



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

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JAN 25 2018

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FINAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
QUALITY REVIEW REPORT

Dear Ms. Carr: *Jennifer*

Enclosed please find the final Permit Quality Review (PQR) Report which summarizes EPA's analysis of Nevada's National Pollutant Discharge Elimination System (NPDES) permit program. EPA would like to acknowledge Nevada Division of Environmental Protection's (NDEP's) quality work, particularly with respect to NPDES permits, fact sheets, and permit file completeness. Deficiencies noted are largely symptomatic of the need for staff training and permit writing policies at NDEP. We provided you a draft PQR report on November 7, 2017 and received your comments on the draft report on January 5, 2018. Your comments have been incorporated as Appendix B in the final PQR report.

The PQR includes Action Items divided into three categories to identify relative priority:

- Category One - Most Significant: Action Item will address a current deficiency or noncompliance with a federal regulation.
- Category Two - Recommended: Action Item will address a current deficiency with EPA guidance or policy.
- Category Three - Suggested: Action Item is listed as a recommendation to increase the effectiveness of the State's NPDES permit program.

EPA appreciates the prioritized schedule you provided in your comments, and your commitment to address the Category One Action Items in the next 18 months. We look forward to supporting your efforts to address these Action Items.

Please call me at (415) 972-3337 or Amelia Whitson of my staff at (415) 972-3216 with any questions.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'T' followed by a long horizontal line that ends in a slight upward curve.

Tomás Torres, Director  
Water Division

ecc: Bruce Holmgren, Chief, Bureau of Water Pollution Control, NDEP  
Andrew Dixon, Stormwater Branch Supervisor, NDEP

Enclosure

**NPDES Permit Quality Review**  
**State of Nevada**

January 2018

EPA Region 9  
75 Hawthorne St. (WTR-2-3)  
San Francisco, CA 94105

## EXECUTIVE SUMMARY

EPA Region 9's National Pollutant Discharge Elimination System (NPDES) Permit Quality Review (PQR) for Nevada found that permits and fact sheets issued in the state were generally of good quality. However, EPA found some significant but isolated deficiencies. Many of these deficiencies seem to be linked to establishing consistent permit writing policies.

EPA reviewed ten individual and general permits for this PQR, as well as state permitting regulations, policies, and water quality standards. The PQR focused on several national and regional priority areas including Reasonable Potential Analysis, Antidegradation, and Total Maximum Daily Load Implementation and Coordination.

The PQR recognizes the many state-specific challenges faced by Nevada, including the nearly complete turnover in permit writing staff and managers over the past two years. Although permit issuance experienced significant delays in past years, Nevada is prioritizing training new permit writers and establishing consistent approaches to development of permit requirements, to improve permit quality and reduce permit backlog.

Although permits commonly conformed to national requirements, EPA identified several deficiencies, principally related to permit writing procedures concerning reasonable potential analyses, calculation of water quality based effluent limitations, and anti-backsliding and antidegradation reviews. Based on this PQR, EPA believes these issues can be best resolved if Nevada develops written policies and procedures for each of these subjects, and ensures permit writers obtain additional training concerning permitting requirements. Specifically, the state should develop or clarify policies to address and standardize approaches for:

- evaluating effluent and receiving water data in reasonable potential analyses,
- calculating long-term and short-term numeric limitations for water quality-based effluent limitations,
- conducting anti-backsliding reviews and antidegradation analyses,
- improving fact sheet discussion and documentation for each of these approaches.

In addition to the items listed above, the report provides an overview of the Nevada NPDES permitting program and identifies areas where EPA and Nevada can work together to continue to strengthen NPDES permits, policies, and documentation.

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## I. PQR BACKGROUND

National Pollutant Discharge Elimination System (NPDES) 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 and opportunities for improvement in the development of NPDES permits.

EPA conducted a review of the Nevada NPDES permitting program, which included an on-site visit to NDEP in Carson City on June 5-6, 2017. The Nevada PQR consisted of two components: permit reviews and special focus area reviews. The permit reviews focused on core permit quality and included reviews of the permit application, permit, fact sheet, and any correspondence, reports, or documents that provide the basis for the development of the permit conditions.

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 NDEP regarding the permit development process. The core review focused on the Central Tenets of the NPDES Permitting program to evaluate the Nevada NPDES program. In addition, discussions between EPA and state staff addressed a range of topics including program status, the permitting process, responsibilities, organization, and staffing. Core topic area permit reviews are conducted to evaluate similar issues or types of permits in all states. The national topics reviewed in the Nevada NPDES program were: nutrients, pesticides, pretreatment, and stormwater.

Regional topic area reviews target regionally-specific permit types or particular aspects of permits. The regional topic areas selected by EPA Region 9 were: reasonable potential analysis, antidegradation, and total maximum daily load implementation and coordination. These reviews provide important information to Nevada, EPA Region 9, EPA HQ, and the public on specific program areas.

EPA selected a total of ten permits to review for national topic areas, including four major POTWs, one major non-POTW, one minor POTW, two minor non-POTWs, one municipal separate storm sewer system (MS4), and one multi-sector industrial stormwater general permit. Of these, eight permits were also reviewed for regional topic areas. EPA's permit selection focused on obtaining a variety of permits (major/minor and facility type) issued in the past three years, and which fell under the national topic areas.

## **II. STATE PROGRAM BACKGROUND**

### **A. Program Structure**

Nevada was authorized to issue NPDES permits pursuant to the CWA in 1975. NPDES permits in Nevada are issued by the Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC).

There are two branches within NDEP BWPC responsible for issuing NPDES permits. The Permits Branch issues non-stormwater individual and general NPDES permits, as well as non-NPDES permits for reclamation, discharge to land, and Underground Injection Control. The Stormwater Branch issues individual and general stormwater NPDES permits, and performs stormwater inspections. These two branches have seven permit writers in total. Additionally, the Bureaus of Water Quality Planning (BWQP) and Safe Drinking Water (BSDW) support BWPC with permit development through staff comment and technical assistance. Permit writers are trained primarily through internal mentoring, and are encouraged to attend EPA Permit Writers' Training Courses and other training opportunities as the travel budget allows.

The main NDEP office is located in Carson City. NDEP also has one field office, located in Las Vegas, which conducts inspection and compliance activities and provides technical support to the Carson City office.

NDEP uses web-based permitting databases (e-Permitting and General Permitting), as well as an in-house database (iWells) to support both individual and general NPDES permit development and implementation. Draft and final permits and fact sheets are maintained on the BWPC network drive and in the e-Permitting database. The public notice drafts and final permit and fact sheet are printed out and placed in a hardcopy permit file in the Carson City office. This hardcopy permit file also contains the permit application, any correspondence related to the permit development and issuance, documentation of public notice, documentation of public hearing (if one was held), comments received on the permit, NDEP's responses to those comments, and notices of decision in response to permit appeals (if any were filed). NPDES compliance records are housed in the e-Permitting database, with hardcopies placed in the permit's technical file in Carson City.

Permit fees are the primary source of funding for NDEP's permitting programs. Fees are established through a public regulatory process, and are approved by the State Environmental Commission and Legislative Commission. Fees are calculated based on the type of discharger and discharge rate.

### **B. Universe and Permit Issuance**

Nevada administers a total of 98 permits, including 13 POTW permits (7 major and 6 minor), 73 non-municipal permits (7 major and 67 minor, including 3 MS4 permits), 5 individual CAFO permits, and 7 general permits. 154 permittees are covered under the non-stormwater general permits, 5 permittees are covered under the Small MS4 General Permit, 715 permittees are

covered under the Multi-Sector Stormwater General Permit, and 1817 permittees are covered under the Construction General Permit. As of May 16, 2017, 92.7 percent of major NPDES permits, 65.6 percent of minor NPDES permits, and 42.9 percent of general permits in Nevada were current.

For new NPDES permits, applicants can call or visit the BWPC front desk. From there, they are directed to a permit writer who assists the applicant with determining what type of permit coverage may be needed. Applicants can then go to NDEP's e-Permitting System to fill out appropriate EPA NPDES application forms, or to the General Permitting database to fill out a notice of intent (NOI). Applications are submitted through these databases to BWPC, and once the permittee pays for the permit using the e-Pay invoice service system, the application can be processed by the BWPC Permits Branch.

Existing permittees can also use the e-Permitting and General Permitting databases to apply for permit renewal. These systems send monthly notifications to BWPC administrative staff, who send out invoice and renewal reminders to permittees 7 months before their NPDES permit expires. EPA commends NDEP's use of these databases to facilitate permit administration and to help ensure permittees provide all necessary NPDES application information in a timely manner.

Once NDEP has received a new NPDES permit application or renewal application, BWPC staff create a new permit folder. NDEP strives to minimize delays to permitted activities by prioritizing new permits and permit renewals with operational modifications that need approval prior to implementation, then grouping similar types of permits or permittees, and then applications in order of oldest to most recently received. High priority permit applications are assigned to permit writers by BWPC management; all other permit applications go to the file room, where permit writers can go and assign themselves the oldest application.

The permit writer reviews the application materials, spends time educating themselves about the discharger and the receiving water, and reaches out to the applicant for any additional information needed to draft the permit. The permit writer then performs a reasonable potential analysis (see Section IV.A), and determines whether the permittee can meet the proposed effluent limits. If they do not appear to be able to meet potential limitations, the permit writer contacts the permittee to see if other changes to the permitted activities or treatment systems are needed to comply, or asks for a mixing zone application, if applicable. Following that, the permit writer uses the e-Permitting system, which contains permit and fact sheet templates with boilerplate language and instructions, to write a first draft of the permit, choosing applicable boilerplate requirements and language for the given discharger, inserting applicable limits into the permit tables, and filling in background information and justification for the permit requirements into the corresponding fact sheet template. NDEP's e-Permitting templates are an effective approach to ensuring baseline requirements and background information are consistently included in every permit and fact sheet.

The e-Permitting system allows the permit writer to distribute the first draft of the permit and fact sheet to every other permit writer, the Permits Branch Supervisor, BWQP, BSDW, and the

BWPC Technical Services Branch (responsible for inspections and enforcement) for review. NDEP expects at least three peer reviews on each draft permit. Permitting checklists are available to staff during permit development and review. These review procedures act as effective quality assurance and promote valuable program coordination between the branches.

Following peer review, each draft permit and fact sheet are sent to the permittee and EPA for review. Once comments from these parties have been addressed, the permit is public noticed for at least 30 days through publication in a local newspaper of daily circulation (the Reno Gazette in northern Nevada, and the Las Vegas Review Journal in southern Nevada) and other local non-daily newspapers, as well as through web notification. The proposed permit and fact sheet are posted to NDEP's website and sent to an email listserv (consisting of recipients who have requested direct notice from NDEP) a couple days before the public notice is published in the newspaper. The public comment period begins as soon as the notices have been distributed via all these means.

Permit writers consider and respond to all comments before finalizing permits. Commenters may request an extension of the public comment period (though NDEP has not received such a request), or a public hearing (of which there have been two in the past six years). If a public hearing is requested, NDEP will hold one to discuss the permit and address comments, followed by a notice of decision in response to all comments. If not all comments can be addressed following the public hearing, commenters can appeal to the Nevada State Environmental Commission. The State Environmental Commission is responsible for hearing the appeals and resolving any objections to issuance of the permit.

### **C. State-Specific Challenges**

Within the past two years, BWPC hired a new Bureau Chief and Permits Branch Supervisor, part of a total of 22 staffing changes within the Bureau that resulted in nearly all new staff writing and managers supervising NPDES permits. Within the same period, BWPC also reorganized to create a new Stormwater Branch, which now handles issuance of stormwater permits previously issued by the Permits Branch. NDEP has been prioritizing sending new permit writers to Basic Permit Writers Training, although because these trainings have so far all been out of state, travel budget limitations mean two permit writers still have not been able to attend this training. NDEP has identified additional training needs for their permit writers, including training on stormwater permitting, Whole Effluent Toxicity (WET) testing, and asset management.

### **D. Current State Initiatives**

NDEP began using their e-Permitting database in 2013 to streamline permit applications, issuance, and administration, as well as to improve permit consistency and quality. The permit and fact sheet templates in the database have sections that include standard language, and options for permit writers to add customized requirements or language. Permit limits that are populated in the permit template are updated automatically in the corresponding fact sheet to ensure there are no discrepancies. For permit renewals, fact sheet descriptions are

automatically populated from the existing fact sheet, allowing the permit writer to update as needed.

NDEP is currently in the process of updating the e-Permitting system to update permit template language, reduce redundancy within the permit templates, and tailor the templates to specific types of dischargers. EPA commends these efforts to improve permit clarity and ensure all federal and state NPDES requirements are met.

During the application process, NDEP also encourages permittees to consider options for eliminating discharges to waters of the United States (for example, through reuse or rapid infiltration where feasible). This helps reduce NPDES permitting workload (thus assisting with reduction of backlog), and can also improve surface water quality. Last year, Nevada finalized regulations for indirect potable reuse, which will facilitate these efforts.

### **III. CORE REVIEW FINDINGS**

#### **A. Basic Facility Information and Permit Application**

##### ***1. Facility Information***

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.

The individual NPDES permits and fact sheets reviewed during the core review consistently identified outfalls and location information relative to receiving waters. The permits included permit issuance, effective, and expiration dates, authorized signatures, and specific authorization-to-discharge information. Fact sheets included good descriptions of the relevant facilities, including the activity, treatment processes and disposition of effluent, consistent with the permit applications. However, EPA recommends adding a section to the permit or fact sheet template identifying whether permittees are new or existing, major or minor, or POTW or non-POTW.

##### ***2. Permit Application Requirements***

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

As described in Section II.B, NDEP uses electronic versions of the federal NPDES application forms. In general, the permit files EPA reviewed contain current, appropriate, and complete permit applications. Permits clearly indicate that a new permit application is required 180 days prior to expiration, and the e-Permitting and General Permitting database systems send reminders to permittees to submit a re-application seven months before their current permits expire. However, one renewal application reviewed was submitted less than 180 days prior to previous permit expiration, and two renewal applications did not contain all required monitoring data. NDEP should establish procedures to ensure that applications are complete and submitted at least 180 days prior to existing permit expiration.

## **B. 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.

### ***1. TBELs for POTWs***

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

The permits and fact sheets developed for POTWs that were part of the core review provide a good description of wastewater treatment processes and discussion of the basis of TBELs. The permits reviewed consistently apply secondary treatment standards appropriately. Effluent limitations were established using the appropriate units and forms (i.e., concentration or mass; average weekly and average monthly), and include the appropriate percent removal requirements. The fact sheets summarize the parameters that are limited and the rationale for those limits (i.e., 40 CFR 133.102).

### ***2. TBELs for Non-POTW Dischargers***

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).

NDEP properly applied TBELs in the one major non-POTW permit EPA reviewed subject to ELGs, specifically 40 CFR 421 Subpart AB for Primary and Secondary Titanium Manufacturing. The fact sheet explained how the categorization and performance level were determined, and documented the calculations of the TBELs in accordance with the ELGs. All TBELs were expressed in appropriate units of measure and averaging periods, and based on reasonable measures of actual production for the facility.

One of the minor non-POTW permits reviewed contained TBELs based on BPJ, for trichloroethylene (TCE), tetrachloroethylene (PCE), and total petroleum hydrocarbons (TPH). NDEP explained that these BPJ limits are implemented in every NPDES permit issued to groundwater perchlorate remediation sites. 40 CFR 125.3(d) contains criteria that the permit writer must consider when developing TBELs based on BPJ. The fact sheet for the permit reviewed stated, "Proposed GAC Pump and Treat system is considered efficient enough to achieve required TCE and PCE reduction to less than 5 micrograms per liter in the effluent. With the same technology expectations, TPH limit is set for  $\leq 1.0$  mg/L." However, neither the fact sheet nor permit record contained a discussion of how the 40 CFR 125.3(d) criteria were considered.

In contrast, some other NPDES permits for groundwater perchlorate remediation sites characterized equivalent limits for TCE, PCE, and TPH as WQBELs rather than TBELs. NDEP should confirm whether these limits are TBELs based on BPJ or WQBELs, and if they are TBELs based on BPJ, ensure that they were developed in accordance with the requirements of 40 CFR 125.3(d).

### C. Water Quality-Based Effluent Limitations

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

The Nevada PQR assessed the processes employed by permit writers and water quality modelers to implement these requirements. Specifically, EPA 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 total maximum daily loads (TMDLs).

Nevada's water quality standards are included in the Nevada Administrative Code (NAC) Chapter 445A, which establishes beneficial uses and classifications of state waters; zone of mixing (ZOM) standards; numeric standards for toxic materials based on protection of municipal or domestic supply, aquatic life, irrigation, and watering of livestock; narrative standards for toxicity; and numeric standards for nutrients and other nonconventional pollutants for specific waters.

NDEP does not currently have written Reasonable Potential Analysis (RPA) procedures, but permit writers generally follow a consistent qualitative approach to RPA, putting WQBELs in permits where pollutants with water quality standards were detected in the effluent. However, the fact sheets reviewed did not contain specific descriptions of how pollutants of concern were identified nor how RPA was performed (see Section IV.A).

When reasonable potential is established, NDEP implements numeric water quality standards directly as WQBELs, using the same averaging period as the standard. However, NDEP does not have written procedures for setting limit duration or for ensuring that limits meet the frequency requirements under 122.45(d). In four POTW permits reviewed, not all limits were expressed as average weekly and average monthly discharge limitations, and no explanation was provided in the fact sheet for why different limit averaging periods were chosen. Similarly, in all three non-POTW permits reviewed, not all limits were expressed as maximum daily and average monthly discharge limitations, and no explanation was provided in the fact sheet for why different limit averaging periods were chosen. NDEP should develop procedures for calculating short-term and long-term limits to ensure that limits meet the frequency requirements under 122.45(d).

In each permit reviewed, WQBELs were applied at end-of-pipe, without consideration of dilution in the receiving water. Because NDEP implements numeric water quality standards directly as WQBELs, and WQBELs were applied at end-of-pipe without consideration of dilution in the receiving water, the permit records reviewed did not include limit development calculations for WQBELs.

All fact sheets except one described the basis (either technology or water quality) for each of the final effluent limits. Fact sheets did not explicitly state that a comparison of TBELs and WQBELs had been performed, and the most stringent limit selected; however, final limits in every permit reviewed reflected the most stringent between applicable TBELs and WQBELs.

One permit reviewed was for a new discharger, and two permits reviewed included limits that were not as stringent as those in the previous permits. In those permit files, there was no discussion of how or if an antidegradation review was performed (see Section IV.B), or (for the latter two) how anti-backsliding requirements were met.

#### **D. Monitoring and Reporting**

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

Specifically, 40 CFR 122.44(i) requires NPDES permits to establish, at a minimum, annual 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.

In determining the appropriate monitoring requirements, Nevada permit writers look at permits for similar facilities and water quality standard averaging period. Fact sheets discuss the rationale for the monitoring requirements in the permits. In addition to monitoring required to demonstrate compliance with effluent limitations, some of the permits reviewed included effluent monitoring for pollutants for which the receiving water is impaired but a TMDL had not yet been developed, ambient sampling at control stations outside the influence of a zone of mixing (ZOM), or temperature, nutrient, or salinity monitoring in the receiving water. These monitoring results will be useful in performing the reasonable potential analysis at the next permit reissuance and for assessing the status of, and the impact of the discharge on, the receiving water.

The permits reviewed included appropriate monitoring and reporting requirements based on the facility type, type of discharge, and corresponding limit basis. Influent monitoring was required for BOD and TSS in the POTW permits reviewed. All permits reviewed included a general requirement that monitoring must be conducted according to test procedures approved under 40 CFR 136, including a specification that methods must be sufficiently sensitive to quantify pollutants at concentrations equal to or less than corresponding limits. Monitoring locations were clearly identified in the permits.

The POTW permits reviewed required monitoring for both acute and chronic whole effluent toxicity, and included limits where RP was determined. The non-POTW permits reviewed did not include whole effluent toxicity monitoring requirements. As far as reporting requirements,

permits included consistent language requiring electronic submittal of DMRs through NDEP's e-Permitting database. Monthly monitoring reports are required to be submitted to NDEP on a quarterly basis. Permits also consistently included submittal requirements for compliance with special studies. Overall, the permits were consistent with federal requirements for monitoring and reporting.

## E. Standard and Special Conditions

Federal regulations at 40 CFR 122.41 require that all NPDES permits, including NPDES general permits, contain an enumerated list of "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 required by the federal regulations.

In addition to standard permit conditions, permits may also contain additional requirements that are unique to a particular permittee or 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 pollutant management plan or 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.

Standard conditions established at 40 CFR 122.41 and relevant portions of 122.42 were included in all the permits reviewed, under Sections A and C. Conditions addressing each of the federal standard conditions were included, although some conditions were not as stringent as the federal language, as follows:

- 40 CFR 122.41(a) – Duty to comply – Permit section C.23 is missing 40 CFR 122.41(a)(1), (2), and (3).
- 40 CFR 122.41(f) – Permit actions – Permit section C.17 is missing second sentence of 40 CFR 122.41(f).
- 40 CFR 122.41(j) – Monitoring and records – Permit section A.3.2.2 doesn't include who performed sampling; A.3.2.4 is unclear whether authorizes analytical methods under SW-846 in place of Clean Water Act methods; and C.15 doesn't contain all of 40 CFR 122.41(j)(5).
- 40 CFR 122.41.(l)(1) – Planned change – Permit section C.3 is missing 40 CFR 122.41(l)(1)(iii).
- 40 CFR 122.41(l)(3) – Transfers – Permit section C.13 is not as stringent as 122.41(l)(3).
- 40 CFR 122.41(l)(6) – Twenty-four hour reporting – Permit section C.8.3 doesn't refer to any noncompliance that may endanger health or the environment, doesn't include

reporting the description of the noncompliance, and missing other report information required under 40 CFR 122.41(l)(6)(i).

- 40 CFR 122.41(m) – Bypass – Missing definition of severe property damage under 40 CFR 122.41(m)(1)(ii).
- 40 CFR 122.41(n) – Upset – Permit section C.8.9 is missing second sentence of 40 CFR 122.41(n)(2); C.8.10.4 should refer to C.7 rather than C.8.

Special conditions applicable to certain dischargers were generally included in all permits (even in permits where the special conditions were not applicable), with language clarifying to which types of dischargers the conditions applied. However, NDEP plans to update the permit templates so that standard and special conditions can be included only where they apply to the specific permittee.

## **F. Administrative 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 NDEP, and reviewed materials from the administrative process as they related to the core permit review.

NDEP sends pre-public notice drafts of permits and fact sheets to EPA Region 9 for review at least 30 days prior to public notice, as specified in the 1975 NPDES Memorandum of Agreement between Nevada and EPA. NDEP addresses all comments from EPA before public noticing the draft permit.

NDEP then performs all required public notice procedures, as described in Section II.B. Documentation demonstrating that all public notice and hearing requirements were performed was included in every permit file reviewed. All public notices met the requirements under 40 CFR 124.10, and when comments were received, the permit files contained responses to all comments.

## **G. Administrative Record**

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; 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, fact sheet or statement of basis, documents cited in the fact sheet or statement of basis, and other documents supporting the permit file.

EPA reviewed fact sheets and administrative records as part of the core PQR review. Each administrative record reviewed contained the permit application, draft permit, fact sheet, correspondence with the applicant, documentation of public notice and response to comments (if any), and additional information supporting the limits and requirements included in the permit. NDEP's administrative records were well-organized and easy to read. However, as discussed in Section III.C, permit records reviewed did not contain descriptions of how pollutants of concern were identified nor how RPA was performed. None of the fact sheets or administrative records reviewed contained any discussion or documentation of antidegradation reviews or how anti-backsliding requirements were met where permit limits were less stringent than in the previous permit. Only one fact sheet contained a description of the impairment status of the receiving water. NDEP explained that until a TMDL is developed, permit writers include monitoring and reporting requirements for the pollutants for which the receiving water is impaired (if any), and applicable WQBELs if water quality standards applicable to that waterbody exist for that parameter.

### *1. Documentation of Effluent Limitations*

Permit records for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations. Technology-based effluent limits should include assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for determining the need for water quality-based effluent limitations as well as the procedures explaining the basis for establishing, or for not establishing, water quality-based effluent limitations should be clear and straight forward. The permit writer should adequately document changes from the previous permit, ensure draft and final limitations match (unless the basis for a change is documented), and include all supporting documentation in the permit file.

Administrative records for both POTWs and non-POTWs contained documentation of TBEL calculations. Fact sheets also documented the calculations of WQBELs based on TMDLs. However, as discussed in Section III.C, all WQBELs were applied at end-of-pipe, without consideration of dilution in the receiving water. Because NDEP implements numeric water

quality standards directly as WQBELs, and WQBELs were applied at end-of-pipe without consideration of dilution in the receiving water, the permit records reviewed did not include limit development calculations for WQBELs.

## H. National Topic Areas

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: nutrients, pesticides, pretreatment, and stormwater.

### 1. Nutrients

For more than a decade, nitrogen and phosphorus pollution has consistently ranked as one of the top causes of degradation of surface waters in the U.S. Since 1998, EPA has worked at reducing the levels and impacts of nutrient pollution. A key part in this effort has been the support EPA has provided to States to encourage the development, adoption, and implementation of numeric nutrient criteria as part of their water quality standards (see EPA's *National Strategy for the Development of Regional Nutrient Criteria*). In a 2011 memo to EPA regions titled *Working in Partnerships with States to Address Nitrogen and Phosphorus Pollution through use of a Framework for State Nutrient Reductions*, the Agency announced a framework for managing nitrogen and phosphorus pollution that, in part, relies on the use of NPDES permits to reduce nutrient loading in targeted or priority watersheds. To assess how nutrients are addressed in the Nevada NPDES program, EPA Region 9 reviewed three permits, as well as water quality standards under NAC Chapter 445A.

Nevada has adopted numeric water quality standards for nutrients for nearly all waterbodies, including for ammonia, nitrate, nitrite, inorganic nitrogen, total nitrogen, total phosphorus, soluble phosphorus, total phosphates, and orthophosphate. Additionally, Nevada has established numeric standards for certain waterbodies based on response variables or biological impacts for chlorophyll-a, dissolved oxygen, and clarity. Numeric water quality standards for nutrients are implemented as WQBELs in permits using the same averaging period as the standard.

Nevada has also adopted narrative standards for nutrients and for response variable or biological impacts on a waterbody-specific basis. The standards do not specify procedures to translate these narrative standards to a numeric expression, but the narrative standards are included as narrative prohibitions or requirements in NPDES permits.

Each of the three permits reviewed for this national topic area contained numeric WQBELs for nutrients (ammonia, total phosphorus, and either total inorganic nitrogen or total nitrogen). Some of these WQBELs were based on numeric water quality standards under NAC 445A, and some were based on applicable TMDLs.

Overall, NDEP is ahead of many states in implementing nutrient water quality standards as WQBELs to protect receiving waters.

## *2. Pesticides*

On January 7, 2009, the Sixth Circuit vacated the EPA's 2006 NPDES Pesticides Rule under a plain language reading of the CWA (National Cotton Council of America v. EPA, 553 F.3d 927 (6<sup>th</sup> Circuit 2009)). The Court held that the CWA unambiguously includes "biological pesticides" and "chemical pesticides" with residuals within its definition of "pollutant." In response to this decision, on April 9, 2009, EPA requested a two-year stay of the mandate to provide the Agency time to develop general permits, to assist NPDES-authorized states to develop their NPDES permits, and to provide outreach and education to the regulated community. On June 8, 2009, the Sixth Circuit granted EPA the two-year stay of the mandate. On March 28, 2011, the U.S. Court of Appeals for the Sixth Circuit granted EPA's request for an extension to allow more time for pesticide operators to obtain permits for pesticide discharges into U.S. waters. The court's decision extended the deadline for when permits would be required from April 9, 2011 to October 31, 2011.

As a result of the Court's decision to vacate the 2006 NPDES Pesticides Rule, NPDES permits are required for discharges to waters of the United States of biological pesticides and of chemical pesticides that leave a residue. EPA proposed a draft pesticide general permit on June 4, 2010 to cover certain discharges resulting from pesticide applications. EPA Regional offices and state NPDES authorities may issue additional general permits or individual permits if needed.

NDEP issued their pesticide general permit in October 2012, which mirrors EPA's national PGP, and does not have any individual permits or additional laws or regulations that control discharges from pesticide applications to waters of the United States.

## *3. Pretreatment*

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 which may cause pass through or interfere with POTW treatment processes or which may contaminate sewage sludge.

### *Background*

The goal of this pretreatment program review was to assess the status of the pretreatment program in [state], as well as assess specific language in POTW NPDES permits. With respect to NPDES permits, focus was placed on the following regulatory requirements for pretreatment activities and pretreatment programs:

- 40 CFR 122.42(b) (POTW requirements to notify Director of new pollutants or change in discharge);
- 40 CFR 122.44(j) (Pretreatment Programs for POTWs);

- 40 CFR 403.8 (Pretreatment Program Requirements: Development and Implementation by POTW);
- 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).

The PQR also summarizes the following: program oversight, which includes the number of audits and inspections conducted; number of significant industrial users (SIUs) in approved pretreatment programs; number of categorical industrial users (CIUs) discharging to municipalities that do not have approved pretreatment programs; and the status of implementation of changes to the general pretreatment regulations at 40 CFR part 403 adopted on October 14, 2005 (known as the streamlining rule).

### *Background*

Nevada is not approved for Pretreatment, and EPA Region 9 is the approval authority for this state. There are 13 NPDES-permitted POTWs in Nevada, and 6 of those have approved pretreatment programs. EPA HQ conducted this review and was provided 5 permits and fact sheets for the following POTWs:

- City of Henderson – Kurt R. Segler Water Reclamation Facility
- City of Las Vegas Water Pollution Control Facility
- Clark County Water Reclamation District – Flamingo Water Resource Center
- City of North Las Vegas Water Reclamation Facility
- Moody Lane Regional Water Reclamation Facility

City of Henderson, City of Las Vegas and Clark County Water Reclamation District all have approved Pretreatment programs. City of North Las Vegas is in the process of developing a Pretreatment program as required under a recent enforcement order. Moody Lane Regional Water Reclamation Facility has no formally approved Pretreatment program.

### *Program Strengths*

Coordination between the NPDES and Pretreatment authorities can be challenging in states with a “split authority,” such as Nevada, which are approved for NPDES but not for Pretreatment. NDEP and EPA Region 9, however, appear to have a strong working relationship and coordinate closely through the permit review and issuance process. The R9 EPA Pretreatment Coordinator is given the opportunity to review each POTW permit before it is developed, and, according to R9, NDEP is responsive to feedback. R9 confirms that they discuss with the permit writer the industries in the area, and provide feedback on the applicable Pretreatment requirements. There also appears to be good coordination between the R9

Pretreatment Coordinator and the R9 enforcement section, to link information from inspections, audits, and site visits to inform permit reviews.

R9 has a system in place for keeping track of annual report submittals, inspections and audits, and takes enforcement action accordingly. They also maintain a system for tracking CIUs in non-Pretreatment cities, of which they have identified 8, and ensuring that they meet their reporting requirements.

### *Critical Findings*

Nevada and R9 appear to coordinate well in developing permits and tracking Pretreatment requirements in a state that has only a small number of POTWs, Pretreatment Programs, and CIUs. Nonetheless, some of the permit boilerplate language can be improved in order to formally incorporate regulatory requirements.

- The permits and fact sheets with approved Pretreatment programs reference the program in vague terms and refer simply to the federal regulations at 40 CFR 403. Enforceability of each permit, approved program, and administrative record would be strengthened if approval dates and incorporated versions are identified in the fact sheet.
- In all the permits reviewed, the 122.42(b) notification requirements in C.34.1, 34.2, 34.3 require submission to “the Administrator,” who is not defined, while other requirements explicitly identify report submission or notifications to NDEP or EPA Region 9 and supply the respective addresses. Permit conditions should be strengthened to define “Administrator” and provide address of intended recipient.
- In all the permits reviewed, the due date of the annual report over the course of the 5-year permit period is unclear. Although a due date for the first year is specific, the subsequent submittal deadlines are only referred to as “annual” on a calendar year basis, which might allow submission at any date within the year. The permit could be strengthened if due dates for all years were specified.
- Cities of Las Vegas, North Las Vegas, and Henderson do identify that there is a “small percentage of flow from industry,” and some indicate that water is reused for irrigation purposes. Otherwise, there is insufficient information on industrial users or documentation of need for a Pretreatment program. The fact sheet should identify reasons why a program is approved (e.g., SIUs and types of industries, POTW flow, or history of pass through or interference). In addition, the pollutants expected from these industries should be included in the review for reasonable potential. The RP statement in the fact sheet does not identify the pollutants reviewed.
- The deadline for the evaluation of local limits is provided in the “schedule of compliance table,” but this deadline appears to be contradicted further down in the permit, where the requirement and submission deadline is described as “once every permit cycle.” The local limits evaluation requirement should clearly reference the schedule of compliance.
- Requirements for continued identification of SIUs, per 40 CFR 122.44(j)(1), are not included in permits for POTWs without approved programs.

#### 4. Stormwater

The NPDES program requires stormwater discharges from certain MS4s, industrial activities, and construction sites to be permitted. Generally, EPA and NPDES-authorized states issue individual permits for medium and large MS4s and general permits for smaller MS4s, industrial activities, and construction activities.

##### *Background*

The Nevada stormwater permits at the time of the Nevada PQR were as follows:

- Phase I MS4 permits include one permit covering Clark County, a second permit covering Washoe County, and a third statewide permit for the Nevada DOT. The Clark County permit includes the County and four other co-permittees; the Washoe County permit includes the County along with two other co-permittees.
- Phase II small MS4s are covered under a statewide general permit. There are five small MS4s covered by the permit.
- Stormwater discharges associated with industrial activity are covered under two general permits, one covering metal mining activities and the other covering all other industrial discharges except coal mines which are not found in Nevada. The metal mining permit currently covers 57 permittees; the other industrial permit covers 715 permittees.
- Stormwater discharges from construction sites disturbing one or more acres are permitted under a statewide general permit. There are currently 1817 active permittees covered by this permit.

For Nevada, Region 9 selected two NPDES stormwater permits to review. These permits were:

- NPDES Permit No. NV0021911 for discharges from the MS4 serving Clark County, and
- Draft NPDES general permit No. NVR050000 covering stormwater discharges associated with industrial activity, except for metal mining and coal mining activities.
  - a. **Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) (NPDES Permit No. NV0021911)**

The Clark County MS4 permit was issued on February 9, 2010 and expired on February 8, 2015. The permit covers the Las Vegas area of southern Nevada. With a population of roughly two million, this is the largest urban area in the State. EPA Region 9 reviewed this permit to evaluate NPDES permitting of MS4s by the State of Nevada.

With an average annual rainfall of about 4 inches, Clark County is one of the driest areas in the country. The MS4 permit includes detailed requirements for the development of post-construction discharge standards tailored to this environment. These requirements focus on low impact development (consistent with EPA guidance) and should lead to effective and

appropriate post-construction stormwater runoff controls for new development/  
redevelopment.

As noted above, the existing permit has expired and needs reissuance. NDEP has explained that it has recently undergone staffing changes and this has delayed permit reissuance. Based on EPA's review of the current permit, the next permit should address the following issues:

- The next permit should clarify the geographic coverage for the permit. The current fact sheet indicates the permit covers the Las Vegas Valley "urbanized area." It's not clear whether this is the Census Bureau definition or not; Part IV.A.9 of the current permit refers to coverage of the area that is or could "reasonably" be urbanized during the permit term.
- The origin of the list of the permittees should also be clarified. This is a Phase I MS4 permit where permitting was based on population and certain other considerations - Clark County and the City of Las Vegas were automatically designated based on population for Phase I MS4s. NDEP designated Henderson and North Las Vegas as Phase I co-permittees in the early 1990s. They were not included based on "automatic designation" by EPA as indicated in the fact sheet.
- The next permit and fact sheet should identify all TMDLs with WLAs applicable to the permittees and the permit should include appropriate effluent limits to ensure consistency with the WLAs, preferably numeric effluent limits. Part II.B.4 of the permit requires additional BMPs "if appropriate," consistent with the WLAs for phosphorus and ammonia for Lake Mead. This provision needs further clarification; the current fact sheet lacks any discussion of TMDLs.
- The fact sheet for the next permit should also include a discussion of pollutants of concern in the permit area, and permit requirements included to address them. Part IV.F.2.a of the current permit indicates a permit goal is to better control selenium discharges, which is apparently a pollutant of concern along with phosphorus and ammonia. There is no explanation of the selenium issue in the current fact sheet.
- The next permit should include a requirement for a description of the source of funding available to the permittees for the program, and a requirement that the permittees ensure adequate funding, staffing and other resources to ensure full implementation of the program.
- The next permit will need to include control measure requirements that are "clear, specific and measurable" for consistency with EPA's 2016 MS4 Remand Rule. Certain program requirements in the current permit such as public education, municipal maintenance and illicit discharge control will need more detail for consistency with the new rule. EPA's 2010 MS4 Permit Improvement Guide and 2016 Compendium of MS4 Permitting Approaches provide sample permit requirements that may be helpful.

- The fact sheet for the next permit should discuss and evaluate the post-construction standards that were developed during the term of the current permit. The next permit should incorporate those standards, or require revisions if appropriate, based on NDEP's evaluation. The next permit should also require that the permittees evaluate opportunities for BMP retrofits within the area covered by the permit.
- The next permit should include controls for both industrial and commercial facilities. The current permit only requires that unspecified controls be developed for industrial facilities; the next permit should include more detailed requirements.
- The fact sheet for next permit should provide additional discussion of the monitoring programs that have been submitted during the term of the current permit, the monitoring results, and NDEP's assessment of the appropriateness of those programs. That information could then be used to fashion monitoring requirements for the next permit that are tailored to the needs of the permit area; the fact sheet for the current permit lacks any discussion of the monitoring program, or what the monitoring results from previous permits have shown.
- The next permit should include requirements for asset management plans and specific requirements for trash controls.

**b. Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (NPDES Permit No. NVR050000)**

The permit that was reviewed was a revised draft permit provided by NDEP to EPA Region 9 in May 2016. The permit that is currently in effect was issued in September 2008 and expired in September 2013. The draft permit reviewed had been revised by NDEP based on an earlier set of comments from EPA to NDEP.

The revised draft permit borrows heavily from EPA's 2015 MSGP; as such, the strengths of EPA's permit are reflected to a considerable degree in the NDEP permit. Notably, for the first time in Nevada, the 2016 NDEP draft permit incorporates sector-specific BMP requirements for the same industrial sectors covered by EPA's permit. The existing NDEP permit only includes generic BMP requirements that are applicable to all facilities.

Based on EPA's review of the latest draft permit, the next permit, when finalized, should address the following issues:

- The permit should include eligibility requirements related to antidegradation for new discharges into Tier 2, 2.5 or 3 waters, or otherwise explain the absence of such requirements in the fact sheet.
- The permit does not address public access to NOI information. This should at least be discussed in the fact sheet. EPA's 2015 MSGP also requires that SWPPPs be available to the public either by posting the SWPPP on a website or by providing basic SWPPP

information on the NOI. In the interest of transparency, EPA recommends that NDEP consider similar requirements for its MSGP.

- EPA's MSGP includes specific timeframes for maintenance that is determined to be necessary based on inspections, e.g., within 14 days if feasible; such a requirement, currently absent in NDEP's permit, should be added.
- The following sector-specific provisions in the EPA permit (currently absent from the NDEP permit) should be added:
  - For clarity in sector A, add a provision authorizing spray down discharges from lumber and wood product storage yards where no chemicals were added.
  - In sectors K and L, add definitions of key terms found in Parts 8.K.4 and 8.L.4 of the EPA permit.
- The fact sheet indicates that there are currently no approved TMDLs in Nevada with wasteload allocations (WLAs) that apply to stormwater discharges, and hence no applicability of TMDLs to the discharges covered by the permit. The fact sheet should further clarify whether there are any approved TMDLs with applicable load allocations that would become WLAs if the discharges were subject to a permit; this situation could arise for any TMDLs that predate the NPDES stormwater permit program.
- The permit should clarify the issue of what would constitute a permit violation, i.e., that an event triggering a corrective action such as failure to implement a BMP would be a permit violation, and that failure to implement an appropriate corrective action would be an additional permit violation. Suitable permit language can be found in Part 4.5 of the EPA MSGP.
- The benchmark monitoring requirements in the EPA permit are omitted from the NDEP permit. The fact sheet for the NDEP permit should provide a rationale for that difference.
- The standard condition from 40 CFR 122.41(h) (Duty to Provide Information) is missing from the standard conditions of the permit, and should be added.
- The permit should include appropriate requirements to ensure compliance with EPA's 2014 sufficiently sensitive methods rule (79 FR 49001), which are currently lacking.
- The permit provides an "alternative form" for electronic reporting of NOIs, NOTs and No Exposure Certifications. This may be in response to the waiver provisions of EPA's 2015 e-reporting regulations (40 CFR 127.15). The fact sheet should clarify how the permit addresses compliance with the e-reporting regulations, including the Phase II requirements taking effect in December 2020.

The permit requires submittal to NDEP of annual reports that include analytical monitoring results required to demonstrate compliance with effluent guidelines. For compliance with the

e-Reporting rule, the permit should require that these reports be submitted electronically by December 2020. Furthermore, this requirement should not be limited to analytical monitoring required pursuant to effluent guidelines compliance, but should include all analytical monitoring required by the permit such as that required for impaired waters.

## **IV. REGIONAL TOPIC AREA FINDINGS**

### **A. Reasonable Potential Analysis**

40 CFR 122.44(d)(1)(ii) requires, “When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.” EPA reviewed eight permits for this regional focus topic, to determine whether Nevada has implemented procedures for determining whether discharges cause, have the reasonable potential to cause, or contribute to in-stream excursions above narrative or numeric criteria within State water quality standards consistent with this federal requirement.

As described in Section III.C, NDEP does not currently have written RPA procedures that all permit writers follow during permit development. NDEP stated that permit writers generally follow a consistent qualitative approach to RPA, putting WQBELs in permits where pollutants with water quality standards were detected in the effluent. There is also an RPA spreadsheet that NDEP used in four of the permits reviewed to compare discharge data over the previous permit term to applicable water quality standards.

NDEP drafted written RPA procedures in 2006, but never finalized or adopted these procedures, and permit writers do not follow these procedures. There appear to be inconsistencies between how different permit writers perform RPA, and four of the permit records reviewed did not document how RPA was performed. To comply with 40 CFR 122.44(d)(1)(ii), NDEP must establish RPA procedures that permit writers will follow as part of every permit issuance. Written RPA procedures will also provide clear guidance to permit writers on how to perform RPA and help improve consistency across permits. NDEP should also document the RPA procedures and findings in each permit fact sheet.

### **B. Antidegradation**

40 CFR 131.12 requires states to develop and adopt a statewide antidegradation policy and to identify the methods for implementing the policy. The focus of the antidegradation review was to verify that issuance of permits follows the statewide policy, and that fact sheets describe how the policy is implemented in each permit. EPA reviewed eight permits for this regional focus topic.

Of the permits reviewed, one was for a new discharger, and two contained limits that were not as stringent as those in the previous permit. However, as discussed in Section III.C, there was no discussion in the fact sheets or permit records of how or if an antidegradation review was performed.

NDEP is currently in the process of updating their statewide antidegradation policy. The policy is being drafted by BWQP, in close coordination with BWPC and EPA Region 9. The goal of the updated policy is to provide clear procedures for how antidegradation reviews will be performed during NPDES permit issuance. Concurrent with the policy update, NDEP is planning to hold workshops on the updated antidegradation review methodology and any corresponding regulatory changes. Once the new policy is finalized, NDEP should implement the finalized procedures as part of every permit issuance.

### **C. Total Maximum Daily Load Implementation and Coordination**

40 CFR 122.44(d)(1)(vii)(B) requires, "When developing water quality-based effluent limits under this paragraph the permitting authority shall ensure that...Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available WLAs for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7." WLAs are pollutant loads developed as part of TMDLs for improving water quality in impaired waterbodies, and assigned to point sources, to be implemented as enforceable requirements under their NPDES permits.

At NDEP, BWQP develops TMDLs, and BWPC is responsible for ensuring NPDES permit effluent limits are consistent with the assumptions and requirements of any available WLA developed under applicable TMDLs. All TMDLs are posted on NDEP's website, and permit writers reference this website to see if permittees discharge to a waterbody with an applicable TMDL. BWQP works with BWPC when questions arise about TMDL implementation in permits, and when changes are being made to existing TMDLs or new TMDLs are developed, to ensure that all point sources are addressed in the TMDL and that expectations for how WLAs should be implemented in NPDES permits are clear. BWPC also sends all draft permits to BWQP for review to help ensure the requirements under 40 CFR 122.44(d)(vii)(B) are met. NDEP is able to track TMDL implementation in NPDES permits by querying the e-Permitting database.

In 2015, EPA provided training to NDEP on coordination during development and implementation of TMDLs. Staff from BWPC, BWQP, and Technical Services attended, and have subsequently demonstrated a close working relationship to help ensure that TMDLs provide clear and practicable direction to permit writers on how they should be implemented in permits, and permits implement the TMDL WLAs accordingly.

Eight permits were reviewed as part of this Regional Focus Topic to verify that permits include WQBELs that are consistent with the assumptions and requirements of any available TMDL WLAs, and that fact sheets describe the basis of these requirements. Each of these permits

contained WQBELs that were consistent with the assumptions and requirements of WLAs in applicable TMDLs, and fact sheets described the basis of the corresponding WQBELs.

## V. SUMMARY OF FINDINGS AND ACTION ITEMS

This section provides a summary of the main findings of the review and provides proposed action items to improve Nevada's NPDES permit program. This list of proposed action items will serve as the basis for ongoing discussions between EPA Region 9 and Nevada as well as between EPA Region 9 and EPA HQ. These discussions should focus on eliminating program deficiencies to improve performance by enabling good quality, defensible permits issued in a timely fashion.

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

- **Critical Findings** (Category One) - Most Significant: Proposed action items will address a current deficiency or noncompliance with respect to a federal regulation.
- **Recommended Actions** (Category Two) - Recommended: Proposed action items will address a current deficiency with respect to EPA guidance or policy.
- **Suggested Practices** (Category Three) - Suggested: Proposed action items are listed as recommendations to increase the effectiveness of Nevada's NPDES permit program.

The critical findings and recommended actions proposed should be used to augment the existing list of "follow up actions" currently established as an indicator performance measure and tracked under EPA's Strategic Plan Water Quality Goals or may serve as a roadmap for modifications to the Region's program management.

### A. Basic Facility Information and Permit Application

The fact sheets and permit files reviewed provided a good level of facility information upon which to base permit requirements. In general, permit applications appeared to be appropriate, timely, and complete. Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- NDEP should add a section to the fact sheet template identifying whether the permittee is new or existing, major or minor, and POTW or non-POTW (Category 3).
- NDEP should establish procedures to ensure that applications are complete and submitted at least 180 days prior to existing permit expiration (Category 2).

### B. Technology-based Effluent Limitations

In general, the permits reviewed properly implemented TBELs for POTW and non-POTW facilities. Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- At the time the relevant permits are next issued, NDEP should confirm whether limits for TCE, PCE, and TPH in groundwater perchlorate remediation permits are TBELs based on BPJ or WQBELs, and if they are TBELs based on BPJ, ensure that they were developed in accordance with the requirements of 40 CFR 125.3(d) (Category 1).

### **C. Water Quality-Based Effluent Limitations**

The permits reviewed include WQBELs and the fact sheets and permit files generally document the basis for these limits. Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- NDEP should develop procedures specifying how pollutants of concern will be identified and how RPA will be performed (Category 1).
- NDEP should develop procedures for calculating short-term and long-term limits to ensure that limits meet the frequency requirements under 122.45(d) (Category 1).

### **D. Monitoring and Reporting**

Monitoring and reporting requirements in the permits reviewed were consistent with federal requirements. Therefore, no action is required.

### **E. Standard and Special Conditions**

The standard and special conditions reviewed were generally consistent with federal requirements, although some standard conditions were not as stringent as the federal standard conditions. Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- The State should revise standard conditions in their permit template to ensure they are at least as stringent as federal standard conditions, as described in PQR Section III.E (Category 1).

### **F. Administrative Process (including public notice)**

Administrative processes for the permits reviewed were consistent with federal requirements. Therefore, no action is required.

### **G. Documentation (including fact sheet)**

The fact sheets reviewed were generally of good quality and permit files were found to be complete. Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- NDEP should add a section to the fact sheet template to describe how pollutants of concern were identified and how RPA was performed, consistent with the RPA procedures described under PQR Section V.C (Category 1).

- NDEP should add a section to the fact sheet template to describe how Nevada’s antidegradation policy was implemented (Category 2).
- NDEP should add a section to the fact sheet template to describe how anti-backsliding requirements were met (Category 2).
- NDEP should add a section to the fact sheet template to describe the impairment status of the receiving water (Category 3).

## H. National Topic Areas

Proposed actions items for core topic areas are provided below.

### 1. *Nutrients*

The permit review indicated nutrients limits and monitoring requirements in the permits reviewed were consistent with federal requirements. Therefore, no action is required.

### 2. *Pesticides*

No action is required, as the permit review indicated the PGP meets federal requirements.

### 3. *Pretreatment*

- The permit template used by Nevada needs to be strengthened to identify appropriate submission requirements, including clearly defining the annual report submission deadline (Category 2), and clarifying “Administrator” (Category 1).
- The permit template for POTWs without approved Pretreatment programs needs to include the ongoing requirement to identify SIUs per 122.44(j)(1) (Category 1).
- The fact sheet template for POTWs with pretreatment programs should be revised to include a description of the basis for the pretreatment program and implementation requirements, including industry categories, dates of approvals, and modifications (Category 2).
- The local limits evaluation requirement should reference the schedule of compliance to provide clarity on the deadline (Category 3).

### 4. *Stormwater*

The stormwater permits reviewed generally met federal requirements, although there were some discrepancies between the permits reviewed and national stormwater general permits and guidance. Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- When MS4 permit NPDES No. NV0021911 is reissued, NDEP should incorporate the recommendations specified in PQR Section III.H.4.a (Category 2).
- When the Multi-Sector General Permit No. NVR050000 is reissued, NDEP should incorporate the recommendations specified in PQR Section III.H.4.b (Category 2).

## **I. Regional Topic Areas**

Proposed action items for special focus areas are provided below.

### ***1. Reasonable Potential Analysis***

As described under V.C, NDEP does not currently have written RPA procedures that all permit writers follow during permit development, although permit writers generally follow a consistent qualitative approach to RPA. Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- NDEP should establish RPA procedures that permit writers will follow as part of every permit issuance, including expectations to document implementation of these procedures in each permit fact sheet (Category 1).

### ***2. Antidegradation***

Proposed action items to help Nevada strengthen its NPDES permit program include the following:

- NDEP should finalize its updated antidegradation policy, and implement the updated antidegradation procedures when issuing permits (Category 2).

### ***3. Total Maximum Daily Load Implementation and Coordination***

No action is required.

## Appendix A: List of Reviewed Permits

**NPDES No. NV0021261.** Clark County Water Reclamation District, Flamingo Water Resource Center. March 2015.

**NPDES No. NV0023256.** JLDB, LLC, The Stirling Club. February 2017.

**NPDES No. NV0000060.** Titanium Metals Corporation (TIMET). October 2015.

**NPDES No. NV0023582.** Churchill County, Moody Lane Regional Water Reclamation Facility. November 2015.

**NPDES No. NV0023647.** City of North Las Vegas Water Reclamation Facility. March 2015.

**NPDES No. NV0020133.** City of Las Vegas Water Pollution Control Facility. March 2015.

**NPDES No. NV0022098.** City of Henderson, Kurt R. Segler Water Reclamation Facility. March 2015.

**NPDES No. NV0024227.** Tropicana East Shopping Center LP, Former PJs Cleaners. February 2017.

**NPDES No. NV0021911.** City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County and Clark County Regional Flood Control District Municipal Separate Storm Sewer Systems. February 2010.

**NPDES No. NVR050000.** Draft Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity. May 2016.

**Appendix B: Draft PQR Comment Letter from Nevada Division of  
Environmental Protection, January, 2018**



NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**

STATE OF NEVADA  
Department of Conservation & Natural Resources

Brian Sandoval, Governor  
Bradley Crowell, Director  
Greg Lovato, Administrator

January 8, 2018

TOMAS TORRES DIRECTOR  
WATER DIVISION  
US EPA REGION IX  
75 HAWTHORNE ST  
SAN FRANCISCO CA 94105-3901

RE: Draft NPDES Permit Quality Review Report

Dear Mr. Torres:

We have reviewed the draft report reflecting the results of the Permit Quality Review (PQR). The report reviews permitting activities conducted by the Nevada Division of Environmental Protection (NDEP) related to the National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act. Our comments on the finding of each item of this review are enclosed.

NDEP was pleased to learn that EPA found Nevada NPDES permits, fact sheets, and permit files to be generally of good quality. NDEP will be addressing the comments received per the attached comment and timeline.

Thank you for the opportunity to comment on this draft PQR. We also appreciate the positive commendations on our program. Please factor our comments into your finalization of the 2017 PQR.

Sincerely,

Jennifer Carr, P.E., CEM, CPM  
Deputy Administrator

Nevada Division of Environmental Protection

cc: Bruce Holmgren, Chief, Bureau of Water Pollution Control, NDEP  
Nicholas Brothers, Permits Branch Supervisor, NDEP  
Andrew Dixon, Stormwater Branch Supervisor, NDEP  
Nancy Woo, Assistant Director, Water Division, US EPA Region IX, 75 Hawthorne St San Francisco  
CA 94105  
Amelia Whitson, Water Division, US EPA Region IX, 75 Hawthorne St San Francisco CA 94105  
1/18/2018



**BWPC Responses to the Clean Water Act Portion of the Draft Fiscal Year 17  
Permit Quality Review**

A. Basic Facility Information and Permit Application Critical Findings

NDEP is reviewing fact sheet content with regards to the NPDES clean-up rule and meeting State goals with regards to providing complete and thorough fact sheets. Recommendation to add some identifying information on permit classification will be considered. (Category 3)

NDEP requires renewal applications be submitted at least 180 days prior to expiration. A renewal application is not accepted and marked as complete until minimum items are submitted. Currently, NDEP requires a completed epermitting application, signed application signature page, and appropriate fees. A full review of the contents of the application and determination if any further information is needed to effectively write the permit must be made by the permit writer at the time the permit is assigned and drafted. By allowing permit writers to perform full reviews at the time of drafting, NDEP reduces redundant or disconnected reviews by different staff and maintains higher staff performance. (Category 2)

B. Technology-based Effluent Limitations (TBELs)

EPA noted that it appeared TBELs were properly implemented in the permits reviewed. NDEP has had to implement limits for perchlorate remediation for which the EPA has not promulgated TBELs. NDEP has chosen to reference EPA interim health advisory value published 2008 as a basis for determining effluent limitation by BPJ. This limit would be a water quality based effluent limitation (WQBEL) instead. Clarification to NDEP permits limiting perchlorate will be added to identify the source of this limitation. Effluent limitations for TPH and TCE are implemented based on Bureau of Correction Actions action levels for the prescribed clean up sites. BWPC will review and ensure these limits comply with 40 CFR 125 or identify them as WQBEL as appropriate. (Category 1)

C. Water Quality-based Effluent Limitations

EPA noted procedures for identifying pollutants of concern and performance of reasonable potential analysis do not appear consistent. NDEP will proceed to solidify these practices with a written procedure. (Category 1)

NDEP utilizes 30-day average and daily maximum as a default reporting requirement but will address a written procedure in identifying sampling frequencies. (Category 1)

D. Monitoring and Reporting

None.

#### E. Standard and Special Conditions

NDEP implements many of the standard conditions for all permits issued within the state. For that reason, references to federal regulation are often removed and language adjusted to apply to all dischargers. NDEP will review the standard narrative conditions to ensure compliance with State law and federal regulation. Where standard conditions are altered to meet the needs of Nevada's program, the review will work to ensure that altered conditions are no less stringent than federal requirements. (Category 1)

#### F. Administrative Process (including public notice)

None.

#### G. Documentation (including fact sheet)

Fact sheet template used by NDEP already contains a section to describe reasonable potential analysis (RPA) and identification of pollutants of concern, and will be implemented as permits are renewed through epermitting. This process will be supported through the development of written procedures to promote consistency. (Category 1)

Current antidegradation policy in Nevada includes the implementation of requirements to maintain existing higher quality (RMHQ) standards. As a new antidegradation implementation procedure is adopted Water Pollution Control permitting will implement the new regulations. Fact sheet template used by NDEP already contains a section to describe antidegradation policy and will be implemented as permits are renewed through epermitting. This process will be supported through the development of written procedures. (Category 2)

Anti-backsliding requirements are implemented during permit drafting and the permit rationale section of the fact sheet would detail any relaxation of previously established limits with regards to anti-backsliding. (Category 2)

The impairment status of the receiving water is typically detailed in the receiving water section of the fact sheet. (Category 3)

#### H. National Topic Areas

Pretreatment program authority is not delegated to the state of Nevada. Permits contain the requirement to work with Region IX and federal regulations which may apply to the POTW. NDEP will add the condition for POTWs to identify significant industrial users. Other items identified in this section of the PQR report will be discussed with EPA Region IX staff to identify applicability in NV permits. (Category 1)

NDEP has recently formed a Stormwater Branch which will specialize in permitting and compliance activities for stormwater issues in Nevada. As this program continues to grow, the PQR recommendations in section III.H.4.a and III.H.4.b will be considered for

incorporation. NDEP appreciates the collaborative review during the permit-drafting period when NPDES stormwater permits are renewed. (Category 2)

#### I. Regional Topic Areas

Reasonable Potential Analysis (RPA) is currently performed and carried out by staff during permit drafting. Currently, permits staff utilizes coworkers, the NPDES permit writers handbook, and regulations when drafting a permit. When data review prompts, and based on the review of identified pollutants of concern during the reporting period, reasonable potential analysis would be performed to justify the removal of a permit requirement. NDEP agrees that staff training and implementation of RPA will benefit from written procedures and will develop them as discussed below. (Category 1)

Antidegradation policy has been implemented to date in accordance with state law through the implementation of RMHQ standards. The development of an updated antidegradation implementation procedure and regulations will prompt the permits branch to adopt the new implementation methodology thereafter. (Category 2)

#### J. Summary

NDEP will proceed with the below proposed effort to address findings of the PQR. NDEP was pleased to learn that EPA found Nevada NPDES permits, fact sheets, and permit files to be generally of good quality. NDEP has implemented entirely new electronic permitting processes in recent years to comply with federal electronic reporting rule in conjunction with netDMR development. NDEP has accomplished meeting all these items on time and successfully transitioned to an electronic system which meets all the federal requirements.

NDEP will continue to improve written procedures and staff training as recommended herein to ensure the continued success of the NPDES program in Nevada. NDEP thanks Region IX staff for the time and effort placed in the review and the recommendations made and looks forward to the continuing cooperative efforts in protecting Nevada's waters.

#### K. Follow-up Actions

The Bureau of Water Pollution Control proposes items be addressed in the next 18 months with the priority below.

- Review NPDES standard conditions
- Review pretreatment definitions and standard conditions for POTWs
- Review definitions included in permits
- Develop State permit writing procedures for including: antidegradation review; anti-backsliding review; reasonable potential analysis; and identification of pollutants of concern. This process will document state program procedures.
- Address fact sheet detail as desired and guided by the NPDES cleanup rule

