

**Alaska Pollutant Discharge Elimination System  
(APDES)**

**Capacity Building Plan**

**August 2008**

# Table of Contents

<b>1.0 Introduction.....</b>	<b>1</b>
<b>2.0 APDES Program Capacity Goals.....</b>	<b>1</b>
<b>3.0 ADEC Division of Water .....</b>	<b>2</b>
3.1 Division of Water - APDES Program Organization.....	2
3.2 Division of Water Expertise .....	2
<b>4.0 Staffing .....</b>	<b>2</b>
<b>5.0 Hiring and Retention .....</b>	<b>3</b>
5.1 Hiring Strategy.....	3
5.2 Retention Strategy .....	4
<b>6.0 Compliance and Enforcement .....</b>	<b>5</b>
6.1 EPA Inspector Credentials.....	5
6.2 ADEC Credentials .....	5
6.3 Credential Tracking.....	7
<b>7.0 Formal Training.....</b>	<b>7</b>
<b>8.0 Work-Based Training.....</b>	<b>8</b>
8.1 Permit Development Partnerships .....	8
8.2 State-Issued Permits .....	9
8.3 Compliance Inspections.....	9
8.4 Intergovernmental Personnel Agreements (IPAs).....	9
8.5 Loaner Staff from NPDES Authorized States.....	10
8.6 Job Shadowing .....	10
8.7 Informal Training .....	10
<b>9.0 Professional Development.....</b>	<b>10</b>
9.1 Attendance at Regional and National Conferences .....	10
9.2 Professional Memberships and Involvement .....	11
9.3 Subscription to Professional Journals.....	11
9.4 Library Resources.....	11
9.5 Mentoring .....	12
<b>10.0 Capacity Building Assessment .....</b>	<b>12</b>

## 1.0 Introduction

The Alaska Department of Environmental Conservation (ADEC) was created by the Alaska Legislature in 1971 and began operating on July 1, 1971. ADEC was given broad regulatory authority in the areas under its charge, including water quality, pollution prevention, state wastewater discharge permit issuance, inspection, compliance, and enforcement. ADEC's wastewater discharge permitting program, including the National Pollutant Discharge Elimination System (NPDES) permit certification program, was established during the first year of operations.

In 2005, the Alaska Legislature directed ADEC to seek approval from the U.S. Environmental Protection Agency (EPA) to assume primacy for the NPDES Program. Building on existing permitting and inspection experience, ADEC and EPA agreed to a capacity building plan to prepare the Department to fully implement the NPDES Program. After program approval, the state's program will be the Alaska Pollutant Discharge Elimination (APDES) Program.

Beginning in FY07, ADEC was awarded the resources for an APDES Program fully staffed at 43 FTE and funded at \$4.8 million. The establishment of staffing and funding at this level prior to obtaining program approval will allow ADEC to fully implement the APDES Program as authority is transferred to the Department. The APDES Program Memorandum of Agreement and Program Description detail staff roles and responsibilities and permitting and compliance and enforcement procedures.

The APDES Program is proposed to be implemented in four phases with the first phase beginning at the time of program approval by EPA and the fourth and final phase occurring no later than three years from program approval.

## 2.0 APDES Program Capacity Goals

- **Permitting:** ADEC will work with EPA through work share agreements to identify NPDES permits that ADEC will draft for EPA's review and issuance.
- **Compliance and Enforcement:** APDES staff will secure the necessary training and credentials for maintaining a vigorous program to identify noncompliance and initiate timely, appropriate, and effective actions to return violators to compliance. ADEC will conduct NPDES inspections on behalf of EPA until full program approval.
- **Staffing:** ADEC will increase the wastewater permitting and compliance and enforcement staff from 29 FTE to 43 FTE positions.
- **Recruitment and Retention:** ADEC will use multiple recruiting strategies to develop and maintain the staff and expertise necessary to implement the APDES Program.
- **Training:** ADEC will provide training opportunities for staff to further develop and maintain expertise in APDES Program areas through formal and informal training.
- **Professional Development:** APDES staff will continue to expand their program-related knowledge and expertise through participation in professional organizations, attendance at conferences and workshops, reading the relevant scientific literature, and taking advantage of mentoring opportunities.

