

Recommended

- Define the timeframe of "adequate".

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

Background

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

Program Strengths

Mississippi’s existing small MS4 general permit contains the six minimum control measures required in the Phase II stormwater regulations. The illicit discharge detection and elimination section of the permit contains sufficient detail on development of a dry weather screening plan.

In the construction section of the permit, MDEQ recommends the adoption of ordinances to promote and encourage low impact development (LID) and green infrastructure (GI) practices, and the permit identifies a numeric post-construction performance standard.

MDEQ has been in communication with EPA Region 4 about its plans for the reissuance of the general permit; EPA appreciates the early discussions on MDEQ's proposed options for meeting the Remand Rule.

Areas for Improvement

Since Mississippi's small MS4 general permit was updated prior to the January 2017 effective date of the Remand Rule, MDEQ must reissue the permit to be consistent with the requirements of the rule (40 CFR § 122.28(d)). MDEQ must clearly indicate whether the general permit is using a comprehensive approach or a two-step general permit approach and meet the requirements under 40 CFR §§ 122.28(d)(1) or 122.28(d)(2) accordingly. Regardless of what option MDEQ chooses, Mississippi's MS4 Phase II general permit must include clear, specific, and measurable requirements per 40 CFR §122.34(a), such that permittees are able to measure the effectiveness of their stormwater programs and identify the need for additional control measures. The requirements of the permit must be prescriptive enough to allow MS4s to set appropriate goals and methods to protect water quality and allow MS4s to document successes and assess the need for improvements in their stormwater program.

EPA Region 4 is available to assist the state in suggesting specific permit changes that would be consistent with the Remand Rule. EPA also recommends that the state review and consider the extensive permit examples provided in the MS4 Permit Compendia, available on EPA's website at: <https://www.epa.gov/npdes/municipal-sources-resources>.

In addition, MDEQ needs to include a fact sheet instead of a Summary of Changes to the permit. The summary, as currently written, does not provide information as to why any permit change was made.

Action Items

Essential	<ul style="list-style-type: none">• None
Recommended	<ul style="list-style-type: none">• When reissued, Mississippi's small MS4 general permit must be consistent with the requirements of the Remand Rule (40 CFR §§ 122.28(d)).• Mississippi's small MS4 general permit must include clear, specific, and measurable requirements (40 CFR §122.34(a)).• MDEQ needs to include a fact sheet instead of a Summary of Changes for the small MS4 general 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 (e.g., lethality, impaired growth, or impaired reproduction) when exposed to the sample. WET tests replicate the total effect of environmental exposure of aquatic life to toxic pollutants in a sample 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, stormwater impacts, 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 Sections 101(a) and (a)(2), 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 EPA'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 CWA, 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 short-term chronic sublethal WET endpoints, such as growth and reproduction as reflected in the state water quality standards, are used in the NPDES program to protect the propagation of aquatic life.

Based on the CWA's provisions to protect the biological integrity of the nation's waters, EPA's regulations require that all effluent discharges to the waters of the U.S. be assessed to determine whether there is the reasonable potential for an excursion of state water quality standards such as the aquatic life protection criteria. RPAs evaluate the potential for permitted discharges (e.g., effluent, stormwater) to cause toxic impacts to aquatic life through determination of whether pollutant concentrations are at a level that would result in an excursion of a state's WET water quality standards. RPAs are conducted to determine whether water quality-based controls are necessary for wastewater discharges to surface waters. 40 CFR § 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 state's 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 EPA's WET review for the PQR was to verify that permits and facts sheets are implementing WET requirements appropriately. Fact sheets should include a robust discussion of WET limit development and take into consideration the past five years of WET testing results, ambient water quality data, and the state's WET strategy. Permits should include WET limits or

monitoring, along with frequency of testing. Permits and fact sheets should clearly reference the most recent EPA toxicity test methods and procedures used, in particular, for WET tests that indicate measured toxicity which exceed the permit WET limit or monitoring requirements and the need to do a new WET test with a fresh effluent sample(s). The permit should also include Toxicity Reduction Evaluation (TRE) requirements when WET limits or monitoring requirements are exceeded.

