

**FINAL**

**Region 8 NPDES Program and Permit Quality  
Review  
Utah**

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## Executive Summary

The United States Environmental Protection Agency, Region 8 (EPA) performed a remote National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Review (PQR) of the Utah Division of Water Quality (UDWQ) NPDES (UPDES) program on February 22–26, 2021. At the time of the PQR, Utah administered 124 individual NPDES permits and, as February 22, 2021, 96 percent of Utah’s permits were current.

The PQR examined 11 permits for discharges in Utah along with 1 general permit issued by the UDWQ, several UDWQ 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- Total Maximum Daily Load (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
- Previously Abandoned Mines.

Overall, the PQR revealed that the UDWQ-issued permits and fact sheets-statements of basis (FSSOB) reviewed by EPA were consistently well organized and adhered to a majority of the federal regulatory requirements. However, EPA identified several concerns including: some permit applications lacked appropriate signatures and analytical data; one permit was administratively continued after the permit expired; and FSSOB lacked sufficient discussion for certain permit conditions.

As part of its NPDES program implementation, UDWQ continually develops internal permitting protocols and standard operating procedures to support development of defensible permits and to provide permit writers with a solid foundation for permitting procedures. Since some of these deficiencies appeared to stem from the template language and standard processes used, EPA has recommended that UDWQ update the permit template to include all federal standard conditions requirements, including the use of sufficiently sensitive analytical methods. EPA has also recommended that UDWQ continue to update and develop protocols and standard operating procedures (e.g., to address application requirements), further develop justifications for permit conditions, and modify all applicable UDWQ FSSOB template documents to ensure there is adequate documentation and understanding for permit decisions.

In addition to the items listed in the paragraphs above, the report provides an overview of the UDWQ program and identifies specific areas where EPA and UDWQ can work together to continue to strengthen permit language and documentation in UPDES permits.

UDWQ reviewed and provided comments on the draft PQR report on February 28, 2023. UDWQ and EPA discussed the comments and agreed with the final draft PQR report’s findings and recommendations. Upon receipt of the final PQR report, UDWQ has indicated they will review and work to address the proposed action items.

## I. PQR BACKGROUND

The National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Reviews (PQRs) are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, EPA promotes national consistency, and identifies successes in implementation of the NPDES program as well as opportunities for improvement in the development of NPDES permits. EPA previously conducted a PQR of the Utah NPDES permitting program on April 21–25, 2014. The PQR summary report is available at: [https://www.epa.gov/sites/production/files/2015-11/documents/utah\\_pqr\\_report\\_final.pdf](https://www.epa.gov/sites/production/files/2015-11/documents/utah_pqr_report_final.pdf). As a result of that PQR, the evaluation team proposed various action items to improve the UPDES permitting program. As part of the current PQR, EPA requested updates from Utah on the progress on those action items. Of the 10 action items identified during the last PQR as being Essential<sup>1</sup> tasks, 4 have been resolved and the remainder represent actions that are either longer-term activities or lower-level actions which the Utah Division of Water Quality (UDWQ) is still addressing. In addition, EPA identified Recommended action items to improve Utah’s program; UDWQ has chosen to implement some of them and will not be implementing the remainder of the Recommended actions. Sections VI and VII of this report contain a detailed review of the progress on action items identified during the last PQR.

During this review, the evaluation team proposed action items to improve the UPDES permit program. The action items are identified within sections III, IV, and V of this report and are divided into two categories to identify the priority that should be placed on each item and facilitate discussions between EPA and UDWQ.

- **Essential Actions** - “Essential” action items address noncompliance with respect to a federal regulation. EPA has provided the citation for each Essential action item. The permitting authority must address these action items in order to comply with federal regulations.
- **Recommended Actions** - “Recommended” action items are recommendations to increase the effectiveness of the state’s or Region’s NPDES permit program.

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

EPA’s PQR review team, consisting of three regional staff and one Headquarters (HQs) contractor staff, conducted a review of the UPDES permitting program. The PQR was conducted remotely, meaning a review of materials was conducted off-site, with materials UDWQ was able to provide electronically. Further, the remote PQR included interviews and discussions conducted via several conference calls. An opening interview was held on February 22, 2021, a

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<sup>1</sup> 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.

discussion with UDWQ staff regarding specific permit questions on February 25, 2021, and a closing meeting on February 26, 2021.

The Utah PQR included reviews of core permit components and national and regional topic areas, as well as discussions between the PQR review team and UDWQ staff addressing their program status and permit issuance process. The permit reviews focused on core permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports or documents that provide the basis for the development of the permit conditions and related administrative process. The PQR also included conversations between EPA and the state on program status, the permitting process, responsibilities, organization, staffing, and program challenges the state is experiencing.

A total of 11 permits were reviewed as part of the PQR. Of these, 10 permits were reviewed for the core review, 7 permits were reviewed for national topic areas, and 1 permit was reviewed for the regional topic area. 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*<sup>2</sup> to evaluate the Utah 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 for the NPDES program were: Permit Controls for Nutrients in Non-Total Maximum Daily Load (TMDL) Waters, Small Municipal Separate Storm Sewer System (MS4) Permit Requirements, and Effectiveness of Publicly Owned Treatment Works (POTW) NPDES Permits with Food Processor Contributions.

Regional topic area reviews target regionally-specific permit types or particular aspects of permits. The regional topic area selected by EPA Region 8 was permitting for abandoned mine sites. These reviews provide important information to UDWQ, EPA Region 8, EPA HQ, and the public on specific program areas.

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

## II. STATE PROGRAM BACKGROUND

### A. Program Structure

At the time of the PQR in February 2021, UDWQ, within the Utah Department of Environmental Quality (UDEQ), administered the UUPDES Program. EPA approved the UPDES program for Utah (including federal facilities, pretreatment, and general permits) on July 7, 1987.

The main UDWQ office is located in Salt Lake City, Utah. Staff in the main office implemented all the program's responsibilities, which included drafting permits, conducting facility inspections, developing enforcement actions, reviewing facility compliance, managing permit files and information systems and databases. UDWQ did not have field offices; however, there were four District Engineers located in various regions of the state co-located with local health department offices. District Engineers provided general assistance as requested, responded to complaints, and conducted inspections of permittees covered under general UPDES permits.

UDWQ employed 12 full-time permit writers across both the individual and general permitting teams; 6 permit writers supported each permitting team. UDWQ permit writers received training through on-the-job training, internal mentoring by senior team members, and through attendance at EPA's NPDES Permit Writers' Course. Additional UDWQ staff that supported permit development included program area specialists from the sections for standards and technical services, engineering, and watershed protection. A wasteload allocation (WLA) writer is part of the Water Quality Standards Unit and they prepared a wasteload analysis for the permit writer to consider during permit development. UDWQ assigned permits to staff based on facility type, size, and date of permit expiration, as well as a consideration of overall workload balance. In addition, permit assignments were based on geography (i.e., grouped by receiving waters and watershed) to provide efficiency in permit development. Permits were assigned to and retained by a specific permit writer across permit cycles unless the supervisor reassigned the permit.

UDWQ used an electronic document database ("D2" or "eDocs") to receive permit applications and house permit information and related documents. UDWQ also used an internal water quality database called the Ambient Water Quality Monitoring System (AWQMS), as a source for ambient data, and EPA's Assessment, Total Maximum Daily Load Tracking and Implementation System (ATTAINS) database for impaired waters and TMDL information. Additionally, UDWQ uses EPA's Integrated Compliance Information System for NPDES (ICIS-NPDES) to manage facility discharge monitoring data.

UDWQ employed permit and fact sheet templates to facilitate consistent permit development and presentation of rationale and documentation for permit conditions; staff updated templates on a routine basis to ensure current practices were represented. The PQR review team reviewed UDWQ's permit template and noted that the template included the following sections: Description of Discharge Points, Narrative Standard, Specific Limitations and Self-Monitoring Requirements, Reporting of Monitoring Results. Sections included boilerplate text and prompts for permit writers to update language inserted as document reviewers' comments. In addition, the permit template included boilerplate text for Whole Effluent

Toxicity (WET) requirements and compliance schedules. The permit template also included permit sections II, III, and IV that addressed requirements for industrial pretreatment, biosolids, and storm water, respectively. The permit template also included boilerplate language for permit standard conditions. UDWQ permit writers used a standard spreadsheet to evaluate reasonable potential (RP) and develop water quality-based effluent limitations (WQBELs). UDWQ also developed the *Reasonable Potential Analysis Guidance* as an internal resource for permit writing staff.

UDWQ conducted an internal review of draft permits through multiple levels of review. Draft permit documents were distributed to the WLA analyst and specialists in biomonitoring, pretreatment, and stormwater for a first level of review. The draft permit documents were then sent to the individual permit manager for review and then to the permittee for comments. The permit writer edited the permit documents as necessary, then routed the revised permit documents to the Assistant Director and Director for review, just prior to distribution for the public comment period.

UDWQ permit writers maintained electronic files for permit development documentation, permit correspondence, certain monitoring and reporting data, and compliance records in UDEQ's D2/eDocs system. In addition, monitoring and reporting data and compliance records were housed in NetDMR and ICIS-NPDES.

## B. Universe and Permit Issuance

At the time of the PQR in February 2021, UDWQ administered a universe of 126 individual UPDES permits. Of these permits, 66 were POTWs (32 major and 34 non-major), 58 were non-municipal facilities (14 major and 44 non-major), and 2 were stormwater permits. UDWQ reported that one major and four non-major individual permits were administratively continued, meaning they were 96 percent current for individual permits.

In addition to these individual permits, UDWQ administered general permits covering 7,641 permittees as shown below:

| NPDES Permit No. | Permit Name/Category   | Number of Permittees |
|------------------|--|----------------------|
| UTG040000        | General Permit for Coal Mining Operations  | 12                   |
| UTG080000        | Concentrated Animal Feeding Operations (CAFO)  | 5                    |
| UTG130000        | General Permit for Concentrated Aquatic Animal Feeding Operations                      | 12                   |
| UTR090000        | General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) | 94                   |
| UTG640000        | General Permit for Drinking Water Treatment Plants                                     | 45                   |
| UTG070000        | General Permit for General Construction Dewatering or Hydrostatic Testing              | 98                   |
| UTG170000        | General Permit for the Application of Pesticides                                       | 77                   |

| NPDES Permit No. | Permit Name/Category   | Number of Permittees |
|------------------|--|----------------------|
| UTG790000        | General Permit for the Discharge of Treated Ground Water   | 6                    |
| UTRH00000        | UPDES Storm Water General Permit for Construction Activities - Common Plan Permit (an acre or less and on a single lot)  | 1,884                |
| UTRC00000        | UPDES Storm Water General Permit for Construction Activities (an acre or more, including less than an acre if it is part of a common plan of development or sale that is over an acre) | 4,461                |
| UTR00000         | General Multi-Sector Industrial Storm Water Permit: UPDES Permits  | 947                  |

According to the responses provided by UDWQ during the PQR, two general permits were administratively continued; therefore, the program is 82 percent current for general permits.

Significant industries within Utah included mineral and oil extraction and refining of extracted material.

### C. State-Specific Challenges

UDWQ did not indicate the agency was facing specific challenges affecting the UPDES program.

### D. Current State Initiatives

During the PQR, UDWQ described their initiative to issue UPDES permits for abandoned mine drainage from legacy mines, which was a challenging and complex process involving various stakeholders. This is further discussed in the Regional Topic Area in Section V of this PQR.

