

**Region 8 NPDES Program and Permit Quality
Review
South Dakota**

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EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

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EXECUTIVE SUMMARY

EPA Region 8's National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Review (PQR) for South Dakota Department of Environment and Natural Resources (SDDENR) found that permits issued in the State were generally well developed and consistent with federal regulations. SDDENR NPDES permits and processes have improved significantly since the 2012 PQR. However, two issues carried forward from the 2012 PQR are that state application forms are inconsistent with federal regulations regarding data requirements and administrative records consistently lacked copies of draft permits. SDDENR indicated during the onsite PQR that they will take steps to correct these two inconsistencies.

The PQR examined 14 permits for discharges in the State issued by SDDENR, several permitting policies, and the statewide permit template. The PQR also focused on several national and regional priority areas including:

- Permit Controls for Nutrients in Non-TMDL Waters,
- Effectiveness of Publicly Owned Treatment Works (POTW) NPDES Permits with Food Processor Contributions,
- Small Municipal Separate Storm Sewer System (MS4) Permit Requirements, and
- Implementation of Whole Effluent Toxicity (WET) monitoring in NPDES permits.

SDDENR permits 229 individual facilities. As of July 2018, 22 percent of permits are current. SDDENR indicated that they are seeking additional means to reduce permit backlog despite the State's inability to hire new staff.

The PQR recognizes the many state and region-specific challenges faced by the State, including an inability to hire staff while facing increased requirements to implement the NPDES Program. SDDENR's program has made noticeable improvements since the last PQR and continues to develop and implement consistent permitting policy, guidance, and tools.

Although the permits reviewed commonly conformed to national requirements, EPA identified several concerns, including application requirements and the contents of the administrative record. Since many of the deficiencies seem to stem from internal policies, EPA believes they can be best resolved if SDDENR updated the state permit application forms and identified ways to include a copy of the draft permit in the administrative record. Based on this PQR, EPA is recommending modifications to the State's procedures for developing the administrative record and documenting data collection during the permit application process. In addition to the items listed above, the report provides an overview of the SDDENR NPDES permitting program and identifies specific areas where EPA and SDDENR can work together to continue to strengthen permit language and documentation in state NPDES permits.

SDDENR reviewed and provided comments on the draft PQR report on March 17, 2020. SDDENR's comments were incorporated into the report. The State agreed with many of the draft PQR's essential and recommended actions and committed to take action to address many of the proposed action items. SDDENR has taken the following actions at the time this report was being finalized.

- By October 11, 2019 60% of permits were current.

- SDENR had transitioned 7 individual permits to State issued general permits as an alternative means for reducing permit backlog.
- SDDENR had started the process of updating the applications.
- SDDENR had started the process of updating the permit templates to meet the findings of the PQR.
- SDDENR had started saving draft permits to the administrative record.

I. PQR BACKGROUND

NPDES PQRs are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, EPA promotes national consistency, and identifies successes in implementation of the NPDES program as well as opportunities for improvement in the development of NPDES permits. EPA last conducted a PQR of the SDDENR NPDES permitting program on October 1–3, 2012. The PQR summary report is available on [EPA's PQR website](#). The evaluation team proposed various action items to improve the SDDENR NPDES permitting program. As part of the current PQR, EPA requested updates from SDDENR on the progress on those action items. SDDENR acted immediately on the procedural and routine action items, including many that were classified as non-essential or Recommended¹. SDDENR continues to improve on Essential¹ tasks such as conducting and documenting the reasonable potential analysis (RPA) for development of effluent limitations, as well as discussing the effect of discharges to impaired waters. Of the 16 tasks identified as Essential during the last PQR, 9 have been resolved and the remainder represent actions that are either longer-term activities or lower-level actions on which SDDENR is still in progress. In addition, EPA identified 25 Recommended action items to improve SDDENR's program. SDDENR implemented 7 and is in the process of implementing the remaining 18 Recommended actions. Section VI of this report contains 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 SDDENR'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 and facilitate discussions between regions and states.

- **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 or Region's NPDES permit program.

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

EPA's review team, consisting of three Regional staff and one contractor staff conducted a review of the SDDENR NPDES permitting program which included an on-site visit to SDDENR in Pierre, South Dakota on July 16–19, 2018.

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

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.

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 SDDENR on program status, the permitting process, responsibilities, organization, staffing, and program challenges the State is experiencing.

A total of 14 permits were reviewed as part of the PQR. Of these, 10 permits were reviewed for the core review, 4 permits were reviewed for national topic areas, and 2 permits were reviewed for regional topic areas. Some permits were reviewed for both the core review and one or more topic areas reviews. Permits were selected based on issue date and the review categories that they fulfilled.

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 SDDENR 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 SDDENR 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 regionally-specific permit types or particular aspects of permits. The regional topic selected by EPA Region 8 was the implementation of WET in NPDES permits. These reviews provide important information to SDDENR, EPA Region 8, EPA Headquarters, and the public on specific program areas.

II. STATE PROGRAM BACKGROUND

A. Program Structure

SDDENR, Surface Water Quality (SWQ) Program is responsible for regulating wastewater discharges (through Surface Water Discharge (SWD) Program and Concentrated Animal Feeding Operations (CAFO) permits), establishing surface water quality standards (SWQS), and monitoring surface waters. Two teams develop wastewater discharge permits; one is dedicated to CAFO permit development and the other to non-CAFO permit development. SDDENR has one central office in Pierre and five regional offices located in Rapid City, Sioux Falls, Vermillion, Watertown, and Mitchell. The central office develops permits, conducts routine compliance inspections, responds to complaints, recommends enforcement actions, monitors surface water

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

quality, and investigates water quality concerns as well as administers all NPDES functions. Staff in the regional offices support the central office in drafting permits, conducting routine compliance inspections, responding to complaints, recommending enforcement actions, monitoring surface water quality, and investigating water quality concerns (e.g., fish kills). In addition, the central office in Pierre reviews and issues all work that the field offices generate.

The SWQ Program's SWD permit staff consists of eight full time permit writers. All members of the SWQ permitting team conduct inspections, with the permit writers inspecting the facilities for which they are writing permits. Permits are distributed between the stormwater team and the wastewater team. The SWQ Program secretary processes public notices and provides other administrative support to both the SWD permitting teams. Staff do water quality modeling directly related to the issuance of the NPDES permit. SWQS staff complete 401 certifications for EPA-issued and U.S. Army Corps of Engineers permits.

New permit writers are provided on-the-job training by experienced permitting staff and through developing minor individual permits. Further, when the budget allows for travel, permit writers receive training (e.g., U.S. EPA's NPDES Permit Writers' Course). SDDENR has a strong commitment to ensuring that new permit writers are provided training through the U.S. EPA NPDES Permit Writers' Course. SDDENR has continued to send permit writers to this training since before South Dakota was delegated NPDES authority. In addition, SDDENR uses permit boilerplates to assist new and experienced permit writers, which also ensures consistency among permits. SWD management assigns permits to permit writers based on existing workload and expertise; SDDENR also attempts to pair senior and junior permit writers to foster on-the-job training. SDDENR supports cross-training of permit writers, so permits may be assigned regardless of expertise.

The SWQ permitting staff manage permit data using EPA's Integrated Compliance Information System (ICIS), ambient water quality data via STORET, and the State's own FoxPro-based database system which has been used for more than 10 years. The State downloads permit information from ICIS and uploads it into their own database; this is the primary mechanism for tracking SWD and pretreatment industrial user permits. In addition, SDDENR accepts Discharge Monitoring Reports (DMRs) electronically through EPA's online system, NetDMR.

SDDENR developed written procedures for conducting RPAs, and implementing requirements for WET, antidegradation, and mixing zones. In addition to these standard procedures, SDDENR developed templates for permits, statements of basis, public notices, and administrative correspondence documents. SWD staff use a standard spreadsheet to calculate reasonable potential and formulas and procedures are based on SDDENR's guidance for conducting RPAs. SDDENR works to ensure consistency and accuracy in permit development by requiring that permit writers use current permit and statement of basis templates. The statement of basis is written first; then the permit itself. Further, SDDENR implements a well-established internal review process, through which draft individual and general permits are reviewed internally by a second permit writer (if necessary) and the team leader. Draft general permits undergo additional review by all Program Administrators and Division Directors. Department managers review each public notice. As part of the QA/QC process, SDDENR uses a permit issuance checklist that details each step in the permit issuance process along with the responsible entity associated with each step; the checklist is introduced into the process with the permit application. SDDENR also

uses a checklist for coding permits into ICIS, public noticing the permit, and issuing the final permit. SDDENR aims to issue permits prior to the current permit expiring.

Permit files are maintained in the central office in Pierre in electronic form; organized within a Facility Information Folder. Documents are categorized as follows:

- *Administrative correspondence (includes permit-related correspondence)*
- *Correspondence*
- *Permit*
- *Statement of Basis (including RPA files and calculations)*
- *Inspection reports*
- *Application*
- *Archived draft permit*

B. Universe and Permit Issuance

SDDENR administers permits for 150 POTWs (21 major and 129 non-major; 1 of the facilities has combined sewer overflows [CSOs]) and 78 non-municipal facilities (6 major and 72 non-major). In addition, SDDENR administers stormwater general permits that cover over 3,000 permittees including, 1,014 industrial stormwater, 1,604 construction stormwater, and 450 CAFOs (20 permitted to discharge). SDDENR maintains an internal Microsoft Access database for tracking Notices of Intent (NOIs).

SDDENR indicated in July 2018, that there are 179 administratively continued permits, comprised of 16 major and 161 non-major permits, and 2 general permits. This equates to approximately 22 percent of South Dakota's permit universe being current, excluding general permitted facilities.

SDDENR indicated South Dakota's primary industries are ethanol production, meat processing, mining, and cheese making.

SDDENR reported they are drafting a Sand & Gravel Stormwater Industrial General Permit since half of their stormwater industrial permittees are sand & gravel operations.

C. State-Specific Challenges

SDDENR, like many other state environmental agencies, suffered from the challenge of hiring additional staff due to budgetary restrictions. Further, SDDENR indicated during the onsite PQR that based on statewide policies to limit growth of government, they will likely not be able to hire additional staff. As a result, an ongoing challenge is the NPDES permit backlog. In February 2018 the state legislature approved a fee program allowing for increased fees for surface water discharge permits. SDDENR had filled the vacancies by the time of the report but the new hires were still being trained.

D. Current State Initiatives

Having experienced flat budgets over the years and pending budget cuts, SDDENR developed a fee program which increased fees for surface water discharge permits. The new fee program bases city fees on their most current census figures and charges fees for stormwater permits to construction companies or cities and counties based on the size of a project. SDDENR conducted extensive outreach in support of passage of Senate Bill 25, which led to the support from various interested parties, including environmental groups, the South Dakota Municipal League, construction stormwater permittees, municipalities, and the Associated General Contractors. SDDENR held public meetings and conducted webinars in an effort to educate and reach out to stakeholders. SDDENR began collecting these additional fees on July 1, 2018.

