

ALASKA LEGISLATURE

2417

HOUSE and SENATE FINANCE COMMITTEE FILES, 2001 - 2002

SENATE FINANCE COMMITTEE
4 / 15 / 2002 COMMITTEE ACTION

Bill Number	SB 326		
Amendment			
Motion	Pass from Committee		
<u>Motion by</u>	Leman		
<u>Objection by</u>	Ward		
<u>Removed</u>			
<u>Second Objection by</u>			
<u>Committee Member</u>	<u>Y</u>	<u>Vote</u>	<u>N</u>
Senator Green			
Senator Hoffman	Y		
Senator Leman	Y		
Senator Olson	Y		
Senator Ward			N
Senator Wilken	Y		
Senator Austerman	Y		
Co-Chair Donley			
Co-Chair Kelly	Y		
<u>Tally</u>			
Yea	6		
Nay	1		
Absent	2		
<u>MOTION</u>	Passed		

Conceptual Amendment #1

ADOPTED

22-LS1504F

- 1 NPDES primacy by the state, including
- 2 (1) statutory and regulatory changes;
- 3 (2) procedures for issuing permits;
- 4 (3) procedures for conflict resolution with the United States Environmental
- 5 Protection Agency;
- 6 (4) a statement of the cost of assuming NPDES primacy;
- 7 (5) a statement of sources of federal funding available.
- 8 (b) The draft plan shall be submitted to relevant interest groups and the public for
- 9 review and comment before the Department of Environmental Conservation adopts a final
- 10 plan. The draft plan shall be submitted to the legislature for review and comment. The final
- 11 plan shall be submitted to the legislature on the first day of the Second Regular Session of the
- 12 Twenty-Third Alaska State Legislature.
- 13 * Sec. 3. This Act takes effect ~~immediately~~ ^{JANUARY 1, 2003} under AS 01.10.070(c).

CORRECTION

THE FOLLOWING DOCUMENT(S)
HAVE BEEN REFILMED TO
ASSURE LEGIBILITY OR PAGINATION



Rev. 6/98

Central Microfilm Services
Department of Education & Early Development
State of Alaska

CS FOR SENATE BILL NO. 326(RES)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SECOND LEGISLATURE - SECOND SESSION

BY THE SENATE RESOURCES COMMITTEE

Offered: 3/27/02
Referred: Finance

Sponsor(s): SENATORS THERRIAULT, Olson

A BILL

FOR AN ACT ENTITLED

1 "An Act relating to evaluating state assumption of the wastewater discharge program
2 under the federal Clean Water Act; and providing for an effective date."

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

4 * Section 1. The uncodified law of the State of Alaska is amended by adding a new section
5 to read:

6 FINDINGS AND PURPOSE. The Department of Environmental Conservation has
7 proposed assuming the national pollutant discharge elimination system (NPDES) permit
8 system program for Alaska under 33 U.S.C. 1342 from the United States Environmental
9 Protection Agency. The department is directed to evaluate the potential benefits and
10 consequences of assuming NPDES primacy for Alaska.

11 * Sec. 2. The uncodified law of the State of Alaska is amended by adding a new section to
12 read:

13 PLAN FOR ASSUMING NPDES PRIMACY BY STATE. (a) The Department of
14 Environmental Conservation shall develop an implementation plan for the assumption of

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- 13 * Sec. 3. This Act takes effect ^{January 1, 2003} ~~immediately~~ under AS 01.10.070(c).

Proof
OK'd by Laura #11/16/02
22-LS1504J
9:35
am

CS FOR SENATE BILL NO. 326(FIN)
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-SECOND LEGISLATURE - SECOND SESSION

BY THE SENATE FINANCE COMMITTEE

Offered:
Referred:

Sponsor(s): SENATORS THERRIAULT, Olson

A BILL
FOR AN ACT ENTITLED

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- 13 * Sec. 3. This Act takes effect January 1, 2003.

Amezd
#1

Alaska State Legislature

SENATOR
GENE THERRIAULT

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Fairbanks, Alaska 99701
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Senate District:

Senate

Senate Bill 326: "An act relating to evaluating state assumption of the wastewater discharge program under the federal Clean Water Act; and providing for an effective date."

Sponsor: Senator Gene Therriault

Sponsor Statement

Passage of Senate Bill 326 will direct the Department of Environmental Conservation (DEC) to evaluate the potential benefits and consequences of assuming primacy for the National Pollutant Discharge Elimination System (NPDES) program and develop an implementation plan.

In 1972 the federal government enacted the Clean Water Act (CWA) to protect and restore the quality of the nations water. The CWA provided that states can be authorized to operate their own NPDES program as long as it complies with federal requirements. Currently 44 states and the U.S. Virgin Islands administer their own NPDES program and Idaho is currently considering assuming NPDES primacy. The main reason that states have adopted primacy is to allow them to tailor their water discharge program to regional concerns and environmental features rather than follow federal guidelines designed to cover all states.

Senate Bill 326 would direct the DEC to study and describe:

- EPA's existing program in Alaska,
- Required and recommended primacy program components,
- Advantages, disadvantages, and experiences from similarly situated states along with their program costs,
- Draft rules and regulations needed for primacy,
- Guidance and implementation recommendations for executing the permit review, issuing permits and performing field compliance assistance,
- Necessary resources including number of staff, use of contractors and specific technical expertise of staff for an Alaskan program,
- legal issues and propose solutions necessary to acquire primacy, and
- A proposed action plan to secure federal funding as an ongoing contributor to offset operational costs of an Alaska NPDES permit Program.

This proposal is supported by the Waste Water Permit Work Group which was formed by the Department of Environmental Conservation. This group is comprised of external stakeholders who were asked to make recommendations to guide the rebuilding of the wastewater discharge program. I envision this group being involved throughout this proposed process helping to evaluate the pros and cons of state assumption of the NPDES program. This review would involve public comment and a final report to be submitted to the First Regular Session of the Twenty-Fourth Alaska State Legislature. The Legislature could then take action if it believed assumption would be in the state's best interest.



Council of Alaska Producers

P.O. Box 22653 Juneau, Alaska 99802

January 31, 2002

Honorable Senator Therriault:

The Council of Alaska Producers has a strong interest in the State of Alaska assuming the NPDES permit program. We believe there is significant potential to benefit from having the program administered by people familiar with the unique conditions of Alaska, as well as the potential for expediting the permitting process through more accessible permitting staff. Resource development in Alaska may become more economic and attractive to mining and other industries, and the protection of the State waters may be improved as locally knowledgeable persons make water use determinations.

However, we also have some reservations. We are concerned whether or not the State will have permitting flexibility equal to that provided through the State permit certification process. We are also concerned whether the State can best resolve water permitting conflicts with the EPA, if and when they should arise, as program administrator or if they have greater power as a separate entity.

It is our hope that with further evaluation of the NPDES assumption, and with an implementation plan that would provide us with a preview of the State NPDES program, that it will be evident that State assumption of the program will benefit Alaska citizens and Alaskan waters.

State assumption of the NPDES program will be costly. It would be unwise to request appropriation of funds for this program without first providing an implementation plan and an evaluation of the consequences. The legislation proposed in the attached document requests the funds and authority to take this first step.

The Council of Alaska Producers respectfully requests your assistance in drafting and sponsoring this bill.

If you have any questions, please contact Charlotte MacCay at (907) 272-2117, or (907) 266-4552, or on my cell phone at (907) 529-4332. My fax number is (907) 266-4568 and my email is cmaccay@aol.com. Kent Dawson is also available to assist you and can be reached at (907) 463-2533.

With sincere appreciation,

Charlotte L. MacCay
Vice President, Council of Alaska Producers

SB 326
Names and Contact Numbers

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ADEC Summary of
Easton Environmental Report, May 1998
NPDES Wastewater Discharge Permitting in Alaska, Options for Improvement

Easton Environmental succeeded in preparing a clear, concise and user-friendly report which explains the elements of the NPDES Program, describes the alternatives for State assumption and gives possible funding mechanisms. Several states with state assumption were surveyed and a 1995 mining report recommending that Alaska assume the NPDES Program was cited. Following are important points from Easton's report.

- Two Approaches to Describing the NPDES Program -
 1. Program Components: The Base Program includes mining, seafood, oil & gas, timber and municipal wastewater, the Sludge (Bio-solids) Program; Pretreatment Program and Storm Water Program.
 2. Program Functional Elements: Permit Development, Compliance, Data Management and Record Keeping, Program Development and Administration.
- Alternatives, Two Basic Options -
 1. Partial to Full Assumption - Disadvantage: ADEC must take over the entire program in 5 years,
 2. Work Share until ADEC has sufficient expertise to seek approval of the NPDES program.
- Costs & Possible Funding Mechanisms -
 1. To operate a fully state-run NPDES program, ADEC would need a total of 23 positions at an annual cost of \$2.3 million. This is essentially the cost today of the combined ADEC/EPA NPDES program, and is on a par with the cost of the other 41 states with program assumption. (Note, however, that 79%, or 137 out of 179 existing Alaskan NPDES permits are presently administratively extended.)
 2. To implement a Work Share agreement, ADEC would need 14 FTEs, at an annual cost of \$1.4 million.

Funding mechanisms include General Funds from the State Legislature, Federal Grant Funds, and Program Receipts (Flat Fees, Graduated Fees based on facility and discharge characteristics such as flow, toxicity, number of outfalls, whether a facility is a major or minor discharger, or Fees based on actual time spent by staff plus expenses.) The trend in other states is to use Program Receipts based on a one-time Permit Application Fee, or Discharge Fees collected on an annual basis, or a combination of both Permit Application Fees and Annual Discharge Fees.

- Stakeholders' Survey - In lieu of the survey, ADEC agreed that Easton Environmental would look at several states which assumed the NPDES program. Additionally, Easton explained the sentiment expressed in "Marketing Alaska", a 1995 sector-based analysis of Alaska business and industry. This report recommended that Alaska phase in a state-run NPDES program. Benefits would be that the process would become *more accessible, efficient and timely*. This analysis called for industry to contribute financially.
- Easton's and ADEC Staff Recommendation: ADEC should initiate a formal NPDES Work Share agreement with EPA. (See attached description.).

Work-Share Advantages:

- Flexibility in focusing ADEC resources,
- A Work Share agreement could be fashioned on a sector-specific basis; e.g., Mining;
- Work Share would be faster and cheaper than a initial partial assumption program,
- Work-share could lead to State Assumption;
- Even though the NPDES program is highly structured, ADEC could implement creative approaches rather than rote program implementation,
- ADEC would have a strong voice in setting state priorities,
- ADEC might improve the overall permitting program; for example, by defining the pre-application baseline information required.

Requirements for A Successful Work Share Program:

- Adequate funding and staff,
- Substantial advancement in ADEC staff technical and programmatic understanding and training,
- An agreement by shareholders (ADEC, EPA and stakeholders) on measures to be used to gage improvements resulting from process changes.

Restricted Revenue Detail
Department of Environmental Conservation

Component: Water Quality
 BRU: Air and Water Quality

Revenue Account	Revenue Description	FY1998 Actuals	FY1999 Authorized	FY1999 Cash Estimate	FY2000 Governor	FY2001 Forecast
51200	Capital Improvement Project Receipts	0.0	0.0	0.0	80.0	80.0

Detail Information

Sub-Revenue Account	Revenue Description	AKSAS Fund	Colllocation Code	FY1998 Actuals	FY1999 Authorized	FY1999 Cash Estimate	FY2000 Governor	FY2001 Forecast
51200	Capital Improvement Project Receipts	11100	18348xxx	0.0	0.0	0.0	0.0	80.0
51200	Capital Improvement Project Receipts	11100	NPDES Assump.	0.0	0.0	0.0	80.0	0.0

These CIP receipts are from the National Pollutant Discharge Elimination System (NPDES) Program Assumption Increment in the capital budget, which will fund one full-time position plus portions of other existing positions to work with the Environmental Protection Agency (EPA) to develop a work-sharing agreement with EPA which would provide for DEC staff to be trained to write NPDES permits. Implementing the work-sharing agreement in FY 2001 (which would require at least three more positions) would be a step toward the state's assuming responsibility for the NPDES permit program in Alaska.