## **3.0 ADEC Division of Water**

### **3.1 Division of Water - APDES Program Organization**

The Division of Water reorganization to accommodate the APDES Program was effective July 15, 2007. The most significant change was the creation of the Compliance and Enforcement Program. See Appendix A.

### **3.2 Division of Water Expertise**

The Division has staff with permitting and compliance expertise in all of the types of facilities requiring NPDES permits in Alaska, including: mining, domestic, oil and gas, seafood/hatcheries, stormwater, timber, transportation, and utilities. Expertise is defined as education, training, skills, and experience in a particular field with sufficient practice to be a lead specialist for the Department. Staff will be located throughout the state offices in Juneau, Anchorage, Fairbanks, Soldotna, and Wasilla.

In addition to sector expertise, specific staff have been designated to become in-house experts in Whole Effluent Toxicity, Pretreatment Program, and Mixing Zone modeling.

Beginning in 2006, ADEC, with the assistance of EPA and NPDES authorized states, provided direct training for staff, hired loaner staff from NPDES-authorized states, participated in job shadowing opportunities, provided practical NPDES permitting experience, and conducted compliance inspections. A work share agreement with EPA is in place for ADEC to take the lead in drafting several NPDES permits. Staff will complete the training required to receive the EPA Inspector Credentials, and additional staff will be identified in 2008 to obtain the credentials until full authorization is obtained.

The Division of Water's Discharge Results and Online Permit System (DROPS) is the primary information system for the APDES Program. DROPS will allow the Department to compile, manage, and report on APDES Program permitting, compliance, and enforcement requirements. Training the permitting and compliance and enforcement staff to use the system is a priority. Staff have received training on DROPS in groups and individually. DROPS user support guidance is posted to the Division of Water Intranet and periodic refresher courses will be available.

## **4.0 Staffing**

Table 1 below shows how the fully authorized APDES Program at the 43 FTEs will be distributed among the different job classes and Division of Water programs. Filling the positions in the near term and providing ongoing training will increase staff experience prior to full authorization.

**Table 1 Staffing**

<b>Number of Full Time Equivalent Positions (FTEs)</b>						
<b>JOB CLASSES</b>	<b>Wastewater Discharge Authorization Programs</b>	<b>Compliance and Enforcement Program</b>	<b>Water Quality Standards, Assessment, and Restoration Program</b>	<b>Administration and Information Management Program</b>	<b>NPDES Primacy Program</b>	<b>Total</b>
Director	0.2	0.2	0.1	0.1	0.1	<b>0.7</b>
Environmental Program Manager	2.2	2.2	0.2	0.1	1.1	<b>5.8</b>
Environmental Program Specialist	7.0	7.0		2.0	2.0	<b>18.0</b>
Environmental Program Technician				2.0		<b>2.0</b>
Technical Engineer	0.5	0.5				<b>1.0</b>
Environmental Engineer	2.5	2.5				<b>5.0</b>
Project Coordinator (Outreach)			0.6			<b>0.6</b>
Chemist IV (Quality Assurance)			0.6			<b>0.6</b>
Analyst Programmer				3.0		<b>3.0</b>
Administrative Manager				1.5		<b>1.5</b>
Accountant				0.8		<b>0.8</b>
Administrative Clerk	1.0	1.0		2.0		<b>4.0</b>
<b>Total</b>	<b>13.4</b>	<b>13.4</b>	<b>1.5</b>	<b>11.5</b>	<b>3.2</b>	<b>43.0</b>

The Department will also continue to contract with the Department of Law for 2.0 FTE attorney positions. Additionally, assistance from contractors will be solicited if the work load exceeds the current staffing level or for specific areas of expertise (e.g. dive surveys and Ocean Discharge Criteria Evaluations).

The Department will pursue opportunities for cross training staff in other sections in the Division of Water, other divisions within the Department, and other state agencies to provide enough knowledge to identify problems or violations in the field.

## **5.0 Hiring and Retention**

Capacity building includes recruitment of new staff and retention of existing and new staff to supplement existing resources.