III. CORE REVIEW FINDINGS

A. Basic Facility Information and Permit Application

1. Facility Information

Background

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

Program Strengths

SWD permits and statements of basis clearly identify the physical location of the facility and discharge points. The statement of basis consistently provided thorough descriptions of the facility operations and treatment processes, and clearly identified the receiving water name, designated uses, water body impairment status, and discussed the applicability of total maximum daily loads (TMDLs) and associated wasteload allocations (WLAs).

Areas for Improvement

SWD permits and fact sheets include appropriate basic facility information; however, permits would be strengthened with clear identification of monitoring locations. Permits appropriately identify the discharge locations; however, certain municipal permits reviewed lack clear identification of the monitoring location—rather, a general statement in the monitoring procedures requires collection of effluent samples prior to discharge into receiving waters. Identification of monitoring locations will help ensure monitoring activities are “representative” of the permitted discharge.

Action Items

Essential	<ul style="list-style-type: none"> •The PQR team did not identify any essential action items for this PQR component.
Recommended	<ul style="list-style-type: none"> •SDDENR should update permit boilerplate language and templates to provide a clear indication of monitoring locations.

2. *Permit Application Requirements*

Background and Process

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

As part of the permit application process, SDDENR sends permit renewal notices to permittees 9 months prior to the expiration of the permit. Between 7 and 8 months prior to permit expiration, they will send a reminder notice, with a goal to receive the application 180 days prior to permit expiration. SDDENR uses their own NPDES application forms for POTWs, a general information form and a form specific to POTWs (revised May 1993), and EPA's application forms for non-municipal permits.

SDDENR indicated that they do not specifically request priority pollutant scans from permittees if the permit includes routine (e.g., annual) monitoring requirements for the pollutants, as it would appear as a duplicative monitoring effort. However, the federal regulations require certain pollutant analyses to be submitted with the NPDES permit application and as such, SDDENR's application should include equivalent data requirements. Routine monitoring requirements for priority pollutants is a best practice and is encouraged. It is appropriate for applicants to reference or indicate on the application form that the data were previously submitted to SDDENR.

Once applications are received, they are inspected for signature, notarized, and scanned electronically. During the review, SDDENR staff examine the applicable data and methods used. The lead permit writer then conducts the initial review to confirm that all required fields are completed, and then enters the application into ICIS as received. The permit is then assigned to a permit writer and the permit writer conducts a technical completeness review. Upon determining the application is complete, SDDENR staff will issue a notice of completeness to the permittee. If a delay in processing the permit renewal occurs, SDDENR will issue a letter to the permittee administratively extending the permit. Once the application is deemed complete, permit writers proceed with permit development.

Program Strengths

SDDENR proactively issues requests for permit renewal applications and conducts a thorough and timely review for completeness. Staff are diligent with issuing reminders to permittees for application submittals and will engage with the permittee during the technical review if data or information gaps are identified, to assure that appropriate data and information are submitted to complete the application. Applications were readily available in the permit records reviewed and appeared to be timely submitted.

Areas for Improvement

The state application form for municipal facilities lacks equivalent data requirements as the federal form 2A. For example, EPA's form 2A establishes additional effluent testing data for facilities with flows greater than 0.1 MGD and less than 1.0 MGD which SDDENR's application lacks. The state application form for municipal facilities asks the applicant to indicate whether the discharge contains certain substances (e.g., ammonia, cyanide, aluminum, beryllium, certain metal parameters, and phenols). The State permit application for municipal facilities lacks the requirement to submit WET data equivalent to the requirements of form 2A. (the state application states that if the facility is a major, submit "a" WET test).

A number of permit records lack analytical results for pollutant scans required by the NPDES permit. SDDENR indicated that such data are maintained in ICIS and permit writers will access the data electronically for analysis. The administrative records lack an indication that the data were available, thus it was unclear to the PQR team if the monitoring had been conducted as required. SDDENR should link discharger monitoring data that are electronically available and the administrative record.

Update

In the time between the onsite audit SDDENR made progress on many of the above findings including:

- Monitoring data for the last permit cycle were included in the record as an attachment to the statement of basis.
- The statement of basis was updated to state the data are obtained from ICIS and that they are available to the public through EPA's Enforcement and Compliance History Online (ECHO) as well as provide a link to ECHO.
- SDDENR was in the process of updating NPDES applications. SDDENR intended to use EPA's applications with some minor changes.

Action Items

Essential	<ul style="list-style-type: none"> •SDDENR must ensure applications include data requirements consistent with EPA regulations at 40 CFR 122.21 as part of the application process.
Recommended	<ul style="list-style-type: none"> •A number of permit records lacked analytical results for required pollutant scans. SDDENR should make a link between discharger monitoring data that is electronically available and the administrative record.

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 biochemical oxygen demand (BOD), total suspended solids (TSS), pH, and percent pollutant removal), and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of seven POTW permits were reviewed as part of the PQR.

SDDENR POTW permits reviewed appropriately establish effluent limitations based on secondary or equivalent to secondary standards, including minimum percent removal requirements. One POTW permit reviewed established effluent limitations for BOD and TSS as average monthly effluent limitations and maximum daily effluent limitations; the permit lacked average weekly effluent limitations. However, the fact sheet included a clear discussion indicating the effluent limitations are water quality-based effluent limitations (WQBELs), more stringent than secondary treatment standards; therefore, the permit does not establish average weekly effluent limitations.

Program Strengths

SDDENR POTW permits reviewed are complete and established appropriate effluent limitations. Further, the associated statements of basis are thorough, provide a clear description of the treatment processes and basis for effluent limitations.

Areas for Improvement

The PQR team did not identify any areas for improvement for this PQR component.

Action Items

Essential	•The PQR team did not identify any action items for this PQR component.
Recommended	•The PQR team did not identify any action items for this PQR component.

TBELs for Non-POTW Dischargers

Background and Process

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

SDDENR indicated that most of their permits are for municipal facilities (approximately 65 percent) and therefore, in most cases, pollutants of concern are those included in secondary treatment standards (i.e., pH, BOD, and TSS). For permits developed for non-municipal facilities, permit writers will consider the industry and identify pollutants expected to be present in the discharge based on staff knowledge of the industry and consideration of information provided in the permit application. Permit writers will review national ELGs and standards regulations established by EPA for various industrial categories or research information on the industry regarding expected pollutants of concern for new facilities or facilities with which they are unfamiliar. In addition, SWD permit writers evaluate pollutants of concern for major facilities through review of effluent monitoring data collected during the permit term (full pollutant scans may be required annually in some permits).

SDDENR indicated that ethanol plants represent the biggest industry in South Dakota. ELGs do not apply to ethanol plants that uses distillation processes, but SDDENR ultimately establishes WQBELs in permits for those facilities because they are more stringent than BPJ-ELG based limits. Meat packing plants, another large industry in the state, are subject to ELGs and SDDENR applies the ELGs accordingly.

Program Strengths

SDDENR develops appropriate discussions of facility operations and wastewater treatment processes in statements of basis for non-municipal permits. Further, SWD permit writers appropriately discuss the applicability of ELGs and basis for effluent limitations based on ELGs. Effluent limitations for non-municipal discharges are presented in the appropriate forms and limit bases.

Areas for Improvement

The PQR team did not identify any areas for improvement for this PQR component.

Action Items

Essential

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

Recommended

- The PQR team did not identify any recommended action items for this PQR component.

2. Reasonable Potential and Water Quality-Based Effluent Limitations*Background*

The NPDES regulations at 40 CFR 122.44(d) 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 will cause, have the reasonable potential to cause or contribute to an excursion above any State water quality standard, including for State narrative criteria for water quality.

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

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

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

Process for Assessing Reasonable Potential

Since the previous PQR, SDDENR has developed a companion guidance document (*Reasonable Potential Implementation Procedure for SWD Permits*, 2013) for the RPA spreadsheet tool, which documents procedures used for the identification of pollutants of concern, consideration of non-detect data, and final determination of reasonable potential (RP). As a result, permit writers implement a standardized procedure for evaluating RP. These procedures are based on EPA's Technical Support Document for Water Quality-based Toxics Control (TSD). Permit writers evaluate all data for the RPA, including data from the DMRs and renewal application, but may exclude data that are deemed inappropriate (i.e., not representative of the discharge). SDDENR's RPA procedures indicate a minimum number of data points are required to conduct an RPA. If enough data are not available, (i.e. for a new permittee) SDDENR's RPA procedures state that the Department will require the facility to provide the expected pollutants of concern and expected levels in the permit application. In addition, in cases where actual effluent data are unavailable, SDDENR will accept data from similar facilities. SDDENR may require additional monitoring in the permit to collect necessary data for conducting a RPA, if the permittee does not have the required data at the time of application. When conducting the RPA, permit writers also consider ambient data and use SDDENR's ambient water quality monitoring program, which has over 150 monitoring sites across the state.

The WQS group has the responsibility for oversight of the ambient water monitoring stations and other available data to determine if receiving waters are impaired. SDDENR indicated point sources are rarely the cause for stream impairments and in cases where the point source is identified as the cause for impairment, it is because the facility has violated effluent limitations. Further, the facility, if in violation of effluent limitations, would be under enforcement actions to correct the violations. SWD and SWQS staff collaborate to evaluate impairment status, identify causes for the impairment, and develop the 303(d) List; most stream impairments are for TSS and bacteria, parameters for which SDDENR has developed SWQS. As part of their biannual Integrated Report for Surface Water Quality Assessment, SDDENR staff develop the state 303(d) list, most recently updated in 2018.

Permit writers also evaluate RP for pollutants for which TBELs exist and compare the TBEL with the WQBEL and establish the more stringent limitation as the final effluent limitation, to ensure compliance with applicable water quality criteria. Permit writers provide a summary table in the statement of basis comparing TBELs and WQBELs and indicate the final effluent limitation and the basis for that limitation.

Process for Developing WQBELs

SDDENR implements the TSD procedures for developing WQBELs and the calculations are built into the RPA spreadsheet program. Therefore, the same spreadsheet that enables the RPA also calculates the WQBELs, for those that demonstrate RP. In addition to any priority pollutants for which RP exists, WQBELs are developed mostly for ammonia and bacterial indicators (including fecal coliform, which SDDENR is transitioning to *E. coli*) which are based on SWQS. SDDENR applies SWQS either end-of-pipe or following incorporation of a mixing zone. SDDENR has developed a translator to evaluate *E. coli* and fecal coliform sampling to identify

statistical relationships. If there is a fecal coliform TMDL/WLA, the permit writer will compare *E. coli* and demonstrate that *E. coli* complies with the fecal coliform WLA. When developing WQBELs, permit writers will conduct individual reviews to see if there were any notable changes since the last permit issuance.

Mixing zones are evaluated and implemented largely through procedures outlined in SDDENR's *Mixing Zone and Dilution Implementation Procedures* (August 1998); however, in certain circumstances, SDDENR may use the CORMIX model to calculate appropriate mixing zones. SDDENR's mixing zone policy includes a flow chart to guide in the decision-making process. While determining mixing zones, permit staff evaluate effluent flow versus stream flow and stream classification. Implementation of mixing zones is discussed in the WQBEL attachment. Complete mixing is assumed under certain conditions. Permit writers include a discussion of mixing zone and dilution considerations in the statements of basis.