## III. CORE REVIEW FINDINGS

### A. Basic Facility Information and Permit Application

#### 1. Facility Information

##### *Background*

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

##### *Program Strengths*

The permits reviewed included permit issuance, effective, and expiration dates, authorized signatures, and specific authorization-to-discharge information. Fact Sheets-Statements of Basis (FSSOB) contained a sufficient description of the facility operations and the wastewater



treatment processes. In addition, FSSOB provided useful facility and outfall location information relative to receiving waters, including specific receiving water body names, downstream waters, and waterbody classifications.

### *Areas for Improvement*

In certain FSSOB, outfall locations were described, but were identified using the same latitude and longitude coordinates as those listed for the facility location; they were not specific in identifying the outfall location.

### *Action Items*

#### Essential

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

#### Recommended

- UDWQ should ensure that specific outfall locations are clearly identified in UPDES permits and FSSOB.

## **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 assessed whether appropriate, complete, and timely application information was received by the state and used in permit development.

UDWQ used state forms for all individual permit applications which were based on EPA's application forms. UDWQ last updated the state application forms in 2020. UDWQ's website<sup>3</sup> housed application forms.

UDWQ sent out application reminder letters to permittees one year prior to the permit expiration date to notify permittees of the application requirements, appropriate forms for the facility to complete identified via web links to the specific application forms, and identified the UDWQ contact if assistance is needed to complete the application. The application reminder letter also indicated the application submission deadline, which was six months prior to permit expiration.

<sup>3</sup> <https://deg.utah.gov/water-quality/updes-permitting-program#individual>

### *Program Strengths*

Applications for all permits reviewed were readily available. Application forms for industrial facilities were clearly organized, consistent with federal application requirements, and included the requirement for applicants to submit data from sampling conducted according to sufficiently sensitive test procedures approved under 40 CFR Part 136.

### *Areas for Improvement*

One application for a POTW was signed four days prior to permit expiration, stamped received by UDWQ two days after permit expiration, and the permit was administratively continued. It was unclear whether UDWQ granted permission to the permittee to submit the permit renewal application at a later date. Utah Administrative Code R317-8-3 (Application Requirements), 3.1(4)(a) indicates that *“Any POTW with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.”* This requirement is consistent with 40 CFR 122.21(d)(1). The review of certain applications for industrial facilities (UT0022896 and UT0000281) indicated that applicants did not meet the reporting requirements contained in 40 CFR 122.21(g)(7)(iii), for reporting quantitative data for biochemical oxygen demand (BOD), chemical oxygen demand (COD), and total organic carbon (TOC), and a waiver for those reporting requirements was not evident in the permit records reviewed. Certain applications reviewed (UT0025569, UT0000175, and UT0023205) lacked signatures consistent with the signatory requirements of 40 CFR 122.22(a). In addition, one application (UT0026140) appeared to lack information for one of the permitted outfalls.

### *Action Items*

#### Essential

- UDWQ must ensure that permittees submit permit renewal applications consistent with the timelines established in UPDES regulations contained in the Utah Administrative Code R317-8-3 (Application Requirements), 3.1(4)(a) and 40 CFR 122.21(d)(1).
- UDWQ must ensure that industrial applicants provide all data required by 40 CFR 122.21(g)(7).
- UDWQ must ensure that applications are signed consistent with the requirements of 40 CFR 122.22(a).
- UDWQ must ensure that applications present information for all permitted outfalls prior to issuing a permit, consistent with 40 CFR 122.21(e).

#### Recommended

- The PQR did not identify any recommended actions for this PQR component.

## **B. Developing Effluent Limitations**

### ***1. Technology-based Effluent Limitations***

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

#### *TBELs for POTWs*

##### *Background and Process*

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

UDWQ established effluent limitations for BOD and TSS in municipal permits to facilities subject to federal secondary treatment standards. Utah Administrative Code R317-1-3, 3.2 established requirements for compliance with secondary treatment standards. In addition, section 3.3 of R317-1-3 provides technology-based phosphorus effluent limits (TBPELs) for controlling phosphorus discharges from non-lagoon discharges; section 3.3 required attainment of the TBPEL by January 1, 2020.

##### *Program Strengths*

UDWQ's municipal NPDES permits included effluent limitations for BOD and TSS in appropriate units and forms and based on federal secondary treatment standards. The permit fact sheets included a sufficient discussion of the wastewater treatment processes that provided an understanding of the basis for the effluent limitations for BOD and TSS. UDWQ's permits and fact sheets clearly identified the applicable effluent limitations and regulatory basis for effluent limitations for BOD and TSS.

##### *Areas for Improvement*

One permit reviewed (UT0021911) provided a variance from the minimum percent removal requirement and the fact sheet cited the basis for relief from the requirement as low influent concentrations due to excessive inflow and infiltration (I&I). The last PQR identified this same finding; the report indicated the variance was inconsistent with 40 CFR 133.103(d), which specifically prohibits "excessive I&I" as a basis for granting relief from the minimum removal requirement.

*Action Items*

## Essential

- UDWQ must ensure permittees that were granted relief from effluent limitations based on secondary treatment standards (i.e., minimum percent removal) satisfied the regulatory requirements in 40 CFR 133.103(d) for less stringent requirements.

## Recommended

- The PQR did not identify any recommended 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).

UDWQ's FSSOB identified the applicable ELGs and permits appeared to apply the most stringent applicable TBEL based on ELGs. UPDES FSSOB did not provide details on how TBELs based on ELGs were calculated, especially where they were production-based TBELs. Certain UDWQ permits included a BPJ-based TBEL (daily maximum) for oil and grease of 10 mg/L. The FSSOB stated that the oil and grease limitation is consistent with other industrial facilities statewide; however, did not provide the basis for the 10 mg/L limitation.

*Program Strengths*

UDWQ appropriately established TBELs in non-municipal UPDES permits in the correct form and units. In addition, UPDES FSSOB clearly identified the regulatory basis for TBELs for non-municipal discharges.

*Areas for Improvement*

UDWQ's FSSOB lacked consistent discussion of facility categorization (e.g., BAT, BCT, and NSPS) and calculations for TBELs, especially production-based TBELs, as they apply to implementing ELGs.

*Action Items*

## Essential

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

## Recommended

- UDWQ should provide greater detail in the FSSOB discussions of facility categorization and TBEL calculations as they apply to the implementation of ELGs.

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

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

The PQR for UDWQ 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*

UDWQ permit writers conducted a reasonable potential analysis (RPA) in accordance with UDWQ's September 2015 RPA guidance document and developed WQBELs for the permitted

discharge. Permit writers also identified the receiving stream, applicable water quality criteria and TMDLs, and evaluated facility monitoring data. The FSSOB and the WLA attachment contained discussions of this information and clearly identified receiving streams, applicable water quality criteria, and described the time frame of discharge monitoring data considered. UDWQ permit writers evaluated RP for WET based on UDWQ's UPDES Permit and Enforcement Guidance Document for WET ("WET Guidance", Draft v. 18, dated May 2017). The WET Guidance states that POTWs with a pretreatment program or a design flow greater than 1 million gallons per day (MGD) must submit WET testing results as part of the application process *"and are therefore presumed to have reasonable potential to discharge toxics. Other factors considered are the prevalence of commercial and categorical industrial users that discharge priority pollutants."* UDWQ considers additional factors in the determination of whether a permitted discharge demonstrates reasonable potential to discharge toxics, including whether the facility is a categorical industry subject to TBELs for priority pollutants; variability of the pollutant; receiving water characteristics; overall facility compliance history; and review of facility inspection reports, data from existing WET testing, discharge monitoring, and ambient water monitoring. The UDWQ's WET Guidance indicated that when WET testing has demonstrated either acute or chronic toxicity, permit writers conduct a rigorous assessment of RP for WET. Permit writers identified pollutants of concern according to the RPA guidance document (dated September 2015) and considered information provided in the permit application, effluent monitoring data, special monitoring studies, ELG development documents, discharge data from similar dischargers, intake or process water data, or application of the permit writer's judgment. Permit writers considered all data available from the current permit term.

UDWQ's statistical approach to evaluating RP was based on the procedures contained in EPA's 1991 *"Technical Support Document for Water Quality-based Toxics Control"* (TSD). UDWQ permit writers used a standardized spreadsheet for evaluating RP, which was developed by EPA Region 8. The spreadsheet was UDWQ's primary tool for conducting quantitative RPAs. The quantitative RPA method identified three steps: identify the maximum effluent value for the pollutant; calculate an RP multiplying factor, which is based on sample size and coefficient of variation; then compare the resultant product to the maximum allowable pollutant concentration, which is based on a WLA and accounts for dilution and background pollutant concentrations in the receiving water.

#### *Process for Developing WQBELs*

Staff in the WLA group were responsible for calculating WQBELs based on RPA results as well as requirements based on TMDLs and antidegradation analyses. WLA staff implemented the procedures in the WLA Procedures for UPDES, Version 2.0 (dated January 4, 2021) and use standardized models to calculate WQBELs.

Permit writers considered the most recent (i.e., the most recent 5 years) ambient water quality data that was available in AWQMS and EPA's Water Quality Exchange (WQX) in the development of WQBELs. WLA staff obtain ambient water quality data from the sampling station immediately upstream of the discharge point.

Utah Administrative Code R317-2-5 contained the state’s mixing zone rules, applicable to discharges to streams and lakes. The rules state, *“The size of the chronic mixing zone in rivers and streams shall not to exceed 2500 feet and the size of an acute mixing zone shall not exceed 50% of stream width nor have a residency time of greater than 15 minutes. Streams with a flow equal to or less than twice the flow of a point source discharge may be considered to be totally mixed. The size of the chronic mixing zone in lakes and reservoirs shall not exceed 200 feet and the size of an acute mixing zone shall not exceed 35 feet.”* The rules also allowed mixing zones to be limited on a case-by-case basis, following consideration of various factors, described in R317-2-5, 5.1. WLA staff calculated WQBELs following the methods in the WLA Procedures for UPDES document. WLA staff used modeling tools to delineate mixing zones for discharges that were not instantaneously fully mixed. UDWQ documented application of the mixing zone policy in the WLA attachment to the FSSOB, which was a part of the administrative record.

With respect to WET, WLA staff referred to section 5.4.5 of the WLA Procedures for UPDES document which states, *“The percent of effluent in the receiving water in a fully mixed condition, and acute and chronic dilution in an incompletely mixed condition are calculated in the WLA in order to generate WET limits. The LC<sub>50</sub> (lethal concentration, 50%) percent effluent for acute toxicity and the IC<sub>25</sub> (inhibition concentration, 25%) percent effluent for chronic toxicity, as determined by the WET test, needs to be below the WET limits, as determined by the WLA. The WET limit for LC<sub>50</sub> is typically 100% effluent and does not need to be determined by the WLA. The UPDES Permit Writer will also use the IC<sub>25</sub> percent effluent in the receiving water to inform the selection of dilution ratios in the required WET testing (i.e., typical dilutions would be 100, 50, 25, 12.5, and 6.5 percent effluent concentrations in the WET test); the selected dilution ratios should bracket the WET limits to maximize effectiveness of the WET test.”*

WLA writers also documented the development of WQBELs and related calculations in the WLA supplemental attachment to the FSSOB, which was consistently available as part of the administrative record.

### *Program Strengths*

#### Reasonable Potential

UDWQ’s FSSOB clearly identified the receiving stream, designated uses, and applicable WQS with appropriate reference to the Utah Administrative Code R317-2. The permit records reviewed consistently included the WLA and Antidegradation Level 1 Review supplemental attachment to the FSSOB which included additional receiving stream information as well as discussion of the RPA and WQBELs. The WLA document was a critical component of the permit record and provided information necessary to understand the basis for evaluating the need for WQBELs.

#### WQBEL Development

UDWQ’s FSSOB attachment that contained the WLA supplemental document clearly discussed the implementation of mixing zone requirements, presented applicable water

quality criteria (numeric stream standards), model numerical inputs, and proposed WQBELs. The WLA document also included a general discussion of antidegradation considerations.