### **5.1 Hiring Strategy**

The following hiring strategies will be used to fill APDES Program positions:

- Workplace Alaska, the state’s online job posting and application process, will be used as the primary online job posting location.
- The Department’s CAREERS web page will highlight the APDES Program career opportunities and include listing of open positions with a link to Workplace Alaska.
- The Program Coordinator of the CAREERS at the Alaska Department of Environmental Conservation (ADEC) will provide information for students regarding APDES Program opportunities at Alaska university job fairs. The CAREERS at ADEC Program Coordinator will attend:
  - UAF Engineering Career Fairs and
  - UAA Science & Engineering Job Fairs
- Positions will be advertised through the University of Alaska Career Centers in Fairbanks, Anchorage, and Southeast (UAF, UAA, and UAS), as well as career centers at Alaska Pacific University and out-of-state universities. The Career Centers include web postings, as well as bulletin board and faculty contacts.
- The Internships at ADEC Program will offer students with appropriate educational focus opportunities to work within the Division of Water, APDES Program.
- The Mentorship at ADEC Program will provide opportunities for less experienced Department staff to pair with more experienced personnel to build capacity for eventual involvement in the APDES Program.
- APDES Program positions will be advertised through web links and publications of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) and other professional organizations.
- Advertisements will be placed in local Alaska newspapers.
- Intergovernmental Personnel Agreement (IPA) positions will be advertised nationwide through EPA (see Section 8.4).
- Loaner staff positions will be advertised with states with authorized NPDES Programs (see Section 8.5).
- Wherever possible, the Department will utilize the efforts of Alaska’s Workforce Investment Board to develop candidates for APDES Program positions.

## **5.2 Retention Strategy**

ADEC will implement an employee retention strategy to retain both new hires and existing staff. The strategy will address the following, which research supports as paramount reasons why employees continue with a particular organization:

- Professional development and opportunities for growth and challenge will be integrated into APDES Program positions.
- Communication will be encouraged so that ADEC will continue to be an open, healthy, and cooperative workplace.
- Staff autonomy will foster capable, creative, and committed employees.
- Recognition of accomplishments: Appreciation is a prime motivator for employees; it enhances productivity as well as promotes longevity of employment.

- Using Environmental Program Technician, Specialist, Engineer, and other position series as a career ladder for employees will help retain staff and enhance program effectiveness.
- Staff work plans will include a training plan component to identify specific training, conferences, etc. staff will attend.

## **6.0 Compliance and Enforcement**

### **6.1 EPA Inspector Credentials**

Prior to and until full NPDES Program authority is transferred to ADEC, specific staff will acquire EPA inspector credentials in order to conduct NPDES inspections on behalf of EPA. Staff will adhere to EPA's credentialing requirements as specified in the *Guidance for Issuing Federal EPA Inspector Credentials to Authorize Employees of State/Tribal Governments to Conduct Inspections on Behalf of EPA*, September 2004.

Training is a significant component of EPA's credential program. The Compliance and Enforcement Program Manager will track staffs' training and requirements necessary to obtain EPA inspector credentials. The inspectors' supervisor will either certify that the inspector has met each of the applicable training elements or certify that the inspector has taken state/tribal or other training that covers the same material. ADEC will send a list to EPA verifying the staff who have completed the EPA credential requirements, and EPA will distribute the credentials.

### **6.2 ADEC Credentials**

The Department's Policy and Procedure 05-04091, June 15, 2006, dictates that all staff members whose position descriptions identify inspections, complaint response, and/or other enforcement as work duties are required to complete the appropriate enforcement training as prescribed in the *State of Alaska Department of Environmental Conservation Enforcement Manual*, Sixth Edition, October 2005. Once the prescribed training has been completed, staff members are eligible to obtain an ADEC Inspector or Enforcement Officer credential.

#### **Eligibility for Inspector Credential or Renewal**

Staff must meet the following minimum requirements and obtain Program Manager approval to be eligible for an ADEC Inspector credential:

- Occupy a position classified as an Environmental Program Technician (EPT), Environmental Program Specialist (EPS), Environmental Engineer Assistant (EE Asst.), Environmental Engineer Associate (EE Assoc.), Environmental Engineer (EE), Technical Engineer, or Environmental Program Manager (EPM);
- work in a position with identified inspection, complaint response, and/or enforcement work duties;
- successfully complete the ADEC Basic Enforcement Training (3-day course); and

- complete the ADEC refresher/in-service training requirements to renew the inspector credential.

### **Eligibility for Enforcement Officer Credential or Renewal**

Staff must meet the following minimum requirements and obtain Program Manager and Director approval to be eligible to obtain an ADEC Enforcement Officer credential:

- Occupy a position classified as an EPS III, EPS IV, EE Assoc. I, EE Assoc. II, EE I, EE II, Technical Engineer, EPM I, EPM II, or EPM III;
- work in a position with identified inspection, complaint response, and/or enforcement work duties;
- successfully complete the ADEC Basic Enforcement Training;
- have a minimum two years of experience conducting compliance field inspections for a Division at ADEC or other regulatory agency; and
- complete the ADEC refresher/in-service training requirements to renew the Enforcement Officer credential.

### **ADEC Basic Enforcement Training**

Any of the following courses satisfy the Basic Enforcement Training needed to obtain Inspector or Enforcement Officer credentials:

- Introduction to Environmental Enforcement Course  
A three-day course taught by the Western States Project that focuses on the process of enforcement within the regulatory system and introduces participants to environmental crimes enforcement as an effective tool that supplements administrative and civil enforcement.
- EPA Basic Inspector course  
A three-day enforcement course designed to explain the basic inspection and enforcement tools used by environmental regulatory agencies.
- Basic Environmental Investigations  
A three-day course taught by the Western States Project designed to give participants a basic working knowledge of the process and requirements for successful environmental crimes investigations.
- Advanced Environmental Investigations. (Also called CIT311 Advanced Environmental Crimes Training Program.)  
An eighty-hour course taught by EPA at the Federal Law Enforcement Training Center designed to teach advanced investigation techniques to environmental regulators and criminal investigators.

Other training may be approved by the Division of Information and Administrative Services Environmental Crimes Unit in-lieu of these classes provided that similar subject matter is covered.

### **6.3 Credential Tracking**

The NPDES Primacy Program will ensure that staff credentials are tracked, including the name of the inspector, the credential identification number, date credential was issued, expiration date, training needed, and training completed.

## **7.0 Formal Training**

The Department will require Program Managers and staff to have additional training beyond the Department Credentialing Program. Appendix B to the biannual Capacity Building Plan is a list of training courses that cover the following APDES Program components:

- permitting
- stormwater
- pretreatment
- compliance and enforcement
- administration and information management (including DROPS and ICIS-NPDES)

Specifically required courses will vary for staff, depending on their particular position, experience, and job tasks. Each staff person will have a work plan identifying required and optional training.

In addition to those courses included in Appendix B to the Capacity Building Plan, advanced courses and training in permitting, compliance, and enforcement in specific sectors will be required for specific staff as classes become available. This training will be critical to develop sector expertise and specific subject matter experts. The classes are periodically available from EPA, National Enforcement Training Institute, or the Western States Project organization. The list of advanced training courses may not be inclusive, as regularly scheduled courses are not always identified.

Examples of advanced training needs are:

- Advanced compliance and enforcement training (i.e. Advanced Inspector Training and Advanced Negotiation Training)
- Advanced NPDES Permit Writers' Training (EPA Region 10 and the Department identified the need for this course to be developed by EPA)
- Modeling mixing zones
- Statistical analysis methods

Examples of sector specific training needs in permitting, compliance, and enforcement are:

- Oil and Gas

- Seafood
- Mining
  - Mining waste and wastewater
  - Domestic wastewater treatment and disposal technology
- Extended aeration package plant
- Stormwater
  - Best Management Practices (BMPs)
- Pretreatment Program

APDES Program staff also need an understanding of environmental management tools that interact with the APDES Program. For example, training in the following areas will be made available, as opportunity offers:

- The origin of effluent guidelines
- Total Maximum Daily Load wasteload allocations
- Supplemental environmental projects policy and implementation
- Biological and Ocean Discharge Criteria Evaluations

Finally, Program Managers maintain a table of available courses in first aid, safety, computer skills, and professional development that is regularly distributed to staff. While some of the courses are not required to meet Inspector or Enforcement credential requirements, staff are encouraged to attend classes that will provide the knowledge to better conduct their job in a safe, efficient, and effective manner.

Department staff will also have opportunities to participate in EPA's courses on working effectively with Tribal Government.

Lists of upcoming classes, both technical and otherwise, will be updated regularly and made readily available to all staff via the Department Intranet.

## **8.0 Work-Based Training**

Work-based training provides on-the-job experience and is an integral part of ADEC's Capacity Building Plan. Work-based training will include permit development partnerships with EPA, continuation of issuing state permits, compliance inspections, intergovernmental personnel agreements (IPAs), loaner staff opportunities, job shadowing, and targeted informal training sessions. Training opportunities will supplement the Department's permitting and compliance and enforcement existing expertise.

### **8.1 Permit Development Partnerships**

ADEC and EPA have negotiated a work share agreement under the Performance Partnership Agreement (PPA) and Performance Partnership Grant (PPG). In order to gain permit development expertise, ADEC staff will draft various work products, such as draft permits, fact sheets, public notices, and response to comments to support EPA's permit issuance.

ADEC and EPA will annually develop a list of permits that Department staff will take the lead role to draft. The criteria to select a permit under a work share agreement will include:

- A wide variety of permit types and sectors so that staff will gain a broad range of experience,
- permits that will not expire in the very near future to allow more time to draft/issue a permit via the work share agreement process, and
- when authority over the permit will be transferred to ADEC per the primacy phasing schedule.

The PPA work plan will include work share agreements until full authorization to implement the NPDES Program is transferred to ADEC.

## **8.2 State-Issued Permits**

ADEC will continue to issue state wastewater permits and state general permit authorizations to facilities and activities that discharge wastewater to land or subsurface. When authority to implement the NPDES Program is transferred to the Department and a state-issued permit discharging to surface waters is scheduled to be reissued, ADEC will reissue the permit to comply with APDES Program requirements. ADEC will incorporate water quality-based analysis and limitations in state permits when reissuing a permit for discharging to surface waters where EPA has not permitted the facility under the NPDES Program. This will not only contribute to staff expertise and NPDES Program capacity building, but will also allow for a smooth transition from an NPDES permit to an APDES permit after program authorization.

## **8.3 Compliance Inspections**

After staff have received EPA Inspector credentials, ADEC will perform NPDES permit compliance inspections on behalf of EPA in accordance with the PPA work plan. Beginning in FY 2007-2008 and until full authorization is achieved, the annually negotiated PPA will identify facilities the Department will inspect on behalf of EPA. Facilities will be selected to provide inspectors a variety of experiences and based on areas of coverage identified by EPA.

## **8.4 Intergovernmental Personnel Agreements (IPAs)**

ADEC will use IPAs to mentor ADEC staff, as appropriate, for specific assignments, such as to:

- Work in a team setting with ADEC permit writers who draft and reissue state general and individual permits that will be converted to APDES permits when NPDES authority is transferred to the Department and the permits are reissued.
- Provide peer review of draft permits prepared by ADEC staff.
- Technical oversight on state CWA §401 certifications of existing EPA-issued permits. For instance, assuring that state Water Quality Standards are reflected in water quality-based effluent limits.

- Occasional review and comment on NPDES primacy application documents for submittal to EPA.
- Develop several short training sessions with staff on topics relating to NPDES permit writing, such as conducting a reasonable potential analysis, reviewing results of whole effluent toxicity testing, and writing inspection reports.

## **8.5 Loaner Staff from NPDES Authorized States**

ADEC has arranged for loaner staff from states with authorized NPDES programs to work in Alaska for up to one year and will continue to do so as opportunities arise. Candidates have permitting and compliance experience with regulated sectors similar to Alaska (e.g. oil and gas, mining, domestic, and stormwater) and will offer assistance and expertise to draft and issue permits and inspect facilities. Duties will be the same as listed for the EPA IPA staff.

## **8.6 Job Shadowing**

Job shadowing offers opportunities to build both permitting and compliance and enforcement capacity. Department staff will continue to job shadow EPA inspectors and EPA compliance and enforcement officers on compliance inspections within Alaska until full authority to implement the NPDES Program is transferred to ADEC.

ADEC will continue to pursue job shadow opportunities with other states with authorized NPDES programs. ADEC will also pursue a “reverse” IPA with EPA where an ADEC staff member will locate to Region 10 or other Regional EPA office to job shadow a permit writer, an inspector, or a compliance and enforcement officer. Specific permit work and discrete tasks and outcomes will be identified.

## **8.7 Informal Training**

ADEC will encourage and coordinate informal training provided by Department staff. Potential in-house training opportunities include training on whole effluent toxicity, pretreatment requirements, how to establish and develop a mixing zone, inspection report writing, and evaluating/selecting an appropriate enforcement response. Guidance and standard operating procedures will be developed as part of a Water Program Handbook to assist staff in implementing the APDES Program.

## **9.0 Professional Development**

### **9.1 Attendance at Regional and National Conferences**

The NPDES Primacy Program staff will distribute information to APDES Program staff about upcoming regional and national conferences. Funds are available to attend such conferences. Staff will be encouraged to network with other conference attendees to increase their NPDES Program knowledge. Staff will be encouraged to share information from conferences with other Department staff. The conferences listed below are typical of the types of forums that APDES Program staff will attend:

- StormCon Workshops: Selection and Design of BMPS
- Water Environment Federation Annual Technical Exhibition and Conference
- EPA Hardrock Mining Technical Conference
- Conference on Managing Sediments in the Watershed: Bringing Dredged Material and Watershed Managers Together
- EPA National Stormwater Conference
- EPA Multi-Stakeholders' Public Meeting on Designated Uses and Use Attainability Analysis
- ASIWPCA/EPA NPDES Managers' meeting
- National Stormwater Coordinators' meeting
- Pretreatment Program Annual Meeting
- Alaska Forum on the Environment
- Alaska Water/Wastewater Management Association (AWWMA) Statewide Conference

## **9.2 Professional Memberships and Involvement**

APDES Program staff participate in several national organizations. For example, as members of ASIWPCA, Department staff participate in ASIWPCA annual meetings, receive documents of interest through a list serve, and participate in the ASIWPCA sponsored NPDES Managers' teleconference calls. The Department is also a member of the AWWMA. Staff who work with domestic wastewater permittees participate in AWWMA meetings. Department staff are encouraged to actively participate in such organizations and to make presentations at conferences.

## **9.3 Subscription to Professional Journals**

ADEC subscribes to several professional journals. Staff are on list serves and automatic mailing lists from EPA, professional organizations, and the Alaska State Library for newsletters and journals pertaining to environmental regulations, wastewater treatment, and scientific/engineering advances.

On a rotating basis, APDES Program staff will present highlights from a professional journal article at a staff meeting or in an e-mail in order to improve or enhance permitting, compliance, and/or enforcement staff knowledge.

## **9.4 Library Resources**

ADEC will continue to use the State Library's Table of Contents Service that provides staff with immediate e-mail notification of the contents of any specified magazine received by the State Library. Staff can request specific articles from the table of contents to help stay current on issues related to their work. Pertinent journals for APDES Program staff include Alaska Business Monthly, Oil Week, Alaska Miner, Oil & Gas Journal, Journal of Environmental Engineering, and Environmental Management. See the website at: <http://library.state.ak.us/forms/tocrequest.cfm>.

The State Library also provides an Information Alert service that sends ADEC staff abstracts from reports, journals, and newspapers based on selected keywords. Staff can request the full article from the library. See the website at: <http://library.state.ak.us/forms/infoalert.html>.

## **9.5 Mentoring**

ADEC will establish a mentoring program to enhance APDES Program capacity by capitalizing on both internal and external talent. The program will offer interested staff the opportunity to set up a formal agreement to be mentored by senior staff within the Department. Training will be provided as appropriate to support the role of mentor. Job duties will be adjusted to allow time for mentoring relationships.

Existing staff have significant APDES Program-related expertise. Many have taken sector specific courses and have worked with EPA on NPDES permits or state permits as discussed in Section 8.0. A mentoring program will promote the transfer of that knowledge to less experienced staff.

## **10.0 Capacity Building Assessment**

ADEC will continue to make substantial progress in expanding the staff, experience, and resources to fully implement the APDES Program before and after authorization is transferred to the Department. A biannual Capacity Building Summary will document the capacity building efforts, such as permits drafted by ADEC staff, compliance and enforcement activities undertaken, ADEC-EPA work share agreements and partnerships, and formal and informal staff training. A Capacity Building Summary will be prepared for the periods January 1 through June 30 and July 1 through December 31 each year until the NPDES Program has been fully transferred to ADEC.