SDDENR has a separate team responsible for the majority of the TMDL work in South Dakota. The TMDL team is responsible for developing TMDLs and conducting any associated water quality modeling. The SWD team provides information and support for any TMDLs that involve point sources and is primarily responsible for the development of the WLAs for TMDLs.

Key points of coordination between SWD, TMDL and WQS programs include:

- Staff from the TMDL and WQS teams work cooperatively to develop the Integrated Report every two years, reviewing the available water quality data and identifying impairments. This report is then reviewed by the entire department, including staff from the SWD team. In addition, SDDENR invites public participation during TMDL development, via requests issued statewide.
- Prior to the issuance or reissuance of an SWD permit, the WQS team conducts a use attainability analysis of any water bodies that are not classified for higher fishery uses. The results of these analyses are communicated with the SWD team prior to drafting the permit. The permit writer then uses this information to determine appropriate limits.
- The TMDL and SWD team work closely on TMDLs if there are any point sources within the watershed. The SWD calculates the WLA and provides this information to the TMDL team. For large, extensive TMDL projects with multiple point sources, a SWD team member has participated in the work group that directs and guides the development of the TMDL.
- All three teams work closely together during the development of the triennial review of the water quality standards.

The SWD statement of basis template includes three options for discussion of impaired waters and TMDLs:

- Water bodies that are not impaired,
- Water bodies that are impaired, but for which a TMDL has not yet been developed, and
- Water bodies that are impaired and for which there is an applicable TMDL and WLA.

Program Strengths

Reasonable Potential

SWD permit writers clearly identify the receiving stream, applicable water quality standards, impairment status and applicable TMDLs. Further, permit writers identify pollutants for which TBELs apply and how they evaluated RP for those pollutants. SDDENR's statements of basis and attachments include discussion of the data evaluated, including identification of assumptions or default values. Permit writers consistently discuss the application of mixing zones and dilution, when they have been granted.

RPA procedures have become more standardized since the previous PQR, with the development and consistent implementation of the *Reasonable Potential Implementation Procedures*. SDDENR's guidance, policy, and accompanying implementation documents have certainly led to this standardization. The *Reasonable Potential Implementation Procedure for SWD Permits* document is a thorough and clear procedural document. The PQR team determined that staff are conducting and documenting RPAs consistently. Staff include thorough discussions of the RPA in attachments to the statement of basis; the attachment is a strong characteristic of SDDENR statements of basis. The attachments to the statements of basis present receiving stream flow data, mixing zone and dilution evaluations, discharge monitoring data, the RPA summary, and RPA results.

WQBEL Development

Statements of basis are drafted and reviewed consistently and include discussion of the RPA process and RPA summary tables (via attachments to the statement of basis). The attachment to the statement of basis providing the RPA methods and results is a strong component of the administrative record and provides a clear description of the RPA methodology and data considered in the assessment. Permit writers include consistent and thorough discussions of the RPA as well as considerations for anti-backsliding and antidegradation in statements of basis and accompanying attachments. This is a strength of the SDDENR permit program.

Areas for Improvement

Reasonable Potential

The attachment to the statement of basis that provides the thorough RPA discussion would be strengthened by specifying the timeframe of the data evaluated in the RPA. Such clear indication provides greater transparency in the development of effluent limitations and permit requirements.

WQBEL Development

The PQR team did not identify any areas for improvement for this PQR component.

Update

In the time between the onsite audit SDDENR made progress on many of the above findings including:

- SDDENR now identifies the start and end dates and the source of the data used in the reasonable potential analysis in the SOB.

Action Items

Essential	<ul style="list-style-type: none"> • <u>Reasonable Potential</u> <ul style="list-style-type: none"> • The PQR team did not identify any essential action items for this PQR component. • <u>WQBEL Development</u> <ul style="list-style-type: none"> • The PQR team did not identify any essential action items for this PQR component.
Recommended	<ul style="list-style-type: none"> • <u>Reasonable Potential</u> <ul style="list-style-type: none"> • SDDENR should consider specifying the timeframe of data evaluated in the RPA in the RPA discussion attachment to the statement of basis. • <u>WQBEL Development</u> <ul style="list-style-type: none"> • The PQR team did not identify any recommended action items for this PQR component.

3. *Final Effluent Limitations*

Background and Process

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

SWD permit writers evaluate all applicable effluent limitations for parameters and compare them, to select the most stringent effluent limitation as the final effluent limitation. Permit writers include a summary table illustrating this comparison in the statements of basis. The statements of basis reviewed during the PQR consistently included this summary table and in a clear presentation.

Once limits have been developed, permit writers perform at least an initial antidegradation review on all permits, based on the State’s *Antidegradation Implementation Procedures* (October 1998). Permit writers use an antidegradation review checklist to conduct the evaluation and include the worksheet as an attachment to the statement of basis. The core review indicated that

the antidegradation review checklist was included in each of the permit records reviewed (included as an appendix to the statement of basis). In addition to a checklist that guides them through the initial evaluation, permit writers use a spreadsheet program to evaluate ambient water quality standards, assimilative capacity, and potential impacts to water quality. As part of the antidegradation review, permit writers evaluate whether parameters are exempt from limits and whether limits will contribute towards impairment. If a new limit is proposed, the limit must go through an antidegradation review. In addition to an antidegradation analysis, an anti-backsliding review is also conducted to determine the stringency of the limits. This is performed during development of all permits, and statements of basis include a discussion of the resulting evaluation.

Program Strengths

SWD permit writers develop TBELs and WQBELs appropriately and consistently. Consistent implementation of the available SDDENR guidance and procedural documents is supported through management’s review of draft permits and statements of basis. Permit writers include a summary table illustrating the comparison of applicable TBELs and WQBELs, in the statements of basis. The statements of basis reviewed during the PQR consistently included this summary table in a clear presentation. Statements of basis identify the foundation for final effluent limitations. Further, statements of basis include consistent discussion of anti-backsliding and antidegradation requirements and evaluations.

Areas for Improvement

The PQR team did not identify any areas for improvement for this PQR component.

Action Items

Essential	<ul style="list-style-type: none"> •The PQR team did not identify any essential action items for this PQR component.
Recommended	<ul style="list-style-type: none"> •The PQR team did not identify any recommended action items for this PQR component.

4. Documentation of Effluent Limitations Development

Background and Process

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.

SWD permit writers include a description of the facility operations and wastewater treatment processes and identify applicable effluent limitation standards for TBELs. Regarding WQBELs, SDDENR provides a clear and consistent discussion of receiving stream quality information, applicable water quality standards, and pollutants of concern. Further, permit writers develop statements of basis that include a thorough discussion of the RPA and provide calculations for WQBELs and final effluent limitations. SWD's statements of basis consistently discuss the permit writers' consideration of anti-backsliding and antidegradation requirements and how they are applicable for each permit. SWD permit writers conduct RPAs using a spreadsheet tool and include a table summarizing the RPA results and WQBEL calculations in attachments to the statements of basis. SWD permit writers consistently include a summary table that illustrates the comparison of TBELs and WQBELs and identifies the most stringent effluent limitation as the final effluent limitation.

Program Strengths

SDDENR has implemented practices since the last PQR that have resulted in consistent and thorough documentation of effluent limitations. SDDENR statements of basis include a discussion of facility operations, especially as they relate to TBELs, and clearly identify receiving stream information as it relates to impairments and applicable TMDLs and WLAs. In addition, the statements of basis consistently provide a clear and thorough discussion of the basis for each effluent limitation and demonstrate that the permit writer compared TBELs and WQBELs to identify the most stringent effluent limitation. Further, the statements of basis demonstrate that permit writers conducted a thorough RPA, as illustrated through the numerous attachments to the statements of basis, including discussions ranging from stream flow data to antidegradation reviews.

Areas for Improvement

As noted in the previous section, the statement of basis attachment that provides discussion of the RPA would be strengthened with clear identification of the specific timeframe of data evaluated in the RPA.

*Action Items***Essential**

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

Recommended

- As noted in the previous section, SDDENR could consider specifying the timeframe of data evaluated in the RPA, in the RPA discussion attachment to the statement of basis.

C. Monitoring and Reporting Requirements*Background and Process*

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

Specifically, 40 CFR 122.44(i) requires NPDES permits to establish, at minimum, annual reporting of monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 CFR 122.48(b) requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data which are representative of the monitored activity, including when appropriate, continuous monitoring. 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 an 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 determining 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 40 CFR Part 136 analytical method.

SWD staff ensure all limited parameters have associated monitoring requirements in the permit. Permit writers establish sampling frequencies for parameters based on permit templates and consider facility type and discharge frequency. Permit writers consider permits for similar facilities to establish consistent monitoring requirements and may assign site-specific monitoring conditions where appropriate. For consistency across SWD permits, permit writers establish monitoring requirements for new facilities based on requirements for similar types of facilities. SDDENR indicated they develop monitoring conditions that are consistent and justifiable. SWD permits for major facilities require annual monitoring for the priority pollutants. In addition, permits for major facilities submit reports to SDDENR monthly while permits for non-major facilities submit monitoring reports to SDDENR quarterly.

Program Strengths

SWD permits clearly identify monitoring frequency and sample type and establish appropriate monitoring requirements to determine compliance with effluent limitations. Permits and statements of basis provide explanatory footnotes associated with the table of effluent limitations and monitoring requirements, regarding the timing of sample collection or requiring the use of specific analytical methods. POTW permits include appropriate influent monitoring for BOD and TSS. Eight of the 14 permits reviewed include WET monitoring requirements. SWD permits clearly present reporting requirements.

Areas for Improvement

SWD permits reviewed consistently lack a clear identification of monitoring locations; permits reviewed provide a general narrative description of the monitoring location. Permits would be strengthened with a clear description of the required monitoring location. In addition, while permits consistently require monitoring according to test procedures approved under 40 CFR Part 136, permits do not broadly include requirements for the use of sufficiently sensitive analytical methods. In two permits reviewed, there were specific methods identified. Permits should require all monitoring activities must use EPA approved analytical methods that can detect and measure the pollutants at, or below, the applicable water quality criteria or permit limits.

Update

In the time between the onsite audit SDDENR made progress on many of the above findings including:

- Permits required all monitoring activities must use EPA approved analytical methods that can detect and measure the pollutants at, or below, the applicable water quality criteria or permit limits

Action Items

Essential	•The PQR team did not identify any essential action items for this PQR component.
Recommended	<ul style="list-style-type: none"> •SDDENR should ensure that permits include clear identification of monitoring locations. •SWD permits should include monitoring requirements for use of sufficiently-sensitive methods that applies to all pollutants.

D. Standard and Special Conditions

Background and Process

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

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

SDDENR establishes standard conditions using boilerplate and permit templates. SDDENR updated their standard conditions language following the last PQR, which occurred in 2012. The revisions are noticeable; in particular, the updates to the bypass conditions create an improved standard condition, from what was described in the findings from the previous PQR. SDDENR’s permits do not explicitly include the compliance schedule standard condition; however, state regulations include the 14-day reporting requirement.