*Areas for Improvement*

Reasonable Potential

UDWQ appeared to use a statistical outlier test to identify data to remove from the RPA. EPA cautions that in most cases outlier tests should be avoided when analyzing environmental data, as such tests typically assume a normal distribution of data which may not be applicable to environmental data sets. While a data point may be identified as a statistical outlier, it may still be representative of the discharge. EPA advises UDWQ to only remove data points that are known errors.

WQBEL Development

The PQR review team did not identify any specific essential or recommended actions for this PQR component.

*Action Items*

Essential

- Reasonable Potential
  - The PQR did not identify any essential action items for this PQR component.
- WQBEL Development
  - The PQR did not identify any essential action items for this PQR component.

Recommended

- Reasonable Potential
  - UDWQ should consider revising the FSSOB template document to include more detailed discussions related to:
    - RP evaluations for specific pollutants of concern and details on the data used in the evaluation, to better understand the quality of the data;
    - Receiving stream's impairment status and TMDL applicability;
    - Qualitative RPAs; and
    - WET requirements as they are tied to UDWQ's WET guidance.
  - UDWQ should ensure that permit writers apply outlier analyses appropriate to the type of data being evaluated, to confirm whether data should be removed from consideration.
- WQBEL Development
  - The PQR did not identify any recommended action items for this PQR component.



### ***3. Final Effluent Limitations and Documentation***

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

In addition, permit records including the permit's fact sheet (40 CFR 124.56) for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations. TBELs should include an assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for determining the need for WQBELs as well as the procedures explaining the basis for establishing, or for not establishing, WQBELs should be clear and straight forward. The permit writer should adequately document changes from the previous permit, ensure draft and final limitations match (unless the basis for a change is documented), and include all supporting documentation in the permit file. The permit writer should sufficiently document determinations regarding anti-backsliding and antidegradation requirements.

UDWQ's FSSOB included facility and treatment processes descriptions and statements regarding expected pollutants of concern. Further, the FSSOB included a section, "Basis for Effluent Limitations" that identifies the regulatory basis (i.e., TBEL or WQBEL) for all parameters limited in the permit. The FSSOB clearly identifies the receiving stream, designated uses, applicable water quality standards, and appropriate references to the Utah Administrative Code for the receiving stream information (i.e., designated uses and WQS). The FSSOB itself includes a brief discussion of the RPA; however, the WLA and Antidegradation Review supplemental document included in the permit administrative record contained a useful summary of the RPA, including considerations, model inputs, RPA results, and subsequent WQBELs development. In addition, the WLA and Antidegradation Review supplemental document was where UDWQ discussed antidegradation considerations. UDWQ indicated during the PQR that anti-backsliding is evaluated when an effluent limitation could potentially be relaxed from the previous effluent limitation, and that when a permit writer has conducted an evaluation, the FSSOB included a discussion of the considerations.

### *Program Strengths*

Effluent limitations were developed appropriately and presented clearly in UPDES permits. UDWQ's FSSOB indicated the basis for effluent limitation, whether it was a TBEL or WQBEL. UDWQ's permit records consistently included a WLA document that provided a thorough discussion of the RPA considerations and results, as well as WQBELs development. The WLA document consistently included a general discussion of the antidegradation review.

### *Areas for Improvement*

UDWQ's FSSOB lacked discussion of anti-backsliding considerations in certain scenarios (UT0021911, UT0020907, and UT0023205) when effluent limitations were adjusted in the WLA. Further, the FSSOB discussions of TBELs for non-municipal permits (UT0000175 and UT0000281) lacked detail with respect to the specific applicability of ELGs and subsequent calculations of ELG-based TBELs. In addition, the FSSOB consistently lacked clear demonstration that the permit writer compared TBELs and WQBELs and applied the most stringent as final effluent limitations.

### *Action Items*

#### Essential

- UDWQ must ensure that the FSSOB addresses anti-backsliding considerations specific to the permit and discharge, especially where effluent limitations may have been adjusted during the WLA, according to fact sheet requirements for documenting the rationale for permit conditions (40 CFR 124.56), including references to applicable regulatory and statutory provisions (40 CFR 124.8).

#### Recommended

- UDWQ should consider adding greater detail to the FSSOB regarding applicability of ELGs and calculations of ELG-based TBELs.
- UDWQ should consider updating the FSSOB template to include clear statements that illustrate that permit writers evaluated and applied the most stringent of TBELs and WQBELs as the final effluent limitations.

## **C. Monitoring and Reporting Requirements**

### *Background and Process*

NPDES regulations at 40 CFR 122.41(j) require that samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Therefore, permittees monitoring to evaluate compliance with the effluent limitations established in their permits should do so at a frequency and type that is representative of the permitted discharge 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 permitted discharge characteristics and compliance status.

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

NPDES permits should specify appropriate monitoring locations to ensure compliance with the permit limitations and provide the necessary data to determine the effects of the effluent on the receiving water. A complete fact sheet (40 CFR 124.56) will include a description and justification for all monitoring locations required by the permit. States may have policy or guidance documents to support determination of appropriate monitoring frequencies; documentation should include an explicit discussion in the fact sheet providing the basis for establishing monitoring frequencies, including identification of the specific state policy or internal guidance referenced. Permits must also specify the sample collection method for all parameters required to be monitored in the permit. The fact sheet should present the rationale for requiring grab or composite samples and discuss the basis of a permit requirement mandating use of a sufficiently sensitive 40 CFR Part 136 analytical test method.

UDWQ indicated during the PQR that typically, monitoring requirements are carried forward from the previous permit, unless there is justification to change monitoring requirements. UPDES permits reference Utah Administrative Code R317-2-10 for monitoring requirements. Reporting requirements are generally standardized for discharge monitoring reports (DMR) and WET data submittals. UPDES permits specify self-monitoring and reporting requirements (parameter, sampling frequency, sample type, and reporting units) in tables following those that present effluent limitations, in Part I of permits. WET testing requirements are outlined in Part I of UPDES permits. UDWQ's WET Guidance document (on page 8) states that test frequency is primarily based on discharge volume—for larger facilities (i.e., POTWs discharging greater than 20 MGD or industrial facilities discharging greater than 10 MGD), monthly WET testing is recommended. UDWQ recommends quarterly WET testing *“for minor facilities where it has been determined that there is reasonable potential to discharge toxics.”* Further, the WET guidance states, *“Under no circumstances shall monitoring for WET at any major facility be reduced to less than quarterly. Minor facilities may be less than quarterly if approved by the Director.”* Further, UPDES permits clearly require electronic submittal of DMRs.

### *Program Strengths*

The reviewed permits consistently identified appropriate monitoring locations, frequencies, and sample types based on the facility, discharge type and corresponding limit bases. In addition, permits reviewed appropriately required the electronic submittal of DMRs and permits clearly indicated reporting requirements, including reporting deadlines.

### *Areas for Improvement*

UDWQ's permits did not specify sampling and analytical test methods consistent with 40 CFR Part 136; permits require *"Monitoring must be conducted according to test procedures approved under Utah Administrative Code ("UAC") R317-2-10."* Further, R317-8-4, 4.1(10)(d) is a permit condition applicable to all UPDES permits that requires monitoring to be conducted according to test procedures approved under 40 CFR Part 136. However, the permits did not appear to include reference to R317-8-4, either expressly or by reference. In addition, UDWQ's permits did not require the use of sufficiently sensitive EPA approved test methods as required by 40 CFR 136.1(c) and 122.44(i)(1)(iv).

### *Action Items*

#### Essential

- UDWQ must include requirements for permittees to conduct monitoring according to test procedures approved under 40 CFR Part 136, in accordance with 40 CFR 122.44(i)(1)(iv). This can be accomplished by referencing either Utah Administrative Code R317-8-4, 4.1(10)(d) or 40 CFR Part 136.
- UDWQ must include requirements for permittees to use sufficiently sensitive EPA approved analytical methods in all UPDES permits, in accordance with 40 CFR 122.44(i)(1)(iv).

#### Recommended

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

## **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.

UDWQ developed the UPDES permit standard conditions language based on boilerplate language. UDWQ updated the boilerplate language most recently in February 2021. UPDES standard conditions were included in distinct sections of the permit and were organized consistently; however, the numbering of the permit sections changed based on the permit. UPDES permits contained special conditions related to the pretreatment program and biosolids management; these sections were also based on boilerplate language.

### *Program Strengths*

The standard conditions were clearly organized and written. Special conditions were included as appropriate to the facility and discharge type. Special conditions were presented clearly.

### *Areas for Improvement*

Similar to the finding from the last PQR, the standard condition for reporting of planned changes lacked the requirement at 40 CFR 122.41(l)(1)(i) for notification when “*the alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 122.29(b).*” In addition, the signatory requirement standard condition lacked the language from 40 CFR 122.22(a)(1) and (2). The monitoring reports standard condition related to reporting results of monitoring conducted more frequently than required lacked the language from 40 CFR 122.41(l)(4)(ii) that references 40 CFR Part 136. Similarly, the reference to 40 CFR Part 136 in the language from 40 CFR 122.41(j)(4) was absent from the standard condition for monitoring procedures; UPDES permits referenced Utah Administrative Code R317-2-10 (instead of 40 CFR Part 136).

### *Action Items*

#### Essential

- UDWQ must ensure that standard conditions are at least equivalent to 40 CFR 122.41.
- UDWQ must ensure that signatory requirements contain the language from 40 CFR 122.22(a)(1) and (2).

#### Recommended

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

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

UDWQ posted public notices for UPDES permits on their website for 30 days; UDWQ ceased publishing public notices in newspapers April 1, 2020, but the FSSOB for certain permits reviewed indicated that the public notice had been published in a newspaper (e.g., The Herald Journal, The Deseret News, Salt Lake Tribune, and Emery County Progress). UDWQ held public hearings as a part of the comment period if a request was made within 15 days of the comment start date and there was sufficient public interest. UDWQ's public comment period was 30 days as a standard but would grant additional time upon request. UDWQ reviewed and considered all comments received, during the permit finalization process. UDWQ would provide an additional public comment period if substantive changes were made to the draft permit based on comments received. UDWQ prepared a comment response summary document and included it in the permit's administrative record. UDWQ indicated that if a formal request for agency action was made, the permit would have proceeded through the administrative legal process in accordance with Utah Code 19-1-3, section 301.5. UDWQ indicated during the PQR that permits were appealed infrequently; staff approximated one permit every five years, or less. An Administrative Law Judge would hear appeals.

### *Program Strengths*

Public notice documents were readily available for review. It appeared that UDWQ implemented appropriate public notice procedures, and maintained adequate documentation of public comments received and responses generated. UDWQ's permit records included clear statements in the final permit transmittal cover letters documenting whether comments were received during the public comment period.

### *Areas for Improvement*

The PQR review team observed that the public notice documents lacked statements regarding procedures for requesting a public hearing as required by 40 CFR 124.10(d)(v). In addition, public notices appeared to lack statements regarding the permitted outfall locations or discharge points as required by 40 CFR 124.10(d)(vii); public notices only included identification and description of the receiving water.

*Action Items*

## Essential

- UDWQ must ensure that public notice documents include a statement of procedures to request a public hearing consistent with the requirements of 40 CFR 124.10(d)(v).
- UDWQ must ensure that public notice documents include a general description of the location of discharge points, consistent with the requirements of 40 CFR 124.10(d)(vii).

## Recommended

- The PQR 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;<sup>4</sup> all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant and regulatory personnel; all other items supporting the file; final response to comments; and, for new sources where EPA issues the permit, any environmental assessment, environmental impact statement, or finding of no significant impact.