Five permits were reviewed for WET requirements using the Region 4 PQR checklist. Of the five permits reviewed, three were for major municipal facilities, one was for a major industrial facility, and one was for a minor municipal facility (classified as a hydrograph-controlled release).

Program Strengths

The reviewed permits contained clear WET language. The most recent EPA toxicity test methods were referenced in all reviewed permits. The permits required two species (*Ceriodaphnia dubia* and *Pimephales promelas*) to be tested. Permits specified type of sample, test duration, type of test, and dilution series based on the discharge's specific instream waste concentration (IWC). Permits contained language about sampling timing and seasonality considerations. Requirements for follow-up testing after a failure were included in all the permits. Clear requirements were included in the event the permittee fails a second WET test. After the second failure, a TRE plan will be submitted in 45 days and the initial phase will include increased monitoring. The permits specify that tests must meet EPA's minimum Test Acceptability Criteria, or TACs. Permits contained a requirement to submit any existing toxicity data for review within the first 30 days to MDEQ.

Areas for Improvement

The state WQS includes the generic narrative prohibition against toxics in toxic amounts, but there is no specific language about WET testing or lethal or sublethal endpoints. No RPA calculations were performed for the reviewed permits; the inclusion of WET limits is based on the facility's history, i.e., having a past failed WET test. No permits contained monitoring only for WET. WET reasonable potential is discussed briefly in the rationale which lists past test results for both species. If there is a failure, the facility is considered to have "demonstrated reasonable potential to violate WET during a period of four and a half years prior to the submittal of the application". The record for the industrial permit reflects two tests from two different seasons to determine reasonable potential did not exist for the discharge. It was noted that in accordance with the State of Mississippi wastewater Regulations, 11 Miss. Admin. Code Pt. 6, Ch.1 and EPA TSD guidance, the permittee is required to retest the effluent discharge for chronic toxicity during the last year of the permit term and submit the results. The WET language contained in state permits and permit rationales, while meeting all requirements, was very brief and could use elaboration or detail. The rationale should include other factors that were considered for RPA if others besides a past failure were considered. TRE language states the permittee shall submit a Toxicity Reduction Evaluation Plan within 45 days following completion of the follow up test to reduce the toxicity of the effluent to safe levels. The permit does not define "safe levels" but it does state the Mississippi Environmental Permit Board

determines what is “safe.” It also states that the first phase of the TRE Plan will include increased monitoring but gives no details or schedule.

Action Items

Essential	<ul style="list-style-type: none">• None
Recommended	<ul style="list-style-type: none">• Define 'safe' in the TRE permit language.• Provide in the Rationale more detail on the factors considered for WET reasonable potential.

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 April 4-6, 2017. As discussed previously, during the 2012-2017 PQR cycle, EPA referred to action items that address deficiencies or noncompliance with respect to federal regulations as “Category 1”. EPA is now referring to these action items going forward as Essential.

Table 1. Essential Action Items Identified During the 2017 PQR

Program Area	Action Item Title	Status Update
Basic Facility Information and Permit Application	Ensure that basic facility information is included in the fact sheet/rationale and in the permit.	(Resolved)
	DEQ should not allow a permittee to collect and submit application data post permit issuance (40 CFR § 122.21(j)).	(Resolved)
Technology-based Effluent Limitations	Provide documentation in fact sheets explaining when alternative effluent limitations deviate from ELG requirements and thus do not trigger a fundamentally different factors (FDF) variance. (40 CFR § 125, Subpart D)	(Resolved)
Documentation	Permit Rationales should include a comparison of TBELs and WQBELs and show where implementation of the most stringent effluent limitations is applied based on a comparison of TBELs and WQBELs. (40 CFR § 124.56)	(Resolved) EPA no longer considers this an essential action item.
Stormwater	MDEQ should ensure that when the MSGP is renewed, the permit addresses the latest applicable regulations and is consistent with requirements in 40 CFR § 122.26.	(In progress) The MSGP has not been reissued yet.