Regarding special conditions, SDDENR implements compliance or construction schedules in permits when limits are new or more stringent than previous effluent limitations. The construction schedule is used in place of enforcement actions and allows permittees flexibility to meet existing limits; the schedules generally span 2 to 3 years.

SDDENR is authorized to administer the biosolids program and as such, requires all biosolids facilities to obtain an individual biosolid-specific permit.

Program Strengths

Standard conditions are organized by general categories (e.g., Reporting and Record Keeping Requirements and Compliance Requirements) and are easy to identify. SDDENR updated their standard conditions following the last PQR and the revisions are apparent. Most notable is that the bypass conditions language is improved from what was identified in the findings from the previous PQR; the language is clearer and consistent with the federal standard condition.

Areas for Improvement

It is unclear if SWD permits contain a standard condition that is as stringent as the federal standard condition for “Other noncompliance” established at 40 CFR 122.41(l)(7). Permits require notification of effluent limitation violations, bypass, and emergency discharges; however, it is not clear if the SDDENR standard condition entitled “Effluent Violation, Bypass, Emergency Discharge, and SSO Reporting Requirements” also addresses instances of unplanned noncompliance. Further, certain standard conditions lack references to sludge requirements as required by 40 CFR 122.41. As the federal standard conditions apply to all NPDES permits, standard conditions should be included in all NPDES permits, regardless if the facility also maintains a biosolids permit.

Update

In the time between the onsite audit SDDENR made progress on many of the above findings including:

- SDDENR added language on unplanned noncompliance to the noncompliance language in permit templates.
- SDDENR was in the process of incorporating the federal standard conditions into the permit template

Action Items

Essential	<ul style="list-style-type: none"> •SDDENR must ensure that standard conditions in NPDES permits include conditions that address sludge.
Recommended	<ul style="list-style-type: none"> •SDDENR should ensure that the standard condition language addressing other noncompliance is clear and consistent with federal standard conditions.

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

SDDENR publishes a public notice in the newspaper local to the facility as well as on the SDDENR public notice website. Permits are available for public notice for 30 days. SDDENR staff maintain an email list of interested parties with a self-maintained opt in/opt out process. The permittee also receives a copy of the draft permit. SDDENR requires an affidavit of publication prior to issuing the SWD permit. Written comments are received either by mail or via the online comment form on the SDDENR public notice website. SDDENR indicated that they will check for comments throughout the public comment period and are aware that comments may be submitted at the end of the comment period, so staff will check the mail days after the comment period has ended, to collect all comments that have been submitted. SDDENR indicated that few formal comments are received on draft permits, but when they are submitted, SWD staff respond to the comments with written responses and work with the commenter to the extent possible and revise the permit as appropriate. SDDENR produces an addendum to the statement of basis to include responses to comments. The revised permit is provided to the parties that commented on the draft and they have an additional 30 days to review the comments and contest the issuance of the permit. If the commenters do not request a contested case hearing within that 30-day period, the SWD permit becomes effective. SDDENR indicated during the PQR that there had only been one request for a hearing on a permit. SDDENR works with permittees throughout the permit development process to ensure information in the permit and statement of basis is accurate and that the permittee understands permit conditions and requirements.

Program Strengths

SDDENR staff extend themselves to work with permittees throughout the permit development process, ensuring that information contained in the permit and statement of basis is accurate and that the permittee is well informed of permit effluent limitations, requirements, and conditions. This strong working relationship ensures that permits are developed and issued in an efficient and streamlined process, working through issues while the permit is in development, rather than through a contested case hearing process. In addition, SDDENR staff develop an addendum to the statement of basis to address comments to responses received during the public comment period; this is a best practice as it provides for transparency in the administrative record.

Areas for Improvement

Certain public notices reviewed lack a brief description of the business conducted at the facility or the activity described in the permit application or draft permit, in accordance with 40 CFR 124.10(d)(1)(iii).

Update

In the time between the onsite audit SDDENR made progress on many of the above findings including:

- SDDENR was updating the public notice templates to include a brief description of the business conducted at the facility or the activity described in the permit application or draft permit, in accordance with 40 CFR 124.10(d)(1)(iii).

Action Items

Essential	<ul style="list-style-type: none"> • Public notices must include a brief description of the business conducted at the facility or activity described in the permit application or draft permit, in accordance with 40 CFR 124.10(d)(iii).
Recommended	<ul style="list-style-type: none"> • The PQR team did not identify any recommended action items for this PQR component.

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.

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.

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.

SDDENR maintains all permit administrative record files in electronic format and creates a Facility Information Folder for all permits, which includes the following components:

- Final permit;
- Statement of basis including RPA files/calculations;
- Administrative and permit related correspondence;
- Relevant inspections;
- Permit applications; and
- An archived version of the draft permit.

SDDENR develops a statement of basis to accompany all individual SWD permits. SDDENR staff generally draft the statement of basis first and then draft the permit; a template is used to develop the statement of basis. SDDENR maintains comments received during the public comment period and from EPA, along with responses to those comments, as part of the Facility Information Folder and administrative record.

Program Strengths

The permit records are well organized and consistent. The administrative records reviewed include necessary documentation supporting the development of the permit and statements of basis. Further, the administrative record appropriately includes public notices and proof of publication documentation. Statements of basis documents are complete and well organized. Further, statement of basis documentation includes informative and well-presented attachments which describe in detail the methods for conducting the RPA and results from the RPA. The development and consistent inclusion of the attachments to the statements of basis are an improvement to the SDDENR NPDES Program.

Areas for Improvement

During the PQR, it was noted that permit administrative records lack a copy of the draft permit. NPDES regulations at 40 CFR 124.9 require the contents of the Administrative Record to include a copy of the draft permit. SDDENR staff indicated during the onsite portion of the PQR that they do not include a copy of the draft permit to avoid confusion regarding which is the official copy of the permit; however, staff indicated they would consider options to include a copy of the draft permit in the administrative record.

The PQR team observed that public notice documents contain the required elements outlined in 40 CFR 124.10, except for the brief description of the business conducted at the facility or the activity described in the permit application or draft permit required at 40 CFR 124.10(d)(1)(iii).

The administrative record would be strengthened with clear statements indicating whether comments were received during the public comment period or if a public hearing was requested.

Update

In the time between the onsite audit SDDENR made progress on many of the above findings including:

- SDDENR was updating the public notice documents to contain the required elements outlined in 40 CFR 124.10.
- SDDENR updated the issuance letter to contain clear statements indicating whether comments were received during the public comment period or if a public hearing was requested. A copy was included in the administrative record.
- SDDENR started adding a statement with the DMR data identifying the dates of the data, that the data comes from ICIS, and that the public can obtain the data from ECHO along with a link to ECHO.

Action Items

Essential	<ul style="list-style-type: none"> •SDDENR must ensure that permit administrative records contain a copy of the draft permit, consistent with 40 CFR 124.9. •SDDENR must ensure that public notice documents contain the required elements outlined in 40 CFR 124.10, including a brief description of the business conducted at the facility or the activity described in the permit application or draft permit, required at 40 CFR 124.10(d)(iii).
Recommended	<ul style="list-style-type: none"> •SDDENR should consider including in the administrative record a connection to the electronic data—for example, include a note to the file that indicates that data available in ICIS were downloaded and evaluated for a certain timeframe, during permit development. •The administrative record would be strengthened with inclusion of a clear statement (in the cover letter transmitting the final permit) indicating whether comments were received during the public comment period or if a public hearing was requested.

IV. NATIONAL TOPIC AREA FINDINGS

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

A. Permit Controls for Nutrients in Non-TMDL Waters

Background

Nutrient pollution is an ongoing environmental challenge; however, nationally permits often lack nutrient limits because few states have established numeric nutrient criteria and are reluctant to interpret their narrative water quality criteria in establishing effluent 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, which are established for waters known to be impaired by nutrients. In this section, waters for which a TMDL has not been approved are considered. Though these waters do not have a TMDL, they may already be impaired by nutrient pollution or may be vulnerable to nutrient pollution due to their hydrology and environmental conditions.

Federal regulations at 40 CFR 122.44(d)(1)(vii)(1)(A) require permit limits to be developed for any pollutant with the reasonable potential to cause or contribute to an impairment of water quality standards, whether those standards are narrative or numeric.

To determine how nutrients are addressed in the SDDENR NPDES program, EPA Region 8 reviewed two permits: Valley Queen Cheese Factory Inc. (Permit Number SD0027987), and City of Hill City (Permit Number SD0020885). The findings are as follows:

Valley Queen Cheese

- Nitrates – Nitrate concentration shall not exceed 50 mg/L (30-day average) or 88 mg/L (daily maximum). These limits are based on the fish and wildlife propagation, recreation, and stock watering classification for the South Fork Whetstone, the SDSWQS (ARSD Section 74:51:01:52) and the settlement agreement.
- Total Phosphorus shall not exceed 7.0 mg/L (30-day average) or 10.0 mg/L (daily maximum). These limits are based on the settlement agreement.

City of Hill City

- The nitrates concentration shall not exceed 50 mg/L (30-day average) and 88 mg/L (daily maximum). These limits are based on the fish and wildlife propagation, recreation and stock watering waters classification of Spring Creek, the SDSWQS (ARSD Section 74:51:01:52), and the current permit limits.
- The total phosphorus concentration shall not exceed 0.1 mg/L (daily maximum). This limit is based on the wasteload allocated to the city in the Fecal Coliform Bacteria TMDL for Spring Creek (2008) and the current permit limits. A copy of the Spring Creek TMDL can be obtained by contacting SDDENR.

The Hill City total phosphorus limit will not be discussed as it is based on a waste load allocation from the Lake Sheridan Trophic State Index total maximum daily load. The Valley Queen Cheese total phosphorus effluent limit is the result of a settlement agreement with SDDENR and will not be discussed.

South Dakota's nitrate numeric water quality standards were developed to protect domestic water supply, South Dakota Administrative Rules Chapter 74:51:01:44, and livestock watering, South Dakota Administrative Rules chapter 74:51:01:52. The State has not adopted numeric criteria to protect other designated uses. SDDENR is only able to use the existing nutrient criteria when establishing effluent limits limiting their ability to restrict the discharges of nutrients into waters of the State.

SDDENR has not identified streams as impaired for nutrients under the current WQS. SDDENR indicated point sources contribute an extremely small portion of the total nutrient loading to most streams in South Dakota. SDDENR considers non-point source reduction a much more efficient and effective use of resources to work on reducing nutrient loading.

Areas for Improvement

SDDENR should develop a standard procedure for implementing the narrative water quality standards in NPDES permits for the limitation of nutrients. In addition, SDDENR should develop and adopt numeric water quality standards for nutrients and response criteria (Dissolved oxygen, chlorophyll *a*, biological oxygen demand, algal biomass, etc.) that are protective of the beneficial uses and accomplish the goals of the narrative water quality standards in ARSD 74:51:01.

Update

In the time between the onsite audit SDDENR made progress on many of the above findings including:

- SDDENR developed a process to implement the narrative nutrient criteria by looking at water quality data for nitrogen and phosphorus and evaluating the habitat to identify streams that could be impaired or need further follow up. SDDENR will take the information into account when writing permits.