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

UDWQ permit writers developed the FSSOB concurrent with permit development, and for all individual and general permits. UDWQ permit writers used an FSSOB template that was periodically updated. The PQR review team reviewed UDWQ's FSSOB template and noted that

<sup>4</sup> Per 40 C.F.R. 124.8(a), every EPA and state-issued permit must be accompanied by a fact sheet if the permit: Incorporates a variance or requires an explanation under 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.

the template included the following sections: Description of Facility, Summary of Changes from Previous Permit, Description of Discharge, Receiving Waters and Stream Classification, Basis for Effluent Limitations, RPA, Self-Monitoring and Reporting Requirements, Permit Duration, Public Notice, and Addendum to FSSOB, and Responsiveness Summary. In addition, the FSSOB template included sections addressing requirements for biosolids, pretreatment, and biomonitoring. The template includes placeholder pages for specific attachments: Industrial Waste Survey, Effluent Monitoring Data, Wasteload Analysis, and Reasonable Potential Analysis. Throughout the FSSOB template was placeholder text with prompts for permit writers to update language included as document reviewers' comments. In addition, the template included summary tables with parameter lists, sample type, and units pre-populated, with prompts for sampling frequency.

UDWQ's administrative record contained the permit application, draft permit, the FSSOB, documents referenced in the FSSOB, and other supporting documentation. UDWQ maintained the administrative record in electronic format and was able to readily provide the PQR team with various components during the PQR.

#### *Program Strengths*

UDWQ's FSSOB included the required elements of a fact sheet. The FSSOB presented a facility and treatment process description, description of the discharge, identification of outfalls and receiving water(s), summary of and general basis for effluent limitations and monitoring requirements, discussion of pretreatment and biosolids where applicable, relevant UDWQ contacts, public notice information, and a responsiveness summary. The FSSOB was consistently organized across the permit records reviewed for the PQR. The FSSOB template appeared to be organized well and included boilerplate text and writing prompts for permit writers.

UDWQ's FSSOB supplemental document, the WLA and Antidegradation Review addendum, provided useful discussions of the WLA conducted during the permit development. Components of the supplemental document included essential receiving water information (waterbody name, designated uses, impairment and TMDL status), mixing zone considerations, WET limits, WLA summary, and antidegradation review. The WLA and Antidegradation Review attachment was consistently organized across the permit records reviewed for the PQR.

The administrative record was generally complete and contained documentation that was necessary to review the permit and understand the basis for permit conditions.

#### *Areas for Improvement*

As discussed in section III.B.2 and 3, UDWQ's FSSOB would be strengthened with consistently greater detailed discussions of the following:

- ELG applicability and subsequent calculations;
- Receiving stream's impairment status and TMDL applicability;
- RP evaluations for specific pollutants of concern and details on the data used in the evaluation, to better understand the quality of the data;



- Qualitative RPAs;
- WET requirements as they are linked to UDWQ's WET guidance; and
- The process that permit writers conducted to ensure they evaluated and applied the most stringent of TBELs and WQBELs as the final effluent limitations.

### Action Items

#### Essential

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

#### Recommended

- UDWQ should consider updating the FSSOB template to include consistently greater detailed discussions of the following:
  - ELG applicability and subsequent calculations;
  - Receiving stream's impairment status and TMDL applicability;
  - RP evaluations for specific pollutants of concern and details on the data used in the evaluation, to better understand the quality of the data;
  - Qualitative RPAs;
  - WET requirements as they are linked to UDWQ's WET guidance; and
  - The process that permit writers conducted to ensure they evaluated and applied the most stringent of TBELs and WQBELs as the final effluent limitations.

## 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 one of America's most widespread, costly, and challenging environmental problems. In April 2022, EPA issued a memo reiterating EPA's commitment to nutrient pollution

reductions throughout the country<sup>5</sup>. Some of the topics discussed in the memo include “strongly encouraging states to rely on numeric targets for...NPDES permitting” and an expectation that states will “commit to use numeric targets to implement applicable narrative criteria statements.” However, nationally permits often lack nutrient limits and/or monitoring. 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 WLAs in TMDLs, since state criteria are often challenging to interpret. For this section of the report, waters that are not protected by a TMDL are considered. These waters may already be impaired by nutrient pollution or may be vulnerable to nutrient pollution due to their hydrology and environmental conditions. For the purposes of this program area review, ammonia is considered as a toxic pollutant, not a nutrient.

Federal regulations at 40 CFR 122.44(d)(1)(i) require permit limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion of any state WQS, whether those standards are narrative or numeric. To assess how nutrients are addressed in the Utah NPDES program, EPA Region 8 reviewed Utah’s Water Quality Standards and Regulations concerning nutrients, as well as three NPDES permits.

In Utah Administrative Code R317-2-7.2, Utah has adopted a narrative criterion applicable to nutrients. This narrative criterion prohibits discharges which cause conditions which produce undesirable aquatic life. Additionally, UDWQ has adopted several criteria for both causal variables, response variables, and combined criterion that generally apply to headwaters streams. These include numeric nitrogen and phosphorus criteria adopted in Table 2.14.8 of UAC R317-2-14. These criteria are 400 µg/L total nitrogen (TN) and 35 µg/L total phosphorus (TP) and are for the protection of aquatic life and associated water-oriented wildlife. In the same table, Utah has also adopted a combined criterion which includes both causal and response variables. In the combined criterion, the protective levels of causal variables (i.e., nitrogen and phosphorus) are 800 µg/L TN and 80 µg/L TP, AND one of the following response variables: filamentous algae cover 33%, gross primary production 6 g O<sub>2</sub>/m<sup>2</sup>-day, or ecosystem respiration 5 g O<sub>2</sub>/m<sup>2</sup>-day. Finally, Utah has adopted a chlorophyll-a criterion of 125 mg/m<sup>2</sup> or 49 g/m<sup>2</sup> ash free dry mass in Table 2.14.7 of UAC317-2-14. All of these adopted criteria are generally state-wide criteria that apply to Category 1 and 2 streams. Since these Category 1 and 2 streams are all headwaters streams, these criteria do not apply to any current point source discharges in Utah. Category 1 and 2 streams are generally protected from point source expansion, so it is unlikely that these criteria will apply to any point source discharges in the future. However, the prohibition against conditions which produce undesirable aquatic life applies to all state waters.

UDWQ has also adopted several nutrient-related regulations that aim to control or reduce nutrient loadings to state waters. In UAC R317-1-3.3, they have adopted technology-based

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<sup>5</sup> EPA, Assistant Administrator Radhika Fox to States and Tribes, April 5, 2022. Accelerating Nutrient Pollution Reductions in the Nation’s Waters, EPA Office of Water, <https://www.epa.gov/nutrient-policy-data/2022-epa-nutrient-reduction-memorandum>

limits for controlling phosphorus pollution and optimizing removal of total inorganic nitrogen. The phosphorus approach assigns a technology-based limit of 1.0 mg/L total phosphorus to non-lagoon treatment works, and phosphorus caps at 125% of current loading to lagoons. If a lagoon exceeds the 125% threshold, then they must upgrade their treatment system. Both types of facilities are eligible for variances from this requirement through January 1, 2025. According to UDWQ, some facilities have used the variance, while others have already complied with the 1.0 mg/L total phosphorus requirement. The state is on track to have all facilities compliant with these requirements by no later than January 1, 2025. The adopted approach for total inorganic nitrogen is a voluntary optimization that allows the facility to receive a waiver from any nitrogen TBEL or WQBEL for 10 years. The due date for this optimization was 2020. According to UDWQ, no facilities adopted this approach because UDWQ did not pursue any type of nitrogen TBELs or WQBELs. Finally, the rules at UAC R317-1-3.3(E) require all discharging treatment works to implement a monthly monitoring program for nitrogen and phosphorus in both influent and effluent, with limited exceptions.

Utah is hoping to adopt water quality criteria for both TN and TP in Utah Lake by 2030. Additionally, TN and TP standards (below the state-wide TBPBEL) are being developed as watershed-based water quality criteria.

EPA also reviewed three facility's UPDES permits to determine how the nutrient conditions above were being implemented in permits. A general summary of each review is included below:

- Central Weber Sewer Improvement District, UT0021911 (POTW, major)
  - Receiving stream is the Weber River, which is not listed as impaired for nutrients.
  - Facility's permit application indicated that nitrogen and phosphorus were pollutants of concern; however, no further analysis of RP for either nutrient (no analysis of nitrogen and phosphorus discharges vs. the general narrative criteria was performed).
  - Permit did contain the phosphorus TBEL – at 1.5 mg/L (through 2024) rather than 1.0 mg/L due to a TBEL variance granted.
  - Fact sheet did not discuss reason for the TBEL variance or the demonstration that was used.
  - No nitrogen limits in permit.
  - Permit contains general narrative prohibition against undesirable aquatic life.
  - Permit requires monthly influent and effluent monitoring for both nitrogen and phosphorus.
  - No other novel/innovative approaches to controlling nutrients were included in the permit (e.g., trading, plant optimization, adaptive management, etc.)
- Snyderville (East Canyon) Water Reclamation Facility, UT0020001 (POTW, major)
  - Receiving stream is East Canyon Creek and is listed as impaired for total phosphorus.
  - There is an EPA-approved TMDL for phosphorus for East Canyon Creek.
  - Facility's permit application indicated that nitrogen and phosphorus were pollutants of concern.

- Fact sheet determined that there was RP based on the total phosphorus TMDL (no analysis of nitrogen and phosphorus discharges vs. the general narrative criteria was performed).
- Permit included an effluent limitation of 1,973 pounds per year of total phosphorus directly from the TMDL WLA.
- No nitrogen limits in permit.
- Permit contains general narrative prohibition against undesirable aquatic life.
- Permit requires monthly influent and effluent monitoring for both nitrogen and phosphorus.
- No other novel/innovative approaches to controlling nutrients were included in the permit (e.g., trading, plant optimization, adaptive management, etc.)
- Chevron Products Company Wastewater Treatment Plant, UT0000175 (industrial, major)
  - Receiving stream is the Northwest Oil Drain/Salt Lake Sewage Canals and is not listed as impaired for any nutrients.
  - Facility's permit application indicated that phosphorus was a pollutant of concern; however, fact sheet noted there was no applicable WQS for phosphorus, and so no further analysis of RP for phosphorus.
  - No nutrient limits included in permit.
  - Permit contains general narrative prohibition against undesirable aquatic life.
  - No nutrient monitoring included in permit.
  - No other novel/innovative approaches to controlling nutrients were included in the permit (e.g., trading, plant optimization, adaptive management, etc.)

### *Program Strengths*

Based on discussions with UDWQ during the PQR, nutrient monitoring is required for almost all POTWs and some industrial facilities upon renewal (regardless of discharge type or volume). Additional permits around the state could also receive nutrient monitoring if nutrients are a pollutant of concern or the facility is discharging to an impaired water or TMDL-affected water. A strong nutrient monitoring program sets UDWQ up well to develop a baseline set of data that will inform future nutrient related water quality projects.

Additionally, UDWQ has adopted a technology-based phosphorus requirement for POTWs that many facilities are already meeting, and most others will be required to meet by January 1, 2025. This requirement has resulted in measurable reductions in phosphorus loading throughout the state.

Finally, UDWQ is in the process of developing in-stream WQS for lakes and watersheds throughout the state. This effort will provide additional protections for many of the State's waters.

