OVERVIEW: DEPT. OF ENVIRON. CONSERVA-TION

Department of Environmental Conservation
Division of Air & Water Quality
Watershed Management

"WHO WE ARE & WHAT WE DO"

1996 REPORT

Prepared by the State of Alaska
Department of Environmental Conservation
Division of Air & Water Quality
January 1997

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Department of Environmental Conservation
Mission Statement

The mission of the Department of Environmental Conservation is to strengthen families and job opportunities through a cooperative stewardship with the citizens of Alaska that ensures protection of public health and the environment.

Division of Air & Water Quality
Mission Statement

To prevent, monitor, and control emissions into the air and water to protect the public health and the environment.

Alaska Watershed Approach

- The Alaska Watershed Approach is a process that encourages decision-making at the local level to more cost-effectively protect Alaska's water resources. The overall goal of the Watershed Approach is to improve resource management by offering a voluntary forum involving all interested stakeholders to address issues that affect water quality and quantity in a given local area or watershed.

- Benefits of this process include promoting watershed health, improving communications and public participation, promoting efficiency and cost-savings for agency decisions, setting priorities, generating "good data" to make good watershed decisions, and coordinated permitting.

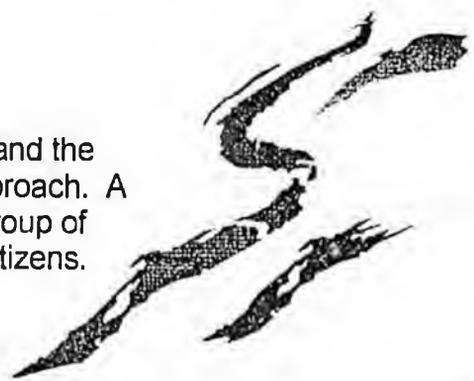
Why should we be interested in the Watershed Approach?

- Water resources are vitally important to Alaska. Many major industries in Alaska--fishing, seafood processing, tourism, mining, forestry, oil and gas--rely on the use of water resources to be successful, whether it is for uses such as fish habitat, recreation, scenery, drinking water, transporting logs, or discharging wastes. Competing uses of water resources are increasing in Alaska. Now, more than ever, there needs to be "grass-roots" efforts from the agencies, industry, Native groups, the environmental community, industry, and other interested public to address water resource issues through a coordinated effort.

- In Alaska, more than 50 waterbodies statewide are currently threatened from pollution caused by industrial activities, urban run-off, leaking landfills, and other sources. Without cooperative efforts the number of polluted waterbodies will likely continue to grow, causing risk to drinking water sources, fish habitat, and other uses of water. Our quality of life in Alaska is closely linked with the quality of our water.

Status of the Alaska Watershed Approach

- Beginning in Summer 1995, the Alaska Department of Environmental Conservation (ADEC) and the U.S. Environmental Protection Agency sponsored development of the Alaska Watershed Approach. A summary of this effort has recently been developed in partnership with a statewide working group of federal, state and local agencies; Native representatives; private organizations; and Alaska citizens.



Watershed Team Management

What is team management?

Team management focuses efforts of individuals working on a project towards accomplishing project goals and objectives. A team leader assigns activities to team members who perform special roles needed to successfully complete a project. The team is empowered to make decisions and bears responsibility for its decisions.

Why di' we adopt team management?

Are work teams in Government a good idea? Sure they are. They have proven successful for private corporations both in Japan and in the United States. Productivity and quality increased while profits soared. DEC began teaming in 1995. Since then, we have rolled other State agencies into our teams, our productivity has increased, and several major industrial projects have overcome environmental and permitting roadblocks.

Change is difficult. However, by moving to teams we are able to better address the changing needs of our "customers" by being more responsive, improving processes and creating a learning environment that is exciting for our employees. A team promotes cooperation as opposed to competition; where there is cooperation, there are winners.

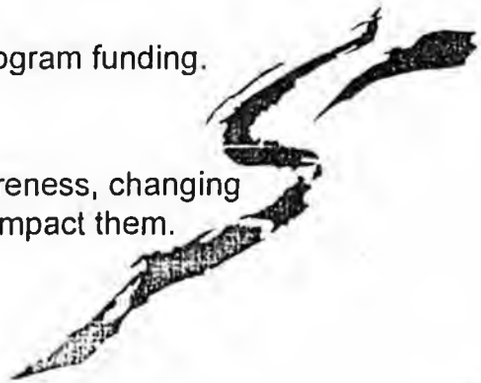
Communication among employees and other agencies is enhanced by removing barriers to communication and the decision-making process; responsibility and accountability rests with the team.

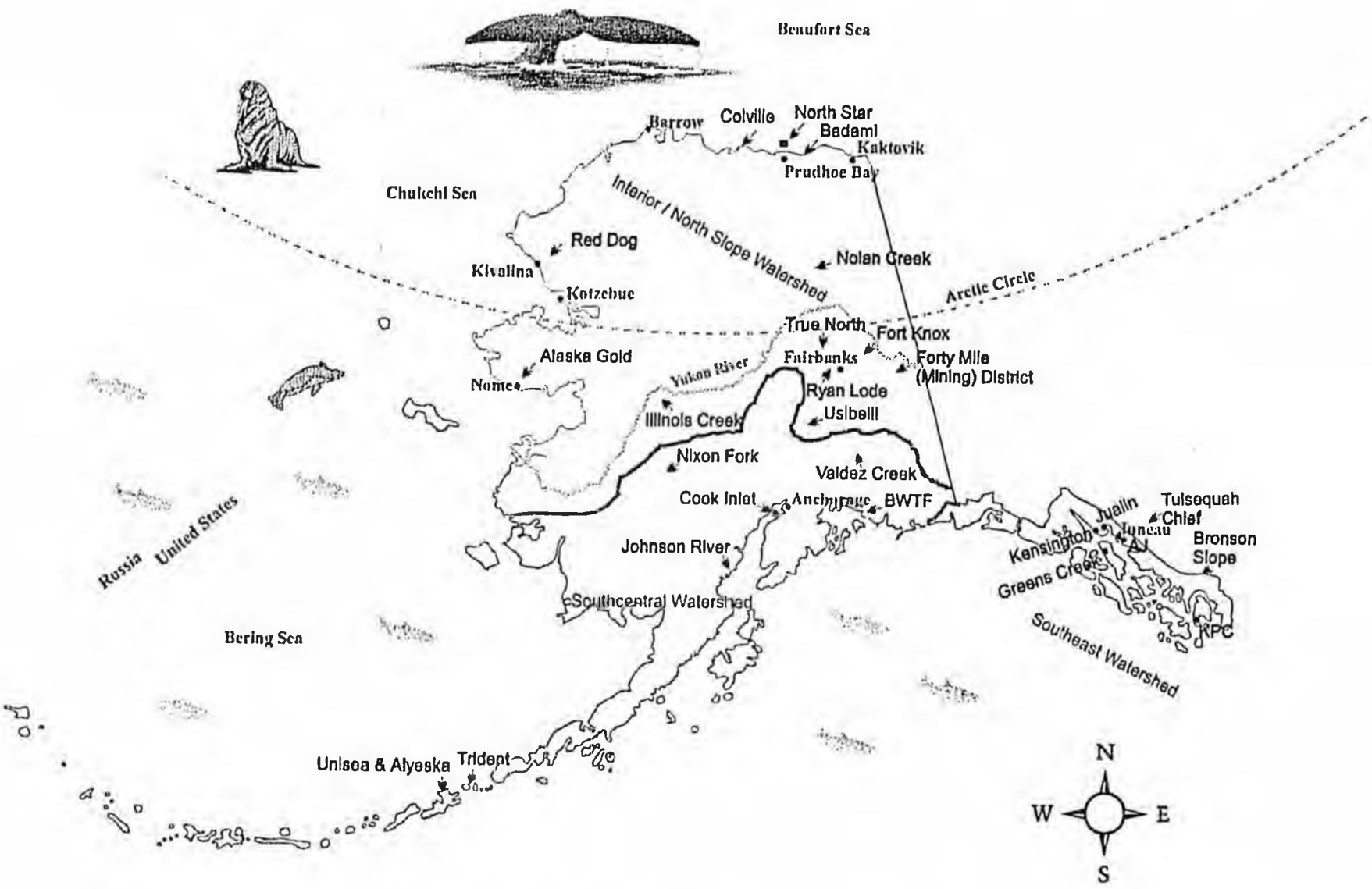
DEC serves a variety of "customers." These include major industrial corporations, privately owned companies, environmental groups, and Alaska citizens.

As a Government agency, we additionally have as "customers" the agencies who provide our program funding. These customers include federal grants, the Alaska Legislature, and the administration.

The needs of our customers are in a constant state of change based upon increased public awareness, changing laws and social parameters. Our customers are demanding more involvement in decisions that impact them.

Team management involves everyone.




Beaufort Sea
Barrow
Colville
North Star
Badami
Kaktovik
Prudhoe Bay
Chukchi Sea
Interior / North Slope Watershed
Red Dog
Nolan Creek
Kivalina
Kotzebue
Arctic Circle
True North
Fort Knox
Alaska Gold
Fairbanks
Forty Mile
(Mining) District
Nome
Yukon River
Ryan Lode
Illinois Creek
Usibelli
Nixon Fork
Valdez Creek
Cook Inlet
Anchorage
BWTF
Jualin
Tulsequah
Chief
Juneau
Kensington
Bronson
Slope
Greens Creek
Johnson River
Southcentral Watershed
Russia
United States
Bering Sea
Southeast Watershed
RPC
Unisea & Alyeska
Trident
N
W
E
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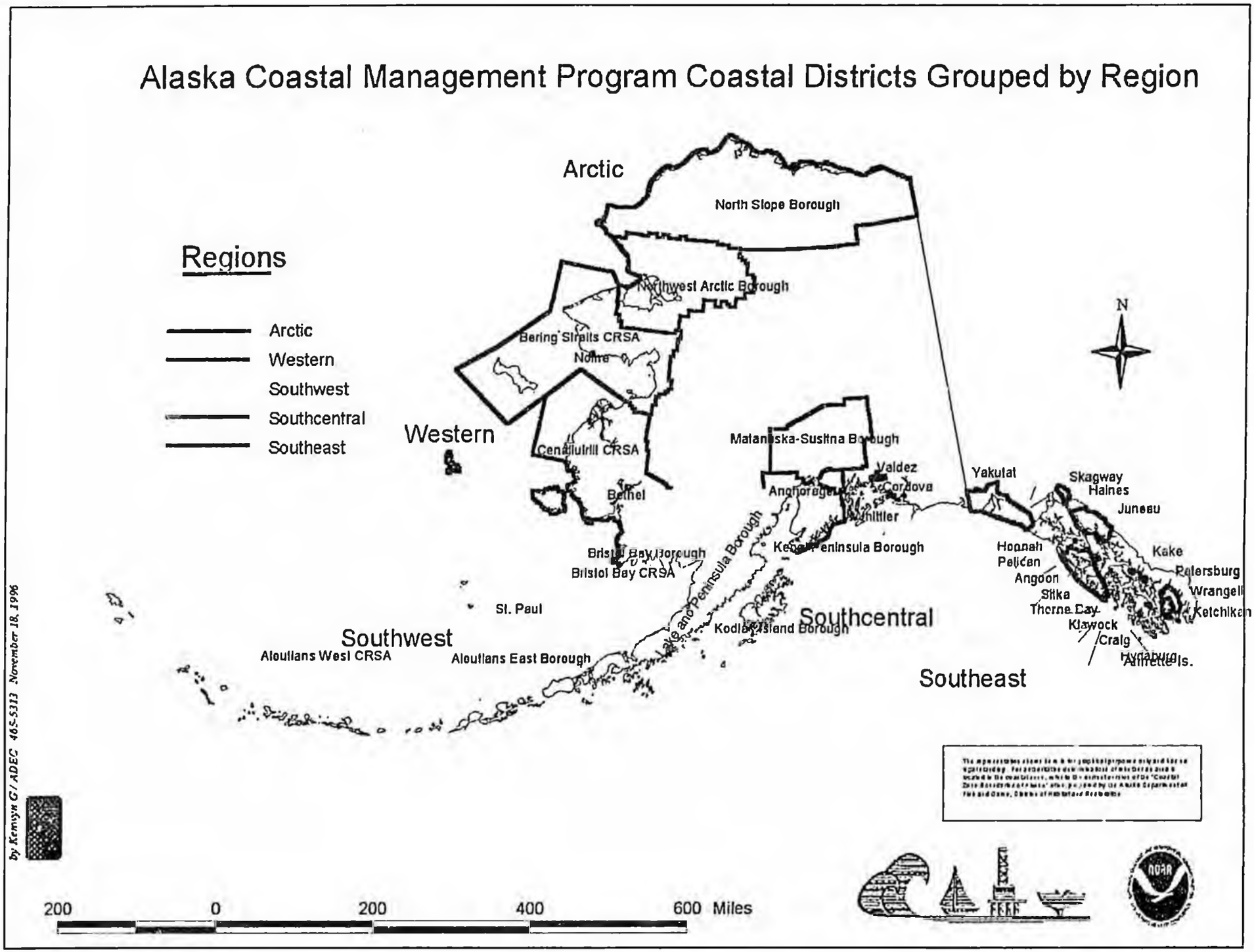
Alaska