Action Items

Essential

- Develop a standard procedure for implementing the narrative water quality standards in NPDES permits for the limitation of nutrients.
- Long-term, update the water quality standards to include numeric limits for nutrients in lakes, reservoirs, rivers and streams.

Recommended

- Coordinate with EPA in developing and updating numeric water quality standards.
- Develop and adopt water quality standards for dissolved oxygen in Class 9 waters at Administrative Rules chapter 74:51:01:52
- Develop and adopt water quality standards for Chlorophyll *a*
- Develop and adopt numeric effluent limitations, for nutrients to accomplish the goals of the narrative water quality standards contained in ARSD 74:51:01.

B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

Background

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

The goal of this pretreatment program review was to assess the status of the pretreatment program in South Dakota as well as assess pretreatment language in POTW NPDES permits. The pretreatment PQR evaluated SDDENR's pretreatment program in the following areas:

- State legal authority found in South Dakota Administrative Rule Chapter 74:52:11 – Pretreatment regulations
 - Status of implementation of changes to the general Pretreatment regulations at 40 CFR part 403 adopted on October 14, 2005 (known as the Pretreatment Streamlining Rule).
- Implementation of pretreatment boilerplate language into NPDES permits of approved and non-approved programs. Focusing on the following Pretreatment regulatory requirements:
 - 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);
- 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).
- Approval Authority implementation, including,
 - Program Oversight
 - Number of audits and inspections conducted,
 - Number of Significant Industrial Users (SIUs) in Approved Pretreatment Programs
- Control Authority implementation for categorical industrial users (CIUs)/SIUs in non-approved programs.
 - Including, the number of CIUs discharging to municipalities that do not have approved pretreatment programs
- Adherence of the Compliance Monitoring Strategy (CMS) program policy for frequency of State reviews of approved POTW pretreatment programs and sampling for CIUs/SIUs in non-approved pretreatment programs.

EPA evaluated pretreatment boilerplate language contained in NPDES permit in POTWs with and without approved pretreatment programs to evaluate the implementation of the Pretreatment regulations by SDDENR as an Approval and Control Authority. In addition, EPA evaluated control mechanism permits for CIUs in non-approved programs and available records for these identified CIUs.

EPA evaluated information in the ICIS database and provided during the PQR to summarize the following pretreatment data elements related to SDDENR’s authorization to implement the pretreatment program as an Approval Authority and a Control Authority:

Approval Authority Implementation			
Number of Approved Pretreatment Programs	7 (Aberdeen, Brookings, Huron, Mitchell, Rapid City, Sioux Falls, Watertown)		
Number of SIUs in Approved Pretreatment Programs	57		
Number of field audits and performance compliance inspections (PCIs) conducted	2015	2016	2017
	4	4	2 field audits (Brookings, Huron)

			3 desktop audits (Aberdeen, Mitchell, Rapid City)
Control Authority Implementation			
Number of CIUs discharging to municipalities that do not have approved pretreatment programs	34		

State Pretreatment Authorization and MOA

SDDENR was authorized by EPA to administer the NPDES program, including the pretreatment program; this authorization was memorialized in a Memorandum of Agreement signed by EPA on December 30, 1993. Section VI of the Memorandum of Agreement (MOA) memorializes the pretreatment authorization to the State, pursuant to Sections 307 and 402(b) of the CWA. The 1993 MOA establishes the policies, responsibilities, and procedures of SDDENR in carrying out the implementation and enforcement of the National Pretreatment Program under Section 307 and 402(b) of the CWA.

Approval Authority Responsibilities

South Dakota Pretreatment Rules

SDDENR establishes the Pretreatment regulations in Article 74:52, Chapter 11 of the State Rules. In addition, SDDENR establishes the Effluent Guidelines and Standards for industrial users in non-approved programs in Article 74:52, Chapter 10 of the State Rules.

Section 74:52:11:01 of the South Dakota Pretreatment regulations references 40 CFR Part 403 to establish the pretreatment legal authority in South Dakota. The reference to 40 CFR Part 403 in §74:52:11:01 establishes the reference to 40 CFR Part 403 as February 13, 1992 and includes the following substitutions:

- (1) Substitute "surface water discharge permit" for "NPDES permit";
- (2) Substitute "secretary" for "director";
- (3) Substitute "SDCL 34A-2-94" for all federal regulation references to "40 C.F.R. 2.302" in 40 C.F.R. § 403.14;
- (4) Substitute "department" for "EPA" in 40 C.F.R. § 403.5(e); and
- (5) Substitute "secretary" for "approval authority."

The establishment of SDDENR’s pretreatment legal authority did not include the Pretreatment Streamlining Rule amendments to 40 CFR Part 403 that were promulgated by EPA on October 15, 2005 (70 FR 60134). The Streamlining Rule revises several provisions of the General Pretreatment Regulations found in 40 CFR Part 403 and was designed to reduce the overall regulatory burden on both industrial users (IUs) and Control Authorities without adversely

affecting environmental protection. Local Control Authorities must update their legal authority (municipal ordinance or rules and regulations) and submit this program modification to SDDENR for approval, in accordance with 40 CFR 403.18 to implement the Streamlining Rule in their service area. However, the State Rules must be changed before the local Control Authorities can incorporate streamlining updates.

SDDENR incorporated the Pretreatment Streamlining Regulations into its pretreatment rules by reference by updating the effective date to December 11, 2017. As part of the modification of its State pretreatment rules, SDDENR held a public hearing on October 5, 2017 for the public to participate and comment. SDDENR published a notice of the October 5, 2017 public hearing in eleven daily newspapers. In addition, SDDENR sent a notification letter to all municipalities, county commissions, tribal governments, and interested parties that have notified SDDENR to be interested parties for CWA public notices. SDDENR submitted its pretreatment rules to EPA on August 8, 2018 for agency review and approval. EPA approved the State's modification to its pretreatment rules found in Chapter 74:52:11 of the Administrative Rules of South Dakota on March 12, 2019.

Permit Quality Review of NPDES Permits

EPA evaluated two NPDES permits and associated fact sheets issued by SDDENR to POTWs with and without approved pretreatment programs, Rapid City (approved pretreatment program) and Lennox (POTW without an approved pretreatment program).

The Rapid City permit was evaluated to ensure that the approved pretreatment program requirements in 40 CFR Part 403 were required as a condition of the permit. The Lennox permit was evaluated to ensure that at a minimum, the permit contained NPDES pretreatment requirements in 40 CFR 122.42(b) (POTW requirement to notify Director of new pollutants or change in discharge) and 40 CFR 122.44(j) which require all POTWs to:

- (1) Identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR Part 403.
- (2)(i) Submit a local program when required by and in accordance with 40 CFR Part 403 to assure compliance with pretreatment standards to the extent applicable under section 307(b). The local program shall be incorporated into the permit as described in 40 CFR Part 403. The program must require all indirect dischargers to the POTW to comply with the reporting requirements of 40 CFR Part 403.
- (ii) Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance.
- (3) For POTWs which are "sludge-only facilities," a requirement to develop a pretreatment program under 40 CFR Part 403 when the Director determines that a pretreatment program is necessary to assure compliance with Section 405(d) of the CWA.

Based on the permit quality review of these permit, EPA has the following findings/comments:

Rapid City, SD-0023574:

- SDDENR adequately implements the Pretreatment requirements in 40 CFR Part 403 for a POTW with an approved Pretreatment program.
- 40 CFR 122.44(j)(2)(ii) requires a POTW to Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance. Section 6.22 of the Rapid City permit requires the permittee to “determine if technically based local limits are necessary...”. The Rapid City permit was issued on July 1, 2017 and as of the PQR date, there were no records of this technical evaluation. The purpose of this written technical evaluation is to ensure the local limits are based on current conditions such as standards, data, POTW conditions/removal efficiencies, etc. to ensure the local limits are protective of the POTW and are defensible.
 - EPA recommends SDDENR modify the current permit condition to require the permittee to provide a written technical evaluation of the need to revise local limits and additionally, SDDENR should require this technical evaluation be provided within a suggested deadline of 12 months after reissuance of the NPDES permit.

Lennox, SD-0021768:

- SDDENR adequately implements the NPDES requirements for POTWs without an approved Pretreatment program found in 40 CFR 122.42(b) and 40 CFR 122.44(j), including a reopener provision for development of a Pretreatment program or additional Pretreatment requirements in Section 2.2.7 of the permit.
- SDDENR’s statement of basis provides an adequate description of the industrial user in the POTW’s service area and the percentage of industrial flow to the POTW.

SDDENR Approval Authority Resources and Implementation Procedures

EPA evaluated SDDENR’s implementation as an Approval Authority for the locally approved pretreatment programs within the state, including its resources devoted to the pretreatment program. SDDENR has one full time employee (FTE) devoted to the full implementation of the pretreatment program as a pretreatment coordinator. The pretreatment coordinator also participates within the NPDES permitting program as a permit writer. The pretreatment coordinator is supported, as needed by staff and management within the NPDES permitting SDDENR serves as the approval authority for seven POTWs with approved Pretreatment programs. According to information gathered during the PQR and in 2017 pretreatment annual reports, approximately 57 SIUs are controlled through these approved Pretreatment programs. EPA evaluated the records for the POTWs with approved pretreatment programs during the PQR and found that the pretreatment records such as annual reports, correspondence, audit/PCI reports, and applicable enforcement records are acceptable.

Program Modification Review and Approvals —

SDDENR has adequate procedures and commitment to provide support and feedback for modification of local limits, ordinances, rules and regulations, Enforcement Response Plans, permit templates, and other non-substantial modifications.

Approved Pretreatment Program Audits and PCIs —

Section 1.C of the October 17, 2007 CWA NPDES CMS for the Core Program and Wet Weather Sources Memorandum establishes inspection frequency goals for pretreatment audits, PCI, and IU inspections. The 2007 CMS memorandum establishes the pretreatment audit frequency for POTWs with approved pretreatment programs as one audit every five years with oversight IU inspections conducted in at least two IUs discharging to the POTW. The 2007 CMS memorandum also establishes a PCI frequency as at least two PCIs every five years.

SDDENR exceeded the CMS goals by performing four audits/PCIs in 2015-2016 and two audits in 2017. SDDENR also performed three desktop audits of the approved pretreatment program in 2017 to supplement the two audits/PCIs performed at the POTWs. The audit and PCI reports are complete and provide a thorough evaluation of the POTW's implementation of the Pretreatment Regulations. These reports provided EPA a clear understanding of each POTW's pretreatment program. SDDENR provides copies of the audit/PCI reports to EPA, as required in the MOA.

Annual Pretreatment Reports —

Annual reports are submitted to SDDENR by POTWs with approved pretreatment programs, as required in their NPDES permit conditions. These reports are evaluated by SDDENR and entered into ICIS. EPA Region 8 is copied on all pretreatment annual reports, as required in the MOA.

Evaluation of Industrial Contributions to POTWs without Approved Pretreatment Programs —

SDDENR permit writers evaluate the service area of POTWs without approved pretreatment programs during permit application and writing activities. Part F of EPA's NPDES form 2A requires permittees to provide information regarding industrial contributions from the service area that may impact the POTW by causing pass-through and interference, including the number of SIUs and CIUs. SDDENR will further evaluate these potentially significant industrial users to determine if they need to be permitted.