*Check Capital Budget
 for NPDES
 increment.*

National Pollutant Discharge Elimination System Assumption

FY2000 Request: \$125,000
Reference No: 6718

AP/AL: Appropriation
Historical Category: Health/Safety
Location: Statewide
Election District: Statewide
Estimated Project Dates: 7/1/1999 - 6/30/2000

Project Type: Health and Safety
Contact: Michael A. Conway
Contact Phone: (907)465-5300

Brief Project Summary and Statement of Need:

This project will fund a work group to prepare a detailed plan for assumption of National Pollutant Discharge Elimination System permits. Currently the state certifies federal permits. This plan will simplify permit issuance, as industry will only be required to deal with the state.

Funding Request:

	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	Total
Gen Fund	\$125,000						\$125,000

Total: \$125,000 0 0 0 0 0 0 \$125,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased Project	<input type="checkbox"/> On-Going Project
<input type="checkbox"/> 0% = Minimum State Match % Required	<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Operating Impact in FY2000:	\$80,000	1
One-Time Startup Costs:	0	
Additional Estimated Annual O&M:	0	0

Additional Information / Prior Funding History:

Easton Environmental

consulting engineering and sciences

418 harris street • suite 205 • Juneau • alaska • 99801
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JUL 24 1998

DEPT. OF ENVIRONMENTAL
CONSERVATION
NRO

The State Role in

NPDES Wastewater Discharge Permitting

in Alaska

Options for Improvement

prepared for the
Alaska Department of Environmental Conservation

May 15, 1998

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Summary

What is the NPDES program?

The National Pollutant Discharge Elimination System (NPDES) program is the wastewater discharge permitting program conceived as part of the sweeping 1972 amendments to the federal Water Pollution Control Act. The amended Act set as a national goal the elimination of discharges of pollutants into navigable waters by 1985. Section 402 of the Act established the NPDES permitting program as the primary means by which the goal was to be achieved.

Today, the NPDES permitting program remains the centerpiece of the Nation's water pollution control efforts. In its most basic sense, the NPDES program requires that persons discharging wastewater to "waters of the United States" (essentially all surface waters, including wetlands, but not including groundwater) apply for a permit. Permits are issued by the U.S. Environmental Protection Agency (EPA), or, in the case of an EPA-approved state-run program, by a state environmental agency.

How is the program currently implemented in Alaska?

Forty-one states administer NPDES programs within their borders. In the nine other states, including Alaska, the U.S. Environmental Protection Agency (EPA) runs the NPDES program. In Alaska, the Alaska Department of Environmental Conservation (DEC) serves in a support role to EPA Region 10, the primary permitting agency.

According to EPA records, there are 947 NPDES permitted facilities in Alaska. Of the total, 778 facilities are permitted under five general permits, with the remaining 169 facilities covered by individual permits. The 169 individual permits further break down into 48 major (larger, more complex) permits and 121 minor (smaller, less complex) permits.

Why are changes needed?

Many Alaskans believe that a state-run NPDES program would bring improvements to the wastewater permitting process. For example, a 1995 sector-based analysis of Alaska business and industry, entitled "Marketing Alaska," recommended that the State phase into a state-run NPDES program. The portion of the analysis dealing with the mineral industry (the "Mining Sector Strategic Plan") contained this recommendation: "Implement a more accessible, predictable, timely, accountable, and coordinated permitting and regulatory process that ensures up-front and continuing public involvement." The plan goes on to say:

The Alaska Department of Environmental Conservation (ADEC) should attain primacy for the National Pollution Discharge Elimination System (NPDES) water discharge program. This program, as operated by the U.S. Environmental Protection Agency, is currently problematic. Primacy could occur through a phased effort to assume and implement this program . . . Industry should also be requested to contribute financially. Industry contribution could be accomplished through permit fees (paying for services) . . . State primacy of the NPDES process would address two important issues. First, it would

make the process most accessible for all involved whether it be the applicant, the state, or the general public. . . Second, state primacy would lead to a more efficient process. . .

What changes could be expected from a state NPDES program?

In addition to the improved access to the permitting process and an overall gain in efficiency and timeliness as suggested by the Mining Sector Strategic Plan, we would expect the State of Alaska would have more say in national developments that affect the NPDES program and ultimately NPDES permitting in Alaska. In the same vein, NPDES program authority would position the State to have far greater influence on program priorities in Alaska. Finally, compliance monitoring should be more effective. Closer proximity of facilities and program staff should foster dialog within which questions could be posed and answered; and problems discussed and resolved. We would also expect some improvement in permit quality in terms of better protecting receiving water quality where warranted, while avoiding overly stringent limits. It is important to understand, however, that permits developed by the State in accordance with strict NPDES protocols will in most respects be identical to permits developed by EPA.

What are the basic options?

There are basically two ways to phase into a state NPDES permitting program: through a partial approval process, or through work share agreements. The partial approval process involves transferring parts of the program from EPA to DEC in increments over a five-year (or shorter) period until full state program capacity is reached. Under the work share process, the agencies agree to share work with DEC assuming more and more of the program functions until the agency has sufficient resources and expertise to seek approval of a state NPDES program.

It is also possible to begin with a work share agreement, transition into a partial program, and finish with a full state program.

How do the options compare?

While both partial approval and work share processes can lead to an approved state NPDES program, there are a couple of basic differences. First, the partial approval process involves transfer of authority from EPA to DEC with approval of each increment; whereas there is no transfer of authority until full program approval under the work share process. Second, while the partial approval process must lead to full program approval within five years, there is no mandate that the work share process ever lead to full program approval.

Work share agreements offer several advantages over going directly to partial program approval:

- Work share agreements provide flexibility to focus limited DEC resources on those areas where the agency can have the greatest impact, whereas a partial program would require that DEC immediately take on substantial data management, record keeping, and administrative responsibilities.
- Work share agreements can be fashioned on a sector-specific basis. That could prove important should some of the permitted sectors support additional state NPDES involvement while others do not. It would be entirely feasible to initiate a work share agreement that deals exclusively with mining industry permitting, for example, while leaving permitting of other sectors alone.
- Going to an initial work share agreement will be faster and cheaper than an initial partial program phase.

What actions are proposed?

To address the concerns in the areas of accessibility, timeliness, accountability and coordination, and as a first step towards greater state involvement in Alaska's NPDES permitting — and ultimately to a state NPDES program — DEC, working with EPA, industry and other public, should implement an initial, formal NPDES work share agreement with EPA. Under that agreement, DEC would become the primary point of contact for permit applicants and interested public, and would be responsible for deriving (for EPA approval) effluent limits and associated monitoring requirements for new permits, as well as permit modifications and renewals.

Depending on the level of industry and public support, a work share agreement may be pursued for some sectors and not others. Once an agreement is implemented, DEC and stakeholders can decide whether in future years to continue to increase state responsibilities towards full NPDES authority through either additional work share agreements or the partial program approval process.

What would be the costs?

To implement the proposed work share agreement (for all permit sectors) as a first step towards a state NPDES program would require the equivalent of an additional four DEC positions at an annual cost of approximately \$400,000.

Ultimately DEC would require a total of 13 new positions at an annual cost increase of approximately \$1.3 million to operate a full state NPDES program. With this increase, DEC would have the equivalent of 23 full-time positions in the NPDES program — essentially the same resources currently devoted by both DEC and EPA to the program. This staffing level is on a par with other states running their own NPDES program.

How could costs be covered?

Additional costs could be covered through either additional general funds or program receipts. Alaska would not be eligible for additional federal grant funds. As for program receipt fee structures, options include:

- Flat fees that assess all permittees the same amount (or at least certain types or groups of facilities the same amount).
- Graduated fees which involve setting fees based on facility and discharge characteristics such as flow, toxicity, number of outfalls, and whether the facility is considered major or minor.
- Actual fees that involve the permitting agency tracking time and expenditures and assessing fees usually at an hourly rate for staff time plus actual expenses.

The clear trend in other states is towards funding state NPDES programs with program receipts based on either one-time application fees, or continuing discharge fees. In five states canvassed as part of this study, program receipts accounted for 57 to 100 percent of the costs to run the program. Application fees are collected whenever a permit is issued, modified or renewed. Discharge fees, on the other hand, are usually imposed on an annual basis.

Graduated application fees (based on flow, toxicity, number of outfalls, etc.) strike a reasonable compromise between simplicity and equitable allocation of costs on the basis of demand on agency resources.

What sort of permit fees could be expected?

If all new costs were to be covered by application fees (as opposed to general funds, or some combination of general funds and program receipts), the cost of the work share proposal would mean collecting an average of a little more than \$400 per facility each year — or \$2,000 per facility over a 5-year permit cycle. Actual fees, of course, would depend on the fee structure. New, complex facilities would likely pay substantially more than the average, with existing, simpler facilities paying less. To generate the \$1.3 million required for full program authority entirely through fees would require an average of \$1,400 from each facility each year.

What about implementation?

Suggesting a work-share concept as presented here is just a first step towards improving Alaska's NPDES framework. A final work-share design will require a balance between EPA who must approve the design; the regulated community who will likely bear the bulk of the costs and yet reap benefits; the public who must have confidence in the program; and the state who must implement the program. To reach that balance, the final design needs to be forged with the assistance of representatives of all affected parties. Things to consider as part of that process include:

- As the state proceeds towards NPDES program authority, Alaska should think in terms other than rote implementation of a federal program. While the program is highly structured in terms of what has to be done, it does offer some opportunity for creative approaches in how things are accomplished.

- Any program design needs to reserve a strong voice for the state in priority setting (defining what has to be done) as well as deciding how objectives are to be accomplished.
- Alaska should use the effort to improve Alaska's NPDES permitting regime as an opportunity for improving the overall permitting process. Better defining pre-application rules, such as baseline data requirements, is one area ripe for improvement. Better integration of state and federal permit procedures is another.
- Another area for progress is examining, and where prudent expanding, the potential role for private contractors in the NPDES program.
- Implementation of the proposed work share agreement will require substantial advancements in DEC staff technical and programmatic understanding and capabilities. An initial period where DEC and EPA agency staff co-develop new permits may be the most efficient way to train DEC staff and establish a system for coordinating actions between the agencies.
- Before launching any changes, DEC, EPA and the shareholders should agree on the measures to be used to gauge improvements resulting from process changes. Ultimately, implementation will include assessing the extent to which work sharing has addressed the problems, and deciding whether to maintain the arrangement as a cost-effective alternative to state program authority, or to continue to expand DEC's role towards state NPDES program capacity.

1. Project Introduction

*Forty-one states
administer NPDES
programs within
their borders.*

The Alaska Department of Environmental Conservation (DEC) is exploring options that would provide for the agency assuming a greater role in wastewater discharge permitting in Alaska. At present, permits for most wastewater discharges in the State are developed, issued and otherwise administered by the U.S. Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NPDES) permitting program. Provisions in federal law, however, allow states to implement the NPDES program. Forty-one states administer NPDES programs within their borders.

The concept of Alaska operating a state NPDES program is not new. In 1987, DEC prepared a report on the feasibility and costs of the state assuming responsibility for the NPDES program. More recently, a sector-based analysis of Alaska business and industry, entitled "Marketing Alaska," recommended that the State phase into a state-run NPDES program. The results of the analysis for the mining sector, described in the "Mining Sector Strategic Plan," had this recommendation:

Implement a more accessible, predictable, timely, accountable, and coordinated permitting and regulatory process that ensures up-front and continuing public involvement – A predictable permitting process is necessary and required to attract responsible

mineral development. The decision process, to be timely, must be concurrent rather than sequential. One of the fundamental barriers in the permit process is the fact that cooperative and consolidated state, federal, and in selected cases, local, programs have not been formally implemented and the public sometimes believes that important information or decisions are not open.

The plan offered the following steps to improve Alaska wastewater permitting:

The Alaska Department of Environmental Conservation (ADEC) should attain primacy for the National Pollution Discharge Elimination System (NPDES) water discharge program. This program, as operated by the U.S. Environmental Protection Agency, is currently problematic. Primacy could occur through a phased effort to assume and implement this program . . . Industry should also be requested to contribute financially. Industry contribution could be accomplished through permit fees (paying for services) . . . State primacy of the NPDES process would address two important issues. First, it would make the process most accessible for all involved whether it be the applicant, the state, or the general public. . . Second, state primacy would lead to a more efficient process. . .

We suspect that, at a conceptual level at least, support for the State playing a greater role in Alaska wastewater permitting extends well beyond the mining industry. The questions are those of specific roles for the state, and their cost and benefits: What options — including phased development of a state NPDES permitting program as suggested in the Mining Sector Strategic Plan — are available to the State? What effect would each option have on the process, the applicants, the public, and the permits? What are the associated costs? And, how could costs be covered? This report seeks answers to those questions, and to recommend an approach that makes sense for Alaska.

2. NPDES Program Description

2.a Background and History

The NPDES program is the wastewater discharge permitting program conceived as part of the sweeping 1972 amendments to the federal Water Pollution Control Act. The amended Act set as a national goal the elimination of discharges of pollutants into navigable waters by 1985. Section 402 of the Act established the NPDES permitting program as the primary means by which the goal was to be achieved.

In its most basic sense, the NPDES program requires that persons discharging wastewater to "waters of the United States" (essentially all surface waters, including wetlands, but not including groundwater) apply for a permit. Permits are issued by the U.S. Environmental Protection Agency (EPA), or, in the case of an EPA-approved state-run program, by a state environmental agency. The permits are developed in accordance with protocols for decision-making and public participation. They contain limits on pollutants based on the nature of the discharging facility and available treatment, as well as protecting receiving water quality.

The NPDES program requires that persons discharging wastewater to surface waters apply for a permit.

Since its beginnings, the scope of the original NPDES program has grown. EPA's initial round of NPDES permits issued between 1972 and 1976 were, by today's standards, relatively simple and dealt with only a very narrow range of "conventional" pollutants. That changed with the 1977 amendments known as the Clean Water Act. Those amendments greatly expanded the range of pollutants addressed in the permits placing new emphasis on "toxic" and "non-conventional" pollutants. In 1987, the program grew again with a new round of Clean Water Act amendments that, among other things, specifically applied the NPDES permitting program requirements to industrial and municipal storm water discharges.

*The NPDES
permitting program
remains the
centerpiece of the
Nation's water
pollution control
efforts.*

Today, the NPDES permitting program remains the centerpiece of the Nation's water pollution control efforts. The crux of the program is still the permitting of wastewater discharges to surface waters, though the program now includes a number of special program areas developed to implement initiatives addressing specific water pollution concerns. Consequently, the NPDES program now includes elements such as the storm water program, the municipal sewage sludge program (sometimes referred to as the "biosolids" program), and the pretreatment program.

This report begins by describing the various aspects of the NPDES program. A full understanding of the program requires examining both the different program areas, as well as the array of functions performed by the EPA or a state agency in implementing the program.

2.b Program Components

The NPDES program currently consists of four major program areas:

- Point Source Control
- Pretreatment
- Municipal Sewage Sludge
- Storm Water

The following table shows the relationship between the two primary types of dischargers — municipal and industrial/commercial — and the applicable program areas. Each of the program components is further described in the paragraphs that follow.

Table 2-1
Major Program Areas

Program Areas	Applies To:
NPDES Point Source Control (Base Program)	<ul style="list-style-type: none"> • Municipal Wastewater Discharges • Industrial Wastewater Discharges
Municipal Sewage Sludge	<ul style="list-style-type: none"> • Municipal Sludge Use and Disposal
Pretreatment	<ul style="list-style-type: none"> • Industrial Discharges to Sewerage Systems
Storm Water	<ul style="list-style-type: none"> • Municipal Storm Water Discharges • Industrial Storm Water Discharges

Occasionally, permitting of federally-owned facilities is considered a distinct element of the NPDES program (and in those cases is referred to as the “federal facility” program). Distinguishing permitting of federally-owned facilities as its own program area arises from cases where state authorities do not extend to federally-owned facilities. In Alaska, the distinction is of little importance in that state environmental authority clearly encompasses federal facilities.

One may also see references to the "Combined Sewer Overflow" program area, or "CSO program." The CSO program area involves implementing EPA's National Combined Sewer Overflow Policy intended to eliminate the untreated discharge of combined domestic wastewater and storm waters during storm events. The CSO program is important in states with large numbers of combined sewer overflows, but does not merit distinct program status in Alaska with only a few combined sewer overflows.

2.b.1 Point Source Permitting Program

The Point Source Control program is the base program.

The Point Source Permitting program is, by far, the most significant NPDES component in terms of complexity and level-of-effort, and is considered the "base program." Point sources are wastewater flows that are discharged to surface waters through a discrete conveyance such as a pipe or ditch. (As opposed to "non-point," or dispersed sources.) They generally fall into two categories: industrial and municipal. Municipal sources are community sewerage systems that discharge primarily treated "domestic wastewater," or wastewater with a composition typical of household sewage (although municipal sources may include some fraction of dissimilar industrial wastewater). While effluent from municipal sources is often similar from one facility to the next, industrial sources discharge a wide array of wastewater streams depending on the type of industrial or commercial facility. Major classes of industrial sources in Alaska include:

- mining industry sources,
- seafood industry sources
- oil and gas industry sources, and
- timber industry sources.

The point source permitting process includes the following more-or-less sequential series of events:

- A facility completes and submits an application to the agency,
- the permitting agency prepares a draft permit,

- the draft permit is subject to public review and comment,
- the agency makes necessary revisions and issues a final permit, and
- the agency monitors and enforces facility compliance with the permit.

NPDES permits are effective for a period of no more than five years.

NPDES permits are effective for a period of no more than five years, although EPA and many states (though not Alaska) have authority to "administratively extend" permits beyond their expiration date. Permit renewals and major modifications follow basically the same process as initial permit application.

An individual permit is a permit specifically tailored to an individual facility. A single general permit covers multiple similar facilities within a specific area.

NPDES permits can be issued to individual dischargers (individual permits) or to a group of similar dischargers (general permits). An individual permit is a permit specifically tailored and applicable to an individual facility. A single general permit, on the other hand, covers multiple similar facilities within a specific area. General permits are developed much the same as individual permits with the exception that the permit is issued at the instance of the permitting authority. Once a final general permit is effective, facilities that wish to be covered under the general permit submit a Notice of Intent (NOI) to the permitting authority. The permitting authority may then either request additional information, authorize the facility to discharge under the general permit, or require the facility to apply for an individual permit.

2.b.2 Municipal Sewage Sludge Program

The Municipal Sewage Sludge Program is intended to ensure that use and disposal of domestic sewage sludge complies with national standards.

Another component of the NPDES program is the regulation of use and disposal of residual sludge generated by the treatment of domestic sewage. The Municipal Sewage Sludge Program responds to the Clean Water Act requirement that NPDES permits issued to facilities that treat domestic sewage include provisions for use and disposal of the sludge generated during treatment. The program also includes, however, regulation of those facilities that do not discharge wastewater (and consequently do not need an NPDES permit), but treat or use sewage sludge, such as sludge incinerators. The law and ensuing program emphasize control of the toxic and pathogenic components of the sludge.

EPA has established national standards for the use or disposal of domestic sewage sludge. In most cases — those where the discharging treatment facility deals with its own sludge — the program is implemented by including in NPDES or other permits stipulations to ensure that use and disposal complies with the national standards. In those cases where the sludge use or disposal facility does not need an NPDES permit, the program can be implemented through a separate permit, or by including stipulations pertaining to sludge in other kinds of permits, such as solid waste or air quality permits.

Interestingly, states authorized to administer this NPDES program element need not implement the Municipal Sludge Program as part of their wastewater permitting program. Some states, for example, administer the Municipal Sludge Program as part of their solid waste and air emission permitting programs.

2.b.3 National Pretreatment Program

The basis of the pre-treatment program is that certain industrial and commercial facilities need to "pre-treat" their wastewater before discharging it to a municipal sewage system.

The National Pre-Treatment Program is rooted in the 1977 Clean Water Act amendments. It applies to discharges from non-domestic (i.e., industrial and commercial) facilities to publicly-owned treatment works (primarily municipal sewage systems). The program was established to guard against a particular type of problem: Most municipal (and other publicly-owned) treatment works are designed to treat, and are effective at reducing, the pollutants found in common household (domestic) sewage. In some communities, however, commercial or industrial facilities may discharge substantial quantities of wastewater to the local sewage collection and treatment system that is entirely unlike household sewage.

There are several potential effects of discharging a highly-toxic, non-domestic discharge — such as might be derived from a metal finishing facility — to a municipal sewerage system. Toxic pollutants may pass relatively unaffected through

the municipal treatment process which is not suited for treating toxic substances. The result being that the toxic pollutants are discharged to receiving waters. Secondly, the composition of the industrial discharge may be such that it interferes with the municipal treatment processes. Treatment facilities that rely on biological processes to decompose pollutants are particularly susceptible to upsets caused by toxic waste streams. Finally, where treatment processes are effective in removing toxic constituents, the process residual — or sludge — may exhibit toxic characteristics that warrant particular care in disposal and safety precautions.

The program is designed to be implemented primarily by larger municipalities.

The basis of the pretreatment program is that certain industrial and commercial facilities need to "pre-treat" their wastewater before discharging it to a publicly-owned treatment works. The program is designed to be implemented primarily by larger municipalities who are required, as a condition of their NPDES permit for the sewage treatment plant discharge, to develop and implement a pretreatment program that complies with federal regulations.

Implementing the program consists of developing program authorities and procedures; identifying publicly-owned treatment works with sources of non-domestic wastewater that trigger pre-treatment requirements; including as conditions of the NPDES permits issued to qualifying municipal treatment facilities that they develop pretreatment programs; assisting municipalities as they develop their programs; reviewing pretreatment programs submitted by municipalities for compliance with federal regulations; and monitoring municipal program implementation. In essence, this NPDES element involves requiring and overseeing pretreatment programs that are actually implemented primarily by municipalities.

2.b.4 Storm Water Program

Storm waters are those flows derived primarily from precipitation, surface runoff, street washing and other drainage. In response to continuing concerns about the

effects of storm waters on the nation's waterways, Congress, in the 1987 amendments to the Clean Water Act, extended the NPDES program to specifically include discharges of storm waters, and required EPA to establish phased NPDES requirements. The first phase of the program required that two types of storm water dischargers apply for NPDES permits:

- storm water discharges associated with "industrial activities" (including construction activity disturbing more than 5 acres); and
- storm water from municipal storm sewer systems in municipalities with a population of 100,000 or more.

The second phase of the program, which is just beginning to be implemented in Alaska, involves permitting of many of the other types of storm water discharges.

Because of the vast number of storm water discharges, EPA has made extensive use of general permits in implementing the storm water program. The basic approach to regulating storm water is somewhat different than the rest of the NPDES program. Most NPDES permits prescribe limits on the amount of pollutants that can be discharged (effluent limits). The focus of storm water regulation, on the other hand, is to require the implementation of practices designed to reduce pollutant loads. Lastly, while general permits play an overriding role in the NPDES storm water program, in some cases storm water conditions are incorporated into individual permits issued to facilities, or a storm water-specific individual permit is issued.

2.c Program Functional Elements

In the preceding discussion, we described the scope of the base and special program areas included within the NPDES umbrella. This section addresses in more detail the actual functions demanded of the permitting agency in implementing the base (point source industry and municipal permitting) program. For purposes of discussion, we have broken NPDES base program functions into four groups:

- permit development (including modification and renewal),
- compliance monitoring (including enforcement),
- data management and record keeping, and
- program development and administration.

The following sub-sections provide an overview of the requisite agency functions within each functional group.

2.c.1 Permit Development

Permit development is the process of developing new permits, modifications or renewals.

Permit development is the process of developing new permits, permit modifications or renewals. The process of developing an NPDES permit, modification or renewal alone does not trigger the environmental planning process prescribed by the National Environmental Policy Act, or NEPA (the Act that requires, among other things, preparation of Environmental Impact Statements). In some cases, however, projects that require NPDES permits trigger the NEPA process for other reasons. In those instances, draft NPDES permits are usually developed within the NEPA framework (eg., as part of overall development of an Environmental Impact Statement).

Whether an NPDES permit is developed within the NEPA framework, or not, the process is largely the same. In the case of individual facility permits, the permitting authority:

- assists applicants in completing applications;
- evaluates applications for completeness;
- develops a draft permit which includes both facility-specific conditions and standard conditions, and a fact sheet that explains the permit;
- provides public notice consisting of, as a minimum, placing advertisements in newspapers;
- provides opportunity for applicant and public comment on the draft permit including, at a minimum, soliciting written comments, but also including sponsoring public workshops and/or hearings for more complex permits;
- responds to applicant and public comment by providing a written summary of comment and agency response, and making revisions to the permit to reflect public comment;
- adjudicates appeals by the applicant or members of the public, and in some cases defending agency actions and decisions in a court of law; and
- completes the administrative record and issues a final permit.

The steps involved in developing general permits are much the same. The primary differences are two: The process is not initiated by receipt of an application, but by a decision of the agency; and after the final permit is issued, the agency accepts, reviews and acts on Notices of Intent submitted by facilities wishing to be covered by the general permit.

Of the elements involved in permit development, the process for deriving effluent limits merits further discussion. Without going into great detail, effluent limits must reflect both the effluent quality that can be expected from the particular type of facility using state-of-the-art treatment and pollution control measures (technology-based limits), and the effluent quality necessary to protect the receiving waters (water quality-based limits). Technology-based limits are derived from federal regulations that provide limits for each of an array of facility types. Water quality-based limits, on the other hand, are derived specifically for each discharge site. In most cases, water quality-based limits are derived from state water quality standards. In cases of discharges to water quality-impaired water bodies, however,

water quality-based limits may be derived from other, more stringent controls (total maximum daily loads and waste load allocations) designed to restore water quality. Water quality-based limits often involve modeling the behavior of the effluent in the receiving environment (in a mixing zone) to determine receiving water impacts. Derivation of water quality-based limits and corresponding monitoring requirements is one of the most significant and time consuming procedures required of NPDES permitting agencies.

2.c.2 Compliance Monitoring

Once a permit has been issued, the permitting authority is responsible for monitoring and maintaining facility compliance.

Once a permit has been issued, the permitting authority is responsible for monitoring and maintaining compliance with the permit terms and conditions, including effluent limits and compliance schedules. Compliance is generally monitored in two ways:

- by reviewing self-monitoring reports (or Discharge Monitoring Reports — “DMRs”) submitted by permittees as a condition of their permits, and
- through agency facility inspections which can range from informal site visits to formal inspections involving collecting and analyzing effluent samples.

For state permitting authorities, compliance activities are conducted in accordance with an EPA-approved “Compliance Evaluation Program.” Compliance Evaluation Programs specify the type, frequency, and intensity of compliance activities, as well as the consequences of noncompliance. A prerequisite to state NPDES authority are written compliance procedures that match violations to a narrow range of agency enforcement responses. EPA guidelines establish minimum standards for EPA and state Compliance Evaluation Programs.

One element of compliance monitoring is notifying facilities of instances of noncompliance and invoking compliance actions.

One element of compliance monitoring is notifying facilities of instances of noncompliance with permit terms, and invoking a hierarchy of increasingly-severe actions aimed at achieving or restoring permit compliance. The vast majority of compliance actions are informal and involve notifying facilities of a violation and the need to rectify the problem, and assisting facilities in achieving compliance. EPA guidance recognizes that formal enforcement actions are taken against relatively few violators at sites where frequent or serious violations have occurred.

While infrequent, formal enforcement cases can be very time consuming, and minimum state program capacity involves having both the legal authority and the resources required to implement a limited number of formal enforcement cases as they arise.

2.c.3 Data Management and Record Keeping

Administration of the NPDES program entails substantial data management and record keeping responsibilities. A permit file comprising the administrative record for new permit issuance, permit modification and permit renewal is prepared for each permitted facility. A compliance file is also prepared for each facility and includes all self-monitoring reports (or discharge monitoring reports -- DMRs) submitted by facilities pursuant to permit conditions, as well as any other compliance data or records associated with compliance actions.

The primary NPDES data management tool is the national Permit Compliance System (PCS).

The primary NPDES data management tool is the national Permit Compliance System (PCS). The PCS database contains permit and permit processing information, as well as compliance monitoring information. Data are entered into this (or in the case of some state programs, a separate but compatible) database identifying and characterizing each permitted discharge and the associated effluent discharge limits and monitoring requirements, and marking significant events in the permit development process. Once the permit is issued, all compliance data, such

as data provided in DMRs or collected during agency inspections, are also entered into the database. PCS database queries and reports are used as the basis for key periodic program reports. For example, formal reports identifying and describing instances of noncompliance by major dischargers are prepared quarterly, and summary noncompliance reports are prepared annually. The level of effort demanded for PCS data entry, updating and quality control is appreciable.

While maintaining permit files and the PCS database are the single largest foci, the universe of NPDES data management and record keeping functions is far broader. Records and data are routinely provided in response to public and other requests. Reports and data are provided for program management and planning purposes. In the case of state-run NPDES programs, the programs include entire systems for routine transfer of data and records to EPA so it may conduct its oversight functions.

2.c.4 Program Development and Administration

Compared to most state and federal environmental programs, the NPDES program is highly structured.

Compared to most other state and federal environmental programs, the NPDES program is highly structured. One of the older programs, an extensive body of program regulation and guidance has evolved. Prescriptive procedures cover a significant fraction of the day-to-day programmatic decisions and actions. Many of the procedures are binding on state-run programs, and state and federal programs alike are administered within this well-developed administrative framework.

A significant element of program administration is prescribed program planning.

A significant element of program administration is prescribed program planning. The regulatory framework prescribes a continuing planning process intended to measure progress against objectives with a feedback loop to focus implementation efforts on program priorities. In the case of state-run NPDES programs, a significant element of program planning is developing and maintaining agreements with EPA as to how the state program is to be implemented. Two agreements weigh heavily on how state programs are administered, and demand significant attention on the part of

program managers. The "Delegation Agreement" governs the transfer of NPDES authority from EPA to the state and covers topics such as transition procedures, coordination of compliance monitoring and enforcement activities, joint permit processing, etc. While it may be amended, a single Delegation Agreement is prepared covering transition to and implementation of a state program. The periodic Environmental Performance Partnership Agreements (that are now replacing the old State/EPA Agreements, or SEAs) must be consistent with the Delegation Agreement, and deal with program priorities, work plans and other issues on a year-to-year basis.

Program administration also includes elements of staff training, budgeting, personnel management, and program development which comprises construction of the regulation packages and guidance documents needed to implement the program. Program development efforts are particularly important in the period immediately preceding and following transfer of NPDES authority from the EPA to a state. It is within that period of program design that the state must decide which of the discretionary elements of the federal program to adopt, to modify, or to supplant with state-specific elements. Development of an initial regulation and guidance package involves a substantial effort.

Finally, program administration involves implementing federal permitting strategies designed to focus efforts on particular problem areas. NPDES program administration involves a number of ancillary activities associated with national initiatives to advance program progress.

3. State NPDES Program Rules

3.a State Program Requirements

State programs must implement the NPDES program as it is set out in federal law.

In a basic sense, state programs must implement the NPDES program as it is set out in federal law. Federal regulations prescribing program standards and procedures are extensive, and the vast majority apply to both EPA- and state-run NPDES programs.

In addition to complying with the same standards and procedures used by EPA in administering NPDES programs, federal regulations detail a number of requirements specific to state-run programs. For example, state programs must be conducted in accordance with a "continuing planning process" as discussed previously. State programs must include a compliance evaluation process with procedures for:

- review and action upon reports and other evidence of permit violations;
- inspection and surveillance;
- investigation of reported violations; and
- determination of the need for and type of enforcement action based on the nature of any violations revealed.

States must have enforcement authority including, among other things:

- a mechanism (eg. emergency order or ability to seek a temporary restraining order) to stop any unauthorized activity endangering public health or the environment;
- the ability to seek civil penalties in at least the amount of \$5,000 per day for each violation; and
- the ability to seek criminal fines in at least the amount of \$10,000 per day for each willful or negligent violation.

State permit programs must contain procedures for EPA review of all permits prior to issuance and specifically preclude issuing a permit over EPA's objection: "State permit programs shall provide that no permit shall be issued when the [EPA] Regional Administrator has objected in writing . . ." (40 CFR 123.29).

State programs must include processes for providing information to EPA for review including:

- copies of all permit applications,
- notice of every action taken by the state on a permit application, and
- copies of draft and final permits.

State programs must also include procedures for routine periodic reporting of instances of facilities failing to meet permit terms to EPA. The noncompliance reports detail the circumstances of each violation, classify instances of noncompliance by severity, and discuss the state agency response.

The list of requirements specific to state-run NPDES program goes on. In general though, the regulations that set the minimum standards for state programs emphasize three areas: that states have a program for monitoring permittee compliance with permit conditions, that states have capacity and procedures to enforce permit terms and conditions on a par with the penalties prescribed by the Clean Water Act, and that state programs include processes for EPA oversight of the program and codify EPA's intervention authorities.

3.b Submittal Requirements

While federal regulations establish minimum standards for state NPDES programs as described in the preceding section, they also specify what a state in pursuit of NPDES program authority must submit to EPA by way of application:

- a letter from the Governor requesting program approval;
- a complete program description including scope, structure, coverage, processes and procedures, costs and funding sources;
- an Attorney General's statement attesting to the adequacy of the State's authority to implement the program and including specific citations;
- a Memorandum of Agreement with the EPA Regional Administrator that provides for a transition from federal to state program management, and specifies the roles and coordinated processes of the state and EPA region; and
- copies of all applicable State statutes and regulations.

The state must describe the program and its authorities in sufficient detail that EPA can determine whether the program meets minimum standards.

In effect, the state application must describe the program design and state authorities in sufficient detail so that EPA can determine whether the proposed state program meets minimum standards.

3.c Options for Partial Programs

While prohibited by the 1977 amendments to the Clean Water Act, the 1987 amendments added a new provision allowing for partial state permit programs. The law provides for two types of partial programs. Under the "Major Category" provision, the EPA Administrator may approve a state program consisting of conducting all permitting functions for a major category of dischargers. The "Major Component" provision allows for phased assumption over a five-year (or shorter) period of the components of the NPDES program, such as permit development, or compliance monitoring.

In 1989, EPA eliminated from its regulations the blanket prohibition on partial program approvals, but not until 1997 did it enact regulations fully implementing the partial program provisions of the 1987 Water Quality Act amendments. The preamble to the 1997 regulations explains that the "Major Category" provision was intended for states where NPDES jurisdiction is divided between two or more state agencies. Under that provision, one state agency can administer its part of the NPDES program regardless of whether other state agencies have been approved to administer their parts of the program. EPA had earlier adopted this narrow interpretation of the applicability of the "Major Category" provision as a matter of policy, and has never granted partial program approval on the basis of the "Major Category" provision. The new regulations at 40 CFR 123.30 codify the limitations on approving partial state programs on the basis of the "Major Category" provision:

A major category partial program submission . . . must cover all discharges under the jurisdiction of a department or agency encompassing at a minimum a major category of dischargers, and must comprise a significant and identifiable part of the State NPDES program. To be considered complete, the program must include permit development and issuance, compliance, and enforcement responsibilities for all direct and indirect dischargers within

the jurisdiction of the State agency or department requesting approval. [40
CFR 123.30(c)(1)]

While options for states wielding NPDES authority on a permanent basis for something less than the full range of dischargers are narrow, options are broader under the other Clean Water Act provision for partial state NPDES program approval — the “Major Component” or “Phased Permit Program” — with one significant constraint: Transfer of NPDES program responsibility from EPA to the state must occur in discrete steps in accordance with a plan leading to full state program approval within five years. States must initially assume a “significant and identifiable” element of the program that includes permit development and issuance, compliance and enforcement responsibility for a specific group or class of dischargers. Each subsequent phase must add permit development and issuance, compliance and enforcement responsibility for one or more new class of dischargers until, by the end of five years, the state program includes all classes of dischargers in the state.

3.d EPA's Role in State Programs

Once a state is authorized to implement NPDES program functions, the EPA is prohibited from conducting those activities and assumes an oversight role.

In general, once a state is authorized to implement NPDES program functions, the EPA is prohibited from conducting those activities and assumes an oversight role. In that role, EPA is afforded an opportunity to review each permit before it is issued by the state, and to object to elements that conflict with or fall short of federal requirements. If the state does not modify the final permit to EPA's satisfaction, EPA may issue the permit directly — a process known as "over-filing." Instances of over-filing are rare, but they do occur.

While EPA's permit review and veto responsibilities are non-negotiable, many of the other divisions between federal and state roles are negotiated as part of the delegation agreement, and subsequent performance partnership agreements. Once the state's role has been defined, EPA monitors the state's performance against the terms of the agreements. Should the EPA find the state program lacking, it can initiate formal proceedings to withdraw all or portions of the state NPDES program approval.

Finally, EPA provides support and assistance to state NPDES agencies. EPA recognizes that a decision to grant NPDES authority brings with it a commitment for aid. The degree of support is greatest with new state programs and declines thereafter as the states gain experience and competence. EPA assistance is negotiated in terms of staff allocation and performance commitments in the transfer agreement. Some level of support continues after the transition period and EPA staff routinely assist even the long-standing state NPDES agencies on procedural, legal and technical matters.

4. Alaska's Water Quality Programs

4.a Federal NPDES Program

EPA distinguishes between "major" and "minor" permits for workload management purposes.

In discussing the nature of the NPDES program currently administered by EPA in Alaska, it helps to understand that EPA groups facilities into "major" and "minor" wastewater sources. In the case of municipal wastewater facilities, "major" sources are those that discharge one million gallons or more per day, serve a population of 10,000 or more, or have a significant impact on water quality. In the case of industrial facilities, sources are classified as "majors" or "minors" through a rating system that allocates points to discharge characteristics such as flow, pollutant loads, potential public health impacts, and water quality factors. The major vs. minor distinction is a key agency workload management tool. Agency permitting priorities focus on the major facilities.

There are 947 NPDES permitted facilities in Alaska, including 48 "major" individual permits.

One way to begin to understand the nature of the program EPA is administering in Alaska is to review the statistics contained in the national Permit Compliance System (PCS) database maintained by EPA. According to the database records, there is currently (as of April 21, 1998) a total of 947 NPDES permitted facilities in Alaska. Of the total, 778 facilities are permitted under five general permits, with the

remaining 169 facilities covered by individual permits. The 169 individual permits further break down into 48 major permits and 121 minor permits.

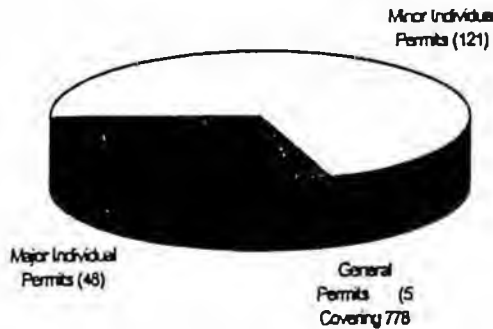
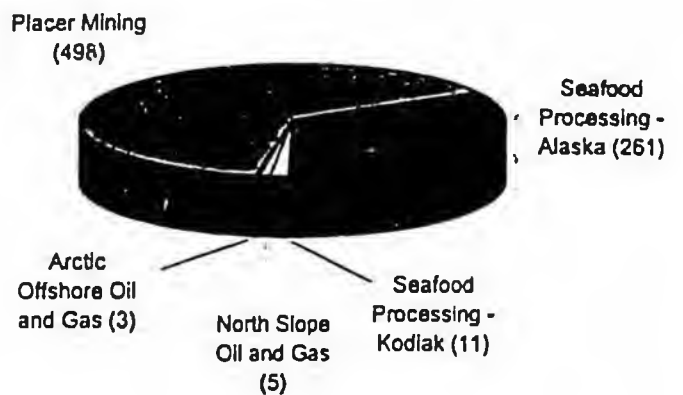


Figure 4-1
Permit Types

Placer mining operations and seafood processing facilities account for the majority of facilities covered by general permits in Alaska:

Figure 4-2
Numbers of Facilities Covered by
General Permits



The distribution of individual permits by source type reveals the substantial percentage of NPDES permits issued to municipal and other types of public sewerage facilities, although mining and seafood processing operations again account for substantial percentages of the total number of permits:

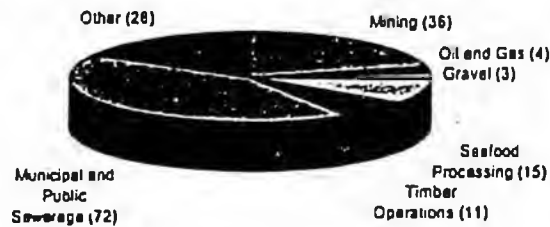
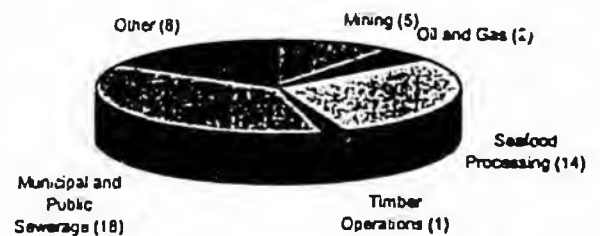


Figure 4-3
Distribution of Individual Permits
by Source Type

The distribution of just the major individual permits is similar to the distribution of all (major and minor) individual permits:

Figure 4-4
Distribution of Major Individual
Permits by Source Type



A significant feature of Alaska's NPDES program is a substantial backlog of expired and extended permits.

Another significant feature of the present Alaska NPDES program is that there is a substantial backlog of permits that have been administratively extended by EPA beyond their expiration dates. Of the total 174 general and individual permits, 137 (or 79 percent) are currently administratively extended. Of the 48 major individual permits, 29 (or 60 percent) have been administratively extended. While some of the extended permits will not need to be renewed because facilities have stopped discharging, most should be renewed. Looking at the numbers of existing NPDES permits that have expired and may need renewal, or that will expire over the next five years:

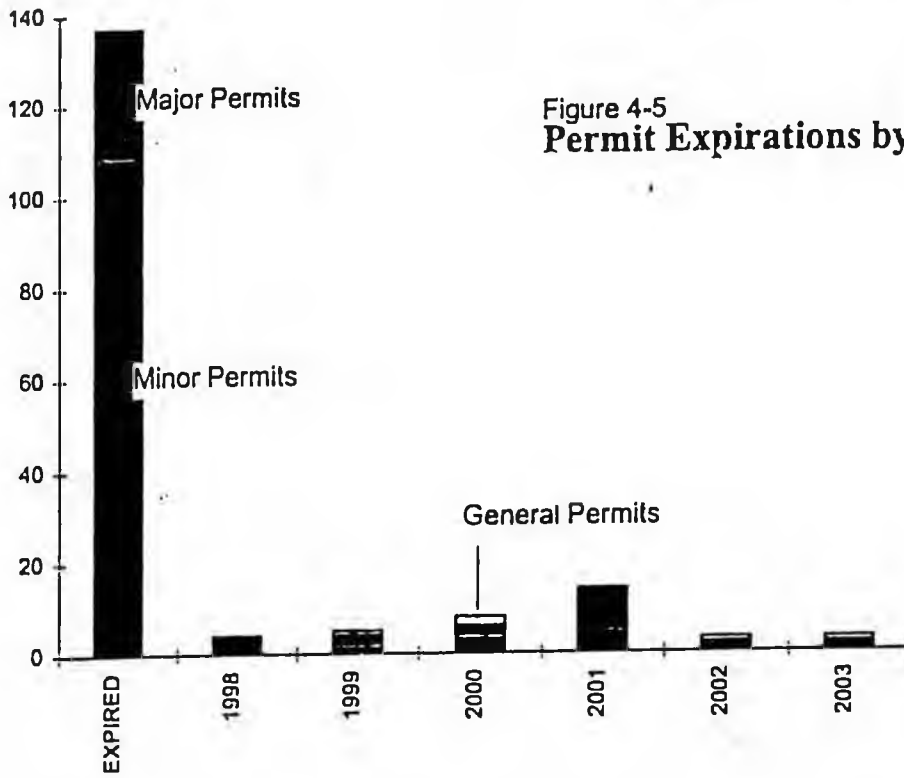


Figure 4-5
Permit Expirations by Year

4.b State Water Quality Programs

While EPA implements the NPDES program, DEC conducts other aspects of the overall water pollution control framework.

While NPDES permitting falls under the U.S. Environmental Protection Agency in Alaska, the State of Alaska, through the DEC, implements various other aspects of the overall Alaska water pollution control regulatory framework. The current, comprehensive state water quality program includes personnel staffing of 38 full time equivalents (FTEs) with a budget of \$4.6 million. Some of the current state water quality protection efforts would continue regardless of any change in the state role in the NPDES program, while others might be assimilated into any new state NPDES program authority. In essence, the state already performs some NPDES functions. Any change to assume a greater role in the NPDES process would involve expanding or adding to current efforts. To begin to approach options for an increased role for the state in the NPDES program, it is important to understand the current roles of DEC and EPA not just within the context of the NPDES program, but within the overall water quality program context, and to identify those current state efforts that already fall within the scope of the NPDES program.

The state water quality programs include the following elements:

- federal Clean Water Act permit (section 401) certification,
- coastal zone management,
- waterbody assessment and recovery,
- water quality standards,
- wastewater system plan review,
- state wastewater discharge permitting,
- groundwater pollution control, and
- forest practices.

Each element is described in the discussion that follows.

4.b.1 Federal Clean Water Act Permit Certification

*DEC certifies
NPDES and other
permits as provided
for in the Clean
Water Act.*

Even though EPA implements the NPDES program in Alaska, the Clean Water Act reserves a voice for the State in the process. Section 401 of the Act requires that federal agencies that issue permits under the Clean Water Act obtain state certification prior to issuing the permits (unless the state waives certification or fails to provide it in a timely manner). The certification attests to a finding by the state that there is "reasonable assurance" that each federal permit will result in compliance with state water quality standards. States may include conditions in its certification to ensure that water quality standards are met. The state's role, however, is limited to requiring more stringent or additional conditions. States may not condition or withhold certification on any other basis.

Alaska's Section 401 certification program deals primarily with two federal permits: permits issued by the U.S. Department of the Army Corps of Engineers for the discharge of fill materials to wetlands under Section 404 of the Clean Water Act, and NPDES permits issued under Section 402. In many cases, the state Section 401 certification program for NPDES permits is an indistinct part of a joint federal-state permit development process. In this process, the EPA consults to varying degrees with DEC staff during permit development, and any issues that might appear as conditions in the state certification are resolved and incorporated into the draft NPDES permit.

As mentioned previously, the issuance of an NPDES permit alone does not trigger the National Environmental Policy Act (NEPA) process. Nevertheless, many major projects do invoke the NEPA process for other reasons. In those cases, DEC is usually involved as a key participant in the planning process identifying water quality (among other environmental and human health) concerns, examining relative water quality impacts associated with project alternatives, and specifying measures to

mitigate impacts. For NEPA projects, draft NPDES permits are developed within the overall NEPA process, and DEC is often placed in an informal co-lead role with EPA in evaluating water quality impacts in relation to state water quality standards.

DEC is obligated by statute to issue a state permit for essentially all wastewater discharges. The law allows, however, the state to adopt an NPDES permit which it has certified under Section 401 of the Clean Water Act as the required state permit, and that is what happens in the vast majority of cases. Once the state adopts the NPDES permit as its own, it has the force and authority of a state permit, and is subject to state compliance monitoring. DEC receives self-monitoring reports (or Discharge Monitoring Reports – DMRs) from the applicant, and conducts periodic inspections – often coordinated with EPA inspections – of permitted facilities. When required, decisions concerning compliance actions at NPDES permitted facilities are usually discussed between DEC and EPA, and an agreement reached as to one or both agencies are to implement compliance actions. As a general rule, EPA plays a far greater role in compliance monitoring and permit enforcement at NPDES permitted facilities than DEC.

4.b.2 Coastal Zone Management

The Alaska Coastal Management Program is implemented by the Alaska Division of Governmental Coordination, an organizational unit within the Office of the Governor. The program ensures that development within coastal areas is consistent with the special values they possess and conforms to state and local plans and standards intended to protect those values. By virtue of the way it is implemented, the program also serves to coordinate state resource agency involvement in the development of projects within coastal Alaska.

As one of the three state resource agencies, DEC plays a significant role in the state coastal zone management process.

As one of the three state resource agencies, DEC plays a significant role in the coastal management process. With specific respect to water quality, the Alaska Coastal Management standards incorporate the state water quality standards by reference. A finding that a project is consistent with the Alaska Coastal Management standards requires a DEC finding that any discharges will result in compliance with water quality standards – the same finding required of DEC under Section 401 of the Clean Water Act. Thus with respect to water quality, the coastal management program places no new burden on the agency. It does, however, add procedural requirements.

4.b.3 Water Body Assessment and Recovery

The water body assessment and recovery program examines water quality on a watershed scale.

DEC also works on water pollution control issues on a watershed scale. These efforts focus on assessing water quality, identifying various point and nonpoint pollution sources that may contribute to water quality problems, and reducing sources of water pollution through planning, land use modification, discharge permit modifications, and other mainly state - local cooperative efforts. This aspect of DEC's current program addresses wastewater discharge issues as only one of potentially many pollution sources. Nevertheless, the results of water body assessments conducted by the program can significantly affect NPDES wastewater permitting for discharges to waters identified as water quality impaired. In those cases, NPDES permit effluent limits are derived using a more complex process (involving total maximum daily loads or TMDLs and waste load allocations or WLAs) that takes into account the effects of all sources of water pollution and the need for more stringent limits to restore water quality to within acceptable limits.

4.b.4 Water Quality Standards

In deference to the wide variation in types of water bodies across the nation, the earliest national efforts at controlling water pollution reserved the setting of quality

standards for waters to the states — and that remains the case today. As in all other states, Alaska maintains water quality standards that specify under what circumstances water quality can be degraded, and limits how much degradation can occur. While water quality standard authority has remained with the states, EPA was given authority to approve or override state standards, and federal guidelines have been developed that specify nationwide minimums for state water quality standards.

One of DEC's responsibilities is to update and to interpret water quality standards for specific applications — such as setting NPDES permit limits.

In addition to a shift towards significant federal authority in the water quality standard arena, there have also been dramatic improvements in water quality sciences. The combination has produced a series of updates to national water quality guidelines to keep pace with advances in understanding, as well as an increasingly complex set of standards reflecting the new depths to which water quality effects are becoming understood. One of DEC's water quality responsibilities is to update and to interpret the standards for specific applications. In developing NPDES permits, the EPA permit writers will take into account the Alaska's water quality standards, but in many cases, DEC is called upon to actually determine which standards and the specific form to be used in developing NPDES permits. Derivation of water quality-based permit limits is probably the most significant part of the technical development of NPDES permits; and water quality standard interpretation along with impact modeling are the most significant parts of the water quality-based permit limit derivation process.

4.b.5 Wastewater System Plan Review

DEC also reviews plans for treatment works to determine if the technology is capable of achieving permit limits.

State law tasks DEC with reviewing and approving engineering plans for wastewater treatment works. While the NPDES program deals almost exclusively with setting effluent limits irrespective of how a specific facility might comply with those limits, the state water quality protection program must examine the specific treatment technology proposed, and arrive at a determination of whether the proposed

technology meets design standards and whether the treatment system will ultimately be capable of producing an effluent that will meet permit limits. There is no NPDES counterpart to this state plan review responsibility.

4.b.6 State Wastewater Discharge Permitting

In a relatively few instances, DEC issues state wastewater discharge permits in the absence of NPDES permits.

As mentioned before, DEC is obligated by statute to issue a state permit for essentially all wastewater discharges, and usually adopts NPDES permits as the requisite state permit. In a relatively few instances, the state issues a state wastewater permit in the absence of an NPDES permit. Those cases are normally instances of discharges that are too small to warrant an NPDES permit, but are large enough, or otherwise significant enough, to warrant a state permit. Once issued, the state has sole responsibility for monitoring and maintaining facility compliance with the permits.

4.b.7 Groundwater and Forest Practices

DEC also implements small programs to control groundwater pollution and to monitor forest practices for compliance with state law and water quality impacts. Since the NPDES program deals exclusively with discharges to surface waters, neither program has particular NPDES significance.

4.c Current State NPDES Functions and Resources

Of the water quality program functions currently performed by DEC, a state NPDES program would subsume two:

- permit certification, including, in particular, DEC's role in developing NPDES permits for major industrial facilities.
- Interpretation and application of water quality standards and water quality impact assessment in conjunction with NPDES permit development.

Conversely, state efforts that would continue outside of a state NPDES program include the procedural requirements associated with the Alaska Coastal Management Program, the wastewater system plan review program, state wastewater discharge permitting of smaller sources, the water body assessment and recovery program element, general maintenance and updating of water quality standards, groundwater protection efforts, and forest practices monitoring.

In the case of major industrial facilities, DEC already plays a significant role in the NPDES process. For major industrial facilities, permitting usually begins with a planning process. In the case of projects subject to the National Environmental Policy Act (NEPA) process, planning is normally conducted in the context of an Environmental Assessment or Impact Statement. For non-NEPA projects, there is usually some form of less formal pre-application planning. In both cases, DEC often plays a major role, identifying issues of concern and the type and amount of data the permittee will need to collect to allow the permitting process to proceed.

DEC is a key agency in the time-consuming pre-application planning process for major new industrial facilities.

Actual major industrial facility permit development is very much a coordinated federal - state process. DEC plays a major role in establishing which water quality

standards to apply and in determining the propriety and size of any mixing zone. EPA derives permit limits on the basis of water quality standard information provided by DEC, as well as its own regulations and guidelines. DEC plays a similar role in the development of permits for other than major industrial facilities, such as municipal wastewater discharges. These, and other less complex permits, are less time consuming requiring a smaller resource commitment on the part of both agencies.

Once an NPDES permit is certified by the State, it has the force and effect of state law as well as federal law.

Once an NPDES permit is issued and certified by the State, it is subject to compliance monitoring by both DEC and EPA. Self-monitoring reports are provided by facilities to both DEC and EPA. Compliance inspections are conducted by both DEC and EPA either separately or jointly. Enforcement actions are coordinated between the agencies.

The fact that the state already carries out certain NPDES functions has particular significance in considering the resource requirements associated with various alternatives for a greater state presence in the NPDES permitting process — as discussed later in this document. DEC estimates that it currently devotes approximately 10 FTEs and \$1 million in state and federal grant funds to NPDES functions.

4.d NPDES Programs in Other States

We have mentioned that of the 50 states, 41 have EPA-approved full or phased state NPDES permit programs. To provide some insight into the thinking and experiences of the other states with respect to the NPDES program, we contacted five other states for basic information about their programs. We contacted our northwest neighbors, Washington and Oregon, both of which have had long standing state NPDES programs. We also sought out the states that had most recently received NPDES program approval. The States of Oklahoma, Florida and Louisiana have all received approval of state NPDES programs within the last three years.

4.d.1 Washington

The State of Washington was delegated NPDES permitting authority in 1973. The state carries out all NPDES functions in all program areas with the exception of the municipal sludge and federal facilities programs. The state is actively working with EPA to assume responsibility for implementing the municipal sludge program. There are no current efforts to integrate permitting of federal facilities into the state program.

The State of Washington program includes 487 active individual permits and eight general permits covering a total of 3,203 facilities. The program staffing level is 102 full-time equivalents (FTEs) with an annual budget of \$7.6 million. The program is funded 96 percent through program receipts with permit fees ranging from a high of approximately \$80,000 for bleach pulp mills, to \$25,000 - \$50,000 for other major industrial facilities, to smaller amounts for municipal discharges.

4.d.2 Oregon

Like the State of Washington, the State of Oregon NPDES permit program was approved in 1973. With one exception, the state fully implements all parts of the program including industrial and municipal point sources, storm water, pretreatment and federal facilities. The exception is that the state is implementing a partial program for municipal sludge, though it anticipates EPA approval to implement all of the municipal sludge program in late 1998.

The State of Oregon program includes approximately 350 individual permits and several general permits covering another 1,500 facilities. Staffing for the program is approximately 44 FTEs with an annual budget of \$3.1 million. The program is funded primarily through program receipts (60 percent) with federal grant funds (20 percent) and state general funds (20 percent) making up the balance.

4.d.3 Oklahoma

Oklahoma's partial NPDES program was approved in 1996. The program currently does not include permitting of animal feedlots, oil and gas facilities, and pipeline facilities. The partial permit program was approved on the basis of phasing into full implementation of all NPDES functions for all categories of discharges over the next three years.

The program includes permit functions associated with 366 municipal and 219 industrial dischargers. The program is currently staffed at 12 FTEs with an annual budget of approximately \$1.8 million. Full implementation is expected to require a staff of 59.5 FTEs and a budget of \$2.85 million. Program receipts is the single greatest funding source (57 percent), followed by state general funds (24 percent), and federal grant funds (19 percent).

4.d.4 Florida

The State of Florida also recently received EPA approval of its phased partial NPDES permit program. The program was approved in 1995 with phasing to a full program to be completed by the year 2000. The current partial program does not include storm water permitting or the municipal sludge program, though both areas are to be phased into the state program.

The partial program is responsible for permitting functions associated with approximately 700 individual permits and one general permit. The program is staffed at 58 FTEs with a budget of \$3.2 million. The program is supported entirely through annual fees paid by dischargers that range from \$100 to \$11,500 per year.

4.d.5 Louisiana

The State of Louisiana NPDES permit program was approved in late 1996. The state program includes full implementation of all aspects of the program, although the municipal sludge program is managed in another division (solid waste).

The program covers 495 individual permits. The current staffing level is 98 FTEs and the program budget is approximately \$7.0 million. The program is funded through a mix of program receipts (94 percent) and federal grant funds (6 percent).

4.d.6 Trends

There is a clear trend towards funding state NPDES programs with program receipts based on application or discharge fees.

The clear trend in other states is towards funding state NPDES programs with program receipts based on either one-time application fees, or continuing discharge fees. In the few states canvassed, program receipts accounted for 57 to 100 percent of the costs to run the program. Application fees are collected whenever a permit is issued, modified or renewed. Discharge fees, on the other hand, are usually imposed on an annual basis. In both cases, fees are structured such that larger, more complex facilities with larger, more toxic wastewater streams pay higher fees than smaller, simpler facilities.

Another trend in State NPDES programs is towards use of general permits. As a general rule, states have succeeded in expanding NPDES coverage to more facilities using general permits.

4.e Impacts of a State NPDES Program

The Mining Sector Strategic Plan suggests that a state NPDES program assumption would have two important effects:

. . . First, it would make the process most accessible for all involved whether it be the applicant, the state, or the general public. Currently the public is likely the most affected by out-of-state permit control. Second, state primacy would lead to a more efficient process. With all the permit writers located under one bureaucratic group (in many cases under the same roof), the permit process timeline would be materially streamlined without suffering any loss of control, process oversight or loss of public access.

We agree. DEC staff working and living within Alaska are in a better position to access and understand state and local processes, issues and contacts; to know what historical data may be available; to incorporate local conditions into the permitting process and permits; and generally to control permit timelines.

In addition to improved access to the permitting process and an overall gain in efficiency and timeliness, the following could also be expected to result from an adequately supported state NPDES program:

- With better understanding of local water quality issues and state water quality standards there should be some improvement in permit quality in terms of better protecting receiving water quality where warranted, while avoiding overly stringent limits. It is important to understand, however, that permits developed by the State in accordance with strict NPDES protocols will in most respects be identical to permits developed by EPA.

- The State of Alaska would have more say in national developments that affect the NPDES program and ultimately NPDES permitting in Alaska.
- In the same vein, NPDES program authority would position the State to have far greater influence on program priorities in Alaska.
- Compliance monitoring should be better. Improved proximity of facilities and program staff should foster dialog within which questions could be posed and answered; and problems could be discussed and resolved.

5. Alternatives for Alaska

5.a General Range of Alternatives

The general range of alternatives available to the state is a spectrum running from the status quo to full NPDES program assumption.

The range of alternatives for assuming a greater role in the NPDES program available to the State of Alaska is a spectrum beginning with informal work sharing (the status quo), progressing through various options for formal work sharing agreements whereby DEC might assume a range of program functions, progressing further through phased program assumption, and ending with full program assumption. As discussed previously, state assumption of partial program responsibility for certain classes of discharges for an indefinite period is not an option under current federal regulations. The only partial program option available to Alaska is to assume portions of the program in some sequence that arrives at a full state program within five years.

5.a.1 Formal Work Sharing Agreements

The first option available to the state representing an increased role would be to negotiate some form of formal work sharing agreement with EPA. There is significant flexibility in how work might be divided between EPA and DEC under a work share agreement. This flexibility provides for a broad range of possible program configurations.

Work sharing agreements can be used to divide work between EPA and DEC in essentially any combination of functions and program areas.

Work share agreements could be developed to divide work between EPA and DEC within essentially any combination of functional and program areas. Theoretically, a work share agreement could be represented as any division of duties specified in the following matrix:

Table 5-1
General Work Share Matrix

Program Area	Base Program	Sewage Sludge	Prétreatment	Storm Water
Function Area New Permit Development	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Permit Modification/ Renewal	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Compliance Monitoring/ Enforcement	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Data Management/ Record Keeping	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Program Development	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Program Administration	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties

Work share agreements can also be applied on a sector basis.

Obviously some of the possible combinations would make more sense than others, but the framework is useful in considering the full array of options. In addition, work sharing can be further refined to divide work on a sector basis. Under the base, point source permitting program, for example, work may be divided one way for mining permit development, and another way (or not at all) for seafood processing permits.

While work sharing agreements can divide work, they cannot assign NPDES authority which rests with EPA.

It needs to be noted that while effort can be divided under a work share agreement, authority cannot. State full or partial program approval involves some transfer of authority from the federal government to the state. No such transfer occurs under a work share agreement. EPA retains full program authority with complete discretion to accept or reject state program decisions and work products.

As discussed previously, the other notable difference between work share agreements and partial program approval is that while work share agreements may lead to full program approval, they don't have to. An agreement to divide and share NPDES work between EPA and a state can remain static at a particular level for an indefinite period.

5.a.2 Phased Program Approval

While sequence and timing are subject to negotiation, phased program approval locks the state into a maximum five-year transition process.

The next higher level of state program participation is phased program approval. Specific alternatives under this general option are far more narrow than the broad options for work share agreements. The only flexibility is the sequence and timing (within a maximum five-year transition period) of transferring program elements from EPA to DEC. Rules also prescribe that transfer of components occur in discrete increments each of which must represent a "significant and identifiable" part of the program.

In contrast to work sharing agreements, phased program approval involves incremental transfer of authority.

In contrast to work sharing agreements, phased program approval does involve transfer of NPDES authority from the EPA to the state with each program element. In other words, once a state program element is approved, EPA is constrained by federal law in its role — though that role remains one of strong oversight.

5.a.3 Full Program Approval

The gap between current state capability and that required for full authority is so wide that some transition process—be it work sharing or phased program approval—would be required.

There is a final option of the state developing and seeking approval of a complete state NPDES program without a partial program phase-in period. The program is now sufficiently complex, and the gap between the current state NPDES capabilities and what would be required for full program approval sufficiently wide, that some form of transition period would be required. It may be possible, on the other hand, for the state to ramp-up under a work share agreement to a level from which it could seek full program approval without ever seeking partial program approval.

5.b Specific Alternatives for Further Consideration

Alaska faces a choice among three options: static work sharing, ramp up to full program capacity under work sharing agreements, and ramp up to full program capacity under the phased approval process.

Of the general alternatives, Alaska faces a choice among basically three options: work share agreements at the existing or some other level of state participation in the NPDES process, work share agreements that ramp the state role up to ultimate full state program approval, and ramp up to full state program approval under the partial program approval process. Each of the last two options requires a decision by the state — at the outset — to develop and seek approval of a complete state NPDES program.

In order to provide the level of detail required to examine specific costs and benefits, three alternative program designs are proposed. These alternatives are subject to revision or refinement in the latter stages of this project. The specific alternatives advanced for further consideration are these: informal work sharing per the current arrangement; a formal work sharing arrangement designed to address expressed concerns with the existing program; and full program approval (either via a work share or partial program approval process). Each option is described more fully in the following paragraphs.

5.b.1 Option No. 1: Informal Work Sharing (status quo)

The first option proposed for further consideration is continuing the current informal work sharing arrangement.

The first option to consider is continuing the current informal work sharing arrangement. The primary purpose of this option is to serve as a base case against which the benefits and detriments of the other options can be evaluated.

A variation on this option would be to maintain the status quo, but to codify the current division of work under the performance partnership agreement or in a formal work share agreement. Formalizing the arrangement might have the effect of

helping to standardize roles and practices, but would not otherwise involve a significant change in how the two agencies operate.

5.b.2 Option No. : Formal Work Share Agreement

As previously suggested, work sharing agreements can be used to structure the collateral roles of EPA and DEC to gain efficiency as well as to take advantage of each agency's strengths.

While the range of work share options is broad, a relatively specific option is needed for estimating costs and to help focus discussions. The proposed formal work sharing program design, described in the following paragraphs, was developed to address the concerns expressed in the Mining Sector Strategic plan.

As envisioned, the initial work share agreement would apply only to the base, point source permitting component of the NPDES program (although there are certainly opportunities for work sharing in the pretreatment, sludge and storm water components that should be considered later). Referring back to the matrix presented earlier, the proposed work share agreement deals only with the highlighted area:

Table 5-2
Proposed Work Share Program Areas

Program Area / Function Area	Base Program	Sewage Sludge	Pretreatment	Storm Water
New Permit Development	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Permit Modification/ Renewal	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Compliance Monitoring/ Enforcement	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Data Management/ Record Keeping	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Program Development	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties
Program Administration	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties	EPA Duties DEC Duties

The proposed work sharing agreement would make DEC the primary point of contact for NPDES permit applicants and interested public.

To address the expressed NPDES process concerns in the areas of accessibility, timeliness, accountability and coordination, the proposed work share agreement would make DEC the primary point of contact for permit applicants and interested public. The assumption here is that by virtue of their location in several areas within the state, DEC staff will be more accessible and accountable to permit applicants and the public. As a state agency with a designated role in the state permitting and coastal zone management processes, DEC is in a better position to help coordinate permitting between federal, state and local agencies. Whether DEC can improve the timeliness of NPDES permit actions will be a function of staffing levels. With adequate staffing, DEC presumably would be in a position to process permit actions more quickly than EPA Region 10 permitting staff who also have competing NPDES responsibilities in the non-NPDES-delegated State of Idaho, as well as the NPDES-delegated States of Washington and Oregon.

The proposed agreement would also have DEC develop NPDES effluent limits and associated monitoring requirements.

To address concerns regarding predictability, as well as to take advantage of DEC's local knowledge and presence, the proposal also has DEC deriving the effluent limits and associated monitoring requirements for new permits, as well as permit modifications and renewals. In essence, DEC would develop — for adoption by EPA — the heart of the permits. The presumed gains from this change would also include improvements in efficiency and quality. The coordinated process currently in effect, with DEC developing the basis for water quality-based effluent limits and EPA developing the actual water quality- and technology-based limits, is inherently inefficient (though unavoidable given the division of responsibility). Placing all effluent limit derivation at the hands of one agency with capacity to translate the state's water quality standards and water body assessment results directly into water quality-based permit limits should simplify, standardize and speed permit development.

Compared to water quality-based effluent limits, derivation of technology-based limits is relatively straightforward, as is integration of water quality- and technology-based limits into a single set of effluent limits. In effect, this change would put the agency most knowledgeable and responsible for local water quality in a position of developing permit limits for discharges to those waters.

As a final note on permit development, deriving water quality-based permit limits often involves computer modeling to understand the behavior of an effluent stream in the receiving water for purposes of determining end-of-pipe effluent limits. DEC is sometimes called upon to conduct this mixing zone modeling. The work share proposal calls for placing the burden of all receiving water modeling on the applicants. Lacking in-house expertise, applicants can enlist the assistance of contractors to run approved mixing models. (Such assistance is readily available at reasonable cost in Alaska's private consulting sector.) There may be other opportunities for third party involvement, as well.

The proposed work share agreement would not modify the current arrangement for other NPDES function except to the extent required for DEC to handle its new permit development and point-of-contact work.

The forgoing discussion deals with work sharing of permit development, modification and renewal functions. With respect to compliance monitoring efforts, the work share proposal includes continuing the current division between DEC and EPA amounting to an annually negotiated schedule for DEC, EPA and joint compliance inspections and coordinated (though not necessarily joint) enforcement actions. The concerns and recommendations of the Mining Sector Strategic Plan deal primarily with permit development, modification and renewal. Some of the arguments for a greater role for DEC in permit development also apply to compliance monitoring and there are incentives for a greater DEC presence in compliance monitoring. Such changes should be considered in future years.

The work share proposal does not include modifying the current data management and record keeping structure. EPA would continue to enter data into the Permit Compliance System (PCS) database and to maintain permit files. DEC would continue to maintain its separate data management and record keeping system. The dual data management and record keeping functions are an unfortunate, but seemingly unavoidable, area of duplication and inefficiency. Short of a fully authorized state NPDES program, the overlap cannot be eliminated or even significantly reduced. And, even with an authorized state NPDES program, EPA would retain a limited data management and record keeping role.

While the proposal does not suggest independent changes to program development and administrative functions, significant changes will be required to implement the work share arrangement. For the most part, the changes represent increasing DEC capacity to carry out new responsibilities transferred from EPA. Staff will need to be trained in technical NPDES program protocols for effluent limit and monitoring requirement development, as well as general NPDES program areas such as application requirements and processing. There will need to be provision for additional planning including developing and maintaining the work share agreement. Identifying DEC as the primary point of contact for permit applicants means that staff of DEC field offices will have to have sufficient understanding of the program to

assist applicants and the public with questions and to provide forms and explanatory materials.

Given that the primary changes are proposed in the permit development, modification and renewal functions, with resulting changes needed to program development and administration functions, the specific break-out of work between DEC and EPA would look like this:

Table 5-3
Proposed Work Share Agreement

Functional Area	DEC Functions	EPA Functions
<p>Permit Development/ Modification/ Renewal</p>	<p>Provide applicants with pre-application assistance.</p> <p>Provide NPDES permit applications (establish NPDES permit centers at existing DEC locations).</p> <p>Assist applicants with applications.</p> <p>Receive completed applications and forward to EPA.</p> <p>Assist applicant in providing additional information if required.</p> <p>Draft permit schedule in accordance with EPA, other federal agency and state agency time frames.</p> <p>Serve as liaison and primary point of contact with applicant and public.</p> <p>Derive effluent limits and monitoring requirements and corresponding fact sheet sections.</p> <p>Hold public workshops and/or hearings as required.</p> <p>Receive public comment.</p> <p>Revise water quality-based effluent limits and monitoring requirements as required.</p> <p>Draft summary of public comment and agency response.</p> <p>Draft responsiveness summary.</p> <p>Issue 401 certificate.</p>	<p>Coordinate pre-application requirements with DEC.</p> <p>Review application and coordinate requests for information as required.</p> <p>Issue formal application completeness determination.</p> <p>Approve permit schedule.</p> <p>Review, approve, modify effluent limits and monitoring requirements as required, complete draft permit and fact sheet, issue public notice.</p> <p>Revise other portions of permit as required.</p> <p>Issue final permit.</p>
<p>Program Development/ Administration</p>	<p>Develop work share agreement with EPA.</p> <p>Provide staffing to handle new responsibilities.</p>	<p>Develop work share agreement with DEC.</p> <p>Provide training for DEC staff.</p>

In addition to the division of responsibility indicated above, a few tenets would also apply. There would need to be a transition/training period during which EPA would train DEC staff, and DEC and EPA would share responsibilities likely largely through co-development of new permits, modifications and renewals. There would be an element of coordination between the agencies — particularly early on in the transition process, but continuing thereafter — at essentially every step of the permitting process. EPA would be free to intervene in the process at its discretion. EPA would also retain final approval over all DEC decisions, actions, and work products. Finally, the work share agreement set out lacks detail which would simply have to be worked out between the agencies as part of developing the actual work share agreement.

5.b.3 Option No. 3: Full Program Approval

As discussed, full program approval may be achieved either through ramping up to near full program capability under work share agreements, or through the partial program approval process. The work share transition process involves increasing state involvement and capability, but no authority is transferred until full program approval. The partial program process involves transferring both authority and responsibility in increments until the full program is reached.

While potential variations in the composition, sequence and timing of program elements to be transferred from EPA to DEC are numerous, the end result is the same: a state NPDES program that has the state performing essentially all functions within the point source, storm water, pretreatment, and municipal sludge program elements under EPA's oversight. Consequently, further analysis of this option focuses on the costs and benefits of a complete state NPDES program, without dwelling on the mechanics of the transition.

6. Costs and Funding

This chapter discusses the costs and potential funding sources for each of the options identified in the previous chapter and advanced for further consideration. The discussion first examines the costs of full state NPDES authority, followed by the costs to implement the proposed work share agreement. The chapter concludes with a discussion of potential mechanisms to fund additional costs.

6.a Costs of a State NPDES Program

Three approaches were used to gain perspective on state NPDES program costs. One was to look at the resources other states devote to their NPDES programs, and to adjust those figures to Alaska's case on the basis of number of major permits. Another was to look at the resources currently used by EPA and DEC in implementing the NPDES program in Alaska. Finally, a workload model was used. Workload models predict resource needs on the basis of unit resource allocations for certain functions — such as the average time required to develop a major permit.

Beginning with the resources devoted by other states to their state NPDES programs. . . The following table summarizes the NPDES program resources of the five other states surveyed as part of this study:

Table 6-1
Other State Program Resources

State	Individual Majors	Individual Minors	General Permits ^a	Total Permits	Staff (FTEs)
Washington	83	404	8	495	102
Oregon	76	350	5	431	44
Oklahoma	117	468	0	585	60
Louisiana	248	2237	N/A	2,485	98
Florida	200	500	1	701	58

Using the number of major permits as a basis for comparing NPDES resources between states, we find that unit resources span quite a range with Washington devoting 1.2 FTEs per major permit, to Florida's 0.3 FTEs per major permit:

Table 6-2
Other State Unit Resources

State	FTEs per Major Permit
Washington	1.2
Oregon	0.6
Oklahoma	0.5
Louisiana	0.4
Florida	0.3

The range of unit resource requirements narrows significantly if Washington's data are excluded, with a resulting span of 0.3 to 0.6 FTEs per major permit. On this basis, an Alaskan NPDES program would require somewhere between 14 and 29 FTEs.

Turning to resources currently devoted to the NPDES program in Alaska. . . EPA Region 10 has approximately 13 FTEs working in the Alaska NPDES program:

Table 6-3
EPA Alaska NPDES Resources

Program Area	FTEs
Point Source Permitting - Seattle	5
Point Source Permitting - Alaska Ops Office	4
Sludge	0.25
Pretreatment	0.15
Storm Water	0.75
Support (technical, legal, managerial, clerical)	3 (estimated)
Total	13.15

With the 10 FTEs in DEC currently working on NPDES activities within DEC, the combined EPA and DEC NPDES staffing level totals a little more than 23 FTEs — within the range of 14 to 29 FTEs expected on the basis of comparison to other states.

Finally, the simple workload model. . . Each unit resource estimate, such as FTEs per major industrial permit, was derived from one of three sources: a 1995 model developed by EPA to examine the distribution of NPDES resources between the agency's regions, from estimates by EPA Region 10 NPDES staff of the resources required to implement parts of the program, or from direct estimates of time required to complete tasks. Numbers of permit actions were estimated based on the number of permits remaining stable at current levels, and assuming that 20 percent of the total number of permits would be issued or reissued each year, and that 20 percent of the total number of facilities would be subject to a compliance inspection each year. Interestingly, the workload model produced a figure of 23 FTEs — the same as the current combined EPA and DEC staffing level.

One last way to put the current estimate into perspective is to compare the estimate with previous ones. In 1987, DEC estimated a continuing level of NPDES program staffing and funding of 27.8 FTEs (including 8.8 existing FTEs) and \$1.9 million per year. As part of 1992 research into the possibility of a separate EPA regional office

for Alaska (a new Region 11), EPA Region 10 estimated that a separate EPA NPDES program for Alaska would require 22 persons.

Based on the results of the three approaches used, it appears that 23 FTEs would be a reasonable estimate of a minimum staffing level for a state-run NPDES program. This represents a 13 FTE increase over the current DEC staffing level. Allowing for travel and other indirect costs, 13 FTEs translates into an increase of about \$1.3 million over current funding levels.

6.b Costs of Work Share Alternative

The same workload model used to predict the personnel resource requirements for a full state NPDES program was used to estimate the resource requirements for the proposed work share agreement. The model was run differently in that it was used to estimate the incremental increase in DEC personnel resources needed to handle the additional work, as opposed to running the model to predict total resource requirements.

The model suggests that an additional 0.5 FTE would be required to deal with additional public information requests, and that an additional 3.5 FTEs would be needed for permit development, modification and renewal activities (assuming that DEC is currently devoting approximately 2 FTEs to these functions). Including travel and other indirect costs, an increase of 4 FTEs would correspond to a budget increase of approximately \$400,000.

6.c Funding Options

Before turning to options for covering the increased costs associated with either a state NPDES program or the work sharing proposal, we should clarify that neither work sharing nor program approval would result in state eligibility for increased federal grant funds. The state can expect, however, that as DEC assumes more of the program work, EPA staff would be more available to provide in-kind assistance, such as training, legal and technical support.

Given that no additional federal funding would be forthcoming, additional costs would have to be met with either state general funds or program receipts. Increasing general funds would have the effect of spreading costs across the Alaska populace. Program receipts would target costs on permitted facilities through a fee structure. We have mentioned that other states employ two basic types of fee structures: one-time application fees that are assessed as part of applying for a new permit, modification or renewal; or discharge fees that are assessed annually. Either application or discharge fees can be set to generate the requisite funds. The primary difference is the frequency with which they are assessed, with application fees being larger and assessed less frequently and discharge fees being smaller and assessed annually.

As for the fee structure, options include:

- Flat fees that assess all permittees the same amount (or at least certain types or groups of facilities the same amount). Flat fee structures are the simplest, but least equitable in distributing costs on the basis of agency resource demand.
- Graduated fees which involve setting fees based on facility and discharge characteristics such as flow, toxicity, number of outfalls, and whether the facility

is considered major or minor. Graduated fees are more complex than flat fees, but are better at distributing costs with the larger, more complex facilities that demand more agency resources paying more than smaller, simpler facilities that demand a smaller commitment of agency resources.

- Actual fees that involve the permitting agency tracking time and expenditures and assessing fees usually at an hourly rate for staff time plus actual expenses. These structures are the most complex and least predictable for the permittee, but are fairest in terms of distributing costs on the basis of actual demand on agency resources.

Which fee structure would work the best for Alaska, and its actual design, are matters for further discussion between DEC, the regulated community and the public. We suggest that graduated application fees strike a reasonable compromise between simplicity and equity.

The actual fees that would be borne by the regulated community, of course, would depend on the amount of the additional funding generated through program receipts (with the balance coming from general funds), and the final fee structure. While it isn't possible to pinpoint fees for these reasons, we can add some perspective. Assuming that the entire funding increase was derived from permit fees, that would mean raising \$1.3 million annually from the 947 NPDES permitted facilities in Alaska, for an average of approximately \$1,400 from each facility. The work share proposal at an increase of \$400,000 over existing budget would amount to an average of a little more than \$400 per facility.