Program Area	Action Item Title	Status Update
Implementation of TMDLs	Where TMDLs have been adopted for a receiving stream, documentation should be included in the fact sheets/rationales describing how the TMDL WLAs were implemented in the permits.	(In progress)
Lagoon Flow (HCR)	Documentation in the fact sheet/rationale the basis for relaxation of percent removal requirements. (40 CFR § 122.44(1))	(In progress)
	Document how monitoring requirements are sufficiently stringent to evaluate Monthly Average (30-day) and Weekly Average (7-day) limitations for BOD5 and TSS. (40 CFR § 122.45(d))	(Resolved)

VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

This section provides a summary of the recommendations from the last PQR, conducted April 4-6, 2017, and notes any state efforts to act on those recommendations. As discussed previously, during the 2012-2017 PQR cycle, EPA referred to action items that are recommendations to strengthen the state’s program as either “Category 2” or “Category 3” action items. EPA is consolidating these two categories of action items into a single category: Recommended.

Table 2. Recommended Action Items Identified During 2017 PQR

Program Area	Action Item Title	Status
Basic Facility Information and Permit Application	Provide additional documentation in fact sheets/rationales explaining when a permittee has already submitted effluent and toxicity data as part of a permit application requirement.	(Not pursuing)
	Consider including the permit effective date on the cover page rather than in the body of the permit.	(Not pursuing)
	Some permit applications could not be confirmed as signed by the cognizant authority as the signature was illegible. Consider adding a line under the signatory block for the cognizant authority to print their name and title.	(Resolved)

Program Area	Action Item Title	Status
	Include documentation in the permit record indicating the facility designation as major/non-major.	(Resolved)
	Advise applicants to indicate on the application forms that data that were previously submitted and on file with EPD are not included with the application submittal.	(Not pursuing)
Technology-based Effluent Limitations	For facilities subject to equivalent-to-secondary treatment standards, document in the permit record the basis for the specific treatment standards.	(Not pursuing)
Water Quality-based Effluent Limitations	Provide documentation in the fact sheets of the link between water quality standards, TMDLs, WLA, and final permit limitations, as well as calculations used to develop effluent limitations.	(Not pursuing)
	Document in the permit record whether ambient surface water quality data was available to evaluate reasonable potential.	(Not pursuing)
Monitoring and Reporting	Provide documentation ensuring that monitoring frequencies are established appropriate for the specific facility, considering facility operations, discharge frequency and pollutants of concern	(Resolved)
	Include documentation in the fact sheets when biocides and/or other process anti-scaling additives are used.	(Not pursuing)
Standard and Special Conditions	Update standard conditions language to reference relevant state penalty statute and/or regulation to ensure that penalty amounts are corrected for inflation.	(Resolved)
Administrative Process	Consider updating the permit development tools and documents to ensure that all facility information and available data are considered and evaluated during permit development.	(Resolved)
	Include in the permit records the Permit Action Form memos that indicate whether hearings and/or comments were received during the public notice.	(Not pursuing)
Documentation (including fact sheet)	Provide documentation in the permit fact sheet/rationale for the basis of existing effluent limitations and the justification for carrying over existing limitations.	(Resolved)
Stormwater	Suggest removing the term “Baseline” from the permit title as this term is only relevant for initial permit coverage and for informational gathering for use in future iterations of the permit.	(Not started)

Program Area	Action Item Title	Status
Implementation of TMDLs	Long term average (LTA) flow values derived from TMDLs should not be used to develop permit limits for other pollutants of concern.	(Not started)
Lagoon Flow (HCR)	MDEQ should require the permittee to contact the state before applying herbicides and/or other water treatment additives to lagoons.	(Not started)
	Consider including narrative criteria to control algae and/or floating vegetation.	(Not started)
	Consider including additional requirements in the permit for detecting leaks or breaches from lagoon systems.	(Not started)

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 Mississippi’s NPDES permit programs, as discussed throughout sections III, IV, and V of this report.

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

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

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

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

Topic	Action(s)
Facility Information	
Permit Application Requirements	<ul style="list-style-type: none"> • Applicants must submit to the Director the results of valid whole effluent toxicity tests for acute or chronic toxicity for samples taken from each outfall through which effluent is discharged to surface waters, except for combined sewer overflows (40 CFR § 122.21(j)(5)(ii)). • Provide in the public notice reasons for not requiring a NOI or require submittal of NOIs for coverage or require that MS4s submit NOIs to obtain permit coverages (40 CFR § 122.28(b)(2)(v)).
TBELs for POTWs	
TBELs for Non-POTW Dischargers	
Reasonable Potential and 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	<ul style="list-style-type: none"> • Update standard condition language to ensure advance notification of anticipated noncompliance is sufficiently covered (40 CFR § 122.41(l)(2)).
Administrative Process	
Administrative Record and Fact Sheet	
Nutrients	<ul style="list-style-type: none"> • Limitations must control all pollutants or pollutant parameters that will cause, have the reasonable potential to cause, or contribute to an excursion of a state's water quality standards (40 CFR § 122.44(d)(1)(i)).
Pretreatment: Food Processing Sector	<ul style="list-style-type: none"> • Ensure that standard permit conditions include the notification conditions in 40 CFR § 122.42(b)
Municipal Separate Storm Sewer Systems (MS4s)	
Whole Effluent Toxicity (WET)	

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

Topic	Action(s)
Facility Information	<ul style="list-style-type: none"> • Provide the stream segment and/or outfall coordinates in the permit/rationale. • The state should add language in ACT2 T-4(1)(C) to clarify that facilities covered under 40 CFR Part 455 and Part 449 (pesticide chemicals and airport deicing) are not covered under this industrial stormwater general permit.
Permit Application Requirements	<ul style="list-style-type: none"> • EPA recommends that language be added to the Stormwater GPs NOI informing the applicant that they are certifying that their discharge will not jeopardize any threatened or endangered species and/or critical habitat.
TBELs for POTWs	<ul style="list-style-type: none"> • Ensure the summary of discharge limitations in the rationale match the effluent limitations in the final permit. • Explain in the rationale how a facility meets the qualifications for treatment equivalent to secondary treatment (40 CFR § 133.101(g)).
TBELs for Non-POTW Dischargers	
Reasonable Potential and WQBELs Development	<ul style="list-style-type: none"> • The permitting authority shall ensure that effluent limits developed to protect a narrative WQC, a numeric WQC, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR § 130.7 (40 CFR §122.44(d)(1)(vii)(B)). • Consider language in the Industrial Stormwater GP clarifying that any facility with a WLA from a TMDL cannot be covered under the Industrial Stormwater GP.
Final Effluent Limitations and Documentation of Effluent Limitations Development	<ul style="list-style-type: none"> • Fact sheets/rationales should contain any calculation or other necessary explanation of the derivation of a specific effluent limit (40 CFR § 124.8(b)(4)). • Permit rationales should include a comparison of TBELs and WQBELs and show where implementation of the most stringent effluent limitation is applied based on the comparison.
Establishing Monitoring and Reporting Requirements	
Documentation of Monitoring and Reporting Requirements	<ul style="list-style-type: none"> • The Small Construction GP must require that Small Construction NOIs and Stormwater Pollution Prevention Plans be submitted to a MS4 (if within jurisdiction prior to construction).
Standard and Special Conditions	
Administrative Process	

Administrative Record and Fact Sheet	<ul style="list-style-type: none"> • Include a responsiveness summary in its administrative record, and/or information in its fact sheet on whether comments were received.
Nutrients	
Pretreatment: Food Processing Sector	<ul style="list-style-type: none"> • Define the timeframe of "adequate".
Municipal Separate Storm Sewer Systems (MS4s)	<ul style="list-style-type: none"> • When reissued, Mississippi's small MS4 general permit must be consistent with the requirements of the Remand Rule (40 CFR §§ 122.28(d)). • Mississippi's small MS4 general permit must include clear, specific, and measurable requirements (40 CFR §122.34(a)). • MDEQ needs to include a fact sheet instead of a Summary of Changes for the small MS4 general permit.
Whole Effluent Toxicity (WET)	<ul style="list-style-type: none"> • Define 'safe' in the TRE permit language. • Provide in the Rationale more detail on the factors considered for WET reasonable potential.