Control of CIUs/SIUs in POTWs without Approved Programs

EPA evaluated SDDENR's direct implementation of the Pretreatment Regulations as the Control Authority for CIUs/SIUs in POTWs without approved pretreatment programs. These control authority requirements are included in 40 CFR 403.8 of the General Pretreatment Regulations.

The components of the State's Control Authority program evaluated included the following:

- Legal Authority
- Industrial User Characterization and Inventory
- Control of CIUs/SIUs
- Inspections/Sampling
- Compliance Evaluation
- Enforcement

Legal Authority —

SDDENR has established the appropriate authority to control SIUs/CIUs in POTWs without approved pretreatment programs in Chapter 74:52:11 – *Pretreatment Regulations of the State Rules*. The Pretreatment Regulations establish the Control Authority requirements for SDDENR such as right of entry, permitting applicability, procedures, and conditions, as well as signatory and certification requirements. Section 74:52:11:03 of the Pretreatment Regulations allows SDDENR to assume approved POTW Pretreatment implementation responsibilities, as set forth in 40 CFR 403.10(e), if requested by an POTW or combination of POTWs with approved pretreatment programs. In addition, SDDENR has incorporated the General Pretreatment Regulations in §74:52:11:01, which provides control authority implementation procedures.

Industrial User Characterization and Inventory –

It appears that SDDENR has provided adequate coverage of the State in identifying, characterizing, and if necessary, controlling CIUs and SIUs in POTWs without approved pretreatment programs. The CIUs and SIUs are identified in part by querying if there are any IUs in the service area during POTW inspections by SDDENR personnel.

There are 34 IUs in POTWs without approved pretreatment programs throughout the State that are controlled with a pretreatment permit issued by SDDENR. This identification and control of IUs in POTWs without approved pretreatment program provides a good benefit to smaller POTWs in the state.

SDDENR evaluates an IU for both pretreatment and stormwater during a facility inspection. SDDENR provides the IU inspection reports to EPA and based on this ongoing review, the IU inspection reports are adequate documents. The facility inspection reports adequately characterize the facilities based on their processes, operating practices, chemical storage, wastewater generation, and wastewater management practices, including treatment, recycling, and offsite management. The inspection reports utilize digital photos to provide additional information as a supplement to the narrative inspection language. The information contained in the inspection reports provides SDDENR and the local POTWs adequate information to determine the significance of the IU and develop an appropriate control mechanism, if necessary. EPA acknowledges SDDENR's efforts in developing the inspection reports.

Control of CIUs/SIUs –

Based on a review of the statement of basis and permits for the CIUs/SIUs in POTW without approved pretreatment programs, SDDENR adequately categorizes the facilities to the appropriate Pretreatment Categorical Standard. SDDENR collaborates with the local POTWs to develop local limits and includes these in the permit, if necessary. The statement of bases and permits are well written and appears to establish appropriate control for these CIUs/SIUs in POTWs without approved Pretreatment programs.

EPA recommends SDDENR strengthen the statement of basis for each Pretreatment IU permit by providing adequate justification for representative and appropriate sampling methods based on the facility operating practices and discharge conditions.

Based on the permit review of the AMPI-Hoven Pretreatment records, SDDENR established a BOD loading limit of 496 lbs/day in the AMPI-Hoven permit. The development of an

enforceable local limit, whether incorporated in the permit from the local jurisdiction's ordinance or established as a permit-specific limit needs to follow the rigor of approval and public notice provisions. SDDENR should provide justification that documents the technical method used to develop the BOD loading limit and the approval/public notice procedures to ensure this limit is enforceable.

Inspections/Sampling –

40 CFR 403.8(f)(2)(v) of the General Pretreatment Regulations require that the Control Authority "...Inspect and sample the effluent from each Significant Industrial User at least once per year..." Based on the permit records review, it appears that SDDENR inspects its permitted SIUs about two or three times every five-year permit cycle. In addition, SDDENR performs an office permit records file review of the permitted SIU in the years that it does not physically inspect the facility. According to permit records review and information gathered during the audit, SDDENR has not sampled the permitted CIUs/SIUs. There did not appear to be any control authority monitoring results in the permit records for the permitted CIUs/SIUs.

SDDENR is required, as the control authority, to meet the inspection and sampling frequency of 1/year, as required in 403.8(f)(2)(v) of the Pretreatment regulations. The permitted CIUs/SIUs in the State of South Dakota are a significant distance from SDDENR offices. The logistics for SDDENR to meet the 1/year inspection and sampling requirement are difficult to overcome. EPA and SDDENR are in discussion regarding the need to meet this requirement. EPA is considering the benefit of using resources to assist in sampling SDDENR-permitted SIUs/CIUs. EPA provided contractor support during the Fall of 2018 to help fill the gap to sample and inspect SDDENR SIUs.

Compliance Evaluation –

Based on information gathered during the audit, the discharge monitoring reports from the permitted CIUs/SIUs in POTWs without approved Pretreatment programs are received by SDDENR, date stamped, and entered into ICIS. Data and permit records management is adequate. The permit records were well organized and were easily accessible to EPA during the audit.

Enforcement –

It appears that SDDENR has an enforcement response plan dated in 1993 to address noncompliance that may occur. In addition, it appears that the Pretreatment Coordinator has the appropriate procedures and support from other NPDES personnel to carry out either informal or formal enforcement actions. There were no enforcement cases in the permit records reviewed by EPA.

Facility inspection of AMPI-Hoven

EPA and SDDENR conducted a Pretreatment IU inspection of AMPI-Hoven in Hoven, South Dakota on July 17, 2018 as part of EPA's Pretreatment audit for direct implementation of South Dakota's Pretreatment program. EPA's oversight IU inspection consisted of an evaluation of the wastestreams generated from the unit operations and processes at the facility, including potential

from spills and slug discharges. The facility discharges to the Town of Hoven's POTW. EPA conducted a closing conference with Mr. Hageman to discuss potential findings and recommendations identified during the inspection. The findings were discussed with Mr. Hageman and the facility inspection report was completed by EPA and mailed to the SDDENR and AMPI-Hoven on July 25, 2018. Specifically, the findings from the AMPI-Hoven facility inspection are summarized below:

1. The facility has a potential for spills from the chemicals used at the facility. The caustic and acid 1,500-gallon tanks are located about 20 feet from an open trench drain. These chemicals are frequently unloaded for daily use into open containers that are manually carried to the cleaning or CIP operation within the facility. A spill from these tanks during loading and unloading has a significant potential to reach the sanitary sewer. In addition, cleaning chemical drums were observed in the milk pasteurization/separation process area that were located next to floor drains that present a significant potential to reach the sanitary sewer. The floor drains in the acid/caustic storage room and process floors are not plumbed to treatment and discharge directly to the Town's sanitary sewer.
 - a. EPA recommends that AMPI-Hoven evaluate its current spill potential from chemicals stored throughout the facility and ensure the slug discharge control plan is adequately implemented. For example, the facility's slug discharge control plan states in Section 4 that "other bulk chemicals stored in 55-gallon drums are located in a designated and restricted area to reduce risk of accidental release."
2. AMPI-Hoven is required to comply with its permit conditions, that are required and enforceable, to submit compliance reports and construction schedule reports within the deadline due dates (refer to the facility inspection report for more specific details related to the findings).

Program Strengths

- It appears that SDDENR provides adequate coverage of the State of South Dakota for the CIUs/SIUs in POTWs without approved Pretreatment programs; approximately 34 CIUs/SIUs are controlled by SDDENR. The control of these facilities provides a significant benefit to the POTWs without approved Pretreatment programs.
- It appears that SDDENR is adequately meeting the 2007 CMS goals for audit/PCI frequency for approved Pretreatment programs.
- The combined pretreatment/stormwater inspection reports for CUIs/SIUs in POTWs without approved Pretreatment programs are comprehensive and strong documents. These inspection reports provide adequate narrative detail to adequately characterize the facility. In addition, the inspection reports include digital photos that help to supplement the narrative information contained within the report.
- SDDENR's Pretreatment records are well maintained and were easily accessible to EPA during the audit.

Areas for Improvement

The Pretreatment boilerplate language for NPDES permits issued to POTWs with approved Pretreatment programs must implement the NPDES requirements at 40 CFR 122.44(j)(2)(ii) to

“Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance.” Further, SDDENR is required, as the control authority, to meet the inspection and sampling frequency of 1/year, as required in 403.8(f)(2)(v) of the Pretreatment regulations. SDDENR should strengthen the statement of basis for each Pretreatment IU permit by providing adequate justification for representative and appropriate sampling methods based on the facility operating practices and discharge conditions. SDDENR should ensure adequate follow up for corrective actions related to the findings from the AMPI-Hoven facility inspection performed by EPA on July 17, 2018.

Update

In the time between the onsite audit, SDDENR made progress on many of the above findings including:

- SDDENR started updating the permit template to include language for NPDES permits issued to POTWs with approved Pretreatment programs to implement the requirements at 40 CFR 122.44(j)(2)(ii).
- SDDENR started cross-training on pretreatment industrial user inspections. SDDENR intends to meet the commitment in the inspection plan.
- SDDENR started updating the permit template to include adequate justification for representative and appropriate sampling methods based on the facility operating practices and discharge conditions.
- SDDENR adopted the pretreatment streamlining rule.

Action Items

Essential

- The Pretreatment boilerplate language for NPDES permits issued to POTWs with approved Pretreatment programs must implement the NPDES requirements at 40 CFR 122.44(j)(2)(ii) to “Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance.”
- SDDENR is required, as the control authority, to meet the inspection and sampling frequency of 1/year, as required in 403.8(f)(2)(v) of the Pretreatment regulations.

Recommended

- SDDENR should strengthen the statement of basis for each Pretreatment IU permit by providing adequate justification for representative and appropriate sampling methods based on the facility operating practices and discharge conditions.
- SDDENR should provide justification in the statement of basis for permitted CIUs/SIUs in POTWs without an approved Pretreatment program that documents the technical method used to develop the local limit and the approval/public notice procedures to ensure the permit limit is enforceable.
- SDDENR should ensure adequate follow up for corrective actions related to the findings from the AMPI-Hoven facility inspection performed by EPA on July 17, 2018

C. Small MS4 Permit Requirements

Background

As part of this PQR, EPA did not review the state’s small MS4 General Permit SDR41##### for consistency with the Phase II stormwater permit regulations. The state’s small MS4 General Permit was issued January 1, 2003 and expired December 31, 2007. The state’s small MS4 General Permit has not been reissued since EPA’s last PQR conducted in 2012. EPA recently updated the small MS4 permitting regulations to clarify: (1) the procedures to be used when using general permits (see 40 CFR 122.28(d)); (2) the requirement that the permit establish the terms and conditions necessary to meet the MS4 permit standard (i.e., “to reduce 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

In 2018, the state began assessing fees for stormwater permits. With the implementation of permit fees, the state’s stormwater program expects to be self-funded.

Areas for Improvement

As stated in the previous PQR report, SDDENR continues to report a lack of resources (including staffing and budgetary) as the reasons for significant delays in reissuance of their small MS4 General Permit. At the time of the PQR, the state reported 0.5 FTE for MS4 program implementation.

Action Items

Essential	<ul style="list-style-type: none"> •When SDDENR reissues its small MS4 General Permit, the permit will need to comply with the updated small MS4 regulations (MS4 Remand Rule).
Recommended	<ul style="list-style-type: none"> •EPA strongly recommends SDDENR prioritize the reissuance of their small MS4 General Permit as resources improve from permit fees and staffing is increased to an adequate level.

V. REGIONAL TOPIC AREA FINDINGS

A. Whole Effluent Toxicity

Background

WET monitoring is used to quantify the aggregate toxic effect of an aqueous sample (e.g., whole effluent wastewater discharge) as measured by an organism's response upon exposure to the sample (e.g., lethality, impaired growth or reproduction). WET tests replicate the total effect and actual environmental exposure of aquatic life to toxic pollutants in an effluent without requiring the identification of the specific pollutants. WET testing is a vital component of the WQS implementation through the NPDES permitting process and supports meeting the goals of the CWA (Section 402), "...maintain the chemical, physical and biological integrity of the nation's waters."

WET tests are designed to predict the impact and toxicity of effluent discharges from point sources into waters of the U.S. WET limits developed by permitting authorities are included in NPDES permits to ensure that the state WQS for aquatic life protection are met. Routine WET monitoring (40 CFR Part 122.44(d)(1)(ii)) is included in NPDES permits to generate WET data to determine whether reasonable potential for toxicity exists. If reasonable potential exists, then a WET limit must be included in the permit (40 CFR Part 122.44(d)(1)(iv) and (v)). WET test results are also used in determining compliance with NPDES WET permit limits.

SDDENR currently implements the WET program via NPDES permits. The state has developed a WET Implementation plan (Plan), July 2013 (Latest Revision 2/24/2017). This document addresses both permitting and enforcement aspects of SDDENR WET program. It is intended to assist permit writers in developing logical and consistent permits and to serve as an administrative guide towards reasonable and appropriate enforcement.

After review, it was determined the Plan provides adequate descriptions of decisions for test methodologies, testing frequency reductions, or if decisions are made based on submitted DMR data or if laboratory bench data is reviewed.

In addition to the review of the Plan, permit files for Rapid City and the City of Pierre were reviewed.

The Rapid City permit requires chronic WET monitoring on a quarterly alternating species basis. The permit file provides analytical WET historical data for the previous permit cycle. The WET test application data for the Rapid City permit only provided data for one test species. No violations of the established WET permit limits were noted. The permit specifies the required dilution series and dilution water, as well as the required test temperature and test acute toxicity end point.

SDDENR uses alternating WET species after the facility has established a pattern of no toxicity. Alternating WET species is used to reduce monitoring requirements when there is no history of toxicity. EPA recommends that the SDDENR require all facilities to perform testing on two species concurrently. The species utilized in WET testing are sensitive to different parameters. The alternating species regimen does not provide complete information on the facilities' effluent.

The City of Pierre permit requires acute testing on a quarterly basis. The statement of basis lacks information on the permit writers decision making process and references the SDDENR *Guidance Document for Whole Effluent Toxicity* for permit decisions. It is unclear if this document is the same as the Plan.

The Pierre statement of basis lacks discussion of a history of compliance for WET . It was unclear how the determination for current WET limitations were established. The permit does specify the required dilution series and dilution water, as well as the required test temperature and test chronic end point.

Program Strengths

The updated Plan provides permit writers with guidance for making WET permitting determinations. Permit requirements provide reproduceable controls for WET laboratories resulting in a reduction of test variability.

Areas for Improvement

The Plan requires an acute vs. chronic determination based on the ratio of critical instream flow to effluent design flow. The Plan’s prescribed ratio for the determination is <10:1. EPA’s TSD recommends that this determination be based on <100:1. EPA recommends SDDENR modify the Plan’s ratio to be consistent with the TSD ratio. EPA recommends SDDENR incorporate laboratory visual findings into all reviews to ensure that no chronic effects are being misreported bypass/fail laboratory assessments.

The statement of basis for the City of Pierre does not provide adequate descriptions on the permit writer’s rationale for WET determinations. Records do not provide the WET data used to make final permit determinations. Statements of basis and the administrative records of permits need to clearly describe and provide documentation of permitting decisions .

Permit writers must provide more information on how WET reasonable potential is determined, justification for species modifications, and how testing reductions are determined and approved.

Update

In the time between the onsite audit, SDDENR made progress on many of the above findings including:

- SDDENR started requiring lagoon systems with metal finishing industries to do acute WET testing since the discharges are short term.
- SDDENR was removing WET pass/fail from permits and is incorporating TUa and TUc limits.
- SDDENR was working on changes to the statement of basis templates to address the other action items.

Action Items

Essential	<ul style="list-style-type: none"> •Permit writers must provide more information on how WET reasonable potential is determined, justification for species modifications, and how testing reductions are determined and approved.
Recommended	<ul style="list-style-type: none"> •SDDENR should modify SDDENR's WET Plan’s dilution ratio to the TSD ratio •SDDENR should incorporate laboratory visual findings into all reviews to ensure that no chronic effects are being misreported by pass/fail laboratory assessments.

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 October 1-5, 2012. As discussed previously, during the 2012-2017 PQR cycle, EPA referred to action items that address deficiencies or noncompliance with respect to federal regulations as “Category 1”. EPA is now referring to these action items going forward, as Essential. In addition, previous PQR reports identified recommendations to strengthen the state’s program as either “Category 2” or “Category 3” action items. EPA is consolidating these two categories of action items into a single category: Recommended.

Table 1. Essential Action Items Identified During 2012 PQR

Program Area	Action Item Title	Response Provided by the State
Basic Facility Information and Permit Application	SDDENR must ensure applications include data requirements consistent with EPA regulations at 40 CFR 122.21 as part of the application process.	(In progress) Applications are being updated in accordance with the NPDES Updates Rule.
	SDDENR should continue to update boilerplate documents used and permit application for developing the permit and statement of basis. Standard conditions in the boilerplates must be consistent with federal regulations as required by 40 CFR 122.41 and 122.42. Specifically, SDDENR approach to bypass must comport with federal regulations as referenced above. Additionally, boilerplate language should direct discussion of facility operations and its relationship to pertinent ELGs.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Technology-based Effluent Limitations	Permit documentation must include the basis and/or rationale for all technology-based and water-quality based effluent limitations.	(Resolved) SDDENR continues to improve the level of detail in describing the rationale for applying technology-based effluent limitations.

Program Area	Action Item Title	Response Provided by the State
	<p>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 for new sources. 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 BPJ in accordance with the criteria outlined at 40 CFR 125.3(d)</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
<p>Water Quality-Based Effluent Limitations</p>	<p>SDDENR must ensure that a robust RP analysis was undertaken and document this process in the Statement of Basis. The analysis must include a comprehensive assessment of pollutants of concern based on knowledge of the facility, all available facility data including application and DMR data, and industry information; if RP is determined, a limit must be established as required by 40 CFR 122.44(d)(1)(i)-(iv).</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>SDDENR must ensure the permit record includes evaluations of background pollutant concentrations and available dilution for the facility to evaluate RP and develop effluent limitations that will meet both numeric and narrative water quality criteria.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>

Program Area	Action Item Title	Response Provided by the State
Special and Standard Conditions	SDDENR should continue to work with EPA to ensure the requirements of the federal standard conditions for bypass are fully captured in all SWD permits.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Nutrients	In the case where a facility is discharging to an impaired water body, the statement of basis should discuss whether the permittee will discharge any pollutants that may cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. Specific to nutrients, this includes impacts of nutrients on response variables with established numeric and/or narrative water quality criteria as established under 40 CFR 122.44(d).	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Pretreatment	SDDENR must update its pretreatment legal authority in §74:52:11 to include the 13 required streamlining provisions listed in §3.2.1. However, EPA strongly recommends that the SDDENR incorporate all Pretreatment Streamlining Rule updates to allow the local Pretreatment programs to adopt the required and optional streamlining provisions.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
	The Pretreatment boilerplate language for NPDES permits issued to POTWs with approved Pretreatment programs must implement the NPDES requirements at 40 CFR 122.44(j)(2)(ii) to “Provide a written technical evaluation of the need to revise local limits	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.

Program Area	Action Item Title	Response Provided by the State
	<p>under 40 CFR 403.5(c)(1), following permit issuance or reissuance.”</p>	
	<p>The SDDENR is required, as the control authority, to meet the inspection and sampling frequency of 1/year, as required in 403.8(f)(2)(v) of the Pretreatment regulations.</p>	<p>(Not started) SDDENR has stated “This requirement is not an efficient use of manpower and makes no sense for the majority of SIUs regulated by the SDDENR”.</p>
	<p>After the Streamlining Update of the State Pretreatment Regulations in §74:52:11, the SDDENR should evaluate the Pretreatment boilerplate language to ensure it adequately implements the Pretreatment Streamlining required provisions.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
<p>Stormwater</p>	<p>Reissue the MS4 General Permit as soon as possible as it has been expired for over five years. Evaluate whether municipalities have been moving forward with program implementation consistent with the “Maximum Extent Practicable” (MEP) standard.</p>	<p>(In progress) SDDENR has filled the vacancies in the stormwater program and is working to address the backlogged general permit.</p>
<p>Whole Effluent Toxicity (WET)</p>	<p>The procedure used and the results obtained for the WET RP determination must be adequately stated in the statement of basis because regulations at 40 CFR 122.44(d)(1) require RP analyses on all discharges to waters of the U.S.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>Failures of additional tests conducted during accelerated testing are permit violations;</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>

Program Area	Action Item Title	Response Provided by the State
	Permits do not indicate that WET failures result in RP; once RP is established (e.g. multiple WET failures in the previous permit term) limits must be established in the permit upon renewal [40 CFR 122.44(d)(1)(iii & iv)]. Limits must be established either for WET or for the pollutant identified as causing toxicity. [40 CFR 122.44(d)(1)(v & vi)].	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.

VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

This section provides a summary of the recommendations from the last PQR, conducted October 1-5, 2012, 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 2012 PQR

Program Area	Action Item Title	Response Provided by the State
Basic Facility Information and Permit Application	SDDENR should continue to update boilerplate documents used for developing the permit and statement of basis. Boilerplate language should address stream impairment status and TMDLs.	Resolved On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Monitoring and Reporting	Permits should include specific analytical methods for certain parameters (e.g., mercury and cyanide). SWD should specify analytical methods for certain parameters to ensure methods are sufficiently sensitive to gather data	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.

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Program Area	Action Item Title	Response Provided by the State
	sufficient to support permitting and compliance assessment decisions.	
	SDDENR should continue to work with permittees to ensure adequate data are submitted during the permit term to provide for RP evaluation.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Special and Standard Conditions	SDDENR should consistently include language in SWD permits and statements of basis indicating if a pretreatment program is required.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Administrative Process (including Public Notice)	SDDENR should consider maintaining a hard copy of the previous permit within the current permit record, for easier reference.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Documentation (including Fact Sheet)	SDDENR should work with the Region to continue developing an implementation procedures document to accompany the RP spreadsheet tool. A clear set of instructions would support clearer documentation of a water quality impacts assessment and the basis for effluent limitation development.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
	SDDENR should work with the Region to evaluate potential improvements upon SDDENR’s current template documents, including development of a more robust discussion and documentation for effluent limitation development, especially water quality assessments and WQBEL development, consistent with requirements of 40 CFR 124.8 and 124.56.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.

Program Area	Action Item Title	Response Provided by the State
	<p>SDDENR should consider additional modifications to their template documents so that a more developed discussion of industrial facility information is provided in the permit record that would enable a clearer understanding of the applicability of technology-based standards (e.g., ELGs) and water quality-based standards.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
<p>Nutrients</p>	<p>The Statement of Basis should establish the impairment status of the receiving water body.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>While monitoring data for total kjeldalh nitrogen (TKN), nitrate/nitrite and total phosphorus must be included as part of the facility renewal application package, SDDENR should consider additional self-monitoring requirements for TKN, nitrate/nitrite and total phosphorus during the permit cycle for facilities discharging to waters with nutrient or nutrient related impairments (DO, chlorophyll <i>a</i>).</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>In the absence of numeric nutrient criteria, SDDENR should use its narrative criteria to ensure that discharges are not impacting aquatic species, or causing or contributing to downstream water quality impairments.</p>	<p>(Resolved) SDDENR has been evaluating receiving streams for impairment of the narrative nutrient criteria and to date has not found any impairments due to point sources.</p>
<p>Pretreatment</p>	<p>EPA strongly recommends the SDDENR commit to decreasing the permit backlog percentage for the Pretreatment permits.</p>	<p>(Resolved) SDDENR has one pretreatment permit that has been administratively continued since December 31, 2018. All others are currently effective.</p>

Program Area	Action Item Title	Response Provided by the State
	<p>The SDDENR should evaluate updating the reference date of Article 74:52, Chapter 10 of the State Rules that establishes the Effluent Guidelines and Standards for industrial users in nonapproved programs.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>The fact sheets for the NPDES permits issued to POTWs without approved Pretreatment programs should provide justification whether a Pretreatment program is required or not.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>EPA strongly recommends the SDDENR perform an adequate compliance evaluation during the receipt of the discharge monitoring reports to ensure the necessary enforcement response is timely.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>The SDDENR should evaluate its resource commitment to the Pretreatment program. It appears that the SDDENR is adequately implementing its responsibilities as an Approval Authority but the SDDENR has a backlog of Pretreatment IU permits and is not adequately implementing the Pretreatment regulations as a Control Authority.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>
	<p>EPA recommends the SDDENR strengthen the statement of basis for each Pretreatment IU permit by providing adequate justification for representative and appropriate sampling methods based on the facility operating practices and discharge conditions.</p>	<p>(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.</p>

Program Area	Action Item Title	Response Provided by the State
	EPA strongly recommends the SDDENR evaluate collaboration with the local POTWs to share the inspection and sampling duties of CIUs/SIUs and meet the required inspection and sampling frequencies of 1/year, as required in the Pretreatment regulations.	(Resolved) SDDENR has evaluated this several times and determined that the local POTWs do not have the technical expertise for this. SDDENR has evaluated making the CIUs middle tier but the allowed discharge flows are so low that none qualify. SDDENR has evaluated NSCIU status. One CIU is considering this route. SDDENR indicated it does not make economic sense for the others.
Whole Effluent Toxicity (WET)	A definitive concentration series must be clearly established that accounts for the receiving water concentration which is based on low flow conditions and is less variable over time.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
	Permits must provide detail and greater clarity regarding what is required of the permittee in terms of TRE-TIE plan, schedule, reporting, etc., so that the expectations of the permitting authority of the TRE study are adequately outlined to the permittee.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
	In the case that toxicity is still observed after the resample, consider increasing frequency of accelerated acute testing; current monthly requirements may not be frequent enough to evaluate impacts to the receiving water from acute toxicity.	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Technology-based Effluent Limitations	SDDENR should ensure the permit record demonstrates the permit writer considered applicable ELGs. Additionally, SDDENR should consider developing	(In progress) SDDENR is in the process of developing TBEL language for the statement of basis industrial template. This should be completed by the end of August 2019.

Program Area	Action Item Title	Response Provided by the State
	boilerplate language for statements of basis to address the applicability of ELGs to industrial facilities.	
Water Quality-based Effluent Limitations	SDDENR would benefit from developing an implementation procedures document to accompany the RP spreadsheet tool that SDDENR already uses, to guide SWD permit writers through the process of identifying pollutants of concern, evaluating monitoring data, defining RP, and documenting WQBEL development. SDDENR should continue to work with EPA to evaluate potential improvements upon SDDENR's current RP spreadsheet tool (e.g., ensure calculations are consistent with EPA guidance and the method for evaluation of censored data is consistent).	(Resolved) On August 2, 2019 SDDENR indicated they have implemented this recommendation.
Stormwater	SDDENR could create promotional materials for administrative law judges and municipal officials to educate them on the significance of stormwater concerns, so that the State is not limited in its ability to pursue enforcement.	(Not started) SDDENR will take this suggestion into consideration.
	Target efforts to ensure that permits can be reissued in a timely manner. The State plans to do more with less, utilizing electronic systems and G.I.S. to focus inspections and oversight.	(In progress) The Surface Water Quality Program has added a new FTE to do GIS work. The position will be filled by an existing SDDENR employee and he will begin his duties within the program on August 9, 2019.

VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE

This section provides a summary of the main findings of the July 2018 PQR and provides proposed action items to improve SDDENR 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. The permitting authority is expected to address these action items in order to come into compliance with federal regulations. As discussed earlier in the report, prior PQR reports identified these action items as Category 1. Essential Actions are listed in Table 3 below.
- **Recommended Actions** - Proposed “Recommended” action items are recommendations to increase the effectiveness of the state’s or Region’s NPDES permit program. Prior reports identified these action items as Category 2 and 3. Recommended Actions are listed in Table 4 below.

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

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

Topic	Action(s)
Permit Application Requirements	<ul style="list-style-type: none"> SDDENR must ensure applications include data requirements consistent with EPA regulations at 40 CFR 122.21 as part of the application process.
Standard and Special Conditions	<ul style="list-style-type: none"> SDDENR must ensure that standard conditions in NPDES permits include conditions that address sludge.
Administrative Process	<ul style="list-style-type: none"> Public notices must include a brief description of the activity described in the permit application or draft permit, in accordance with 40 CFR 124.10(d)(iii).
Administrative Record and Fact Sheet	<ul style="list-style-type: none"> SDDENR must ensure that permit administrative records contain a copy of the draft permit, consistent with 40 CFR 124.9. SDDENR must ensure that public notice documents contain the required elements outlined in 40 CFR 124.10, including a brief description of the business activity, required at 40 CFR 124.10(d)(iii).
Nutrients	<ul style="list-style-type: none"> Develop a standard procedure for implementing the narrative water quality standards in NPDES permits for the limitation of nutrients. Long-Term, update the water quality standards to include numeric limits for nutrients in lakes, reservoirs, rivers and streams.
Pretreatment: Food Processing Sector	<ul style="list-style-type: none"> The Pretreatment boilerplate language for NPDES permits issued to POTWs with approved Pretreatment programs must implement the NPDES requirements at 40 CFR 122.44(j)(2)(ii) to “Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance.” SDDENR is required, as the control authority, to meet the inspection and sampling frequency of 1/year, as required in 403.8(f)(2)(v) of the Pretreatment regulations.
Municipal Separate Storm Sewer Systems (MS4s)	<ul style="list-style-type: none"> When SDDENR reissues its small MS4 General Permit, the permit will need to comply with the updated small MS4 regulations (MS4 Remand Rule).
Whole Effluent Toxicity	<ul style="list-style-type: none"> Permit writers must provide more information on how WET reasonable potential is determined, justification for species modifications, and how testing reductions are determined and approved.

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

Topic	Action(s)
Facility Information	<ul style="list-style-type: none"> SDDENR should update permit boilerplate language and templates to provide a clear indication of monitoring locations.
Permit Application Requirements	<ul style="list-style-type: none"> A number of permit records lacked analytical results for required pollutant scans. SDDENR should make a link between discharger monitoring data that is electronically available and the administrative record.
Reasonable Potential	<ul style="list-style-type: none"> SDDENR could consider specifying the timeframe of data evaluated in the RPA, in the RPA discussion attachment to the statement of basis.
Documentation of Effluent Limitations Development	<ul style="list-style-type: none"> SDDENR could consider specifying the timeframe of data evaluated in the RPA, in the RPA discussion attachment to the statement of basis. (same as Reasonable Potential comment).
Establishing Monitoring and Reporting Requirements	<ul style="list-style-type: none"> SDDENR should ensure that permits clearly identify monitoring locations. SWD permits should include monitoring requirements for use of sufficiently-sensitive methods that applies to all pollutants.
Standard and Special Conditions	<ul style="list-style-type: none"> SDDENR should ensure that the standard condition language addressing other noncompliance is clear and consistent with federal standard conditions.
Administrative Record and Fact Sheet	<ul style="list-style-type: none"> SDDENR should consider including in the administrative record a connection to the electronic data—for example, include a note to the file that indicates that data available in ICIS were downloaded and evaluated for a certain timeframe, during permit development. The administrative record would be strengthened with inclusion of a clear statement (in the cover letter transmitting the final permit) indicating whether comments were received during the public comment period or if a public hearing was requested.
Nutrients	<ul style="list-style-type: none"> Coordinate with EPA in developing and updating numeric water quality standards. Develop and adopt water quality standards for dissolved oxygen in Class 9 waters at Administrative Rules chapter 74:51:01:52. Develop and adopt water quality standards for Chlorophyll <i>a</i>. Develop and adopt numeric effluent limitations, for nutrients to accomplish the goals of the narrative water quality standards contained in ARSD 74:51:01.

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<p>Pretreatment: Food Processing Sector</p>	<ul style="list-style-type: none"> • SDDENR should strengthen the statement of basis for each Pretreatment IU permit by providing adequate justification for representative and appropriate sampling methods based on the facility operating practices and discharge conditions. • SDDENR should provide justification in the statement of basis for permitted CIUs/SIUs in POTWs without an approved Pretreatment program that documents the technical method used to develop the local limit and the approval/public notice procedures to ensure the permit limit is enforceable. • Ensure adequate follow up for corrective actions related to the findings from the AMPI-Hoven facility inspection performed by EPA on July 17, 2018.
<p>Municipal Separate Storm Sewer Systems (MS4s)</p>	<ul style="list-style-type: none"> • EPA strongly recommends the state prioritize the reissuance of their small MS4 General Permit as resources improve from permit fees and staffing is increased to an adequate level.
<p>Whole Effluent Toxicity</p>	<ul style="list-style-type: none"> • SDDENR should modify SDDENR's WET Plan's dilution ratio to the TDS ratio. • SDDENR should incorporate laboratory visual findings into all reviews to ensure that no chronic effects are being misreported by pass/fail laboratory assessments.