The following photographs and project descriptions represent a few of the types of activities and facilities permitted, regulated, and inspected by the team members of the Division of Air and Water Quality, Watershed Management Section. There are many other industrial facilities and watershed activities for which no team members have been assigned due to limited resources.

Statewide Watershed Programs

Alaska Coastal Management Program Coastal Districts Grouped by Region



Alaska Coastal Management Program

Description of above photograph:

Map showing ACMP Coastal Districts.

Project Description:

Alaska's coastal areas provide safe harbors, homes, jobs, natural resources, a means of transportation, and sites for industry, commerce, and recreation. Many of these coastal resource uses are conflicting - pristine waters must be protected to assure strong fish and wildlife populations, but development is also needed to provide for our livelihoods. The mission of the Alaska Coastal Management Program is to build partnership and efficiency in striking a balance between conserving and developing coastal resources. The program assures that communities have a seat at the table with State and Federal regulators, to determine how their resources are utilized and protected, and provides a framework for coordinating speedy reviews of proposed projects.

Jobs and Families:

Many Alaskans live and work in the coastal areas. The major industries in Alaska - oil and gas development, forestry, fisheries, mining and tourism are all concentrated in coastal areas. Wise management of coastal resources is key to assuring sustainable industries, maintaining wild areas, and providing us and our children the opportunity to continue the quality of life that we now enjoy.

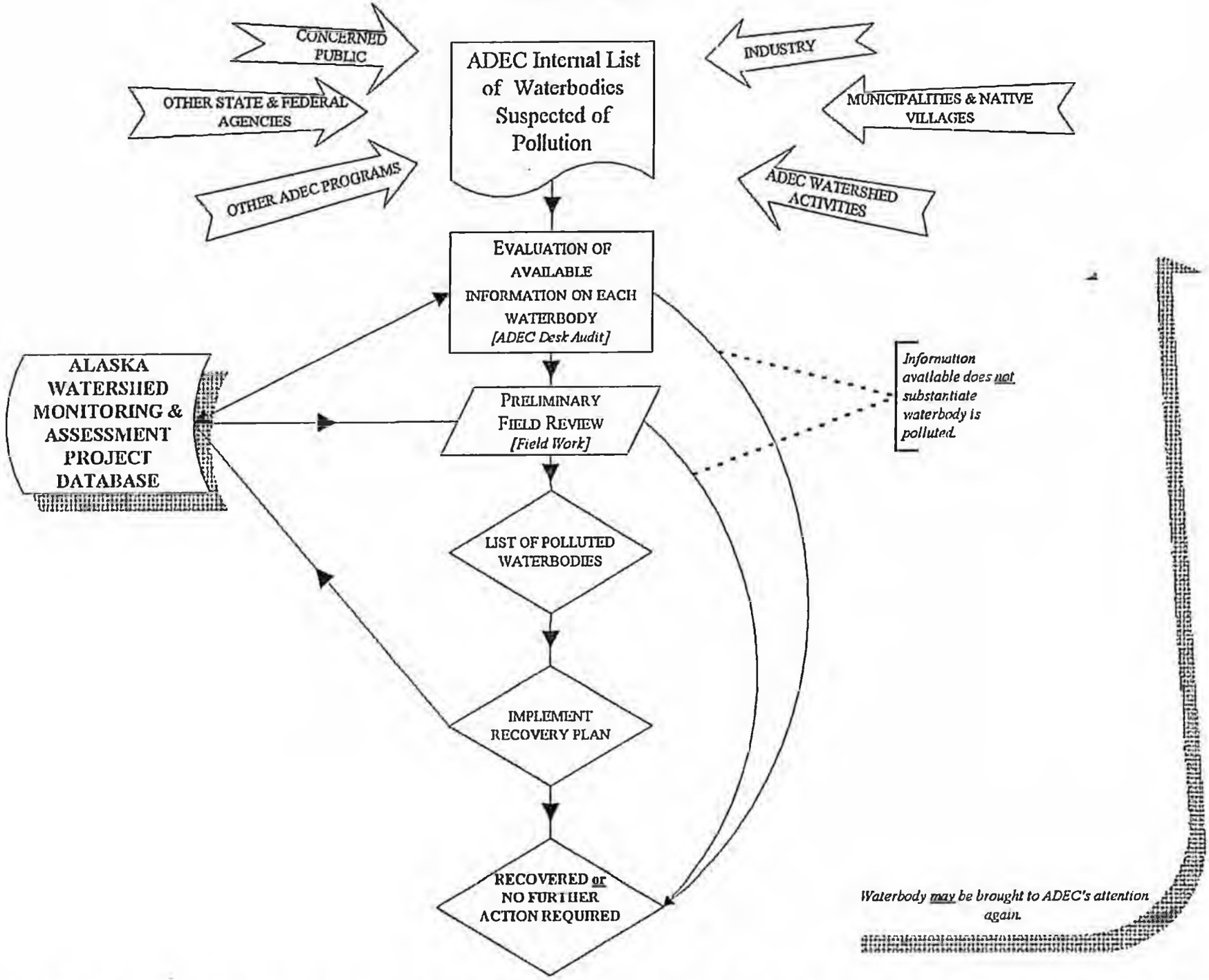
State Oversight and Regulatory Function:

The Alaska Coastal Management Program was established under the Federal Coastal Zone Management Act to allow the State and communities to develop coastal management programs to guide land use decisions and protect key resources. Significant projects or activities in the coastal areas must be determined to be "consistent" with State and local coastal management programs as a condition for being permitted. These "consistency determinations" often add conditions to permits so that a project does not conflict with other uses of the coastal area. The program is implemented through participation of all State resources agencies and coastal districts, with oversight by the Alaska Coastal Policy Council. The Division of Governmental Coordination (Office of the Governor) provides the lead in coordinating statewide project and permit reviews for all State agencies.

Accomplishments:

The Department reviewed and commented on approximately 400 projects to assure that they were consistent with State and community coastal management standards. Staff also provided technical assistance to coastal districts and reviewed proposed program updates to district plans for Unalaska and Hoonah. The ACMP underwent a thorough assessment this year to look for ways of streamlining the process, and to improve local district participation. The assessment resulted in 30 recommendations for improvements, which are in the process of being implemented.

HOW AWMAP SUPPORTS ALASKA'S WATERBODY ASSESSMENT PROCESS



Alaska Watershed Monitoring and Assessment Project

Description of above Photograph:

This graphic flow chart shows how the Alaska Watershed Monitoring and Assessment Project database supports the information needs of Alaska's waterbody assessment and recovery process.

Project Description:

The Alaska Watershed Monitoring and Assessment Project (AWMAP) is a statewide water quality monitoring database involving local, State and Federal agencies; industry; schools; University of Alaska; and other entities collecting water quality information. AWMAP identifies areas of the State where water quality monitoring occurs and the kind of information collected. The information management system is used by DEC for Alaska's waterbody assessment and recovery process, other State and Federal agencies and private Alaskan consulting firms.

Jobs and Families:

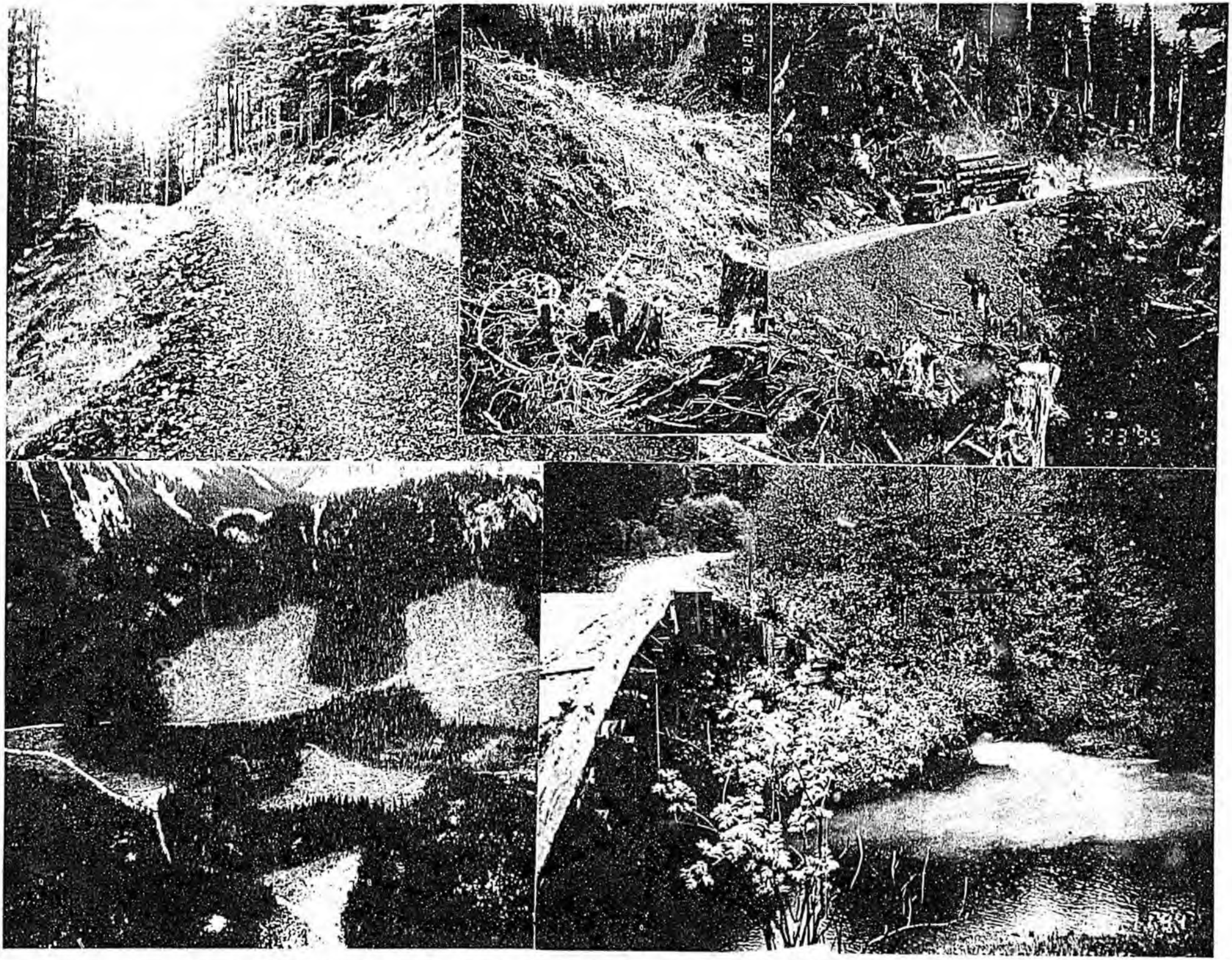
Effective monitoring of statewide water quality data puts existing information to work in solving water quality issues at the local level. The AWMAP database provides a convenient and readily available source of centralized water quality information on a variety of waterbodies throughout Alaska, which can expedite facility permitting. Collection activities include the use of modern communications and computer technologies which simultaneously support the development of an in-state high technology infrastructure.

State Oversight and Regulatory Function:

The AWMAP database serves permitters with a tool for readily available water quality information. It supports the preparation of a summary water quality report to EPA every two years under section 305(b) of the Clean Water Act. Additionally, it provides the State with a geographically-based strategic tool to identify high priority watersheds for resource targeting.

Accomplishments:

Developed the AWMAP water quality monitoring database where information is continually gathered from a variety of sources for entry to track who is collecting water quality monitoring information, where and what kind of information is collected; Prepared Final Draft AWMAP Report for EPA that identified gaps in water quality monitoring in Alaska; Prepared AWMAP Implementation Schedule for EPA to fully implement AWMAP Report findings; Contracted improvements to the AWMAP database to increase the utility of reports generated from database queries and make it easier to enter information.



Forest Practices

Description of above photographs:

Top Left:	Proper application of Best Management Practice (vegetation establishment) to stabilize erodible soil and control sediment runoff.
Top Middle:	Interagency forest practices inspection.
Top Right:	Log truck, Tongass National Forest.
Lower Left:	Logging units and riparian buffers on a salmon stream in Tongass National Forest.
Lower Right:	Sedimentation from a logging road into a salmon stream.

Project Description:

Forest Practices, including timber harvesting, road construction, and marine log transfer operations, can generate nonpoint source pollution. Major regulated pollutants resulting from these activities include sediment, turbidity, vegetative debris, and temperature. The DEC Forest Practices team represents the Department in the oversight of timber harvest operations and related activities on Federal, State, and private lands to ensure that nonpoint source pollution is minimized, and water quality and fish habitat are adequately protected through the proper application of Best Management Practices. (BMPs)

Jobs and Families:

The year-round economy of much of Alaska, especially the coastal forested regions, is largely dependent on the timber and commercial fishing industries. In Southeast Alaska alone, these industries support an estimated 7,000 direct and indirect jobs, contributing substantially to the region's economy. Both industries are inextricably linked, as the fishing industry is largely dependent upon the salmon that are produced in the abundant streams and lakes that exist throughout the coastal forests where timber harvesting occurs. Providing for responsible timber development while ensuring the protection of water quality and fish habitat is key to sustaining the jobs and families supported by the timber and fishing industries.

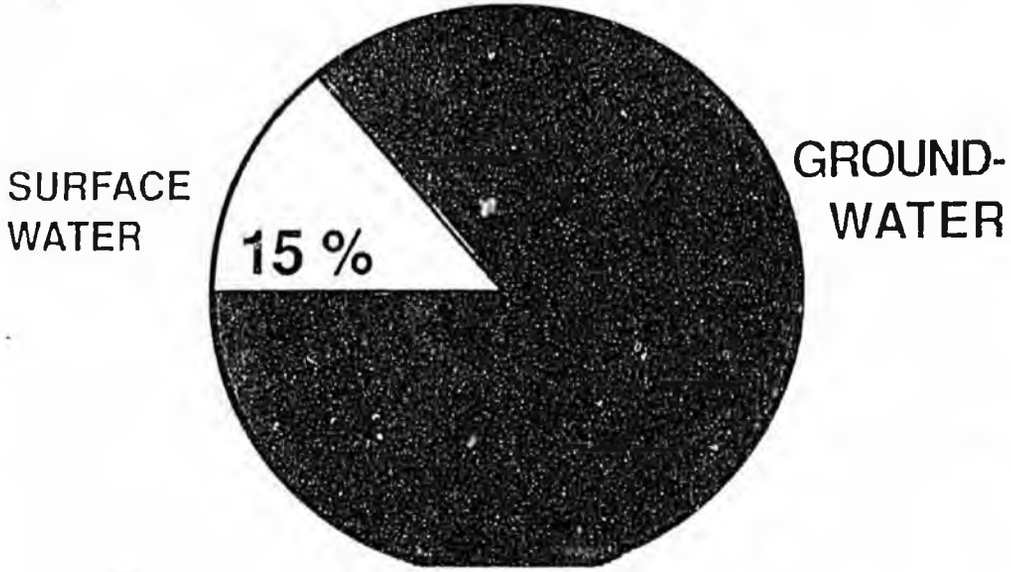
State Oversight and Regulatory Function:

The requirements of the Federal Clean Water Act, the Alaska Forest Resources and Practices Act and Regulations, and the Tongass Timber Reform Act form the basis for regulating timber harvest and road construction activities to ensure the maintenance of water quality. These statutory and regulatory requirements specify and require the proper application of BMPs to meet the State Water Quality Standards and to protect the designated uses of forested watersheds. BMPs are cost-effective techniques, applied during the planning and implementation of land-disturbing activities, that have been designed to minimize water quality degradation. To ensure the proper application of BMPs, Alaska maintains an interagency forest practices regulatory program that covers all land ownerships. Oversight of forest practices activities occurs through review of timber harvest plans and joint field inspections conducted by resource agency staff from the Alaska Departments of Natural Resources, Fish and Game, and Environmental Conservation. Key to the forest practices program is the cooperation from the forest products industry, State and Federal resource agencies, and other interest groups to help achieve forestry and water quality objectives.

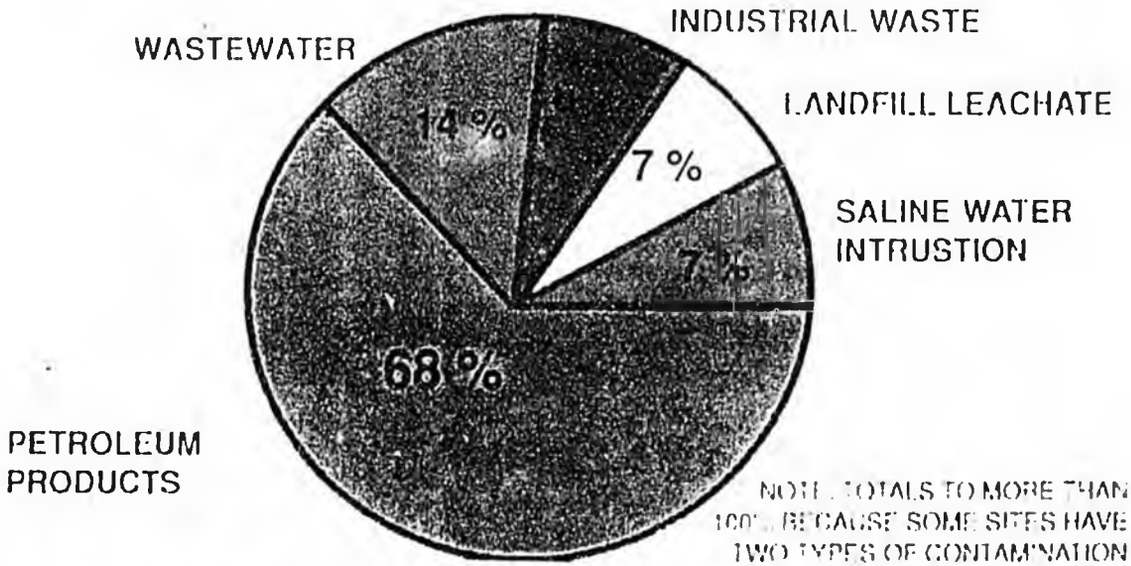
Accomplishments:

As a result of DEC's direct involvement with State and Federal resource agencies and the timber industry, logging operators and resource managers have become increasingly aware of the need to properly implement forestry BMPs for the protection of water quality. DEC has worked cooperatively with, and provided technical assistance to, both the U.S. Forest Service and the Department of Natural Resources in developing successful BMP implementation monitoring programs for Federal, State, and private lands. These programs are designed to assess the degree to which the BMPs are implemented and to identify areas where corrective measures are needed to prevent water quality degradation. In addition, DEC's review and participation in the planning process for major Federal timber sales has proven effective in modifying the projects to better ensure that water quality and fish habitat are protected during project implementation.

WATER SOURCE FOR PUBLIC WATER SYSTEMS



MAJOR TYPES OF GROUNDWATER CONTAMINATION IN ALASKA



NOTE: TOTALS TO MORE THAN 100% BECAUSE SOME SITES HAVE TWO TYPES OF CONTAMINATION

Ground Water Protection Program

Description of above photographs:

Top Left: Water source for public water systems -85% from ground water.

Bottom Right: Pie chart of major types of ground water contamination in Alaska.

Program Description:

The Alaska Department of Environmental Conservation's Ground Water Protection Program has a staff of one, and is fully funded by a grant from EPA through Section 106(b) of the Federal Clean Water Act. The objectives of the program are to create a Comprehensive State Ground Water Protection Plan; administer the ground water element of the State's Section 319 Clean Water Act (nonpoint source) grant; create an integrated - standardized State Ground Water Data Management Plan; assist DEC's Wellhead Protection Program; prepare the ground water portion of State's Section 305(b) of the Clean Water Act list of impaired and threatened water bodies; help implement the State's Pesticide Management Plan; and provide technical assistance and public outreach on ground water related issues.

Jobs and Families:

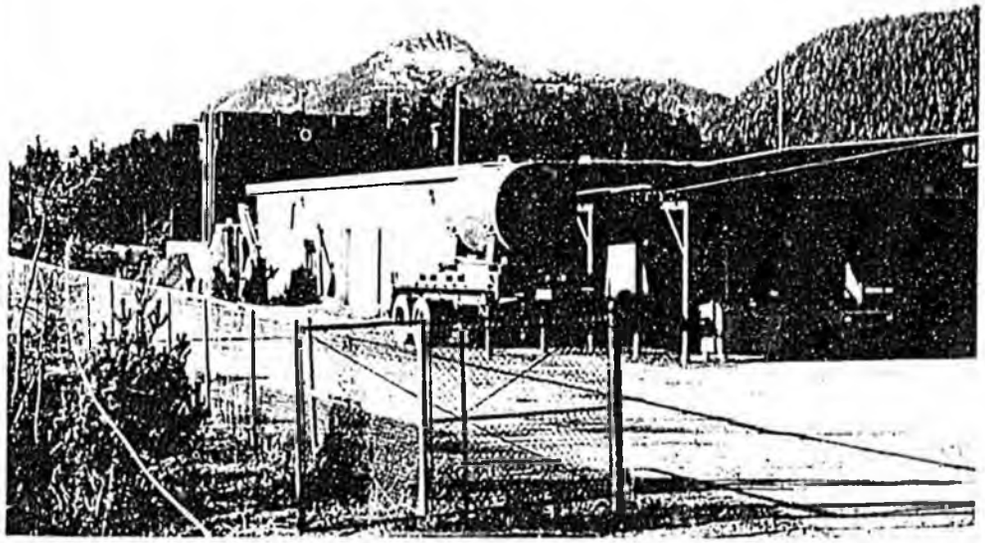
Of the 3,333 public drinking water systems in the State, 2,822 (85%) use ground water as a source (11/96). These figures do not account for all of the private or household drinking water systems, most of which use ground water. Alaskans have a reasonable expectation that their ground water is clean and safe to drink. While it is next to impossible to put a price on the value of Alaska's ground water resource, the costs of cleaning up contaminated ground water are high. A small amount of oil or other hazardous substance can contaminate many times its volume of ground water. Since ground water is not readily accessible, it is difficult and expensive to clean it up to the very low levels of contamination that are no longer considered to pose a health risk. It is much easier and cheaper to prevent ground water contamination than to clean up or replace a drinking water source that has become unusable as the result of contamination.

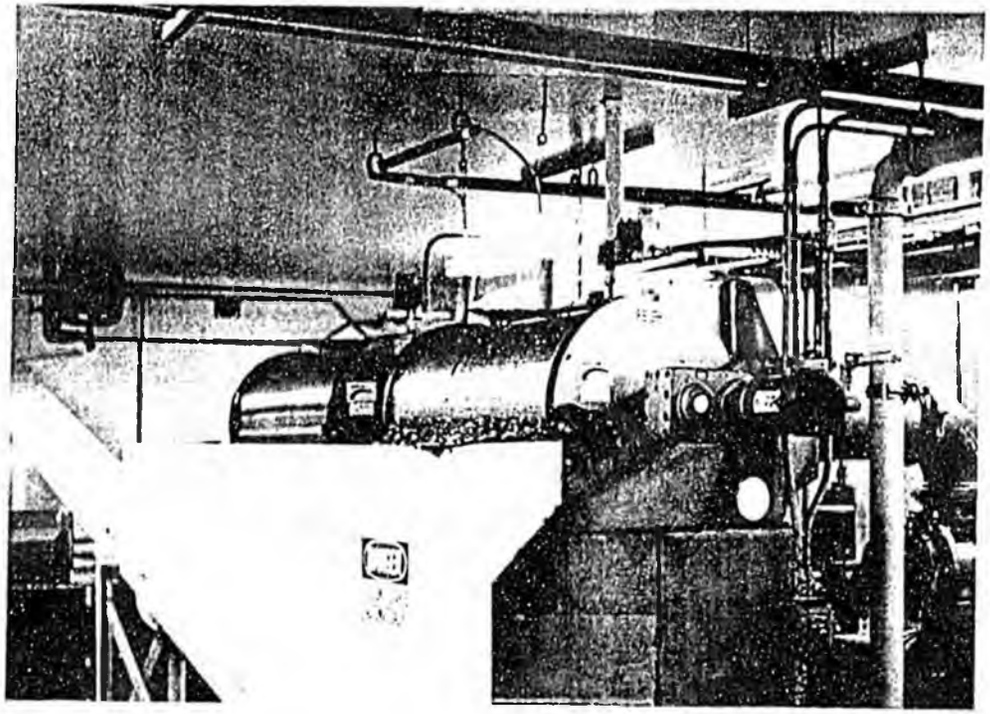
State Oversight and Regulatory Function:

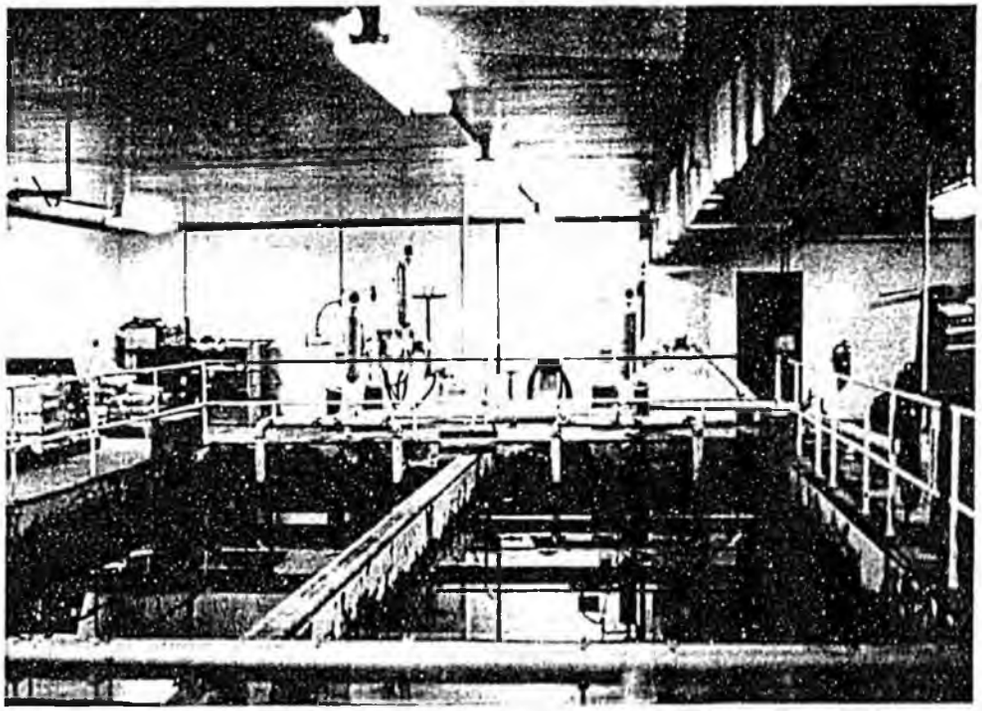
Ground water is regulated by many different programs within DEC and other State and Federal agencies. This leads to confusion as to what is required and by whom. One of the functions of a Comprehensive State Ground Water Protection Plan is to gather all of the requirements into one document to avoid this confusion, and correct conflicting or redundant requirements. The Safe Drinking Water Act Amendments of 1996 will require all public drinking water systems to formally assess the source of their water supply. These source water assessments will be data intensive. Having all of the ground water related data in an accessible format will greatly help in the preparation of drinking water source assessments. The DEC Ground Water Protection Program is not enforcement oriented. Its mission is to educate Alaska citizens as to the value and need to protect Alaska's ground water resource to ensure future generations will have access to safe and clean ground water.

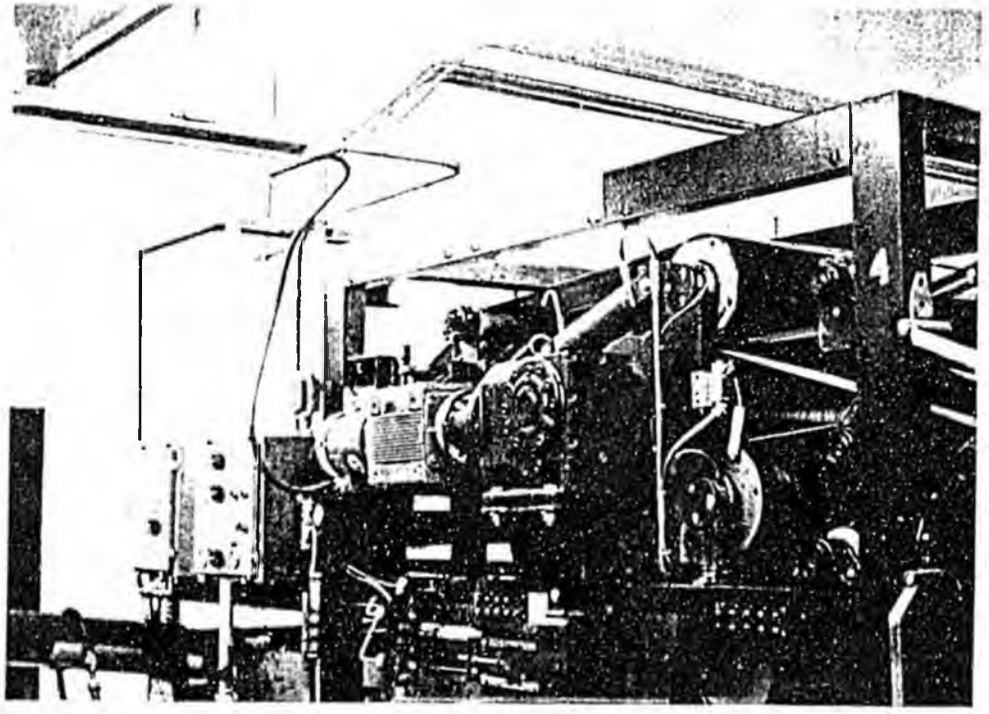
Accomplishments:

After being vacant for several months, this position was filled effective May 1, 1996. The following are the highlights of what has been done since May: Created draft versions of a Comprehensive State Ground Water Protection Plan for Alaska, a Ground Water Data Management Plan, an Action Plan, and a finalized version of a Summary Report (all required by EPA); Technical review of State and Federal regulatory and guidance changes related to ground water management (Alaska contaminated sites clean up regulations and associated guidance documents: EPA regulation changes as a result of the Safe Drinking Water Act Amendments; EPA's large capacity septic system guidance; administering nonpoint source grants (Municipality of Anchorage - Hillside Nitrate Study; McCarthy Area Council - Wellhead Protection; Alaska Cooperative Extension - Home*A*Syst Alaska specific wellhead protection program and materials; DAR -Fairbanks area aquifer vulnerability study). Also participated in the solicitation and selection of nonpoint source grant proposals for FY'97; assisting the DEC drinking water program in creating a wellhead protection program, and ongoing efforts in ground water data management, ground water quality criteria, pesticide management, and providing technical assistance.









Municipal Wastewater Treatment and Disposal Program

Description of above Photograph:

Top Left: Petersburg Wastewater Treatment Plant (primary treatment process).

Top Right: Rotary screens (0.4 inch mesh size for removing solids from sewage).

Bottom Left: Clarifiers and sludge pumps, (for settling and the transfer of solids).

Bottom Right: Belt filter sludge press, (for dewatering sludge prior to disposal).

This page represents an example of a municipal treatment system currently operating in Alaska.

Facility Description:

City of Petersburg Wastewater Treatment Plant. This wastewater treatment plant was recently reissued a NPDES permit which has been certified by the State of Alaska. The plant is currently permitted to treat domestic wastewater and discharge an average of 2.18 million gallons per day of primary treated wastewater to Frederick Sound. This facility is one of eight 301(h) waiver communities in the State of Alaska. The 301(h) waiver is a waiver from the EPA secondary treatment requirements. Some of the treatment processes and equipment used at this facility are: Flow meter; rotary screens, (0.4 inches); screenings conveyer; grit separator; grit dewatering escalator; primary clarifiers; sludge collectors; scum skimmers; sludge storage tanks; v notch weirs; effluent launders; screenings press; belt filter press; lime blender; various laboratory analytical equipment; a variety of pumps and valves; 15 lift stations; and a final outfall line and diffuser.

Jobs and Families:

The operation and maintenance of this facility provide full time jobs for 25 employees. The operating and maintenance budget was $420,000 in 1996. The Treatment Plant currently has 1,197 wastewater connections which serve approximately 3,300 individuals. The facility is well operated and the treated wastewater produced by this primary treatment facility is of good quality and results in protection of the environment and the public health of the 3,700 residents of Petersburg.

State Oversight and Regulatory Function:

DEC certified that the NPDES permit limitations were stringent enough that violations of the State of Alaska Water Quality Standards should not occur. Certification of the NPDES permit, in effect, allows the State of Alaska to adopt the NPDES permit and therefore a separate State of Alaska permit is not required. DEC worked with EPA and the community to create a larger, more accurate mixing zone for fecal coliform bacteria for this permit. Monitoring reports are routinely submitted to EPA and DEC, and facility inspections are conducted periodically.

Accomplishments:

For the time period July 1, 1995 to November 15, 1996 the Wastewater Treatment and Disposal team issued wastewater disposal permits or water quality certifications for NPDES permits for the following facilities: Johnson Store/ Elfin Cove; Rowan Bay Upland Camp; Neets Bay Hatchery; Polk Inlet Camp; Klawock/(Draft); Ketchikan Golf Associates; James Bride Subdivision/ Ketchikan; Abacus Minerals/Niblack Anchorage; Defense Fuels/Whittier; Talketna; Eielson Air Force Base; Harper Lodge; Point Barrow Long Range Radar Station; Kiana; Town and Country/Kenai; Don Turner Subdivision/Haines; Angoon; Portage Bay Land Camp; Coffman Cove; Victory Ministries/Palmer; Palmer Correctional; Chevek; Yukon Ventures; Rainbow Valley Mobile Home Park/Fairbanks; King Trucking/(Draft)/Fairbanks; Schlumberger Camp; Prudhoe Bay Hotel; North Slope Borough Service Area 10; Seward; Cordova; Juneau-Douglas Plant/Juneau; Petersburg; Sitka; Skagway.

Most of the permits that are being issued have authorized mixing zones to meet Water Quality Standards and monitoring requirements to assure compliance. Staff has also provided technical assistance to applicants, permittees, consultants and the general public on a daily basis. There are approximately 40 applications, permit modifications, and permit renewal requests that have been received since July 1996, and are pending action by the Department.

Nonpoint Source Pollution Control Program

Description of above photographs:

Top Left: Planting vegetation on exposed slopes as part of a comprehensive nonpoint source pollution control project in King Cove.

Top Right: Improperly functioning culvert on Juneau's Duck Creek presents a barrier to fish passage. Poorly constructed or maintained culverts also create stagnant, unhealthy conditions.

Center: Citizen volunteers collect benthic macro invertebrates ("bugs") in a stream to assist DEC in monitoring water quality. Small bottom-dwelling animals are easily affected by nonpoint source pollution and are good indicators of health of a stream.

Bottom Left: Stockpiling snow from roads and parking lots contains a variety of contaminants.

Bottom Right: Erosion is a common problem affecting urban area streams.

Program Description:

Most water pollution in Alaska comes from "nonpoint" sources such as: failing septic systems (bacteria and excess nutrients); rain water run-off from streets and parking lots (oil and trace metals); erosion from construction activities (sediments); poor logging practices (sediments and habitat destruction); and destruction of stream side habitats from building or trampling. The Nonpoint Source Pollution (NPS) Control Program provides technical and financial assistance to communities and agencies to restore polluted waterbodies, and to develop and implement programs to control sources of pollution. The program focuses on educating the public and industry about NPS pollution, and implementing Best Management Practices (BMPs) to prevent pollution.

Jobs and Families:

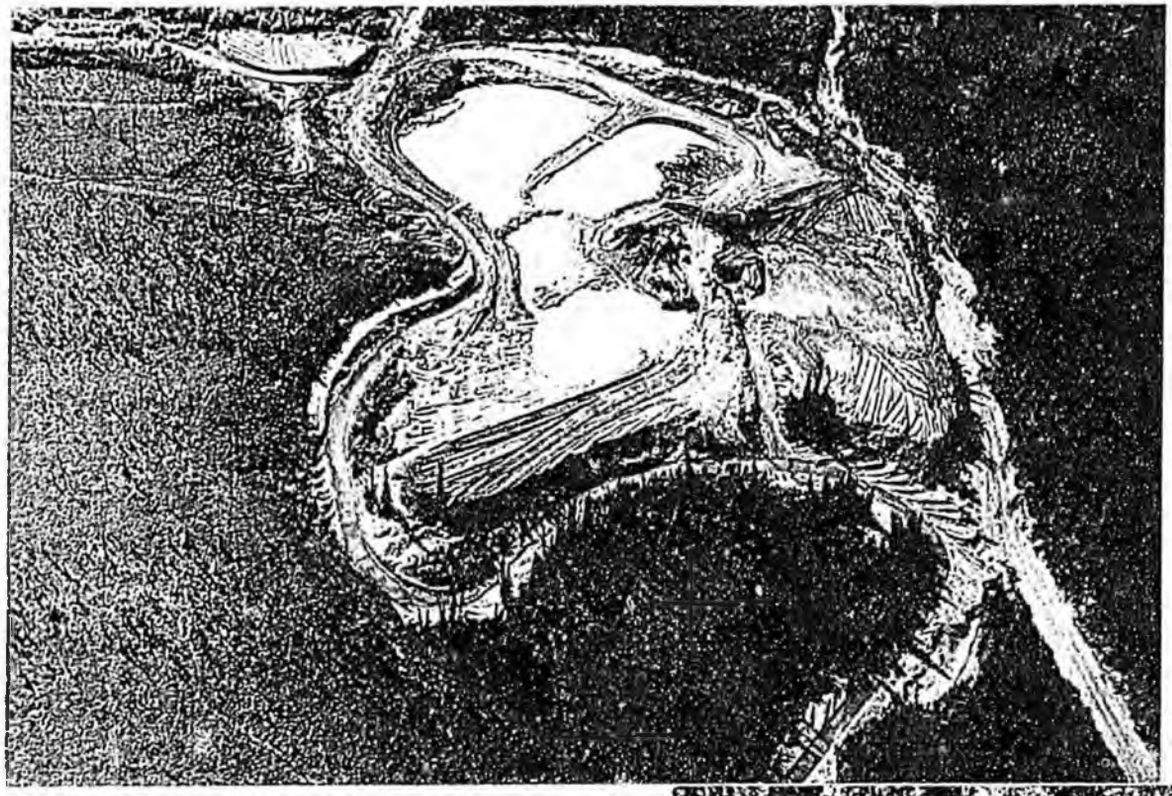
Our quality of life, as well as most jobs in Alaska depend on clean water and abundant fish and wildlife. Alaska is unique among the rest of the world, in possessing clean water and pristine habitat to support fisheries, tourism, and water-dependant recreational opportunities. As examples, fisheries and tourism are major contributors to Alaska's economy. Commercial fishing alone supports over 17,000 vessels which land approximately $1.4 billion worth of fish each year. Sport fishing provides over 4,000 jobs, with over $100 million spent on sport fishing related activities annually. Development pressure is having its effects on our water quality and fisheries resources. In 1996, 53 waterbodies were listed as being polluted from nonpoint sources. Many of these streams are no longer safe to fish, swim or drink. This pollution translates into loss of jobs, recreational opportunities, and threatens natural fish stocks, and public health.

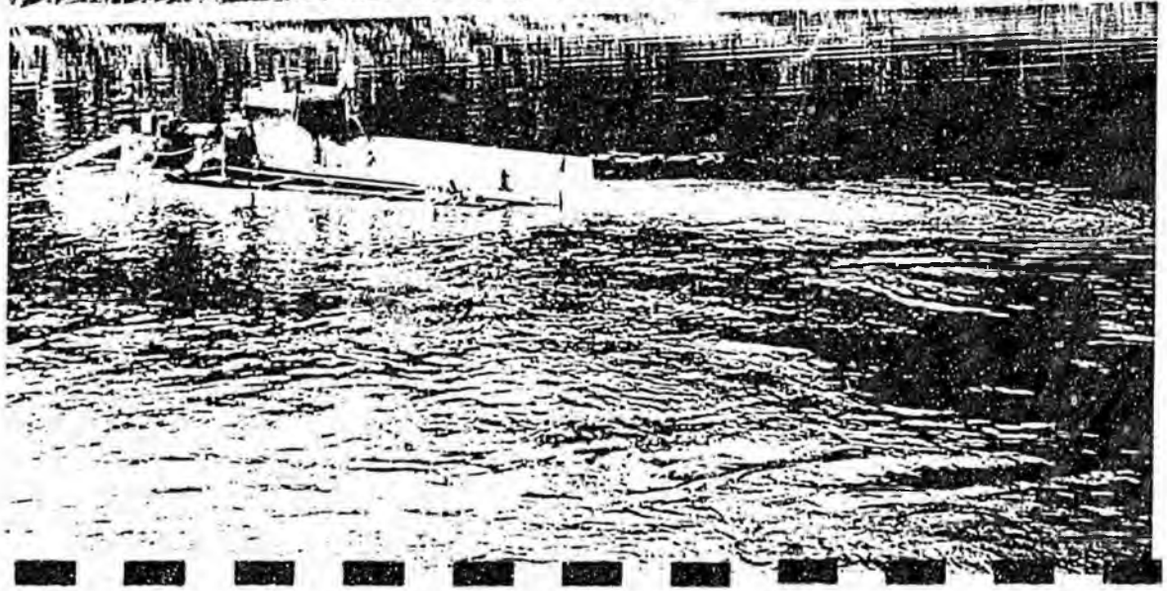
State Oversight and Regulatory Function:

Nonpoint source pollution is controlled through both regulatory and voluntary programs. Examples of regulatory controls include the regulation of logging operations, and review and approval of plans for roads. DEC staff provides technical assistance and oversight to local communities with regard to private septic systems, and the design and implement of nonpoint source pollution controls. In addition, DEC provides approximately $500,000 annually in grants through Section 319 of the Clean Water Act to communities for stream restoration, public education, monitoring, planning and other activities.

Accomplishments:

In 1996 DEC provided approximately $500,000 in grants and technical assistance for: restoration of water quality and fish habitat in Duck Creek, Juneau; public outreach to homeowners to protect their wells from contamination; a placer mining reclamation demonstration project; Anchorage Basin Watershed Project; streamside rehabilitation; development of a watershed protection approach for Alaska; a Watershed Stewardship Project in Anchorage; and restoration of Ophir Creek in Yakutat. In conjunction with other agencies, DEC also developed a draft *Alaska Coastal Clean Water Plan* to control NPS pollution in the coastal areas.





Placer Mining

Description of above photographs:

Top Left: A placer mine on Cherry Creek in the Fortymile Mining District (August 1996).

Bottom Right: A suction dredge operating in the Fortymile River (August 1996).

Project Description:

Placer deposits are defined as waterborne or glacial deposits of gravel or sand containing particles of gold or other precious minerals. Placer mines are usually located in a stream-side environment. The Alaska Department of Environmental Conservation regulates the waste water discharge and other environmental concerns related to placer mines. The primary tool used to regulate waste water discharges is the States' certification of the National Pollutant Discharge Elimination System (NPDES). There are more than 300 NPDES permitted placer mining facilities in the State. It is estimated that ½ to ⅔ (150 to 200) of the permitted facilities actively mined during the 1996 season. The mines range in size from operations that process 10 yards of material per hour to operations that process 250 yards per hour.

Jobs and Families:

The 1995 Alaska Mineral Industry Report indicates that mining, statewide, is believed to employ 3,406 people. Placer mining accounts for 975 employees from this total. Recreational placer mining, mostly in the form of suction dredgers, accounts for an additional 280 jobs. The 1995 Alaska Gold production value was $56.0 million; 1996 values are still being calculated. Indications are that 1996 numbers and values will be slightly down, with placer mining including suction dredgers accounting for more than 1,100 jobs, and gold production at $60.0 million.

State Oversight and Regulatory Function:

DEC Watershed Development staff work with the Placer Mining Industry and the U.S. EPA in developing NPDES wastewater discharge permits. DEC staff conducts compliance inspections and issue U.S. Army Corps of Engineers Section 401 water quality certifications for general and individual permits required at most placer mining operations.

Accomplishments:

The State issued its certification for three General Permits for mechanical, medium suction dredges, and small suction dredges on November 15, 1996. These permits will ensure protection of the environment while allowing most placer and suction dredge mines to operate without going through the individual permit process.

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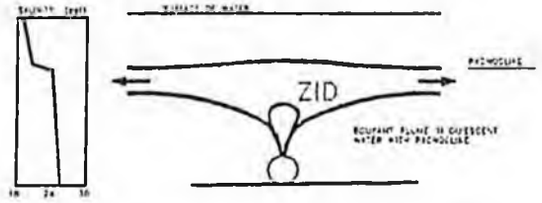

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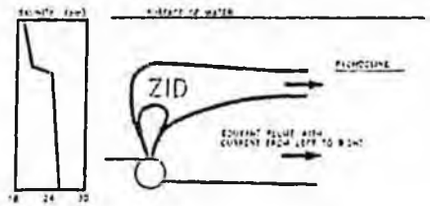

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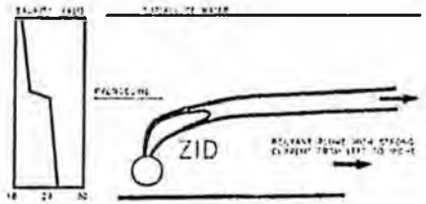

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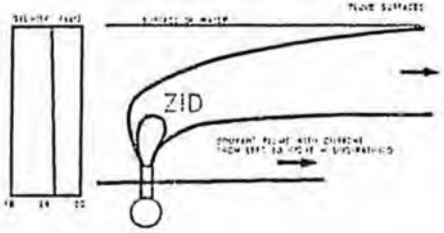

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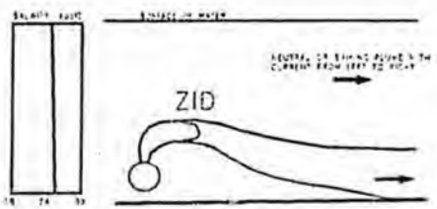

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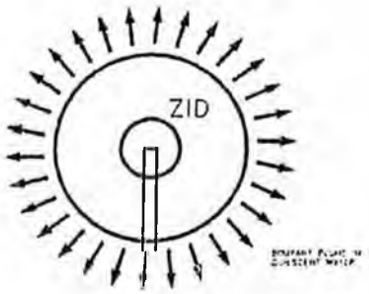

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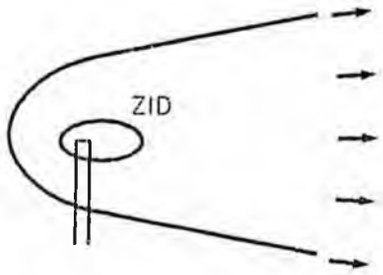

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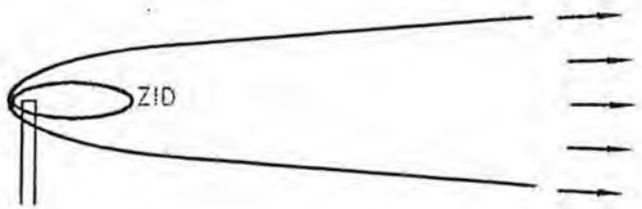


Science and Engineering Support Services Project

Description of above Photograph:

DEC uses EPA's PLUMES model and the CORMIX model for determining mixing zone sizes. The diagram shows a variety of effluent plume shapes as the effluent disperses. The shape, size and depth of the plume depend on such parameters as salinity, temperature, density of the effluent, receiving water currents, diffuser design and depth of the outfall. The type of model chosen depends on some of these characteristics.

Project Description:

The Science and Engineering Support Services Project includes scientists and engineers who provide technical services and specialized expertise to Department permitting staff, permittees and the public. Typical services include modeling the behavior of an effluent in the receiving water to design mixing zones and estimate dilutions to set permit effluent limits which will ensure that Water Quality Standards are met at the edge of the mixing zone (see Alyeska Ballast Water Treatment Facility, for example); reviewing proposed receiving water monitoring programs to ensure that an adequate quantity and quality of data will be gathered to measure compliance with Water Quality Standards; reviewing risk assessments of proposed discharges to ensure that human health and aquatic life are protected.

Jobs and Families:

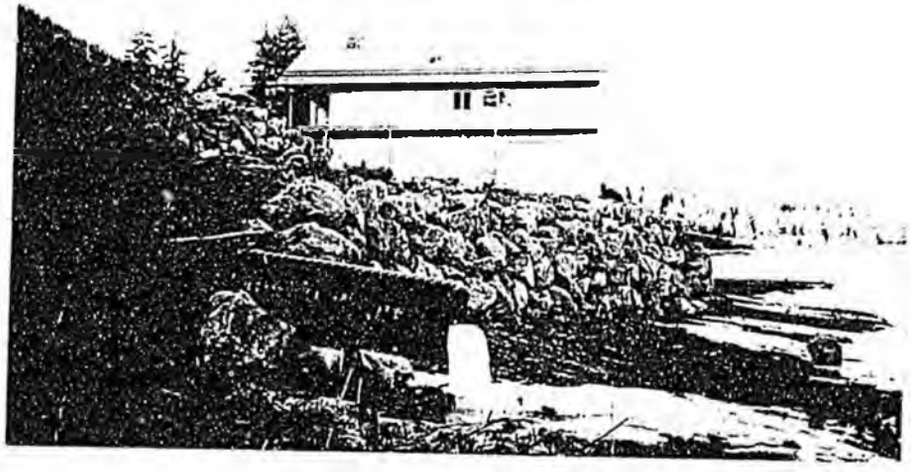
Most municipal and industrial wastewater permittees need mixing zones in order to make sewage and industrial wastewater producing projects economically feasible. Properly designed mixing zones ensure protection of public health and ecological integrity while, allowing economic development. Risk assessments and receiving water monitoring provide assurance that human health and the environment are protected.

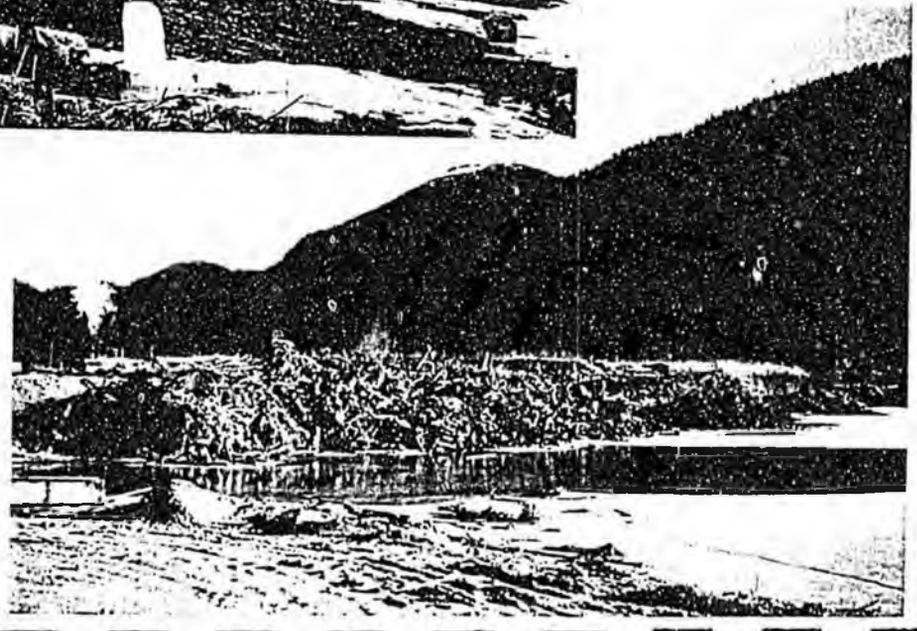
State Oversight and Regulatory Function:

Alaska Statutes (AS 46.03.010) declare that "It is the policy of the State to conserve, improve and protect its natural resources and environment and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the State and their overall economic and social well-being." Department permitting decisions can meet these goals only by applying the most applicable water quality standards and by the use or review of the latest mixing zone models being used by agencies and consultants. Complex, technical operations require specialized science and engineering, keeping current with present day modeling methods and risk assessment requirements.

Accomplishments:

Modeled wastewater discharges for the Alyeska Ballast Water Treatment Plant, Ketchikan Pulp Company, Cook Inlet oil platforms, Greens Creek Mine, and the municipal sewage treatment effluents at Petersburg and Skagway which have Federal waivers from the secondary sewage treatment requirement of the Federal Clean Water Act. Conducted Risk Analyses for the Ballast Water Treatment Plant and Ketchikan Pulp Company, evaluating chemical and toxicity data and ecological and human health risk assessment models and criteria. Experience from this process was used to develop draft guidelines for the use by permit writers and industry, and is currently being applied to the Greens Creek permit renewal, the AJ Mine, and other large facility permits. Staff is presently looking more closely at the modeling and mixing zone sizes for Petersburg and Skagway sewage treatment plant discharges as they relate to meeting effluent limits for Whole Effluent Toxicity (WET), and at Skagway, effluent limits for copper. This research may enable these communities to economically deal with potential permit violations, avoiding increased WET testing at approximately $3000 per sample and toxicity reduction studies.





Section 401 (Clean Water Act) Water Quality Certifications

Photographs of 401 Projects:

Top left: Unauthorized road excavation in forested wetlands that developed severe erosion.

Center: Residential fill that encroached on tidelands.

Bottom Right: Authorized placement of stumps and overburden as fill in a gravel pit, with eventual restoration.

Project Description:

Under Section 401 of the Federal Clean Water Act, any applicant for a Corps of Engineers Section 404 permit to ***excavate or place fill material in wetlands or waters*** is required to obtain a ***water quality certification*** from the State. The Corps cannot issue a 404 permit without the State certification or waiver. The Corps issues approximately 400 of these permits annually; DEC must certify or waive each case. The facilities receiving 404 permits and 401 certifications encompass every type of development statewide: residential, commercial, industrial, public, energy, and transportation, from housing and businesses, to major mines and oil and gas facilities, to schools, harbors, airports, and highways. The 401 program also applies to hydroelectric facilities licensed by the Federal Energy Regulatory Commission, of which roughly 12 now are in process. In addition, the 401 program evaluates roughly 300 other development projects annually, and provides comments and conditions to ACMP, reflecting the Department's regulatory authorities.

Jobs and Families:

As a Federal requirement, Section 401 certification is a cornerstone of development in the State. Given the extent of dependent industries and facilities, Section 401 certification is essential to the creation and maintenance of a very large number of jobs, and to economic security for families that results from jobs. Families enjoy a better quality of life from wetlands, lakes, streams, and oceans that improve water quality, protect drinking water resources, improve the aesthetic landscape, increase recreational opportunities, and provide fish and wildlife habitats. The 401 program has contributed to reduced wetlands loss; mitigation of impacts to wetlands, tidelands and waters; protection of wetlands functions and productivity; improved erosion control; and protection of water quality and habitat. Work with industry and the public tends to decrease development costs by reducing fill placement and facility footprints, and by reducing the need to repair or mitigate damage to property.

State Oversight and Regulatory Function:

The 401 program is a direct requirement of the Federal Clean Water Act. Any project that will excavate or place fill material in wetlands or navigable waters must receive a Section 404 permit from the U.S. Army Corps of Engineers, and a jointly-developed Section 401 water quality certification from DEC. The 401 certification provides "reasonable assurance" that a project will meet State Water Quality Standards, and may require Best Management Practices to be followed concerning fill materials, erosion control, drainage control, and habitat protection. The 401 certification is developed under the umbrella of the Alaska Coastal Management Program, which coordinates the development of all State permits that may be required, and also coordinates fully with Municipal Coastal District Programs. Approval of the 401 is essential to allow approximately 300 construction projects to go forward annually.

Accomplishments:

Issued 300 water quality certifications; reviewed and commented on 300 ACMP projects. Special projects included EPA general permit for log transfer facilities; COE single-family housing nationwide permit; COE Anchorage wetlands general permit; Federal/State agreement on highways 404/NEPA process merger; DEC wastewater general permits; DEC general permit for salmon carcass disposal; resolution of five 401 cases thru administrative appeal; formation of 401 program team; development and implementation of computer database tracking system; enhanced participation in ACMP interagency review process.

Statewide Hardrock Mining Program Routine Oversight

Description of above Photograph:

An exploration trench is used to determine mineral deposits at the True North Prospect, north of Fairbanks. The trench is designed to limit water impacts and to accommodate reclamation once sampling has been completed.

Facility Description:

The following mines and mineral deposits routinely need review and assistance by DEC: Donlin Creek, Nixon Fork, Alaska Gold's Nome property, Golden Zone, Liberty Bell, Usibelli Coal Mine, Red Devil, Golden Summit, True North, Marshal Dome, Ryan Lode, Grapefruit Rocks, Pogo Property, Delta Belt, Wishbone Hill, Jonesville, Jualin, Niblack, Tulsequah Chief, Bronson Slope, Red Mountain and Calder.

These sites include mineral deposits reaching final exploration and delineation activities, active mines, and mines that are going through reclamation. Regardless of the status of the projects listed, they all have the potential for large future expansion. They include deposits for coal, precious metals, limestone quarries and other metals. Some are located in Canada which have potential to affect Alaskan resources. These projects do not require the intense working relationship with companies to address the complex regulatory and technical issues of project development, but do require ongoing periodic communication and interaction.

Jobs and Families:

Hundreds of jobs depend on these projects, and potentially thousands more will result from development of the prospects pending in the State which are listed in the facility description above.

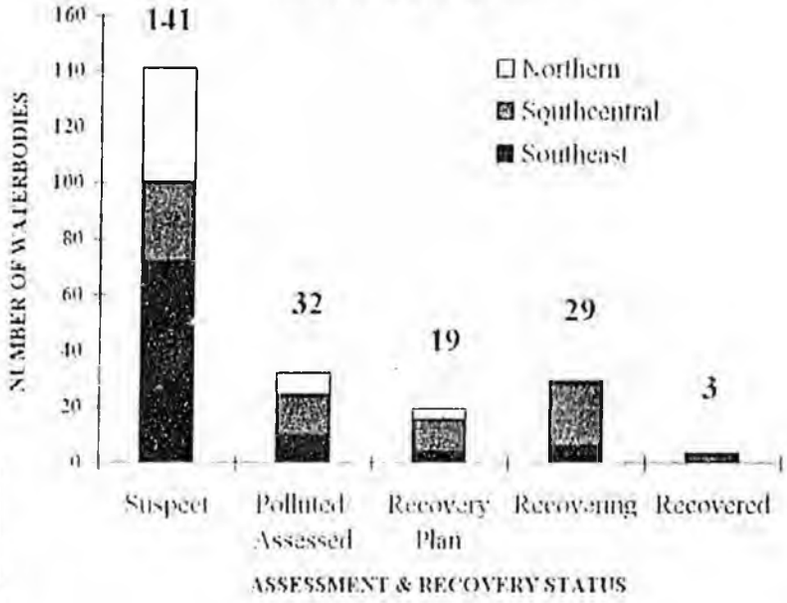
State Oversight and Regulatory Function:

A myriad of actions are needed for these projects including the development of watershed monitoring plans, providing prompt technical assistance for issues that develop in current mines, reviewing reclamation plans, inspections, and keeping current on changes and developments of projects.

Accomplishments:

Early and ongoing involvement by agencies in developing mines greatly reduces costs and the impact of regulatory issues on the projects. This assists companies in choosing approvable alternatives for development and prevents costly redesigns. At these stages of the projects agency involvement is low per project, with large returns in the reduction of overall workload for each of the projects. When all the projects are evaluated together there is a significant amount of effort needed. Because of the smaller effort needed for each individual project, funding agreements are not in place.

1996 STATUS OF ALASKA'S POLLUTED WATERS BY GEOGRAPHIC REGION



Waterbody Assessment and Recovery Program

Description of above Photograph:

Top: The center graphic reflects the 1996 status of polluted waterbodies in Alaska by geographic location.

Bottom Left: Nonpoint sources of sediment and turbidity are Alaska's largest threat to water quality.

Bottom Right: Clean Alaskan streams reflect the goal of water quality recovery and protection to maintain healthy waters that support viable fisheries.

Program Description:

The Waterbody Assessment and Recovery Program systematically identifies and assesses polluted waterbodies throughout Alaska and assures their eventual recovery. Watershed protection is promoted through local projects to develop and implement water quality assessments and recover polluted waters for their beneficial uses. In watersheds where point and nonpoint source pollution is a concern, technical assistance is provided and financial support is encouraged to implement local watershed activities. Periodic summary reports are prepared for both the Alaskan public and the Environmental Protection Agency (EPA).

Jobs and Families:

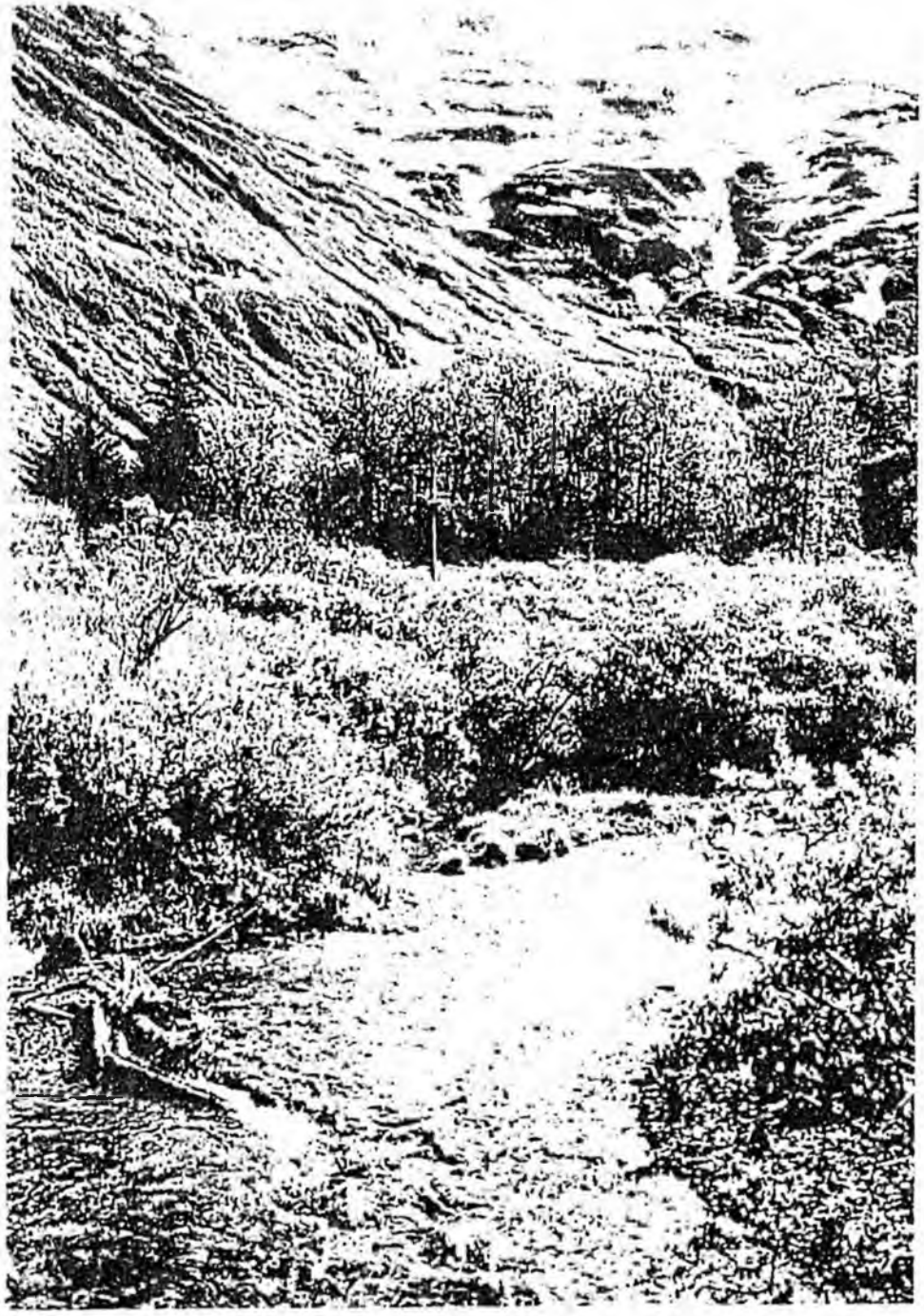
Clean waters supporting healthy salmon runs are important to residents, the fishing industry and tourism. Resource development in Alaska needs clean water to successfully achieve its full potential. If polluted waterbodies lack demonstrated progress toward recovery, Federal regulatory agencies tighten controls which increase the length of time required to permit a facility and increase operating costs. More stringent controls can lead to reduced profit margins which have a direct relationship to the number of jobs available. Reduced employment affects local economies, the integrity of Alaskan families and their quality of life. DEC Watershed staff work at the local level to encourage waterbody recovery and protect Alaska's waters.

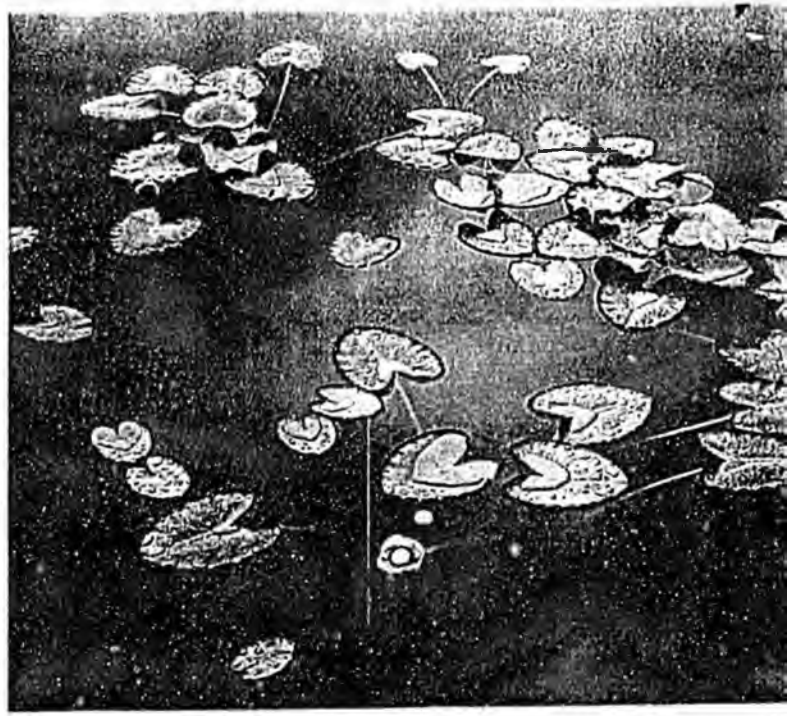
State Oversight and Regulatory Function:

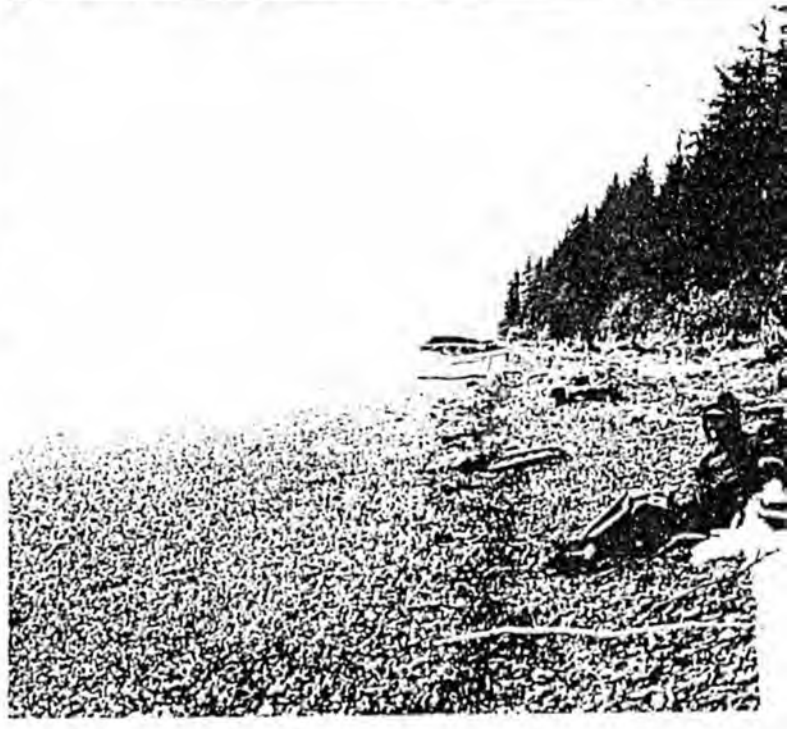
The State of Alaska is required under Section 305(b) of the Clean Water Act to prepare and submit a water quality summary report to the Environmental Protection Agency every two years. In addition, the Clean Water Act Section 303(d) requires States to identify surface waters that are polluted by point and nonpoint sources of pollution every two years. These polluted waters may require additional contro to meet State Water Quality Standards.

Accomplishments:

Developed a systematic process to evaluate, assess and recover waterbodies that assure widespread public involvement; Published Alaska's 1996 Water Quality Assessment Report; Submitted Alaska's biennial polluted waterbody list (303(d) list) to EPA; Adopted a watershed approach to resolve water quality problems at the local level; Scheduled action on all listed waterbodies during FY'97 to move them toward complete recovery.







Water Quality Standards Program

Description of above Photograph:

Top Left: A view of Sheep Creek Valley in Juneau.

Center: Unnamed lake along Mount Jumbo trail on Douglas Island.

Bottom Right: Beach along west side of Douglas Island.

Project Description:

The Alaska Water Quality Standards (WQS) provide the backbone for protection of Alaska's waters. The Standards consist of identifying designated uses for waterbodies in the State, identifying narrative and numeric water quality criteria that define the minimum acceptable conditions necessary to support each use. The Standards also contain an antidegradation provision to protect existing water quality. Most waterbodies in Alaska must be protected for fishable and swimmable uses.

Jobs and Families:

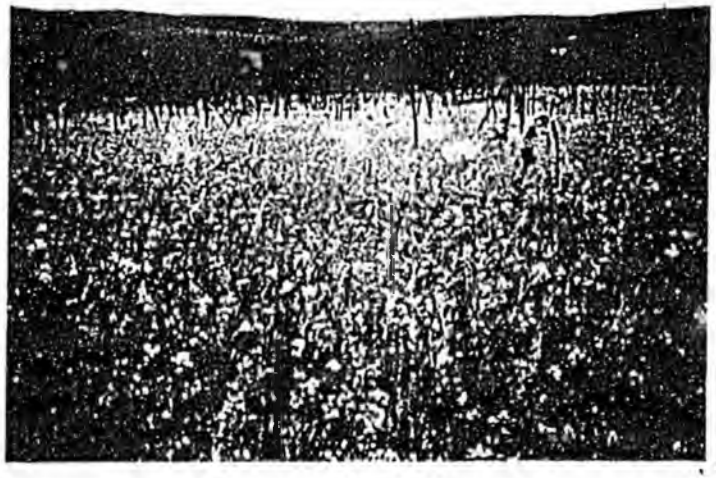
The Water Quality Standards program represents the cornerstone for reasonable protection of our water resources. The protection of water quality is important for maintaining the quality of life in Alaska and for maintaining the viability of industries that rely on clean water, such as fisheries, tourism, and water-dependent recreational opportunities. Industries that discharge wastewater into waters of the State also rely on Water Quality Standards which reasonably protect public health and the environment and are not unduly onerous or costly. A good Water Quality Standards Program saves industry's money, which in turn translates to jobs and quality of life.

State Oversight and Regulatory Function:

The Federal Clean Water Act requires States to develop Water Quality Standards regulations for waters of their State. The Department of Environmental Conservation is responsible for regulatory oversight of the Alaska Water Quality Standards, which are found in 18 AAC 70. These Standards are applied whenever it is necessary to determine whether water quality is being protected for a waterbody. Examples include wastewater permitting and ambient water quality monitoring.

Accomplishments:

Revised WQS regulations took effect on March 16, 1996 which revised language on antidegradation, treatment works, and the methodology for petroleum hydrocarbons; two staff studies were completed on total suspended solids and particulate hydrocarbons in July 1996. The Commissioner issued a decision document on these studies in November 1996; draft regulatory language for mixing zones went out for public review in January 1996 and again in November 1996. DEC expects to forward a final draft to Law in early 1997; a letter from the Commissioner to EPA Region 10 was sent in June 1996 requesting resolution of the questionable Federal arsenic numeric criteria which are now imposed on the State; WQS staff completed a paper on *Toxics and the Alaska Water Quality Standards* to educate DEC staff, industry, and the public on the history and status of toxics criteria in Alaska; DEC is working closely with EPA to remove Alaska from portions of the National Toxics Rule, which imposes Federal numeric criteria on Alaska waters. Action expected in early 1997.



Wetlands Program

Description of above Photograph:

Top Left: Soil probing in the Interior, Rapid Assessment Model.

Center: Reference site for Rapid Assessment Model.

Bottom Right: Southeast site work to develop local reference Rapid Bioassessment Protocols.

Project Description:

Alaska has more wetlands than the rest of the United States put together. Of Alaska's wetlands, only about 0.15% have been developed. Wetlands are vital to the economic, recreational, cultural and biological values of the State. Wetlands provide flood storage and control, fish and wildlife habitat, erosion control and water quality protection. Considering their abundance and the need for basic infrastructure development in Alaska, DEC is taking a fresh approach to wetlands management. DEC has initiated a cooperative effort between local, State, and Federal agencies, the private sector and the University of Alaska to develop a regionally based process which can provide a wetlands assessment in less than one day. This new approach is expected to be very helpful in permitting, planning and mitigation.

Jobs and Families:

Wetlands support the following jobs: Sport and Commercial Fishing; Flood control for homes; Tourism - Outdoor and Ecotourism; Hunting - Wildlife and Waterfowl; Drinking Water - Water Quality Protection.

State Oversight and Regulatory Function:

The objective of the Wetlands Program is to understand Alaska's wetlands so we know which wetlands can be developed and which wetlands should be preserved. The process DEC is currently developing uses regional conditions (for example permafrost) and is designed to be done in less than a day. This new methodology is Hydrogeomorphic Methodology or "HGM." HGM provides a process for determining how wetlands function, not what value society should put on them. After an HGM assessment of the function of the wetlands, then local, State, or Federal jurisdictions can better determine what to do with them. By improving our understanding and by taking into account local conditions, we can better decide which wetlands to develop and which to save in order to provide the basic infrastructure for our families and communities and their jobs that depend on developing or conserving wetlands.

Under the Federal Clean Water Act, any facility or activity that will place fill material in wetlands or navigable waters must receive a "Section 404" permit from the U.S. Army Corps of Engineers (COE), and a jointly-developed Section 401 water quality certification from DEC. The 401 certification may contain stipulations to protect water quality, and provide "reasonable assurance" that a project will meet Water Quality Standards. The COE national guidance published in August 1996, stated that 80% of the 404 permits will use the HGM assessment methodology by the year 2000. Also, the Natural Resource Conservation Service has decided to use HGM for their "minimal effects determination." The EPA and the U.S. Fish and Wildlife Service have also decided to participate in the development of HGM. By taking the lead in developing an HGM process, Alaska can better determine how wetlands will be developed.

Accomplishments:

State Policy on Wetlands: Organized and coordinated the State interagency Work Group on Wetlands, involving DNR, F&G, DGC, DOT, Commerce, and the Governor's Office in Washington, D.C. This group's job has been to respond to Federal legislation, coordinate grant proposals and discuss wetlands policy for the resource cabinet's consideration; **Draft Wetlands Guide Books For Assessing Wetlands:** Training and field work was conducted as part of developing an HGM guide book for assessing wetlands for Southeast and Interior Alaska. This was a significant undertaking involving approximately 75 experts from 15 different governmental, private and academic communities; **Report on Past Performance of Nationwide Permit 26:** Authored a comprehensive study on the issuances of Nationwide Permit 26 (NWP 26) over the past five years (which has become a valuable component of the five-year review of NWP 26 now in progress for the State of Alaska).

Interior / North Slope Watersheds

Alaska Water Watch

Alaska Stream Survey

Interior / North Slope Watersheds

Description of above photographs:

Top Right: Musher Ray Brooks, 1995.
Dog Waste Composting Project.

Center: Waterwatch Program Booklet Cover.

Top Left: 101 Mile Placer Mining District reclamation project at Eagle, Ptarmigan and Birch Creeks.

Bottom Left: Water quality sampling of the Clearwater River in Delta Junction.

Program Description:

The Interior/North Slope Watersheds Team is dedicated to working with local governments, agencies, industry, and the public to monitor, assess, protect and restore water quality and promote healthy watersheds through application of Best Management Practices. This voluntary, cooperative effort includes citizens, industry and resource agencies working together to identify watershed problems and solutions. Key activities include: inspections; technical assistance; permitting; monitoring water quality; oversight of restoration projects; completing waterbody assessment and recovery plans; and providing education to local governments, agencies, industry and the public in best management practices for healthy watersheds.

Jobs and Families:

Clean water makes dollars and sense. Waters supporting healthy salmon populations are important to residents, and the fisheries and tourism industries. Good water quality also benefits the resource extraction and development industries because there will be fewer restrictions for developers and less Federal EPA oversight of discharge and wetland fill permits. Less Federal EPA oversight and control translate to lower costs for the developer. The best way to have good water quality is to involve those with the most at stake; the people who live and work on a waterbody. They can protect, maintain or enhance these waters through voluntary implementation of Best Management Practices. This cooperative effort is much more cost effective, both in preventing pollution and cleaning up past mistakes, than government acting alone to assure water quality. