



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

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OFFICE OF
WATER AND
WATERSHEDS

OCT 19 2016

Mr. Wade Strickland, Program Manager
Wastewater Discharge Authorization
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, Alaska 99501

Re: U.S. Environmental Protection Agency – Alaska Permit Quality Review Final Report

Dear Mr. Strickland:

The EPA Region 10 and Headquarters staff conducted a Permit Quality Review (PQR) of Alaska's Department of Environmental Conservation (DEC) Alaska Pollutant Discharge Elimination System (APDES) Program. The EPA provided the draft PQR report to DEC for review and comment on January 13, 2015. The draft report was revised to address DEC's comments. Please find enclosed the final PQR Report dated October 2016, which includes DEC's final comments on the report in Appendix B.

Permit Quality Reviews are a key review mechanism for the EPA to promote national consistency, identify successes in implementation of the NPDES program, and describe opportunities for improvement in the development of NPDES permits. The primary focus of the PQR is 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 and NPDES regulations. The report also includes general information about Alaska's NPDES program; a discussion of findings for core permit reviews, national topic areas and regional topic areas; and action items developed based on the findings. We acknowledge and appreciate that DEC has proactively addressed most of the findings.

The EPA thanks DEC staff and managers for their cooperation in preparing for the PQR and the time provided to us during our on-site file review. We appreciate DEC's assistance with and participation in the PQR process. Please feel free to contact me at (206) 553-1855 if you have any questions or you may contact Mike Lidgard, NPDES Permits Unit Manager, at (206) 553-1755 or by email at lidgard.michael@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Daniel D. Opalski".

Daniel D. Opalski, Director
Office of Water and Watersheds

Enclosure: Final Alaska PQR Report, October 2016

cc: Ms. Michelle Hale, Director, Division of Water



U.S. EPA Region 10
NPDES Permit Quality Review (PQR)
For
Alaska
Department of Environmental Conservation

October 2016

U.S. EPA Region 10
1200 6th Avenue
Suite 900
Seattle, WA 98101

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I. PQR BACKGROUND

National Pollutant Discharge Elimination System (NPDES) Permit Quality Reviews (PQRs) are an evaluation of the state's Program Description, Memorandum of Agreement, and a review 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 identifies opportunities for improvement in the development of NPDES permits.

EPA's review team, consisting of one Region 10 staff person, one EPA Headquarters staff person and one contractor, conducted a review of the Alaska NPDES permitting program, which included an on-site visit to the Alaska Department of Environmental Conservation in Anchorage on July 15-17, 2013.

The Alaska PQR consisted of two components: core permit reviews including national topic areas and regional topics area reviews. 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. 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 to evaluate the Alaska 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.

National topic area permit reviews are conducted to evaluate similar issues or types of permits in all states. The national topics reviewed in the Alaska NPDES program were nutrients, the state pesticide general permit, 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 10 included Seafood, Mining, and Oil and Gas. These reviews provide important information to Alaska, EPA Region 10, EPA Headquarters, and the public on specific program areas.

A total of 14 permits were reviewed as part of the PQR. Eight permits were reviewed for the core review - of these permits one permit was reviewed under the stormwater national topic and seven permits were also reviewed under the oil and gas, mining and seafood for regional topic areas. Permits were selected based on issue date and the review categories that they fulfilled.

Because Alaska Department of Environmental Conservation's (ADEC) program was newly delegated in 2008, there was a limited pool of permits to select from which ADEC issued and many of those permits EPA Region 10 had previously reviewed under increased oversight of the newly delegated program. Therefore, a key objective of this PQR was to serve as a learning

experience for EPA Region 10 as the first regionally administered PQR, and for ADEC as the first PQR of ADEC-issued permits since gaining primacy.

One function of this report is to document ADEC's key NPDES permit issuance processes as described in PQR questionnaires and interviews. The information presented in Section II is based on responses to PQR questions provided to EPA by ADEC.

II. STATE PROGRAM BACKGROUND

A. Program Structure

Within ADEC, the Division of Water includes four program areas, including the Water Quality Program (WQP). Within the WQP are programs addressing Cruise Ships, Wastewater Discharge Authorization Program (WDAP), Water Quality Standards, Assessment and Restoration (WQSAR), and Compliance and Enforcement. WDAP issues Alaska Pollutant Discharge Elimination System (APDES) permits within the State of Alaska.

The main office of the ADEC WDAP program is located in Anchorage, although the program also has offices in Juneau and Fairbanks. The ADEC Commissioners and Director's office are located in the Anchorage office, and the Anchorage office is currently the location of all required APDES permit submittals. Policy for APDES-related activities is almost exclusively set from the Anchorage and Juneau offices. In addition to the offices in Juneau and Fairbanks, WDAP has two field offices in Wasilla and Soldotna that provide engineering support as well as limited compliance and permit site visits.

Alaska is the most recent state to be authorized under the CWA to implement the NPDES program. In October 2008, EPA approved Alaska's application to implement the NPDES program and transferred program authority to the state in four phases. The initial phase transferred in 2008 and included domestic discharges, log storage and transfer facilities, seafood processing facilities, and hatcheries. Phase II was completed in 2009, which included federal facilities, stormwater, wastewater pretreatment programs, and non-domestic discharges (e.g., utilities). Phase III was completed in 2010 and included mining activities. November 1, 2012 marked the completion of Phase IV authorization, which included wastewater permitting for the oil and gas industry, pesticides, munitions, and any other facilities that have not yet been transferred. More information about the history of Alaska's APDES program including the program approval document is available on ADEC's website at <http://dec.alaska.gov/water/npdes/index.htm>.

Organization: WDAP has 25 permit writers, including five section managers that occasionally draft permits. Permit writers receive a variety of training as well as internal mentoring to support their development. For example, within the last three years, in-state training has included the U.S. EPA NPDES Permit Writers' Course, a two-day EPA-sponsored training on implementing Total Maximum Daily Loads (TMDLs) in APDES permits, EPA Region 10 and Headquarters-led Whole Effluent Toxicity (WET) training, and an online Cornell Mixing Zone Expert System (CORMIX) course presented by MixZon, Inc. exclusively for ADEC APDES staff. Examples of out-of-state training includes the NPDES Permit Writers' Course for new staff, and

CORMIX training in Portland for selected staff. Select domestic wastewater permit writers also attend an in-state course titled Introduction to Alaska Small Wastewater Systems, which is an operator certification class sponsored by DEC. In addition, permits writers attend in-state and out-of-state conferences (e.g., annual Water Environment Federation Technical Exhibition and Conference (WEFTEC) meeting, Advanced NPDES Permit Writers Conference, annual in-state mining, oil and gas, and domestic wastewater related conferences, etc.). EPA R10 provides technical assistance and feedback on draft permits when requested.

WDAP has two primary and two secondary water quality modelers. As noted above, all staff have participated in CORMIX training recently. WQSAR has three or four TMDL staff. WQSAR generally uses contracts to fund TMDL development and finalization.

Other staff that support APDES permitting include:

- one Program Manager that supports all WQPs for ADEC;
- one Program Manager for WDAP;
- 6 WDAP Section Managers
- six wastewater engineering staff responsible for completing engineering plan review of collection and treatment system installations and modifications (note, other engineering staff in WDAP may complete plan reviews; however, their primary function is to draft and issue wastewater permits);
- 12 APDES compliance and enforcement staff including a program manager;
- approximately seven clerical and contract facilitation staff;
- approximately two to three water quality standards staff;
- approximately two information technology specialists assisting with data management and database support; and, one tribal and local government coordinator.

Permitting Tools: WDAP has developed a significant set of tools that support APDES permit development and implementation. Although the APDES Program is relatively young, with full authority to administer the program transferring in November 2012, during the phasing period the state has developed both administrative procedures that address permit development (e.g., how to process permit applications, draft permit writers' guidelines, etc.) and some permit-specific guidance (e.g., interim methods for antidegradation implementation). Currently, the state is in the process of developing guidance for reasonable potential (RP) and permit limit derivation. Future plans for the development of guidance include: determination of administrative and technically complete application submittal, mixing zone and seafood zone of deposit guidance, WET guidance, setting monitoring frequencies guidance, and how to implement wasteload allocations (WLA) from TMDLs into APDES permits. In the interim, the state has relied on referenced documents including the Technical Support Document for Water

Quality – Based Toxics Control¹ and other guidance documents where state procedures are lacking.

WDAP has developed both permit and fact sheet templates for individual permits, which provide instruction for inclusion of specific standard and regulatory language to be used if the permit is for a POTW or non-POTW. The templates are customized by permit writers when used to develop a general permit. WDAP develops detailed fact sheets for all permits, including minor permits. In general, such fact sheets include information addressing the following: Applicant, Facility Information and Background, Compliance History, Effluent Limits, Receiving Water Body, Reissued Permits (i.e., backsliding), Antidegradation, Monitoring Requirements, Other Permit Conditions, Other Legal Requirements, References, as well as Tables, Appendices (including but not limited to: Basis for Effluent Limitations, Reasonable Potential Determination, Effluent Limit Calculation, Mixing Zone Analysis Checklist), and Figures.

Reasonable Potential Analysis: WDAP has also developed and uses a permitting checklist, and employs tools such as CORMIX as well as a reasonable potential analysis and final effluent limits spreadsheet tool and guidance. ADEC is in the final stages of revising the spreadsheet and guidance document, which will take the permit writer from RP through the selection of final numeric effluent limits and more clearly define when dilution, if available, should be introduced into the spreadsheet's calculations. The guidance document will more completely explain the reasonable potential and limit derivation process complete with calculations and examples presented in appendices. ADEC developed the *Reasonable Potential Analysis and Water Quality-Based Effluent Limits Calculation Tool* (Tool) to establish a framework for permit development in Alaska and assist staff, contractors, and others involved in writing, reviewing and issuing APDES permits. The Tool and guide helps to ensure that APDES permits satisfy Alaska's regulatory requirements and final permit effluent limits are protective of water quality. ADEC and their contractor hosted a webinar on October 31, 2013 to train staff on the application and use of the new tool. EPA Region 10 staff were invited to participate in the training. Tool and guide finalization is anticipated for spring to early summer 2015.

As indicated, WDAP uses water quality models to support permit development. The state largely relies on CORMIX to simulate mixing zones and maintains a subscription to the proprietary software for all permit writers. The state also accepts other water quality models, such as Plumes.

WDAP uses a variety of data systems to support APDES permit development and implementation. These include Microsoft Office, Online Application System (OaSys), Discharge Results and Online Permit System (DROPS), Integrated Compliance Information System (ICIS), as well as water quality modeling programs like CORMIX or Plumes. DROPS tracks APDES permit applications, permit development and issuance, and reported data. The state uploads APDES data to ICIS.

¹ Environmental Protection Agency, *Technical Support Document for Water Quality-based Toxic Control*, March 1991. <http://water.epa.gov/scitech/datait/models/upload/2002_10_25_npdes_pubs_owm0264.pdf>

QA/QC: Permit QA/QC occurs for each permit throughout the issuance process (e.g., review of the preliminary draft, draft, proposed final, and final documents). WDAP has an “internal review” where other permit writers, engineering staff, and compliance staff review the preliminary draft permit and fact sheet to ensure that the technical and legal basis are adequate, the description is accurate and that there is clear enforceability. The Section Manager and the WDAP Program Manager, who signs the permit, reviews the preliminary draft, draft, proposed final, and final permit, fact sheet and response to comments document prior to issuing final permits. WDAP employs a permitting checklist that guides permit writers through the steps necessary to develop and issue the permit. The permitting checklist is routinely revised based on lessons learned, but maintains adherence to the permit issuance process described in APDES Regulations Alaska Administrative Code (AAC) 18 AAC 83 and the Program Description. Most permits undergo the same QA/QC process; however, permits like the Multi-Sector General Permit will undergo an expanded internal review since it covers such a broad NPDES universe.

Permit Applications: The state uses EPA permit application forms for EPA-issued permits that are administratively extended, state forms for individual APDES permits (these are very similar to EPA forms), and state Notice of Intent (NOI) forms for general permits.² In cases where an old application was accepted by EPA, ADEC reviews the application and determines if additional information or an updated application is needed. Permit application forms are accessible on-line. Re-application reminders are not sent out routinely but are used for some permits (certain general permits). Completed applications are date stamped and logged into the state’s electronic file folder structure, and sent to a manager for assignment based on permitting plan priorities, which are set in the 2-year permit issuance plan. Staff review the application or NOI for completeness (within 30 days) and additional information is requested, if necessary. Letters acknowledging administrative completeness are generally sent out. An administrative extension notice is sent when applicable. Timely submittal of an application can be an issue for small domestic dischargers and WDAP is working to provide more compliance assistance. Notice of early permit development is provided to identify potentially affected tribes and local governments. A pre-application meeting is offered for facilities seeking an individual permit. For general permits, scoping meetings are typically held internally to understand the previous permit, permit universe and plan for permit development. Public workshops may be held for general permits of significant interest. Appendix H of the Program Description discusses the supplemental public process that ADEC may use for additional outreach and involvement.

General Permits: With regard to general permits, NOIs are provided to the permit writer. The permit writer generates an authorization for Section Manager signature if the applicant is determined to be eligible for general permit coverage. Alternatively, the permit writer may determine that an individual permit is required and correspondingly notifies the applicant of the determination.

Permit Development: The permit writer is primarily responsible for permit development. Permits are assigned based on sectors or other factors by the respective Section Manager

² APDES Permit Applications http://dec.alaska.gov/water/wwdp/online_permitting/dom_ww_apps.htm.

and/or Program Manager. WDAP has developed and made available to all permit writers a 24-page *Permitting Process Checklist* that lists the steps in the permitting process, the person responsible, resources (with links), record requirements, data entry requirements, and completion date. Most of the information used comes from the permit application. A permit applicant, if desired, also requests a mixing zone via application (the Form 2M mixing zone request provides input for the CORMIX model). Permit applications require facility information, line diagrams, and mandated pollutant reporting required by the permit and application.

Data: Permit writers use data from ICIS and Discharge Monitoring Reports (DMRs) to supplement permit application data in assessing RP and developing limits. Available WLAs from EPA-approved TMDLs are also used in permits, however, there are very few final TMDLs in Alaska (99.9 percent of state waters are considered pristine). The most recent EPA-approved 303(d) Integrated Report is from 2010; the 2012 Integrated Report is final and pending EPA approval. The status of water bodies as listed in the 2010 303(d) Integrated Report is used for permitting purposes. Permit writers also conduct site visits, as well as use compliance inspection reports and enforcement action information in developing permits. The timeline for permit development varies based on permit complexity, but generally encompasses 6 to 18 months. The permit writer generally calculates all permit limits.

Technology-based effluent limitations (TBELs): In developing TBELs, permit writers determine the applicable Effluent Limit Guidelines (ELG) for the relevant industry and the applicable subcategory (this can be complex as Seafood or Oil & Gas ELGs have multiple subcategories). Permit writers then determine the applicable standard (Best Available Technology (BAT), New Source Performance Standards (NSPS), etc.) and apply the concentration and mass limits as appropriate (Publicly Owned Treatment Works (POTWs) follow secondary treatment standards). Best Professional Judgment (BPJ)-based limits are developed based on regulatory requirements. ADEC is working to make the analysis supporting BPJ permit limits more consistent. TBEL limit calculations are generally developed using an Excel spreadsheet, which is included in the administrative record or calculations are included in the fact sheet.

Water quality-based effluent limits (WQBELs): In developing WQBELs, pollutants of concern (POC) are identified based on parameters addressed in TBELs, water quality criteria in WQs, WLAs, and pollutants present in the effluent (based on monitoring data). If the maximum effluent concentration indicates RP, a WQBEL is calculated (using critical conditions). WDAP, with the assistance of Bruce Kent of EPA Region 8, developed a RP spreadsheet tool in 2007/2008. Permits reviewed for the PQR have individual RP spreadsheets (either based on an EPA Region 8 RP spreadsheet, prior permit writers' RP spreadsheets or inherited RP spreadsheets from EPA Region 10). At the time of the PQR, ADEC was developing a revised RPA and permit derivation spreadsheet tool and guidance document. The tool was made available to permit writers along with training in October 2013. Additional updates and improvements to the RPA tool have been made since the PQR.

Receiving Water Information: Impaired water information is available in a state database called Alaska Monitoring & Assessment Program (AKMAP)³. Data is uploaded into EPA's National Aquatic Resource Surveys as well as the national database for TMDLs⁴. ADEC has a limited database for ambient data, from which ambient data is used when available. Ambient data is also collected from other credible sources (e.g., United States Geologic Survey Reports). In addition, some APDES permits require the collection of ambient data for use in permit development. Some APDES have assumed ambient background concentrations to be zero. WDAP is moving towards guidance that would assume 15% of the water quality criterion if no ambient data is available or provided by the permit applicant (this creates an incentive to obtain and use such data). Permit writers use the Integrated Report, discussion with the TMDL staff and other tools to identify any relevant TMDLs. Permits implement any relevant WLA and other conditions to eliminate the impairment.

Mixing Zones: State mixing zone requirements are specified in 2003 regulations (state WQS have been approved by EPA in a piecemeal manner over the years); these regulations are used by permit writers as EPA has yet to approve revisions to the mixing zone regulation section since 2003 version. Permittees must request a mixing zone and submit data and typically model the mixing zone in support of their request. The regulations have size constraints for flowing fresh waters, bays and estuaries. Use of a mixing zone is documented in the relevant fact sheet and a regulatory mixing zone checklist is included as an appendix to individual permit's fact sheets. Permit writers are responsible for making sure an authorized mixing zone is consistent with regulations. WQBEL development that incorporates any dilution available from a mixing zone is also documented in the fact sheet.

WDAP will be developing a mixing zone guidance document for permit staff in the near future. The contractor's scope of work is complete and the plan is to develop a mixing zone guidance document with contractor assistance as funding is available. Alternatively, WDAP staff will form an internal work group, review other delegated Region 10 NPDES states mixing zone documents, and generate its own mixing zone guidance document based on the most recently EPA-approved DEC mixing zone regulations.

Seafood Zones of Deposit: WDAP is developing a seafood zone of deposit (ZOD) guidance document. Development of a seafood ZOD guidance is a two-phase project: phase 1 is an evaluation of available modeling software to select a final model, and phase 2 is to use the model to evaluate seafood discharges. Phase 1 has been completed and a model has been selected. Phase 2 will be implemented as discharges are authorized and further information is gathered.

Antidegradation: During the first two years of the APDES Program, antidegradation was implemented through the State's Antidegradation Policy, which is codified in the State's WQS regulation at 18 AAC 70.015. In July 2010, the state Attorney General's office wrote the current interim implementation methods document. These provisions have been reviewed by EPA and found to be consistent with federal antidegradation policy and have survived legal challenges

³ <http://dec.alaska.gov/water/wgsar/monitoring/AKMAP.htm>

⁴ <http://ofmpub.epa.gov/apex/waters10/f?p=ASKWATERS:SIMPLE:0>

by non-government organizations (NGOs). Nevertheless, ADEC is moving towards developing implementation procedures that are part of state WQS regulations. Public notice of draft implementation regulations occurred in early 2014.

The interim policy⁵ presents a tiered approach and generally defaults to Tier 2 waters unless ambient water quality data exists demonstrating otherwise. Currently all APDES permits issued to date by ADEC contain an antidegradation analysis, which is typically discussed in the fact sheet. ADEC published the public notice for the implementation regulations on January 9, 2014.

Antibacksliding: With regard to preventing backsliding, any more stringent limits from a prior permit are generally carried forward except where there is justification to make a change; the development of a less stringent limit is uncommon. WDAP's legal evaluation for backsliding is documented in the fact sheet.

Pathogens: EPA promulgated *Enterococcus* as a pathogen criterion in 2004. Where relevant, most existing permits address fecal coliform bacteria and the state requires monitoring for *Enterococcus* for marine dischargers to determine the appropriate indicator bacteria in future permits.

Monitoring & Methods: Monitoring requirements are developed to track compliance with permit conditions and are based on state regulations, based on the type of discharge and receiving water. ADEC has not developed minimum monitoring requirements for discharges based on facility type, size or other criteria. The RP/WQBEL guidance under development will incorporate use of monitoring data.

Permits require use of methods authorized in 40 CFR 136 and that methods are sufficiently sensitive to document compliance with limits. QAPPs are required in almost all permits to ensure quality data.

Data collected during the previous permit cycle is used to decrease or increase reporting requirements. Permits generally require DMR submittals and may require annual reports in addition to or instead of DMRs. Permits may also require special studies and require submittal of non-compliance reports. ADEC has an internal workgroup that is developing processes and systems to support electronic reporting. WDAP has in place an eNOI submittal system for the CGP, MSGP and Seafood general permit.

Conditions: Appendix A of APDES permits include standard conditions specified in 18 ACC 83, which were updated recently, and follow the federal regulations. APDES permits often include special conditions for QAPPs, BMPs, facility planning, and O&M Plans. Permits include narrative conditions, such as "free from" statements (e.g., toxics, floatables). Three municipalities have approved for Pretreatment programs (Anchorage, Fairbanks, North Pole);

⁵ ADEC, Policy and Procedure, Interim Antidegradation Implementation Methods, Procedure No. 50.03.103, July 14, 2010. <http://dec.alaska.gov/water/wqsar/Antidegradation/docs/P&P-Interim_Antidegradation_Implementation_Methods.pdf>

however, Anchorage's pretreatment program is overseen by EPA Region 10 given Anchorage's CWA 301(h) waiver. Where relevant, fact sheets will include language on biosolids.

CWA section 401 certification: The state completes CWA section 401 certifications for NPDES permits issued by EPA and for 404 permits issued by the Army Corps, but sometimes waives this opportunity based on established criteria and competing workloads. Certifications are completed by the relevant sector of WDAP. No checklist is used and no outreach is conducted, but notice of ADEC 401 certifications are included with EPA or Army Corps public notice of draft permits.

Applicant Review/Public Notice: Once the preliminary draft permit has been developed, WDAP provides a 10-day applicant review of the preliminary draft permit for the applicant and state and federal service agencies. Comments can be provided, but WDAP provides no formal response to these comments.

A minimum 30-day public notice of the draft permit is provided (45 days if a hearing is to be conducted). Comments received are addressed in a formal response to comment document that is developed and provided to everyone who provided comments. WDAP revises the permit and fact sheet documents as appropriate based on public comments. Significant comments are received on almost all O&G and hard rock mining permits, as well as on seafood general permits. WDAP does not normally re-public notice permits, except in cases where changes to the permit documents are not a logical outgrowth of the comments received. Public hearings are held during the public notice period if there is anticipated or actual significant public interest in the permit; testimony is recorded and transcribed. WDAP conducts extensive outreach with local government and tribes and has a Local Government Tribal Coordinator (LGTC) who serves as the point of contact.

Following the public comment process and any revisions, WDAP provides a 5-day proposed final review for the applicant and state and federal service agencies. Following this, the permit, fact sheet, and response to comment documents are finalized and the permit is issued. Permits are effective 30 days after issuance, generally on the first of a month. Once issued, permits and fact sheets are accessible online.⁶

Appeals: Within the first 15 days post permit issuance, each permit has an informal administrative appeal period (i.e., it can be appealed to the Director of the Division of Water). Within 30 days post-issuance, an administrative appeal via an adjudicatory hearing request can be sent to ADEC's Commissioner's office. The Commissioner can also refer permit appeals to an administrative law judge in the Office of Administrative Hearings within the State's Department of Administration. After the 30-day post-issuance period, any appeal must be made in district court, which occasionally occurs with high profile mining and O&G permits. The beginning part of each fact sheet explains the administrative appeals process.

⁶ The Permit Search webpage provide access to permit documents.
<http://dec.alaska.gov/Applications/Water/WaterPermitSearch/Search.aspx>.

Following permit issuance, permittee workshops or teleconferences for both individual and general permits are used to explain permit conditions and how to comply.

Administrative Record: The permitting checklist is used as a guide for permit writers, which is often reviewed by Section Managers. Permit writers are responsible for keeping the checklist current. The final record is printed and filed; paper copies are maintained in the appropriate office location, and the e-folder structure is maintained. Paper copies of permit development documentation are located in Anchorage, Juneau or Fairbanks depending on where the permit writer is stationed. Electronic copies of permit development documentation are saved in a file directory accessible throughout the state as long as the user is logged into the state's network. In effort to ensure consistency of content and format, electronic documentation is saved according to the APDES E-folder Structure and Document Naming Convention Guidance document.

B. Universe and Permit Issuance

As of the PQR site visit in July 2013, WDAP is responsible for 134 wastewater discharge permits. Seventy-two (72) these are APDES permits, 40 are state permits (these will be reissued as APDES permits over time), and 22 are APDES general permits. Twenty-seven (27) of these are POTW permits (16 APDES, with 15 major APDES permits), and 85 are non-municipal permits (56 APDES, with 14 major APDES permits). The state permits were issued based on applications submitted to ADEC and EPA, but were not acted upon by EPA. ADEC issued state permits to satisfy authorization to discharge under state statutes and regulations.

Under the stormwater program, WDAP oversees four municipal separate storm sewer system (MS4) permits, 287 active NOIs from industrial facilities covered under the Multi-Sector General Permit (MSGP), and 572 entities covered under the Construction General Permit (CGP). NOIs are tracked in DEC's DROPs, OaSys, and EPA's ICIS.

With regard to permit reissuance rate and backlog, as of July 2013 WDAP has a backlog rate, expressed as the percentage of permits that are current, of 57 percent (77/134 permits are current). For APDES permits, this rate is 28 percent (37 APDES permits are current), for state permits that will eventually be issued as APDES permits it is 30 percent (40 state permits are current). However, as of February 20, 2015, the breakdown is as follows:

- For individual APDES Permits, 55% are current
- For individual permits (both APDES and state-issued permits issued pre-primacy), 42% are current
- For general permits and the facilities covered under the general permits, 86% are current. In addition, once the Mechanical Placer Mining Permit is re-issued in spring 2015, 94% will be current.

A significant portion of this backlog results from a large NPDES permitting backlog from Region 10 when Alaska obtained primacy in 2008 - 2012. In addition, prior to program transfer, the state issued several state permits for surface water discharges under state regulations 18 AAC

72; reissuance of these permits as APDES permits under 18 AAC 83 will be considerably more involved than the original issuance. Alaska also has several permits that are expired 10 years or longer; however, the status of reissuing many of these permits as APDES permits is uncertain given a 1979 Federal Register notice modifying secondary treatment requirements for 76 Native Alaskan Villages. Subsequent to the notice, EPA added an additional six Native Alaska Villages by letter bringing the total to 82 villages.

WDAP is actively working to reduce the backlog through permit reissuance and the use of general permits and has been bringing the rate of backlog down (refer to figure 1). WDAP has in place a permit issuance plan for 2015-2016 that reflects permitting priorities, including reduction of the backlog inherited from EPA. WDAP should continue to prioritize permits and increase permit issuance rates in order to reduce the backlog and meet the EPA national target established for state programs of 90 percent of permits being current.

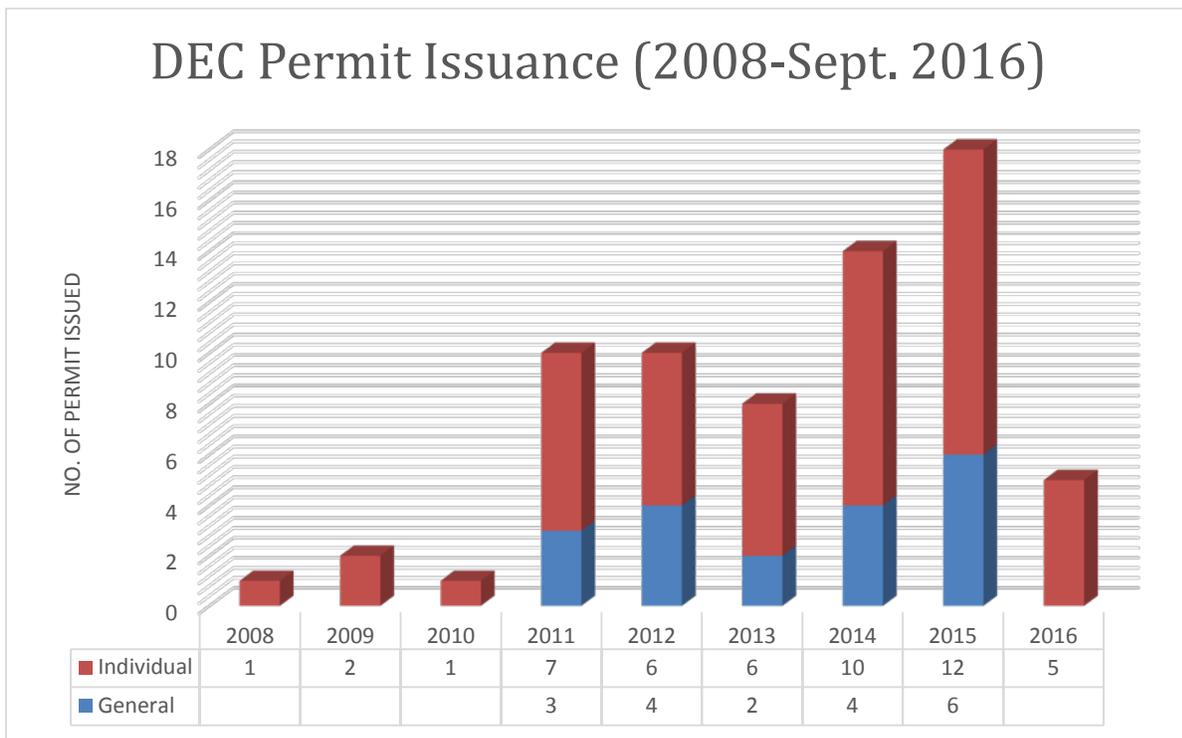


Figure 1. APDES Permit Issued by Year

C. State-Specific Challenges

WDAP identified the following challenges that affect aspects of permit development and implementation:

- WDAP would like EPA to clarify aspects of the Seafood ELG (e.g., remote vs. non-remote; who is subject to grind size requirements). ADEC also would like Region 10 to keep ADEC apprised of EPA Headquarters work on these issues since they affect numerous permits issued in Alaska.

- EPA’s failure to finalize the Peak Flow/Wet Weather policy creates uncertainty regarding how to proceed in permitting facilities that currently or propose to use blending. WDAP would like to have a final decision on this issue.
- On the North Slope, many issues arise regarding what is a discharge to a waters of the U.S. (i.e., is a pollutant discharged to a surface water, wetlands, land, etc.). It would be helpful to obtain EPA clarification regarding what are waters of the U.S. especially as it relates to tundra discharges in these unique conditions.
- ADEC and WDAP would like oversight by EPA Region 10 to be similar in scope to state oversight provided for other states and by other EPA Regions. The high level of oversight during the initial years of authorization have been beneficial, however, as the state’s APDES Program develops, in the interest of realizing the state’s capacity and for conserving both of the agencies resources, the level of oversight should be consistent with other states in the Region that administer the NPDES Program. Not only will this allow for the state to develop autonomy, but will also assist in allowing the state to reduce the large permit backlog inherited at program transfer, which are both state and national performance measures as well as a top priority for both agencies according to the Performance Partnership Agreement between the respective agencies.
- WDAP would like to remain fully informed regarding expectations for future PQRs, and promotes constancy between PQRs as they begin to be conducted regionally by EPA.
- WDAP inherited a considerable backlog of permits from EPA Region 10 and continues to focus on the priority of reducing this backlog through a range of permitting actions.

D. Current State Initiatives

Current state initiatives that will improve permitting include the following:

- WDAP is developing enhanced RP and limit development tools and guidance.
- WDAP will be developing a mixing zone guidance document for permit writers.
- WDAP is developing regulatory antidegradation implementation methods.

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 are 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 core ADEC permits and fact sheets reviewed by EPA as part of the PQR include a clear description of the facility, a description of processes or services conducted by the facility, identification of outfalls, a description of waste streams associated with each permitted outfall, and location and receiving water information.

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.

For the core permits reviewed, the permit applications are identified in the respective permit files. These are state forms (for individual permits) or EPA forms if the applications were submitted pre-program primacy and/or the state had yet to develop a state application form. Permit applications appear to be submitted in a timely manner. For a few permits, the date of the application in the file is several years prior to the effective date of the permit (AK0021245, AK0021547, AK0021890). Three permits applications (AK0021245, AK0021547, AK0021890) include data for some required parameters but do not include data for several other parameters that appear to be required (e.g., TRC, DO, TKN, O&G, N, P, TDS). WDAP staff indicated that they believed that complete application data should be in the file and that supplemental information was likely provided. For one permit (AK0021890), Form 1 is not identified in the file.

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 Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), pH, and percent pollutant removal), and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133 adopted by reference in 18 AAC 83.010. A total of three POTW permits were reviewed as part of the PQR.

The fact sheets for the core POTW permits include a good description of the facilities and treatment processes, and make the basis of the permit limits clear. The core POTW permits reviewed include permit limits that are consistent with secondary treatment requirements or explain where the treatment systems being used support the use of alternative limits. All of these limits are expressed in appropriate units and forms.

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 may 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).

The fact sheets for the non-municipal core permits reviewed include a good description of the facility and treatment process and identify applicable ELGs where relevant. The fact sheets include effluent data and identify pollutants in the discharge, and also discuss the basis for TBEL requirements. TBEL limits are expressed in appropriate units and forms. In one permit (AK0043206), it is not clear whether the facility was a new or existing facility. TBELs appear to be consistent with applicable standards.

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” (WQBEL), 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 PQR for ADEC assessed the processes employed by permit writers and water quality modelers 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, and
- 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).

The fact sheets for the core permits reviewed consistently identify the receiving water including designated uses. The impairment status of the receiving waters is routinely described in the fact sheets, but the TMDL status is not routinely described. However, the interview indicated that Alaska has very few final TMDLs and where the fact sheet indicates no impairment it follows that there is no applicable TMDL. The fact sheets and permit file materials reviewed do not include a clear explanation of how pollutants of concern are selected (i.e., which pollutants and pollutant data are evaluated and assessed for RP and possibly water quality-based limits). The fact sheets consistently discuss the pollutants that were evaluated for RP, whether RP was indicated for those pollutants and the basis for associated WQBELs. The permit files generally include documentation of the RP analyses and limit calculations. In one permit (AK0053643), the fact sheet indicates RP for several parameters in one location of the document and no RP for these parameters in another location of the document. The file spreadsheet indicated no RP and no limits were included in the permit.

The fact sheets for the core permits reviewed discuss antibacksliding where a permit limit is less stringent in a subsequent permit and where a mistaken provision was removed, and explain WDAP's basis. Antidegradation is discussed in the core permit fact sheets that were reviewed. This is the case even for existing facilities where loadings do not increase. The interview indicated that the state wants to establish a baseline record that antidegradation has been considered for all APDES permits.

Some of the core permits reviewed included limits for fecal coliform bacteria that are significantly higher than the state's WQS (e.g., AK0021890, AK0021547) for receiving waters that include uses of contact and secondary water recreation. These limits are based in part on the regulatory use of mixing zone water quality variances. In one case (AK0021547), the facility was expected to install disinfection by the Fall of 2013. DEC's mixing zone provisions requires authorized mixing zones to be "as small as practicable".⁷ In the case of bacteria, DEC may not

⁷ 18 AAC 70.240. <<http://dec.alaska.gov/water/wqsar/wqs/pdfs/70mas.pdf>>

have accounted for available technologies, such as disinfection and dechlorination, that would enable the application of smaller mixing zones. The EPA expects DEC to prioritize development of mixing zone guidance to support the regulatory provisions and policies, and ensure that authorized mixing zones are designed to be as small as practicable, and are supported by documented fact sheet analysis.

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 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 that 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.

The core permits reviewed include at least annual monitoring for all limited parameters and establish monitoring protocols that appear to support determinations of compliance, and monitoring frequency is specified for each parameter. One POTW permit specifies the monitoring location for both influent and effluent, while two others (AK0021245, AK0021547) specify the location for effluent monitoring and only generally identify the location for influent monitoring. The industrial permits describe the location for effluent monitoring. One permit (AK0053643) requires testing for WET, while several other permits indicated that, based on prior testing, WET testing is not needed and prior WET testing requirements have been removed. The permits include requirements that sampling and analysis methods meet 40 CFR 136 requirements (and the state equivalent) and that MDLs must be below permit limit levels.

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 a 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.

The core permits reviewed include standard conditions that track the federal regulatory standard conditions. With regard to special conditions, the municipal permits generally included provisions that address a Quality Assurance Project Plan, Operation and Maintenance Plan, a Facility Plan, as well as provisions that address identification signs, removed substances, and air and land releases. Industrial permits generally included provisions that address a Quality Assurance Project Plan and BMP Plan.

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 (40 124.5). EPA discussed each element of the administrative process with ADEC, and reviewed materials from the administrative process as they related to the core permit review.

For the core permits that were reviewed, appropriate public notice documents are identified in the relevant permit files. Evidence of publication of these notices was not identified in the files reviewed. WDAP staff indicated that these materials should be part of the hard copy file (which was not reviewed as part of the site visit). Public comments and response to comments are identified in the permit files that had received such comments. Correspondence also supported early notice of draft permits to stakeholders and feedback regarding these drafts. Revisions to permits appear to follow applicable requirements, and the fact sheets reviewed discuss and document any changes that have been made to permit conditions. No records of hearings were identified in the permit files reviewed and no hearings were conducted.

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, 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.

The fact sheets for the core permits reviewed are of good quality. They address the required elements and include a thorough discussion of the facility, discharge, receiving water, limits (TBELs and WQBELs), and other considerations. In addition, fact sheets include appendices that support the limits developed for each permit. Fact sheets identify pollutants that were evaluated for RP, however, they do not explain how pollutants of concern are identified based on application and other available data. ADEC also has complete, well organized permit files that include supporting documentation.

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 straightforward. The permit writer is responsible for documenting changes from the previous permit, ensuring draft and final limitations match (unless the basis for a change is documented), and including all supporting documentation is retained in the permit file.

For the core permits reviewed, the documentation of the basis for TBELs is generally good, but the specific regulatory citation and applicable subparts were not clearly identified. The fact sheets for the permits reviewed include a good description of the facility, processes, effluent, and treatment. The fact sheets address ELG categorization; although in some instances it is not clear whether a facility is existing or new. The fact sheets include examples of TBEL calculations and explain how ELGs are applied to develop permit limits. Where more stringent, WQBELs are used in lieu of TBELs. Not many BPJ-based limits were identified and thus no assessment can be provided of how such limits are derived and documented (WDAP acknowledged that it wants to strengthen the consistency of the BPJ process). Alternate effluent limits are explained where they were applicable and effluent limitations are expressed in appropriate units and forms.

With regard to the documentation for WQBELs, the core permit fact sheets reviewed identify the receiving stream and the designated uses of the waterbody and characterize the impairment status of the waterbody, although the presence or absence of relevant TMDLs are not routinely discussed (as previously noted, Alaska has very few TMDLs). They contain a good

discussion of reasonable potential analysis and the results and examples of limits calculations, while the permit file includes the spreadsheets that contain these calculations and the associated limits. The fact sheets reviewed also consistently address antidegradation and antibacksliding requirements.

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 area are nutrients, pesticides, pretreatment and stormwater.

1. Nutrients

For more than a decade, both 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 the EPA's *National Strategy for the Development of Regional Nutrient Criteria*). In a 2011 memo to the 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. This review assessed how nutrients are addressed in the APDES permitting program in Alaska and implementation of this framework.

Background

To date, Alaska does not have any permits that contain effluent limits for nutrients. The state has not developed policies or implementation guidance for permitting the discharge of nutrients.

Alaska has not developed numeric water quality criteria for nutrients. The state relies on the general narrative criteria expression in their standards to address nutrient related impacts or conditions. The narrative criteria for fresh and marine waters states, "Substances may not be introduced at concentrations that cause, or can reasonably be expected to cause, either singly or in combination, odor, taste, or other adverse effects on the use." [18 AAC 70.020(11) and (23)] Additionally, the state's water quality standards include narrative criteria for dissolved oxygen (DO) as a response variable indicative of nutrient pollution. The dissolved oxygen criteria for fresh and marine waters are found at 18 AAC 70.020(3) and (15), respectively. The numeric criteria values for DO vary depending of the designated use of the waterbody. The state has not developed a methodology to derive WQBELs for DO based on effluent and receiving water data, but rather, relies on applicable TBELs to limit pollutants that deplete DO such as biochemical oxygen demand (BOD).

Program Strengths

Typical sources of nutrient pollutant such as urban stormwater and Concentrated Animal Feeding Operation (CAFOs) are not viewed as problematic sources of nutrient pollution in Alaska due to the vastness of the state and low population densities found throughout most of the state. Alaska rarely has multiple discharges in the same waterbody so cumulative impacts are minimal.

Findings

At the time of the review, Alaska has not identified any water impaired by nutrient pollution. The state's NPDES permitting program has focused on program development and permit backlog reduction since receiving primacy in 2008. Given the status of permitting and lack of nutrient concerns in the state, the EPA recommends that the permitting program, at a minimum, develop guidance to evaluate nutrient concerns in NPDES permitting and develop implementation procedures to address or prevent nutrient impairments, and as needed, establish nutrient limits or other permit conditions (e.g. studies, BMPs). This may be done in conjunction with the states non-point source pollution efforts.

2. Pesticides

On October 31, 2011, the EPA issued a final NPDES *Pesticide General Permit (PGP) for Discharges from the Application of Pesticides*. This action was in response to a 2009 decision by the U.S. Sixth Circuit Court of Appeals (National Cotton Council of America v. EPA, 553 F.3d 927 (6th Circuit 2009)) in which the court vacated EPA's 2006 Final Rule on Aquatic Pesticides (71 ed. Reg. 68483, November 27, 2006) and found that point source discharges of biological pesticides and chemical pesticides that leave a residue, into waters of the U.S. were pollutants under the CWA. The federal PGP applies where the EPA is the permitting authority. All NPDES-authorized states and territories (47 in all) have developed and are implementing NPDES permits for pesticides discharges.

Background

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 (6th 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 of biological pesticides and of chemical pesticides that leave a residue, to waters of the United States. 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.

Authority over pesticide permitting transferred to Alaska at the time of the final phase IV transfer on November 1, 2012. The EPA was the permitting authority for pesticides permitting in Alaska at the time the EPA national permit was issued. EPA's *Pesticide General Permit (PGP) for Discharges from the Application of Pesticides* became effective on October 31, 2011 and will expire on October 31, 2016. The EPA issued NOIs for coverage prior to the phase IV transfers, since that time, ADEC issued NOIs for coverage under their state authority. Transferred permits will remain in effect (along with the state certification) until ADEC issues an APDES permit to replace the EPA-issued permit. Eligibility requirements are included in the PGP under section 1.1.

Program Strengths

For this PQR, Region 10 reviewed ADEC's administration of NOIs under the EPA's *Pesticide General Permit (PGP) for Discharges from the Application of Pesticides* with a focus on verifying its consistency with NPDES program requirements. The state does not expect to issue any other pesticide general permits. At the time of the review, the state had three NOIs, primarily from state agencies. The state expects only a small number of new NOIs over time. NOIs are submitted electronically via email and NOI are available online through ADECs permit search at (<http://146.63.9.103/Applications/Water/WaterPermitSearch/Search.aspx>).

ADEC maintains a webpage (<http://dec.alaska.gov/water/wnpssc/stormwater/PesticideGP.html>) to provide information to permittees about the permit. They encourage entities seeking authorization under the PGP to use tools provided by the EPA, such as the Interactive Decision Making Tool, to determine if coverage is needed.

The PGP requires the development and implementation of a Pesticide Discharge Management Plan (PDMP); establishes technology-based effluent limitations, water quality, monitoring, corrective action, record keeping, and annual reporting requirements. The University of Alaska-Fairbanks has a pesticide safety education program and offers Certified Pesticide Applicator Training.

Findings

There were no remarkable findings regarding ADEC's administration of the national PGP in Alaska.

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 Alaska, 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).

Program

ADEC's pretreatment program is closely aligned with the federal program established at 40 CFR Part 403 and adopted by reference at 18 AAC 83.010(g)(2). ADEC relies on POTW's to regulate industrial discharges to its sewer systems. A POTW with a total design flow greater than five million gallons per day (MGD) that receives industrial discharges that could interfere with or pass through the operations of the POTW will be required to develop a Pretreatment Program submission. ADEC may also require a POTW with a design flow less than five MGD to develop a Pretreatment Program submission if the POTW receives significant industrial contributions that warrant a Pretreatment Program to prevent interference or pass-through. A Pretreatment Program submission may be required to improve the opportunities to recycle and reclaim domestic and nondomestic wastewaters and sludges. ADEC was approved to implement the Pretreatment Program in accordance with the transfer schedule in MOA, Appendix B.

The pretreatment universe in Alaska is small and currently includes only three delegated programs. The following table summarizes the program status.

Approved Programs	Number of SIUs	Number of CIUs	Permit Status
Anchorage	4 SIU 4 non- SIU	4	Permit issued by EPA Region 10. Administratively Extended 301(h) waiver, under EPA Region 10 oversight
City of Fairbanks and Golden Heart Utilities	5	1	Administratively Extended – Issue Date July 25, 2000 AK0023451
City of North Pole	3	3	Administratively Extended – Issue Date June 1, 2008 AK0021393 Amended for program approval May 2012

POTWs applying for NPDES permits are required to identify their industrial users per 40 CFR 122.21(j). ADEC relies on permit applications to provide data about SIUs and pretreatment information. The pretreatment staff should review this portion of the NPDES application to determine which POTWs should be required to develop a pretreatment program and seek authorization. Due to significant turnover in ADEC Pretreatment Program staffing, a standard procedure has not been put in place for consistent review and consideration of the need for program development.

EPA Region 10 wrote and issued the permit for the entities with delegated pretreatment programs, and the permits were administratively extended. Due to the status of these permits, none of the above-mentioned permit were selected for review under PQR. ADEC indicated on the PQR checklist that the NPDES permit and fact sheet incorporate the requirements of 40 CFR Part 122.42 and 40 Part 403. EPA will review these draft permits to ensure that necessary pretreatment requirements are incorporated into future ADEC-issued permits.

The EPA reviewed 3 POTW permits without approved pretreatment programs (AK0021245- City of Homer. AK0021547 - City of Cordova Wastewater Treatment Plant, AK0021890 - City of Seward Lowell Point Wastewater Treatment Facility). The applications identified no SIUs. The permit incorporated general permit conditions requiring notification of the introduction of new pollutants in Appendix A – General Conditions, Section 2.8. Federal regulations at 122.44(j)(1) requires POTWs to conduct an industrial user survey themselves. The EPA recommends that the permit template incorporate requirements for POTWs to conduct an industrial user survey at least once each permit cycle. Additionally, this may assist the ADEC in conducting their statewide survey and keeping it up-to-date.

Findings

Based on the NPDES Pretreatment Program PQR Checklist, completed by ADEC following the site EPA-site visit, ADEC reported the following:

- Zero non-categorical SIUs have expired permits in approved POTW Pretreatment Programs.
- Zero CIUs have expired permits in approved POTW Pretreatment Programs.

- Zero Pretreatment Compliance Inspections (PCIs) conducted in the last full year [40 CFR 403.10(f)1(iii)]
- Zero Pretreatment Compliance Audits (PCAs) conducted in the last full year [40 CFR 403.10(f)1(iii)]

The checklist responses indicate a relatively inactive pretreatment program on the part of ADEC.

Pretreatment – Industrial User Survey

One goal of the PQR's evaluation of the ADEC pretreatment program is to assess the status of program implementation. One function of ADEC's program implementation includes identifying and regulating significant and categorical industrial users that discharge to POTWs without an approved pretreatment program.

As of June 2014, ADEC has not conducted a statewide industrial user survey to identify significant industrial users (SIUs) or categorical industrial users (CIUs) which was committed to prior to assuming pretreatment program authority in 2009.

The ADEC's APDES Program Description (Final, October 29, 2008), Section 8.3.1., indicated that prior to assuming pretreatment program authority (i.e. prior to October 31, 2009), ADEC will develop a plan to complete a state-wide survey of all industrial users (IUs) in non-delegated POTWs to identify all facilities meeting the definition of categorical or significant non-categorical users.

Pretreatment – Implementation Procedures and Inspections/Audits

Goals of the PQR's evaluation of the ADEC pretreatment program include an assessment of ADEC meeting the EPA's compliance monitoring strategy (CMS) goals of 2 pretreatment compliance inspections (PCIs) and one pretreatment compliance audit (PCAs) every five years for POTWs with approved pretreatment programs, and an annual sampling inspection of SIUs discharging to POTWs without approved pretreatment programs.

ADEC has had pretreatment sector authority and jurisdiction since the APDES Phase II transfer, October 31, 2009. Initially, the Fairbanks/GHU POTW (AK0023451) was the only approved pretreatment program. The North Pole POTW (AK0021393) pretreatment program was approved May 5, 2012.

In the last full year, ADEC reported that it did not conduct any PCIs or PCAs.

ADEC has reported that a pretreatment audit was completed at the Fairbanks/GHU POTW by Tetra Tech on May 11, 2010 but there are no ICIS entries to corroborate that such an audit was completed and documented. ICIS does not show the completion of any PCI or audit of this facility since completion of the Phase II transfer. No audit report has been provided to EPA as of June 1, 2014.

Even if an audit was completed in 2010, ADEC will not meet either the EPA CMS goal (two PCIs every five years) or its Program Description commitment (annual PCIs) with regard to PCIs for the Fairbanks/GHU POTW within the first five-year term of ADEC's pretreatment program. ADEC is also not meeting its Program Description commitment with regard to annual PCIs for the North Pole POTW.

SIU Annual Sampling Inspections

The ADEC Program Description, Section 9.1.4, states in part that ADEC will inspect and sample SIUs in POTWs without an approved pretreatment program at least once per year. In the last full year, ADEC reported that it did not conduct any annual sampling inspections at POTWs under their control authority without approved pretreatment programs. ADEC has not yet identified any SIUs discharging to POTWs without an approved pretreatment program.

4. Stormwater

Background

The NPDES program requires storm water discharges from certain municipal separate storm sewer systems (MS4s), industrial activities, and construction sites be permitted. Generally, the EPA and NPDES-authorized states issue individual permits for medium and large MS4s (referred to as Phase I MS4s), and general permits for smaller (Phase II) MS4s; industrial activities; and construction activities. As of November 2009, ADEC is authorized to issue storm water permits under the APDES program.

ADEC has five individual MS4 permits (including two Phase I MS4 permits, and three Phase II MS4 permits), a construction general permit, and a multi-sector industrial storm water general permit; each permit is listed below. All permits are in effect and current, with the exception of the Phase I MS4 permit for the Port of Anchorage (which ADEC inherited from EPA upon NPDES program transfer, and expired since March 3, 2000.)

- AKS052558 – Municipality of Anchorage & Alaska Department of Transportation & Public Facilities MS4s (Phase I)
- AKS052426 – Port of Anchorage MS4 (Phase I)
- AKS053406 – City of Fairbanks, City of North Pole, University of Anchorage-Fairbanks, and AK Department of Transportation and Public Facilities MS4s (Phase II)
- AKS053414 – Fairbanks North Star Borough MS4 (Phase II)
- AKS053651 - Joint Base Elmendorf-Richardson MS4 (Phase II)
- AKR100000 – General Permit for Stormwater Discharges from Construction Activities
- AKR050000- General Permit for Stormwater Discharges Associated with Industrial Activities

Municipal Separate Storm Sewer Systems (MS4s)

Information about ADEC MS4 program is available at http://dec.alaska.gov/water/wnpssc/stormwater/sw_municipal.htm.

For the PQR, the EPA reviewed preliminary drafts of AKS053406 - City of Fairbanks, City of North Pole, University of Anchorage-Fairbanks, and AK Department of Transportation and Public Facilities MS4 Permit (Fairbanks et al MS4 Permit) as detailed below. Since the PQR was conducted, these two MS4 permits completed the public comment period and were issued in June 2013. EPA's findings were based on the draft permits available at the time of the PQR. These findings were address with the issuance of the final permits.

AKS053406 – City of Fairbanks, City of North Pole, University of Anchorage-Fairbanks, and AK Department of Transportation and Public Facilities MS4s

On April 14, 2011, the EPA completed a review of ADEC's preliminary draft Permit reissuance for storm water discharges from municipal separate storm sewer systems (MS4s) owned and operated by the City of Fairbanks, et al, and transmitted the EPA's comments on the preliminary draft Permit. Between November 26 and December 10, 2012, ADEC subsequently conducted its formal Preliminary Draft Permit Review period; the EPA again reviewed the revised draft Permit and fact sheet, and submitted comments to ADEC in a letter dated December 10, 2012. The EPA Region 10 permitting program and compliance staff reviewed both preliminary draft documents for completeness utilizing the EPA's *State MS4 Permit Quality Review Checklist* and the April 2010 *MS4 Permit Improvement Guide*. ADEC proposed the Permit for a 30-day public comment period between April 11 and May 13, 2013. ADEC issued the final Permit on June 13, 2013, and established the Permit's effective dates as August 1, 2013 through July 31, 2018.

Program Strengths

In general, the Permit meets all minimum requirements of EPA's storm water program for regulated small MS4s (40 CFR 122.34). The Permit requires a written Stormwater Management Program (SWMP) document, and contains measurable goals and requirements for program assessment. The Permit requires submittal of an annual report to track measurable goals. The Permit adequately requires permittees to effectively control illicit discharges to the MS4, and control of pollutants from construction sites to the MS4. The Permit requires the permittees to perform specific activities that constitute an effective program, including requirements to: maintain an updated storm sewer system map and inventory; conduct inspections at all construction sites at least once per year; implement compliance and enforcement measures to ensure best management practices are utilized; and to review pre-construction site plans for BMPs. The permittees must use and continue to evaluate further use of green infrastructure/low impact development practices.

Critical Findings

Based on our review of the preliminary draft Fairbanks, et al MS4 Permit and comments submitted to ADEC in December 2010, the following are select findings:

- Some requirements should have been more stringent than the previous Permit. In several provisions, ADEC required the permittees to “develop” and “implement” programs/plans, using identical language to the previous Permit. In its comments, the EPA advised ADEC to not refer to the “development of” any of the required six minimum SWMP measures, because such programs, ordinances, and activities must already be in place and implemented by each of the permittees pursuant to the initial Permit term. The EPA advised ADEC that they should review the annual reports and renewal application information. ADEC should specify particular actions the permittees must take to fix program deficiencies where any specific minimum SWMP activities are not being adequately implemented as per the previous Permit and/or as necessary to reduce pollutants to the maximum extent practicable as required by federal regulations. Further, EPA recommended that implementation of any identified program improvements take place immediately upon the Permit’s effective date.
- With regard to the Permit’s requirement to address known impairments in receiving waters and/or to implement applicable TMDLs within the permit area, ADEC’s preliminary draft Permit was not consistent with relevant federal requirements. The EPA noted that ADEC’s preliminary draft permit text did not comport with EPA’s November 2002 guidance memorandum entitled “Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs.” Instead, the preliminary text read very close to the requirement included in the first Permit term and did not appropriately reference or address an applicable, EPA-approved TMDL for Noyes Slough. The Noyes Slough TMDL clearly contains WLAs assigned to the Fairbanks area MS4 permittees and specifies, “zero discharge of debris.” EPA notes that where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the wasteload allocations in the TMDL. See 40 CFR 122.44(d)(1)(vii)(B) and EPA’s 2002 memorandum. Neither the preliminary Permit text nor the accompanying fact sheet contained any explanation of whether ADEC believed the existing SWMP actions were sufficient to adequately control debris. Further, the Permit text did not include SWMP provisions specific to other impaired pollutants of concern (POC) in the receiving waters, namely sediment and oil & grease. EPA commented that ADEC should review the prior SWMP implementation analysis submitted by the permittees during the initial Permit term, and should use its judgment to determine if the POCs are adequately controlled through the required SWMP activities. EPA noted that ADEC must also explain its conclusion in the fact sheet, and must support such findings in the Administrative Record. As drafted, EPA found no direct evidence in the preliminary draft Permit or fact sheet that ADEC had conducted such a review or assessment during the Permit development process.

Multi-Sector General Permit (MSGP)

**Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity
(AKR050000)**

ADEC adopted EPA's 2008 MSGP, which became effective on February 26, 2009, as their MSGP permit on November 2, 2009 following assumption of NPDES program authority on October 31, 2009. EPA's 2008 MSGP will remain in effect until ADEC reissues their MSGP in 2014. The permit is available on ADEC's MSGP webpage at <http://dec.alaska.gov/water/wnpspc/stormwater/MultiSector.htm>

For the PQR, EPA reviewed ADEC's administration of the EPA's MSGP.

Additionally, Region 10 reviewed the preliminary draft MSGP in January 2014 and completed the PQR checklist at that time. Region 10 found the preliminary draft permit closely followed EPA's Draft MSGP, which was public noticed in April 2014. The final MSGP was issued on February 19, 2015 and became effective on April 1, 2015.

Two differences between EPA's MSGP and ADEC's were

1. ADEC's MSGP does not discuss availability of records and SWPPPs to the public. There are provisions for confidential business information in Appendix A, which is the standard NPDES permit conditions, but these do not provide any context of what and when non-confidential information might be public.
2. The body of the permit does not require submittal of relevant records/information requested by the permitting authority. Appendix A, the standard NPDES permit conditions, does require this, so the permit is sufficiently enforceable on this point, but it seems somewhat confusing to have these two sections in apparent conflict.

These issues were addressed in the final issued version of the 2015 MSGP, Part 5.7 SWPPP Availability states "DEC may provide access to portions of the SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public, but may not be withheld from those staff cleared for CBI review within DEC, EPA, USFWS, or NMFS. DEC encourages permittees to post their SWPPP online and provide the website address on the NOI (the SWPPP does not need to be reposted on the internet each time it is updated)." See http://dec.alaska.gov/Water/WPSdocs/AKG060000_2015_MSGP.pdf

Construction Stormwater Permit (CGP)

General Permit for Stormwater Discharges from Construction Activity (AKR100000)

ADEC issued their first CGP on May 19, 2011. The permit became effective on July 1, 2011 and will expire on January 31, 2016. The permit is available on ADEC's CGP webpage at http://dec.alaska.gov/water/wnpspc/stormwater/sw_construction.htm

EPA reviewed the ADEC CGP twice before it became final, transmitting formal comments on December 10, 2010 and on March 10, 2011. EPA then used the PQR checklist to review the final permit in April 2014.

The ADEC CGP

1. Does not discuss whether records and SWPPPs be made available to the public in the body of the permit. The Fact Sheet states, “The permit does not require that the general public have access to the construction site nor does it require that copies of the plan be available or mailed to members of the public. However, ADEC strongly encourages permittees to provide public access to SWPPPs at reasonable hours. Upon request, ADEC intends to assist members of the public in obtaining access to permitting information, including SWPPPs. ADEC believes this approach will create a balance between the public's need for information on projects potentially impacting their water bodies and the site permittees need for safe and unimpeded work conditions.”
2. The body of the permit does not require submittal of relevant records/information requested by the permitting authority. Part 9.4 simply states, “A permittee must provide a response to written requests for records to the Department within thirty (30) calendar days of receipt of a written request.” While Part 9.4 seems to indicate that a permittee could respond “No,” and be in compliance, Appendix A, **1.9 Duty to Provide Information** states
“The permittee shall, within a reasonable time, provide to the Department any information that the Department requests to determine whether a permittee is in compliance with the permit, or whether cause exists to modify, revoke and reissue, or terminate the permit. A permittee shall also provide to the Department, upon request, copies of any records the permittee is required to keep under the permit.”

As with the MSGP, while the permit is sufficiently enforceable it seems somewhat confusing to have two sections on this topic, one less clear than the other.

IV. REGIONAL TOPIC AREA FINDINGS

Region 10 choose the regional topics based upon the major industrial sectors represented in Alaska; seafood, mining, and oil and gas industries are important industries economically, but also many have significant impacts on water quality if not managed properly. For each of these industries, ADEC utilizes both individual and general permits to authorize wastewater discharges. General permits are used in cases where there are many entities with similar wastewater discharge characteristics and individual permits are used for larger discharges that required special considerations in permitting. Sixty-four percent (14 out of 22) APDES general permits cover these three industrial sectors. Additionally, approximately thirty-six percent of individual permits are issued to entities within these three major industries.

The following table displays the total number of general and individual permits within these sectors, as well as, the NPDES permits reviewed within each sector.

Sector	Number of General Permits	Number of Individual Permits	Permit Reviewed
Mining	4	9	AK0043206 - Greens Creek Mine AK0053627 - Nanuuq Gold Mine AK0053643 - Fort Knox Mine AKG374000 - Norton Sound Large Dredge Placer Miners AKG375000 - Small-Size Suction Dredge Placer Miners
Oil and Gas	6	7	AKG315100 - Cook Inlet Mobile Exploration
Seafood	4	9	AKG523000 Offshore Seafood Processors Alaska

Region 10 worked closely with ADEC on the development of each of the above permits under the increased level oversight agreed to during the phase transition of the NPDES program. Region 10 staff with sector expertise provide technical assistance to ADEC in permit development.

Clean Water Act (CWA) § 301 states, “[e]xcept as in compliance with this section and sections 302, 306, 307, 318, 402, and 404 of this Act, the discharge of any pollutant by any person shall be unlawful.” CWA section 402 contains the requirements for the National Pollutant Discharge Elimination System (NPDES) permitting program. This program implements the Effluent Limitation Guidelines for the seafood, mining and oil and gas sectors as well as insures compliance with state water quality standards. NPDES permits contain a combination of numeric and narrative limitations, and best management practices to meet the objective of the CWA, which is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. The focus of the review is to verify that permits and fact sheets comply with the permitting regulations (18 AAC 83), the Memorandum of Agreement between EPA and ADEC, and the Program Description submitted as part of the NPDES Application in May 2008. The permits shown in the above table fulfill the regional topic area requirements in that they are permits in the seafood, mining or oil and gas sector that have been reissued or issued by ADEC.

A. Seafood

The seafood industry is a significant industry in Alaska. As shown above, the majority of permittees are covered under general permits.

- [AKG520000](#) **Seafood Processors in Alaska GP** (Expired/Administratively Extended)
Covers shore-based facilities and vessels operating within 3.00 nautical miles (nm) of shore at mean lower low water or baseline. No new permittees can be authorized under the expired permit.
- [AKG523000](#) **Alaska Offshore Seafood Processors GP**
Currently permitted seafood processors discharging in Alaskan waters between 0.5 and 3.0 nm from shore at mean lower low water or baseline, shall submit an NOI by December 1, 2011. New permittees shall submit an NOI at least 90 days prior to the start of a proposed discharge.

- [AKG524000](#) NPDES **Offshore Seafood Processors in Alaska GP**
Covers seafood processors that discharge more than 3.0 nm from shore at mean lower low water or baseline.
- [AKG528000](#) NPDES **Seafood Processors Operating Shorebased Facilities on Kodiak Island**
This permit is expired, but most operators on Kodiak that discharge into St. Paul Harbor or Near Island Channel have administrative extension under the expired permit.

EPA promulgated the Seafood Processing effluent guidelines and standards (40 CFR Part 408) in 1974 and 1975. The regulation covers wastewater discharges from facilities that preserve and can seafood from a raw to marketable form. The Seafood Processing effluent guidelines and standards are incorporated into NPDES and APDES permits. Subparts of the regulation apply specifically to Alaska. The focus of the seafood sector review is to verify that permits and fact sheets contained the appropriate effluent limitation guidelines in accordance with federal regulations. ADEC had issued only the Off Shore Processors general permit at the time of the review and was drafting the onshore processor permit.

EPA worked closed with ADEC on the development of the Off-shore Seafood Processors general permit. EPA objected to the draft permit. After significant discussion and revisions to the draft permit, the EPA lifted the objection and ADEC issued the final permit. Because of continued collaboration on issued permit since ADEC's gained primacy, there are not critical findings during this review.

B. Mining

Alaska's mining industry includes open pit and underground hard rock mines, developing hard rock projects, a coal mine, several coal projects in progress, an underground placer mine, a number of conventional placer mines, and an extensive exploration industry. Employment in the industry is a significant contributor to rural employment and economic prosperity. The value of the industry is well over \$1 billion annually. Mine production, development, and exploration projects are located throughout the state.

NPDES permitting of mines in Alaska is a collaborative effort between ADEC and EPA. EPA was consulted early in the permitting process for each of the five permits listed above. The permit writer who worked with ADEC had written two of the listed permits for EPA and written multiple individual permits for a third sector which ADEC decided to replace with a general permit. This resulted in EPA's concerns being addressed early in the process so few comments resulted during the formal review process.

Because of collaboration on issued permit since ADEC's gained primacy, there are no critical findings during this review.

C. Oil and Gas

Alaska's oil and gas industry includes onshore facilities on the North Slope and in the Cook Inlet region along with offshore facilities in the coastal waters of upper Cook Inlet. Exploration is occurring in all of these areas and in the waters offshore of the North Slope. New production

facilities are proposed for both Cook Inlet and the North Slope. The industry produced revenues of \$178 billion from 1977 through 2012. The state government relies almost entirely on petroleum revenues to pay for public services and the industry accounts for roughly half of all Alaska jobs.

Permitting for Cook Inlet was a joint effort because the previous Cook Inlet general permit covered both state and federal waters so along with the state permit, EPA also had an obligation to issue their own permit. Although the regulatory requirements were different, the permits were written and public noticed together and joint public hearings were held in three communities. Teaming produce a reduction in comments during the formal review period although there were some that tended to be the result of bifurcating an existing permit or based on new requirements that were overlooked during the drafting process.

Because of collaboration on issued permit since ADEC's gained primacy, there are no critical findings during this review.

V. ACTION ITEMS

This section provides a summary of the main findings of the review and provides proposed action items to improve ADEC's APDES permit programs. This list of proposed action items will serve as the basis for ongoing discussions between EPA Region 10 and ADEC as well as between EPA Region 10 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 the state's or Region'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 for the core permits reviewed include very good descriptions of the facility and receiving water. Permit applications are present in the respective files; however, some required

data is not identified. Proposed action items to help ADEC strengthen its NPDES permit program include the following:

- Ensure that permit applications include all required data and that all supplemental application information and data are available in permit files. [40 CFR 124.9] (Category 1)
- Ensure that permit application information is sufficiently recent as to be representative of conditions at the facility at the time a permit will become effective. (Category 2)

B. Technology-based Effluent Limitations

For the core permits reviewed, the TBELs for municipal facilities are consistent with secondary treatment requirements and any alternative limits are explained. For non-municipal facilities, TBELs also appear to be properly applied and developed. Proposed action items to help ADEC strengthen its NPDES permit program include the following:

- Include or reference TBEL calculations in the permit file. (Category 2)
- Provide a more robust description for basis of BPJ limits. (Category 2)

C. Water Quality-Based Effluent Limitations

The core permits reviewed include WQBELs consistent with the respective fact sheet discussions and file support. The fact sheet and file documentation does not consistently discuss how pollutants of concern are determined but does explain and document the RP analyses conducted and limit development. Proposed action items to help ADEC strengthen its NPDES permit program include the following:

- Include documentation in the fact sheet or permit file that indicates how pollutants of concern (POC) are determined based on data available. (Category 2)
- Prioritize ongoing efforts to development of mixing zone guidance to support the regulatory provisions and policies, and ensure that authorized mixing zones are as small as practicable for each discharger. (Category 2)

D. Monitoring and Reporting

The monitoring and reporting provisions reviewed in the core permits appear to be consistent with federal requirements. Proposed action items to help ADEC strengthen its NPDES permit program include the following:

- Clearly identify the location for influent monitoring in all relevant permits. (Category 2).
- Develop monitoring guidance to promote effective and consistent implementation of monitoring requirements in APDES permits. (Category 3).

E. Standard and Special Conditions

The standard conditions in the core permits reviewed are consistent with federal requirements. The special conditions appear to address needs, state requirements, and useful planning. Proposed action items to help ADEC strengthen its NPDES permit program include the following:

- No action items identified for Standard and Special Conditions.

F. Administrative Process (including public notice)

The administrative process followed for the core permits reviewed generally appears to be consistent with federal requirements. Copies of the public notices of draft permits are in the files but copies of the published notice were not included in the electronic file reviewed. Proposed action items to help ADEC strengthen its NPDES permit program include the following:

- Ensure that documentation of the published permit notices are maintained in the respective permit files. (Category 2)

G. Documentation (including fact sheet)

The fact sheets for the core permits reviewed are very descriptive of the permit requirements and basis for those requirements. In addition, the permit files are well organized and include documentation for the permit limits and other conditions. Proposed action items to help ADEC strengthen its NPDES permit program include the following:

- In cases where the receiving water is impaired, indicate in the fact sheet the TMDL status of the receiving water even where no final TMDL is applicable. (Category 2)

H. National Topic Areas

Proposed actions items for core topic areas are provided below.

1. Nutrients

At present, Alaska has not identified any waters impaired by nutrient pollution. The state's NPDES permitting program has focused on program development and permit backlog reduction since receiving primacy five years ago. Given the status of permitting and lack of nutrient concerns in the state,

- EPA recommends that the permitting program, at a minimum, develop guidance to evaluate nutrient concerns in NPDES permitting and develop implementation procedures to address or prevent nutrient impairments, and as needed, establish nutrient limits or other permit conditions (e.g. studies, BMPs). (Category 2)

2. Pesticides

ADEC's administers NOIs under the EPA's *Pesticide General Permit (PGP) for Discharges from the Application of Pesticides* with a focus on verifying its consistency with NPDES program

requirements. The state does not expect to issue any other pesticide general permits. At the time of the review, the state had three NOIs, primarily from state agencies.

- No action items were identified for Pesticides.

3. Pretreatment

This PQR report includes findings indicating issues and deficiencies with the development and implementation of a pretreatment program consistent with regulatory expectations. The following action items will help ADEC address the deficiencies and strengthen its pretreatment program.

- ADEC must complete development and implementation of SOPs to implement its pretreatment program in accordance with Program Description commitments. These SOPs must include the inspection and sampling plan for POTW audits/PCIs and IU inspections. (Category 2)
- The EPA recommends that the permit template incorporate requirements for POTWs to conduct an industrial user survey at least once each permit cycle in accordance with 122.44(j)(1).. The regulations at 40 CFR 122.44(j)(1) require POTWs to (1) Identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR Part 403. (Category 2)

4. Stormwater

EPA had previously reviewed draft permits during the development process. ADEC was responsive to corrections. The following recommended actions are based on concerns in draft permits that should be addressed in future issuance of stormwater permits. Proposed action items to include the following:

MS4 Permits

- Ensure that future issuance of stormwater permits take into consideration new and more stringent requirements to protect water quality including TMDLs and revised water quality standards. (Category 3)
- EPA recommends that implementation of any identified program improvements become effective upon the effective date or as soon as possible. (Category 3)

MSGP

The following comments are based on EPA's review of ADECs preliminary draft MSGP following the PQR in January 2014. This will be the first time issuance of the MSGP for ADEC. Some of these concerns may be addressed prior to the issuance of the final permit.

- Ensure the permit discusses the availability of records and SWPPP to the public. (Category 2)

- Ensure the permit explicitly requires submittal of record/information requested by the permitting authority. (Category 2)

CGP

- Ensure the permit discusses the availability of records and SWPPP to the public. (Category 2)
- Ensure the permit explicitly requires submittal of record/information requested by the permitting authority. (Category 2)
- Ensure provisions about minimizing soil compaction and, unless infeasible, preserving topsoil as required in (40 CFR 450.21(a)(7)) are included in the CGP. (Category 2)
- Ensure provisions for completion time frame for stabilization, as required in (40 CFR 450.21(b)) are included in the CGP. (Category 2)
- Provide clarification whether problems requiring corrective action are considered a permit violation are included in the CGP. (Category 3)

I. Regional Topic Areas

Proposed action items for special focus areas are provided below.

1. Seafood

Seafood is a significant and important industrial sector in Alaska. Several general permits providing coverage for significant discharges have been administratively extended, but coverage is not available to new discharges. Proposed action items to help Alaska strengthen its NPDES permit program include the following:

- ADEC should evaluate its substantive sectors in an attempt to anticipate impending potential new or uncovered discharges that need APDES permit coverage. (Category 2)
- Based on this evaluation, ADEC should prioritize and expedite permit issuance rates, especially of the near shore/shore-based seafood general permit, to ensure applicable dischargers obtain appropriate APDES permit coverage. (Category 2)

2. Mining

ADEC worked closely with EPA's mining permit writer during the development of the permits reviewed under PQR. Because of collaboration on issued permit since ADEC's gained primacy, there were no critical findings on the selected permits during this review.

3. Oil and Gas

ADEC worked closely with EPA's oil and gas permit writer during the development of the permits reviewed under PQR. Because of collaboration on issued permit since ADEC's gained primacy, there were no critical findings on the selected permits during this review.

Appendix A. Table of NPDES Permit Reviewed

NPDES No.	Permit Name	Reviewer	Draft, Modification, Reissue or Final Permit?	Core Review ¹				National Topics ²				Regional Topics				
				POTW	Non- POTW	Major	Minor	Nutrients	Pre-treatment	PGP	SW	Oil and Gas	Mining	Seafood		
AK0021245	City of Homer		F	10/8/2010		x				NA						
AK0021547	City of Cordova Wastewater Treatment Plant		F	5/25/2011		x										
AK0021890	City of Seward Lowell Point Wastewater Treatment Facility		F	6/24/2011		x										
AK0053627	Rock Creek Mine		F	6/24/2011		x								x		
AK0053643	Fort Knox Mine		F	8/15/2012		x								x		
AK0053392	KPC Ward Cove Landfill Leachate	Karen Burgess, PQR checklist used to review draft.	F		3/28/2013		x									
AKS053406	MS4 - City of Fairbanks, City of North Pole, UAF, DOT	PQR checklist using for draft.	F				x					Jun-13				
AK0043206	Helca Greens Creek Mining Company		F			x								Jun-13		
General Permits																
AKR100000	GP for Discharge from Large and Small Construction Activities		F									2/19/2011				2/23/2011
AKG52300	Alaska Offshore Seafood Processors		F													8/21/2012
AKG375000	Small-Size Suction Dredge Placer Miners		F													
AKG572000	Small POTWs to Surface Water		F	9/28/2012												
AKG315100	Mobile Oil and Gas Exploration Facilities in State Waters in Cook Inlet		F										Jun-13			
AKG374000	Norton Sound Large Dredge Placer Miners		F													Jun-13
Total Permits as of 6/1/2013				6	1	6	2	0	1	1	2	1	1	5	1	
Total Permits Required for PQR				6	4	8	2	4	4	4	4	NA	NA	NA	NA	
Total Permits Needed as of 1/12/2012				0	3	2	0	4	3	3	2	2	2	2		

NOTES:
¹Review includes PQR checklist and/or special topic checklists; Review can include final permits issued within 2 years or draft permits for real-time review; draft permits are expected to be final prior to state visit. R2
²Review includes special topic checklists; 4 permits required per special topic unless general permits are used. NY has a GP for pesticides so only 1 permit is available for use.

Appendix B. DEC Comments on Final PQR Report

DEC provided the following letter to DEQ prior to issuance of the final report.



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Environmental
Conservation

DIVISION OF WATER
Wastewater Discharge Authorization Programs

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October 13, 2016

Mr. Michael Lidgard, NPDES Unit Manager
Environmental Protection Agency, Region 10
Office of Water and Watersheds, M/S OWW-191
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101

RE: Alaska Department of Environmental Conservation Comments on the Environmental Protection Agency's Final Permit Quality Review Report for Alaska

Dear Mr. Lidgard:

This letter serves as the Alaska Department of Environmental Conservation's (DEC) formal response to the Region 10 Environmental Protection Agency (EPA) Final Alaska Permit Quality Review (PQR) Report (Final Report). EPA conducted the subject PQR in 2013. EPA subsequently generated the Final Report after evaluation of comments DEC submitted on the Draft PQR Report (Draft Report) on April 20, 2015 (April 20 letter). EPA transmitted the Final Report to the DEC Wastewater Discharge Authorization Program Manager via e-mail on October 12, 2016.

DEC appreciates that EPA incorporated many of DEC's comments and suggestions on the Draft Report in the Final Report. There are select areas remaining in the Final Report that DEC is providing follow-up comments. In addition, narrative has also been included in certain parts of this letter to highlight the current status of issues raised in the Final Report, including existing or proposed efforts with respect to a particular issue. The following are DEC's general and specific comments on the Final Report.

Permits Not Cited

Throughout the document, EPA made findings without identifying the specific permit or group of permits that EPA determined could be improved (e.g., see Page 21, Part III. G. 1.). This vagueness leaves ambiguity as to which permits EPA is suggesting could have been improved, and is not particularly helpful in guiding program improvement efforts.

Page 18, Part III. C.

EPA indicates in this Part of the Final Report that the fact sheets and permit file materials reviewed do not include a clear explanation of how pollutants of concern (POCs) are identified. The POC

concept is later echoed on Page 21 and in Part V. C. (Action Items) of the Final Report, and is listed as a “category two” finding (category two indicating action is recommended by EPA). As discussed in DEC’s April 20 letter on the Draft Report, DEC disagrees with EPA’s assessment with respect to identification of POCs. DEC is copying the language from the April 20 letter below as it is still valid.

“Firstly, this section does not identify the permits that do not identify pollutants of concern. Secondly, DEC disagrees with the assessment. While DEC’s fact sheet template as currently structured does not include a section titled “identification of pollutants of concern”, the fact sheet does include a basis of limits section and associated appendices that identify the particular pollutants of concern and whether the pollutants of concern were identified from data submitted with the permit application, discharge monitoring reports, special studies, and/or some other source. Accordingly, DEC requests the language be removed prior to finalizing the PQR Report. However and nevertheless, DEC is currently in the process of updating its fact sheet and permit template documents and will incorporate a specific section dedicated to the identification of pollutants of concern.”

Notwithstanding the merits of the quoted paragraph above, several permits developed or in the process of development since the Draft Report was provided to DEC include specific sections discussing the identification of POCs.

Pages 18 & 19, Part III. C.

The last paragraph of this part of the Final Report discusses the authorization of fecal coliform bacteria limits in select permits that are “significantly higher” than the State’s Water Quality Standards. DEC provided commentary on this part of the Draft Report in its April 20 letter, and the commentary is still valid as EPA has not satisfactorily revised or deleted the language. DEC is copying the applicable language from the April 20 letter below.

“Through an integrated approach of applying the provisions of the mixing zone and antidegradation regulations as well as the legal and technical findings for basis of effluent limits included in permit fact sheets, DEC maintains that for the subject permits identified (as well as all other APDES permits) that the mixing zone regulations were satisfied including determining that the most reasonable and effective treatment was used to justify fecal coliform bacteria effluent limits and mixing zone authorizations. DEC does not dispute that development of a mixing zone guidance is a high priority, but disagrees that when the permit documents are reviewed holistically, that the regulatory bar for justifying the fecal coliform bacteria limits was not met. DEC requests the subject language be removed prior to finalization of the PQR Report.”

Pages 22 & 23, Part III. H. 1.

Part III. H. of the Final Report discusses how Alaska’s Permitting Program performs in areas of national interest. Part III. H. 1. covers the topic of nutrients. DEC provided commentary on this Part of the Draft Report in its April 20 letter, and the commentary is still valid as EPA has not satisfactorily revised or deleted the language. DEC’s applicable commentary targeted the sentence in the findings section that reads, “Given the status of permitting and lack of nutrient concerns in the

state, the EPA recommends that the permitting program, at a minimum, develop guidance to evaluate nutrient concerns in NPDES permitting and develop implementation procedures to address or prevent nutrient impairments, and as needed, establish nutrients limits or other permit conditions (e.g. studies, BMPs).” DEC is copying the recommendation language on nutrients it provided in the April 20 letter below.

“As EPA indicates at the beginning of the aforementioned quoted sentence, there currently are not nutrient concerns in the state. However, EPA then follows with a list of recommendations to develop and/or implement nutrient permitting and impairment guidance. DEC agrees with EPA that there currently are not nutrient concerns in the state, and as such, recommends deletion of the EPA recommendations in the quoted paragraph. Further, as numerous studies have demonstrated, storm water run-off can be a major contributor to water body nutrient impairment. All major population centers that meet criteria in Alaska have individual separate municipal storm water (MS4) permits that are current or that are in the process of being reissued, thereby providing appropriate control measures to mitigate the introduction of nutrient pollution subject to compliance with permits. DEC maintains that there is not a basis of concern to request DEC development of nutrient related APDES guidance and requests the language be removed prior to finalizing the PQR Report.”

Given the minimal environmental risk currently posed by nutrients in the state of Alaska, DEC will not be working on nutrient related guidance at this time and will be focusing resources to address more pressing environmental concerns.

Pages 26-28, Part III. H. 3.

Part III. H. 3. covers the topic of pretreatment. DEC provided commentary on this part of the Draft Report in its April 20 letter, and the commentary is still valid as EPA has not satisfactorily revised or deleted the language. DEC is copying the applicable language from the April 20 letter below.

“These sections are largely duplicative of the content EPA included in the December 1, 2014 Final State Review Framework (SRF) Report for DEC’s APDES Compliance Program (See SRF Findings 2-3 & 2-4). DEC is already tracking and reporting on pretreatment given the SRF findings. There is no benefit to reporting the same material in two separate reports, or requiring tracking by both EPA and DEC for both the APDES permitting and compliance programs for these items. Further, much of the content referenced in the subject draft PQR Report section is in relation to audits, inspections and compliance monitoring strategy (CMS) goals, which is the purview of the SRF, not the PQR. Additionally, discussing inspections, audits and CMS goals is inconsistent with the stated purpose of the PQR as stated in the first paragraph of the NPDES PQR Standard Operating Procedures document, which states, “The evaluation compares the substantive and procedural requirements set out in relevant regulations (40 CFR 122 through 133, and 400 through 699) and guidance with the permit file documentation developed as part of permit issuance.”

Based on the above, DEC maintains that the duplicative pretreatment findings should have been removed prior to finalizing the PQR Report. Nevertheless and for the record, DEC would like to

provide a status update in the following four paragraphs on progress made in the area of pretreatment.

With respect to a statewide industrial survey, DEC completed this effort in early 2016, which did not identify any new significant industrial users (SIU). In addition, as EPA recommends in the report, DEC has begun placing a permit provision in individual permits for publicly owned treatment works (POTW) that they shall complete an industrial survey during each permit cycle and report the results to DEC in their application for permit reissuance.

The statewide industrial survey only identified one SIU that is discharging to a POTW without an approved pretreatment program, The Alaska Brewing Company in Juneau, Alaska, which both EPA and DEC already were aware existed. Though the POTW does not have an approved pretreatment program, the POTW's current permit language mirrors pretreatment program language and places identical requirements on the POTW for pretreatment program compliance. Additionally, DEC conducted an inspection of the facility in February 2016, though no samples were collected. DEC intends to continue annual inspections of the facility.

With respect to pretreatment inspections and audits, the CMS requires that pretreatment compliance audits (PCA) be completed once every five years for each POTW with an approved pretreatment program; the document further states that approval authorities should conduct at least two pretreatment compliance inspections (PCI) once every five years. DEC conducted a PCA of Golden Heart Utilities in Fairbanks, Alaska in January 2015. The PCA is annotated in EPA's Integrated Compliance Information System (ICIS) and resulted in a compliance letter to the facility. Additionally, a PCA for the Golden Heart Utilities POTW was completed by Tetra Tech on May 11, 2010, but was not originally added to ICIS. The information has been updated and the audit is now included in ICIS.

DEC is currently planning to conduct a PCA of the North Pole POTW in the fourth quarter of 2016 and a PCI of the Golden Heart Utilities facility in the first or second quarters of 2017. The finding of DEC not meeting the pretreatment program commitments was addressed in the SRF and the subsequent plan to meet the requirements of the CMS was approved by EPA Region 10's Compliance Program. DEC plans to meet all pretreatment programmatic requirements in the future.

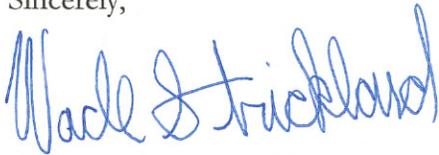
Pages 36-41, Section V.

This part of the Final Report carries forward language that DEC commented on when reviewing the Draft Report. This particular part of the Final Report discusses action items identified by EPA through the PQR process. Three categories are identified in the report based on prioritization. Critical Findings, or Category One Findings, are identified as the most significant items as the proposed action is to address an alleged current deficiency or noncompliance with respect to a federal regulation. Recommended Actions, or Category Two Findings, are actions to address a current deficiency with respect to EPA guidance or policy. Suggested Actions, or Category Three Findings, are actions that are recommended to increase the effectiveness of the DEC's Permit Program.

None of the identified category two determinations in the report cite an EPA guidance or policy document. As stated in the April 20 letter on the Draft Report, it is challenging for DEC to determine proposed strategies to address identified category two findings without an associated guidance or policy document reference. DEC would evaluate the guidance or policy document language to ensure the action item was appropriate, and if determined appropriate, adequately addressed. In addition, without the guidance or policy document reference, the category two determinations are essentially baseless. In future PQR assessments, EPA should identify the EPA guidance or policy document for each category two determination. EPA may also find through this exercise that the categorization of some of the action items should be revised for category two or three determinations, or that the particular categorical scheme should be revised all together.

DEC looks forward to further collaborations with EPA on the PQR process. Should you have any questions regarding this letter, please do not hesitate to contact me. I can be reached via e-mail at wade.strickland@alaska.gov and by phone at (907) 269-7580.

Sincerely,



Wade Strickland,
Manager

cc: Ms. Karen Burgess, EPA, State Oversight Lead (Electronic Only)