### *Areas for Improvement*

As mentioned above, the Utah WQS contain a general narrative water quality standard related to nutrients. This standard prohibits discharges which cause conditions which produce

undesirable aquatic life (UAC R317-2.2). While this narrative water quality standard was included in each permit that was reviewed, there was no discussion in the fact sheets regarding the link between nutrients and the narrative criteria. All three permits reviewed had at least one form of nutrient identified as present in the facility's discharge. The defensibility of the fact sheet should be strengthened by including a discussion of reasonable potential, discussing whether an existing limit (e.g., a TBPBEL, a WLA from a TMDL, etc.) adequately protects the general narrative criteria, and a discussion of how inclusion of the narrative water quality standard in the permit as a statement will equate to practices that ensure its protection. These discussions in the permit record would strengthen the nutrient protections afforded by Utah's general narrative water quality standard.

For example, in one permit reviewed (Chevron – UT0000175), data from the facility indicated that phosphorus was found in the discharge screening. The state concluded that since there was no applicable phosphorus water quality standard, no further reasonable potential discussions or considerations were necessary. However, Utah's "free from" narrative water quality criterion for undesirable aquatic life (which the state included in the permit) does apply to the receiving water, and eutrophication and growth of algae is directly tied to excess nutrient concentrations (such as phosphorus). A discussion of the relationship between phosphorus and this narrative standard in the fact sheet would strengthen the defensibility of the permit.

The state should also clearly document their reasoning when a TBEL variance is granted for the TBPEL compliance date. In one permit reviewed (Central Weber – UT0021911), the facility was granted a TBEL variance to the compliance date to achieve the TBPBEL of 1.0 mg/L. They were granted an interim effluent limitation of 1.5 mg/L through December 31, 2024. However, the reasoning behind this TBEL variance was not documented in the permit record. Per UAC R317-1-3.3(C)(1), a TBEL variance may be authorized for several conditions laid out in the regulations. It is unclear why this facility was granted the variance or which one of the eligible conditions they met to be authorized for a variance. To strengthen the defensibility of the permit, the permit record should present the basis for the TBEL variance and tie it into Utah regulations.

Additionally, UDWQ has some ambitious goals for continuing to develop water quality numeric criteria for nitrogen and phosphorus. While the permitting record and the available documentation show that UDWQ is developing an excellent collection of nutrient data from treatment works, from the permits reviewed during the PQR it appears that there may be a lack of nutrient monitoring data required by non-POTW (i.e., industrial facilities). These types of facilities can often be significant contributors of nutrients, depending on their processes and volume of discharge. The inclusion of more robust nutrient monitoring requirements in these permits would help UDWQ better characterize nutrient loadings in watersheds throughout the state and support the goals and initiatives of UDWQ's nutrient strategy.

*Action Items*

## Essential

- Per 40 CFR 122.44(d) and UAC R317-2.2, UDWQ fact sheets must address whether a discharge causes or has reasonable potential to cause or contribute to an excursion of the narrative "free from undesirable aquatic life" standard, and how any narrative conditions included in the permit will ensure protection of the water quality standard.

## Recommended

- Document the basis for a TBEL variance authorization in the fact sheet, based on the allowable conditions for a TBEL variance set out in UAC R317-1-3.3(C)(1).
- Include nutrient monitoring in permits at non-POTW facilities with the potential to be significant nutrient loading contributors.

## B. Effectiveness of POTW NPDES Permits with Food Processor Contributions

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

*Background*

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

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

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

- 40 CFR 122.42(b) (POTW requirements to notify Director of new pollutants or change in discharge);

- 40 CFR 122.44(j) (Pretreatment Programs for POTWs);
- 40 CFR 403.8 (Pretreatment Program Requirements: Development and Implementation by POTW), including the requirement to permit all significant industrial users (SIUs);
- 40 CFR 403.9 (POTW Pretreatment Program and/or Authorization to revise Pretreatment Standards: Submission for Approval);
- 40 CFR 403.12(i) (Annual POTW Reports); and
- 40 CFR 403.18 (Modification of POTW Pretreatment Program).

EPA evaluated information in the ICIS database during the PQR to summarize the data elements related to the UDWQ’s authorization to implement the Pretreatment program as an Approval Authority and a Control Authority.

| Approval Authority Implementation   |     |
|---|-----|
| Number of Approved Pretreatment Programs  | 19  |
| Number of significant industrial users (SIUs) in Approved Pretreatment Programs   | 304 |
| Control Authority Implementation  |     |
| Number of categorical industrial users (CIUs) discharging to municipalities that do not have approved pretreatment programs | 4   |

### State Pretreatment Authorization and MOA

UDEQ was authorized by EPA to administer the NPDES program, including the Pretreatment Program, in a memorandum of agreement (MOA) signed in 1987. Section VI of the MOA memorializes the Pretreatment authorization to the state of Utah, pursuant to Sections 307, 402, and 403 of the Clean Water Act, 33 U.S.C. Section 1251 et seq., and 40 CFR 123.24.

### Permit Quality Review of UPDES Permits

EPA evaluated four UPDES permits and associated fact sheets issued by UDWQ to POTWs with and without approved Pretreatment programs:

- POTWs with an approved Pretreatment program:
  - Central Weber
  - Springville
- POTWs without an approved Pretreatment program:
  - Hyrum
  - Richmond City

The Central Weber and Springville permits were evaluated to ensure that the approved Pretreatment program requirements in 40 CFR Part 403 were required as a condition of the permit. The Hyrum and Richmond City permits were 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 SIUs 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.

In addition, the UPDES permits, fact sheets and applicable associated records were evaluated to determine their effectiveness to identify non-domestic contributions from food processors and provide applicable control, if necessary. Food processing discharges, and other wastewaters with high strength conventional pollutant concentrations, frequently contribute excess nutrients and toxics pollution (e.g., nitrogen, phosphorus, ammonia) to the nation’s waterways. Indirect discharges of food processors or other IUs can be a significant contributor to noncompliance at POTWs that receive the waste. If these food processors or other significant IUs have the potential to impact POTWs, whether discharging to state waters or not, UDWQ needs to ensure these IUs are in compliance with Pretreatment Standards. This includes but is not limited to, IU surveys, facility inspections/investigations, application of Pretreatment Standards in control mechanisms and ensuring appropriate conditions are included in IU permits or UPDES permits.

According to information gathered during the March 10, 2021 Pretreatment PQR interview, the Utah Pretreatment Coordinator evaluated available records such as the UPDES permit application, Pretreatment annual reports, IU inventories specific to the POTW’s service area, and Enforcement and Compliance History Online (ECHO) and EnviroFacts databases to determine if there were any potential impacts from non-domestic sources in the service area, including food processors for each UPDES reissued permit.



For POTWs with approved Pretreatment programs, the Pretreatment Coordinator reviewed past audits and annual reports for the permittee to determine potential impacts from IUs in the service area, including food processing facilities. The Pretreatment Coordinator either developed the Pretreatment section of the UPDES permit or discussed the needs with the UPDES permit writer to ensure the permit addresses conditions within the permittee's service area.

For POTWs without an approved Pretreatment program, the Pretreatment Coordinator reviewed the UPDES permit application, IU inventories, ECHO and Envirofacts databases to determine potential impacts from food processors and other IUs. The Pretreatment Coordinator either developed the Pretreatment section of the UPDES permit or had discussions with the UPDES permit writer to ensure the permit addresses conditions within the permittee's service area. For example, if the permittee did not provide detailed information regarding the IUs in the service area in its permit application, the reissued permit required the permittee to complete the IU inventory. The Pretreatment Coordinator reviewed all UPDES permits developed by UDWQ to ensure applicable Pretreatment requirements and conditions were applied.

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

Springville, UT0020834:

- Food processing IUs: Nestle Frozen Foods/Stouffers (frozen meals), SupraNaturals (nutritional powders and drinks)
- UPDES Permit Application submitted by the POTW was thorough and complete
- FSSOB:
  - Provided a description that adequately characterizes Nestle, which is a SIU in the POTW's service area. The characterization included who/what they are, how they contribute, and what kind of pretreatment they provided and how the surcharge fees have improved water quality in the system.
  - The "Pretreatment" section of the FSSOB did not adequately address the approved Pretreatment program; it contained three short paragraphs stating that they have an approved pretreatment program and under which authority it existed (UAC reference), that they must do an annual evaluation to revise or develop local limits, and that they must sample for metals and total toxic organics (TTOs) annually. However, the FSSOB did not discuss any specifics of this pretreatment program (approval date, etc.), nor did it characterize or identify the contributing IUs (i.e., how many SIUs/CIUs, what they were, how much flow they provided, etc). In addition, the FSSOB did not describe if hauled waste was received by the POTW.
  - The FSSOB did not contain information on development of local limits.
- Permit:
  - Did not contain Pretreatment requirements found in 40 CFR 122.42(b).

- Did not identify when the approved program was implemented.
- Did not have any special conditions to control or monitor the food processing waste streams.

Central Weber, UT0021911:

- Food processing IUs: Treehouse Brands (cookie processor), CSM Bakeries (wholesale bakery), Gordito’s Meats (slaughterhouse), Admiral Beverage (soft drink manufacturer)
- UPDES Permit Application:
  - Applicant did not completely fill out section F of form 2A, but instead attached a table. This table did not provide all the information required in section F. Missing information included a description of all industrial processes, principal products and raw materials, and average daily volume of wastewater discharged broken up by process and non-process flow.
  - The application also had a discrepancy between the table and the section F of form 2A on the number of CIUs and SIUs. Section F stated 6 SIUs and 24 CIUs; the attached table listed 11 SIUs and 20 CIUs.
- FSSOB
  - The “Pretreatment” section mentioned that the facility will no longer be required to implement a mercury control program due to categorical standards being developed and because the permittee has not violated mercury since 2016.
  - The “Pretreatment” section of the FSSOB did not adequately address the approved Pretreatment program; it contained three short paragraphs stating that they had an approved pretreatment program and under which authority it existed (UAC reference), that they must do an annual evaluation to revise or develop local limits, and that they must sample for metals and TTOs annually. However, the FSSOB did not discuss any specifics of this pretreatment program (approval date, etc.), nor did it characterize or identify the contributing IUs (i.e., how many SIUs/CIUs, what they were, how much flow they provide, etc). In addition, the FSSOB did not describe if hauled waste was received by the POTW.
  - The FSSOB did not contain information on development of local limits.
  - The FSSOB did not contain a flow diagram indicating where the food processing waste was introduced to the POTW.
- Permit:
  - Did not contain Pretreatment requirements contained in 40 CFR 122.42(b).
  - Did not identify when the approved program was implemented.
  - Did not identify if/whether the POTW has adopted any local limits.

- Did not have any special conditions to control or monitor the food processing waste streams.

Hyrum, UT0023205:

- Food processing IUs: West Point Dairy (dairy manufacturer – butter mostly)
- UPDES Permit Application:
  - Application in section F of form 2A listed a zero for number of SIUs, but then listed West Point Dairy under SIUs. In addition, the FSSOB was not clear regarding the type of dairy manufacturing.
- FSSOB
  - The “Pretreatment” section of the FSSOB provided a requirement for an industrial waste survey and local limits but it did not include justification for why Hyrum does not need an approved pretreatment program. The FSSOB stated that the industrial users were less than 1% of total inflow to POTW but it appeared that the West Point Dairy contributes about 10%, according to the application and permit.
  - The FSSOB did not discuss any specifics of this pretreatment program (approval date, etc.), nor did it characterize or identify the contributing IUs (i.e., how many SIUs/CIUs, what they were, how much flow they provide, etc). In addition, the FSSOB did not describe if hauled waste was received by the POTW.
  - An incomplete industrial waste survey was included in the FSSOB.
  - The FSSOB did not contain information on development of local limits.
  - The FSSOB did not contain a flow diagram indicating where the SIU waste was introduced to the POTW.
- Permit:
  - Required an industrial waste survey (IWS) and influent/effluent monitoring for metals and TTOs.
  - Did not identify if/whether the POTW had adopted local limits and did not require revision of local limits, as necessary.

Richmond, UT0020907:

- UPDES Permit Application:
  - The POTW did not indicate IUs on their permit application.
- FSSOB:
  - Lacked documentation in the FSSOB regarding the number, type, size, and operations of IUs in the POTW’s service area.

- The FSSOB did not acknowledge the existence of IUs.
- The number of IUs was also not well tracked and, per conversations with the state, may have changed since the last permitting cycle – this was not conclusively addressed in the record.
- The FSSOB did not address the transition from an approved PT program to an unapproved program.
- The record did not indicate the full extent of oversight activities being performed by the state or the full extent of compliance activities required for the POTW to remain in compliance as an unapproved program.

### *Program Strengths*

The Pretreatment Coordinator was directly involved with the evaluation of industrial contributions from the POTW's service area, this may include an evaluation of the UPDES permit application, coordinating with the UPDES permit writer or developing the Pretreatment section of the FSSOB and permit. However, the universe of UPDES permits may be a resource concern for the Pretreatment Coordinator.

Additionally, it appeared that UDWQ provided good coverage of the state of Utah for the CIUs/SIUs in POTWs without approved Pretreatment programs by requiring the submittal of IWSs in the UPDES permit application.

### *Areas for Improvement*

The review found that permit application form 2A, Section F, which requires an adequate description of non-domestic wastewater contributions, was not consistently completed by the permittee.

Permits did not consistently implement requirements regarding notification of new pollutants or change in discharge, as required in 40 CFR 122.42(b). Permits also did not consistently identify whether the POTW had adopted local limits and require revision of existing local limits, as necessary. For permittees with significant contributions from food processing IUs, permits did not include any special conditions to control or monitor the food processing waste streams.

The review also found that FSSOB lacked adequate description of the Pretreatment requirements for the permittee such as justification on whether an approved program is required, if local limits development is required, characterization or identification of the contributing IUs, flow diagram with locations of SIUs in the service area, and receipt of hauled waste. FSSOBs also did not consistently provide the approval date for POTWs with approved Pretreatment programs.

*Action Items*

## Essential

- UPDES permits need to consistently implement Pretreatment requirements found in 40 CFR 122.42(b).
- UDWQ needs to ensure the UPDES permit application form 2A, Section F is consistently completed by the permittee during the permit renewal process to provide an adequate description of non-domestic wastewater contribution from the permittee’s service area.

## Recommended

- FSSOB should provide adequate description of the Pretreatment requirements for the permittee such as justification on whether an approved program is required, if local limits development are required, characterization or identification of the contributing IUs (i.e., how many SIUs/CIUs, what they are, how much flow they provide, etc), flow diagram with locations of SIUs in the service area, and receipt of hauled waste.
- FSSOB should provide the approval date for POTWs with approved Pretreatment programs.
- UPDES permits should identify whether the POTW has adopted local limits and require revision of existing local limits, as necessary.
- Per 40 CFR 403.5(c)(1), POTWs are required to continue to develop limits as necessary and effectively enforce such limits. For permittees with significant contributions from food processing IUs, UPDES permits should include special conditions to control or monitor the food processing waste streams.

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

*Background*

As part of this PQR, EPA reviewed Jordan Valley Municipalities General Permit UTS000001, one of the state’s small MS4 general permits for consistency with the Phase II stormwater permit regulations. This permit was signed on February 26, 2020, effective February 26, 2020 and expires on February 25, 2025.

In 2017, EPA finalized updates to the small MS4 permitting regulations to clarify: (1) the procedures to be used when coverage is by general permits (see 40 CFR 122.28(d)); (2) the requirement that the permit establish the terms and conditions necessary to meet the MS4 permit standard (i.e., “to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act”), including conditions to address the minimum control measures, reporting, and, as appropriate, water quality requirements (see 40 CFR 122.34(a) and

(b)); and (3) the requirement that permit terms must be established in a “clear, specific, and measurable” manner (see 40 CFR 122.34(a)).

### *Areas for Improvement*

The permit and/or FSSOB did not clearly specify the approach (Comprehensive General Permit or a Two-Step General Permit) as required by 40 CFR 122.28(d). The construction minimum control measure did not have procedures for receipt and consideration of information submitted by the public as required by 40 CFR 122.34(b)(4)(i). The public involvement minimum control measure lacks clear, specific and measurable requirements as required by 122.34(a).

### *Action Items*

#### Essential

- The permit and/or Fact Sheet must specify the approach (Comprehensive General Permit or a Two-Step General Permit) as required by 40 CFR 122.28(d).
- The construction minimum control measure must have procedures for receipt and consideration of information submitted by the public as required by 40 CFR 122.34(b)(4)(i).
- The public involvement minimum control measure must include clear, specific, and measurable requirements as required by 40 CFR 122.34(a).

#### Recommended

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

## **V. REGIONAL TOPIC AREA FINDINGS**

### **A. Previously Abandoned Mines**

EPA Region 8 reviewed abandoned mine drainage from legacy mines as the Regional Topic Area. UDWQ has been faced with the challenge of permitting historically abandoned mine discharges when ski resort companies purchase land (and the associated mine discharges) for resort expansion. After the land has been purchased, UDWQ issues NPDES permits to the ski resort companies. The challenges with permitting these types of discharges are that the locations are very remote, densely forested areas with heavy snow fall in the winter months. This creates logistical issues with designing, constructing, and implementing a treatment system for the discharge. There is no existing electricity in these areas which is needed to power more advanced treatment systems like reverse osmosis or pressure filtration. Accessibility to operate the treatment system and sampling the discharge during winter months is also challenging due

to snow, ice, and steep grades in the densely forested terrain. Permitting legacy mines is a fairly recent challenge with limited or no history in Utah or other states for reference.

For this topic, EPA reviewed BLX Mayflower, LLC (UT0026140) which became effective on December 1, 2020. UDWQ is in the process of issuing two to three similar type permits to other ski resort companies who recently purchased land with historically abandoned mine discharges.

### *Program Strengths*

EPA commended the state for tackling legacy mines when a new owner is identified through a land purchase. EPA recognized that permitting abandoned mine drainage from legacy mines was unique and could be quite challenging, complex, and politically charged to permit these discharges. Many times, the mine discharge was discharging to an impaired waterbody and there may or may not have been an EPA-approved TMDL on the waterbody. The state addressing these discharges through permitting actions is setting the tone regionally and nationally for previously abandoned mines.

### *Areas for Improvement*

The following aspects of the permit application were deficient:

- No facility location or operator information was listed on permit application; however, the application was still deemed complete (40 CFR Part 122.21(f)(2) and (4)(2)). The FSSOB stated “TBD” for actual address. UDWQ should work with the permittee to identify a temporary address until a permanent address can be located.
- Only outfall 001 was identified in the permit application, but 001 and 002 were listed as permitted outfalls in the permit and FSSOB. The FSSOB should explain why outfall 002 was added and require an application be submitted for this outfall.
- The permit application described a treatment system of coagulation using chlorine and pressure filtration using silica type media. Yet, there was no mention of a specific treatment in the permit or FSSOB and there was no chlorine monitoring or limit. It was unclear what treatment would be used to comply with the permit limits and the permit only stated that the site was under construction and that the compliance schedule would allow time to develop plans for flow and treatment.
- The FSSOB and Aqua Engineering report mentioned that data were available for several pollutants of concern for outfalls #001 (inactive Mayflower mine effluent) and #002 (inactive Star mine effluent), but the permit application in Tables B (p. 46 of 67) and C (p. 50 of 67) did not have them marked as believed to be present.
  - The model used suggested that routine monitoring requirements would be placed or increased from what they are in the permit.

There was no mention of whether the facility discharged to impaired waterbody or whether there were TMDLs in effect. According to the 303(d) list in Utah’s 2016 Integrated Report, McHenry Creek and tributaries (Glencoe is listed as a tributary of McHenry Creek) were listed as impaired for cadmium and zinc. However, no TMDL has been approved for McHenry Creek. The

permit compliance schedule did not have interim milestones to demonstrate the permittee would achieve compliance with the final limits. Further, there was no schedule for determining what treatment (if any) would be required to comply with final limits.

### *Action Items*

#### Essential

- UDWQ must ensure that the facility provide a complete permit application, including facility location and operator information requirements at 40 CFR 122.21(f)(2) and (3).
- UDWQ must ensure that the facility provide a complete permit application, including information for all outfalls (40 CRR 122.21(g)).
- UDWQ must ensure that compliance schedules include appropriate activities and that interim milestones are included in permits with compliances schedules exceeding one year (122.47(a)(3)(i)).

#### Recommended

- FSSOB should describe basis for including an additional outfall not identified in the application.
- FSSOB should address any waterbody impairments and applicable TMDLS identified on the most recent 303(d) list for Utah.



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

This section provides a summary of the main findings from the last PQR and provides a review of the status of the state’s efforts in addressing the action items identified during the last PQR, conducted April 21–25, 2014. 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 the 2014 PQR**

| Program Area                     | Action Item Title   | Status Update   |
|----------------------------------|---|---|
| Technology-Based Effluent Limits | The Program needs to indicate how permittees with limitations that are less than the National Secondary Treatment Standards met the regulatory requirements for less stringent limitations (Central Davis). | <b>(In progress)</b> Central Davis Sewer District’s permit (UT0020974) will be modified to require the permittee to meet secondary treatment standards for BOD <sub>5</sub> and TSS percent removal.  |
| Technology-Based Effluent Limits | Permits need to provide an explanation or justification for the use of BPJ and include information to determine how an ELG limit was derived, as required in 40 CFR 125.3(d). (Miller-EA).                  | <b>(In progress )</b> UDWQ will begin including information in the FSSOB on how BPJ was derived. This is primarily associated with Oil and Grease. The UDWQ has historically utilized 10 mg/L daily max as a limit for Oil and Grease. The historical implementation of the 10 mg/L daily max Oil and Grease limit has demonstrated that it is protective of the DWQ’s narrative standard in Utah Administrative Code (UAC) R317-2-7.2 which states “ <i>It shall be unlawful, and a violation of this rule, for any person to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste; or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms...</i> ” As permits are renewed and modified that have an effluent limit derived through BPJ, a justification will be added. |

| Program Area                        | Action Item Title   | Status Update   |
|-------------------------------------|---|---|
| Water Quality-Based Effluent Limits | Permits must include if the receiving water was impaired, and if so, if there was an approved TMDL and how the discharge will comply with the TMDL.   | <b>(Resolved)</b> UDWQ has made efforts to include information in each Permit FSSOB that discusses whether the receiving water is impaired, has an approved TMDL, and how the Permit will comply with the TMDL. UDWQ had primarily been documenting this in the wasteload analyses (attached to FSSOB), but has recently (post-FY21 PQR) updated the boilerplate language in the FSSOB to include a specific section to address this item and ensure consistency moving forward. As permits are renewed, it will be ensured that this requirement is addressed (when applicable).   |
| Reasonable Potential                | Permits must contain effluent limitations for pollutants that cause, have the reasonable potential to cause or contribute to an excursion of state WQS including narrative standards per 40 CFR Part 122.44(d)(l) (Central Davis Sewer District). | <b>(Resolved)</b> UDWQ changed the way it evaluates discharges into the Great Salt Lake (GSL). Previously a wasteload analysis (WLA) was not generated for discharges to the GSL. Permit renewals prior had a document declaring that there was a finding of no significant impact for the discharge. UDWQ permit writers evaluate RP for WET based on UDWQ’s UPDES Permit and Enforcement Guidance Document for WET (“Wet Guidance”) (dated February 2018). Additionally, DWQ developed Reasonable Potential Guidance (“RP Guidance”) (dated September 10, 2015), which is utilized during Permit renewals to identify pollutants that cause, have the reasonable potential to cause or contribute to an excursion of state water quality standards, including narrative standards. Between the change to the use of WLAs for the GSL and the UDWQ developing and following both Wet Guidance and RP Guidance this item has been resolved. |
| Reasonable Potential                | Utah's RP Policy should be completed and submitted to EPA Region 8 for review. Region 8 has noted this as a critical finding in previous PQR reviews.   | <b>(Resolved)</b> UDWQ submitted their RPA Guidance (“RP Guidance”) (dated September 10, 2015) to EPA on June 19, 2015. DWQ continues to utilize the RP Guidance.   |
| Anti-backsliding                    | Permits that have an increased loading from previous permits shall include documentation for how it will comply with the anti-backsliding requirements 40 CFR 122.44(1) (St. George).   | <b>(In progress)</b> UDWQ is working to identify an appropriate prompt in the Boilerplate FSSOB that will address this issue. Once an appropriate prompt is identified, it will be added into the FSSOB boilerplate language. Additionally, as permits are reviewed, UDWQ management will verify that changes in limitations that result in less stringent requirements are appropriately justified.  |

| Program Area                    | Action Item Title  | Status Update   |
|---------------------------------|--|---|
| Standard and Special Conditions | <p>The State's standard and special conditions need to be at least equivalent to 40 CFR 122.41 and 122.42. Specifically, not included in the State's condition is the requirement that the alternation or addition to a permitted facility may meet one of the criteria for determination whether a facility is a new source 40 CFR 122.29(b).</p> | <p><b>(Resolved)</b> UDWQ updated boilerplate permit standard condition language in “planned changes” to state:</p> <p>A. <u>“Planned Changes</u>. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:</p> <ol style="list-style-type: none"> <li>1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in Section R317-8-8; or</li> <li>2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit nor to notification requirements under Subsection R317-8-4.1(15).</li> <li>3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. The permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.”</li> </ol> |
| Standard and Special Conditions | <p>The State's special permit conditions for manufacturing, commercial, and mining dischargers did not include a notification level for discharges, on a non-routine or infrequent basis, of a toxic pollutant</p>   | <p><b>( Resolved )</b> Special permit conditions for manufacturing, commercial, and mining dischargers include notification levels for discharges, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit and that will exceed the highest of the notification levels, as required in 40 CFR 122.42(a)(2). The applicable permit types include</p>   |

| Program Area                  | Action Item Title   | Status Update   |
|-------------------------------|---|---|
|                               | <p>which is not limited in the permit and that will exceed the highest of the notification levels, as required in 40 CFR 122.42(a)(2).</p>  | <p>specific language to address this. As an example, below is language included in Emery County Coal Resources, Inc. - Lila Canyon Mine (UT0026018).</p> <p>“Changes in Discharge of Toxic Substances. Notification shall be provided to the Director as soon as the permittee knows of, or has reason to believe:</p> <ol style="list-style-type: none"> <li>1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":                             <ol style="list-style-type: none"> <li>a. One hundred micrograms per liter (100 ug/L);</li> <li>b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6- dinitrophenol; and one milligram per liter (1 mg/L) for antimony;</li> <li>c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with UAC R317-8-3.4(7) or (10); or</li> <li>d. The level established by the Director in accordance with UAC R317-8-4.2(6).”</li> </ol> </li> </ol> <p>The requirements outlined in the permit and State rules is equivalent to the requirements in 40 CFR 122.42(a)(2).</p> |
| <p>Administrative Process</p> | <p>Utah's administrative record must contain the documentation to verify public notices have been published in the local newspaper. Public notices need to have the verification (such as affidavit from the newspaper agency) in the file.</p> | <p><b>( Resolved )</b> At the March 25, 2020 Utah Water Quality Board Meeting the Board voted to adopt revisions to Utah Administrative Code R317-8-6.5(3)(b). The revisions allow UDWQ to provide public notice of permitting actions for UPDES individual and general permits on the UDWQ’s website in lieu of the newspaper publication requirement in 40 CFR 124.10(c)(2)(i). This is consistent with 40 CFR 124.10(c)(2)(iv) and the revisions became</p>  |

| Program Area            | Action Item Title   | Status Update  |
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|                         |   | effective on April 1, 2020. All UDWQ permit renewal public notices are now posted on UDWQ’s website. Prior to the rule change, UDWQ strived to include newspaper affidavits in the permit file.  |
| Documentation           | UPDES Program must ensure permit files include complete documentation of RP analyses.   | <b>( Resolved )</b> RPAs are included as attachments to permit FSSOBs and are additionally included in UDWQ’s electronic filing system with the permit record. UDWQ follows the 2015 Reasonable Potential Guidance. If a facility does not have enough information for an accurate RPA, monitoring requirements are added to the permit to ensure that enough information is obtained to conduct a reasonable potential analysis during the next renewal.  |
| Whole Effluent Toxicity | FSSOBs must provide adequate descriptions about the permit writer's decision making process for WET determinations. Specifically, the following should be documented in permits/FSSOBs: <ul style="list-style-type: none"> <li>• EPA Test acceptability criteria (TAC) for sampling requirements or analysis</li> <li>• Dilution factors/series to include five effluent test concentrations plus a control as required under EPA WET test methods (40 CFR Part 136)</li> </ul> | <b>(Resolved)</b> UDWQ permit writers evaluate WET based on UDWQ’s UPDES Permit and Enforcement Guidance Document for WET (dated February 2018). The UDWQ Boilerplate FSSOB includes a section for specific details wet determinations and the wasteload analyses (attached to the FSSOB) include further information regarding wet determinations. The Boilerplate Permit language also identifies wet requirements in detail. Between information the Permit, FSSOB, and WLA these items have been resolved. |
| Whole Effluent Toxicity | Utah should develop a policy for how WET RP will be determined.   | <b>( Resolved )</b> UDWQ permit writers evaluate RP for WET based on UDWQ’s UPDES Permit and Enforcement Guidance Document for WET (dated February 2018).  |
| Stormwater              | The post-construction stormwater management requirements (Part 4.2.5.) are insufficient to meet current   | <b>( Resolved )</b> All MS4 Permits now have post-construction retention standards. The MS4 permits require “all new development projects meeting the applicable threshold, to manage rainfall on-site, and prevent the off-site   |

| Program Area        | Action Item Title  | Status Update   |
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|                     | <p>expectations of the Maximum Extent Practicable (MEP) standard for MS4s. The post-construction standard requires that MS4s develop and adopt a postconstruction ordinance. Development of ordinances should have been completed in previous permit terms, such that this permit could include a standard (UTS00000I).</p>  | <p>discharge of runoff associated with precipitation less than or equal to the 80th percentile rainfall event” and “redevelopment projects meeting the applicable threshold that increase the impervious surface by greater than 10%, shall manage rainfall on-site, and prevent the off-site discharge of the net increase in the volume associated with the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event.” UDWQ has determined that the retention standards meet the intent of the MEP standard to prevent or minimize water quality impacts from new and redevelopment post-construction storm water management through clear, specific, and measurable requirements.</p> |
| <p>Pretreatment</p> | <p>The SNC definition in Program's Pretreatment Rules is not equivalent to 40 CFR 403.8(f)(2)(viii)(c). The SNC criterion limits any other violation to a Pretreatment effluent limit for a permitted facility instead of a Pretreatment Standard or Requirement that applies to all IUs. The Program is required to update its Pretreatment Rules to align with the SNC definition found in the Federal Pretreatment Regulations.</p> | <p><b>(In progress)</b> UDWQ has been evaluating the potential for a significant revision and reorganization of Utah Administrative Code (UAC) R317-8 for a few years. If the UDWQ moves forward with the revision to UAC R317-8, the SNC criterion will be updated to align with the SNC definition found in the Federal Pretreatment Regulations. If the significant revision to UAC R317-8 does not occur, then UDWQ will pursue a smaller revision addressing this requirement.</p>   |
| <p>Pretreatment</p> | <p>The Program 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><b>(In progress)</b> SIUs in areas with an approved pretreatment program are inspected and sampled by the POTW. SIUs outside of approved pretreatment programs are inspected and sampled by the UDWQ. UDWQ was completing 100% of the inspection and sampling of SIUs outside of approved pretreatment programs; however, the number of SIUs outside of approved programs increased from 6 to 10 between Federal Fiscal Year (FFY) 2022 and FFY 2023. In the Final Annual State/EPA Compliance Inspection Plan for FFY 2023, UDWQ committed to inspecting all 10 SIUs and sampling 6 of the SIUs. Due to resource limitations, the UDWQ does</p>   |

| Program Area    | Action Item Title  | Status Update   |
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|                 |  | not have the capacity to conduct sampling inspections at all 10 SIUs in FFY23 and will instead focus its resources on permitting the 4 unpermitted SIUs. UDWQ will continue working on addressing resource constraints impacting their ability to meet this requirement.  |
| Great Salt Lake | Utah shall ensure that when it has shown there is reasonable potential to cause, or contribute to an exceedance of the numeric and/or narrative standards for chronic toxicity (through chronic WET testing), that it complies with the requirements in 40 CFR 122.44(d)(I)(iv) and/or 40 CFR 122.44(d)(I)(v) by including WET limitations in the permit or chemical-specific limitations that attain and maintain the numeric or narrative standards. | <b>(Resolved )</b> UDWQ changed the way it evaluates discharges into the GSL; previously a wasteload analysis (WLA) was not generated for discharges to the GSL. Permit renewals prior had a document declaring that there was a finding of no significant impact for the discharge. UDWQ permit writers evaluate RP for WET based on UDWQ’s UPDES Permit and Enforcement Guidance Document for WET (“Wet Guidance”) (dated February 2018). Between the change to the use of WLAs for the GSL and the UDWQ developing and following the Wet Guidance this item has been resolved. |

## VII. RECOMMENDED ACTION ITEMS FROM LAST PQR

This section provides a summary of the recommendations from the last PQR, conducted April 21–25, 2014, 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 the 2014 PQR**

| Program Area                          | Action Item Title   | Status  |
|---------------------------------------|---|---|
| Technology-Based Effluent Limitations | Permits (or FSSOBs) need to include an explanation on what the authorized wastestream is and if that wastestream was subject to an ELG (Nucor steel-Plymouth Division).   | ( Not pursuing ) UDWQ agrees with the finding that permits/FSSOBs should include an explanation on what the authorized waste stream is and if that waste stream was subject to ELG (i.e., Nucor Steel-Plymouth Division). However, we believe that this was adequately addressed in the permit/FSSOB for Nucor Steel. |
| Pretreatment                          | EPA recommends the Program evaluate collaboration with the local POTWs to share the inspection and sampling duties of CIUs/SIUs and meet the required inspection and monitoring frequencies of 1/year, as required in the Pretreatment regulations.   | ( Resolved ) UDWQ agrees to collaborate with local POTWs to share inspection and sampling duties of CIUs/SIUs and to meet the required inspection and monitoring frequencies for non-approved areas.  |
| Pretreatment                          | The PCI and audit reports are not complete, and do not provide clarity on the evaluation of the POTW's Pretreatment program. In addition, there are numerous typos in the reports; the audit/PCI reports should be peer reviewed to ensure adequate QA/QC of typos, grammar, and content.   | ( Resolved ) UDWQ believes that PCI and audit reports are complete with the addition of the checklist.  |
| Pretreatment                          | The Moab NPDES permit did not contain a re-opener provision for development of a Pretreatment Program. The Program should ensure the NPDES permits for POTWs without approved program to contain a reopener clause that the permit can be reopened to require development of a local Pretreatment program, if determined necessary. | ( Resolved ) Moab Wastewater Treatment Facility’s most up to date permit was issued on January 1, 2022 and includes a reopener provision in Section II. F. Change of Conditions which states “At such time as a specific pretreatment limitation becomes  |



| Program Area | Action Item Title  | Status  |
|--------------|--|---|
|              |  | <p>applicable to an industrial user of the permittee, the Director may, as appropriate, do the following:</p> <ol style="list-style-type: none"> <li>1. Amend the UPDES discharge permit to specify the additional pollutant(s) and corresponding effluent limitation(s) consistent with the applicable national pretreatment limitation;</li> <li>2. Require the permittee to specify, by ordinance, contract, or other enforceable means, the type of pollutant(s) and the maximum amount which may be discharged to the POTW Treatment Plant for treatment. Such requirement shall be imposed in a manner consistent with the POTW program development requirements of the General Pretreatment Regulations at 40 CFR 403;</li> <li>3. Require the permittee to monitor its discharge for any pollutant, which may likely be discharged from the POTW Treatment Plant, should the industrial user fail to properly pretreat its waste; and/or</li> <li>4. Require the permittee to develop an Approved Pretreatment Program.”</li> </ol> |
| Pretreatment | The FSSOBs for St. George and Cedar City do not provide a date when the Pretreatment program was approved and if there have been any program modifications since the approval date. Program should provide this information in the FSSOBs. | ( In progress ) As permits are renewed information will be added to the FSSOBs for facilities with approved pretreatment programs indicating the date the pretreatment program was approved and any program modification since the last renewal.  |

| Program Area            | Action Item Title  | Status  |
|-------------------------|--|---|
| Whole Effluent Toxicity | FSSOBs must provide adequate descriptions about the permit writer's decision making process for WET determinations. Specifically, the following should be documented in permits/FSSOBs: <ul style="list-style-type: none"> <li>• IWC or end-of-pipe limitations should be documented in permits</li> <li>• Sampling requirements on grab and composite sampling</li> <li>• Reductions in sampling frequency regimen</li> </ul> | ( Resolved ) UDWQ agrees with the findings and will include all items listed in the updated WET policy. As mentioned previously, the draft WET policy was sent to EPA for review by December 31, 2015.  |
| Whole Effluent Toxicity | The Program should review laboratory bench data, not DMR pass/fail data alone, to look for anomalies in sampling prior to reduction to less frequent monitoring or alternating species.  | ( Resolved ) This is typically completed during Compliance Evaluation Inspections (CEI) during lab data review activities.  |
| Documentation           | EPA recommends that the Program maintain draft permits as part of the administrative record.   | ( Resolved ) The Draft UPDES Permits that are put on Public Notice are primarily saved as a different document in the UDWQ's electronic filing system Documentum (D2). This allows the Draft Permit to have its own D2 Number. There may be a few cases where the Draft Permit was updated and finalized, but all versions are available in D2. |

### VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE

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

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

- **Essential Actions** - Proposed “Essential” action items address noncompliance with respect to a federal regulation. EPA has provided the citation for each Essential action item. The permitting authority is expected to address these action items in order to comply with federal regulations. As discussed earlier in the report, prior PQR reports identified these action items as Category 1. Essential actions are listed in Table 3 below.
- **Recommended Actions** - Proposed “Recommended” action items are recommendations to increase the effectiveness of the state’s or 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"> <li>• UDWQ must ensure that permittees submit permit renewal applications consistent with the timelines established in UPDES regulations contained in the Utah Administrative Code R317-8-3 (Application Requirements), 3.1(4)(a) and 40 CFR 122.21(d)(1).</li> <li>• UDWQ must ensure that industrial applicants provide all data required by 40 CFR 122.21(g)(7).</li> <li>• UDWQ must ensure that applications are signed consistent with the requirements of 40 CFR 122.22(a).</li> <li>• UDWQ must ensure that applications present information for all permitted outfalls prior to issuing a permit, consistent with 40 CFR 122.21(e).</li> </ul> |
| TBELs for POTWs                 | UDWQ must ensure that permittees that were granted relief from effluent limitations based on secondary treatment standards (i.e., minimum percent removal) satisfied the regulatory requirements in 40 CFR 133.103(d) for less stringent requirements.   |

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| <p>Final Effluent Limitations and Documentation</p>     | <p>UDWQ must ensure that the FSSOB addresses anti-backsliding considerations specific to the permit and discharge, especially where effluent limitations may have been adjusted during the WLA, according to fact sheet requirements for documenting the rationale for permit conditions (40 CFR 124.56), including references to applicable regulatory and statutory provisions (40 CFR 124.8).</p>  |
| <p>Monitoring and Reporting Requirements</p>            | <ul style="list-style-type: none"> <li>• UDWQ must include requirements for permittees to conduct monitoring according to test procedures approved under 40 CFR Part 136 in accordance with 40 CFR 122.44(i)(1)(iv). This can be accomplished by referencing either Utah Administrative Code R317-8-4, 4.1(10)(d) or 40 CFR Part 136.</li> <li>• UDWQ must include requirements for permittees to use sufficiently sensitive EPA approved analytical methods in all UPDES permits, in accordance with 40 CFR 122.44(i)(1)(iv).</li> </ul> |
| <p>Standard and Special Conditions</p>                  | <ul style="list-style-type: none"> <li>• UDWQ must ensure that standard conditions are at least equivalent to 40 CFR 122.41.</li> <li>• UDWQ must ensure that signatory requirements contain the language from 40 CFR 122.22(a)(1) and (2).</li> </ul>  |
| <p>Administrative Process</p>                           | <ul style="list-style-type: none"> <li>• UDWQ must ensure that public notice documents include a statement of procedures to request a public hearing consistent with the requirements of 40 CFR 124.10(d)(v).</li> <li>• UDWQ must ensure that public notice documents include a general description of the location of NPDES permitted discharge points, consistent with the requirements of 40 CFR 124.10(d)(vii).</li> </ul>   |
| <p>Permit Controls for Nutrients in Non-TMDL Waters</p> | <ul style="list-style-type: none"> <li>• Per 40 CFR 122.44(d) and UAC R317-2.2, UDWQ fact sheets must address whether a discharge has reasonable potential to cause, potential to cause or contribute to an excursion of the narrative "free from undesirable aquatic life" standard, and how any narrative conditions included in the permit will ensure protection of the water quality standard.</li> </ul>  |
| <p>Pretreatment: Food Processing Sector</p>             | <ul style="list-style-type: none"> <li>• UPDES permits need to consistently implement Pretreatment requirements found in 40 CFR 122.42(b).</li> <li>• UPDES needs to ensure the UPDES permit application form 2A, Section F is consistently completed by the permittee during the permit renewal process to provide an adequate description of non-domestic wastewater contribution from the permittee’s service area.</li> </ul>   |

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| <p>Municipal Separate Storm Sewer Systems (MS4s)</p> | <ul style="list-style-type: none"> <li>• The permit and/or Fact Sheet must specify the approach (Comprehensive General Permit or a Two-Step General Permit) as required by 40 CFR 122.28(d).</li> <li>• The construction minimum control measure must have procedures for receipt and consideration of information submitted by the public as required by 40 CFR 122.34(b)(4)(i).</li> <li>• The public involvement minimum control measure must include clear, specific, and measurable requirements as required by 40 CFR 122.34(a).</li> </ul>   |
| <p>Previously Abandoned Mines</p>                    | <ul style="list-style-type: none"> <li>• UDWQ must ensure that the facility provide a complete permit application, including facility location and operator information requirements at 40 CFR 122.21(f)(2) and (3).</li> <li>• UDWQ must ensure that the facility provide a complete permit application, including information for all outfalls (40 CRR 122.21(g)).</li> <li>• UDWQ must ensure that compliance schedules include appropriate activities and that interim milestones are included in permits with compliances schedules exceeding one year (122.47(a)(3)(i)).</li> </ul> |

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

| Topic  | Action(s)  |
|--|--|
| Facility Information                             | UDWQ should ensure that specific outfall locations are clearly identified in UPDES permits and the FSSOB.  |
| TBELs for Non-POTW Dischargers                   | UDWQ should provide greater detail in FSSOB discussions of facility categorization and TBELs calculations as it applies to the implementation of ELGs.   |
| Reasonable Potential                             | <ul style="list-style-type: none"> <li>• UDWQ should consider revising the FSSOB template document to include more detailed discussions related to:                             <ul style="list-style-type: none"> <li>○ RP evaluations for specific pollutants of concern and details on the data used in the evaluation, to better understand the quality of the data;</li> <li>○ Receiving stream's impairment status and TMDL applicability;</li> <li>○ Qualitative RPAs; and</li> <li>○ WET requirements as they are tied to UDWQ's WET guidance.</li> </ul> </li> <li>• UDWQ should ensure that permit writers apply outlier analyses appropriate to the type of data being evaluated, to confirm whether data should be removed from consideration.</li> </ul>  |
| Final Effluent Limitations and Documentation     | <ul style="list-style-type: none"> <li>• UDWQ should consider adding greater detail to the FSSOB regarding applicability of ELGs and calculations of ELG-based TBELs.</li> <li>• UDWQ should consider updating the FSSOB template to include clear statements that illustrate that permit writers evaluated and applied the most stringent of TBELs and WQBELs as the final effluent limitations.</li> </ul>   |
| Administrative Record and Fact Sheet             | <ul style="list-style-type: none"> <li>• UDWQ should consider updating the FSSOB template to include consistently greater detailed discussions of the following:                             <ul style="list-style-type: none"> <li>○ ELG applicability and subsequent calculations;</li> <li>○ Receiving stream's impairment status and TMDL applicability;</li> <li>○ RP evaluations for specific pollutants of concern and details on the data used in the evaluation, to better understand the quality of the data;</li> <li>○ Qualitative RPAs;</li> <li>○ WET requirements as they are tied to UDWQ's WET guidance; and</li> <li>○ The process that permit writers conducted to ensure they evaluated and applied the most stringent of TBELs and WQBELs as the final effluent limitations.</li> </ul> </li> </ul> |
| Permit Controls for Nutrients in Non-TMDL Waters | <ul style="list-style-type: none"> <li>• Document the basis for a TBEL variance authorization in the fact sheet, based on the allowable conditions for a TBEL variance set out in UAC R317-1-3.3(C)(1).</li> </ul>   |

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|   | <ul style="list-style-type: none"> <li>• Include nutrient monitoring in permits at non-POTW facilities with the potential to be significant nutrient loading contributors.</li> </ul>   |
| <p>Pretreatment: Food Processing Sector</p> | <ul style="list-style-type: none"> <li>• FSSOB should provide adequate description of the Pretreatment requirements for the permittee such as justification on whether an approved program is required, if local limits development are required, characterization or identification of the contributing IUs (i.e., how many SIUs/CIUs, what they are, how much flow they provide, etc), flow diagram with locations of SIUs in the service area, and receipt of hauled waste.</li> <li>• The FSSOB should provide the approval date for POTWs with approved Pretreatment programs.</li> <li>• UPDES permits should identify whether the POTW has adopted local limits and require revision of existing local limits, as necessary.</li> <li>• Per 40 CFR 403.5(c)(1), POTWs are required to continue to develop limits as necessary and effectively enforce such limits. For permittees with significant contributions from food processing IUs, UPDES permits should include special conditions to control or monitor the food processing waste streams.</li> </ul> |
| <p>Previously Abandoned Mines</p>           | <ul style="list-style-type: none"> <li>• FSSOB should describe basis for including additional outfall not identified in the application.</li> <li>• FSSOB should address any waterbody impairments and applicable TMDLS identified on the most recent 303(d) list for Utah.</li> </ul>  |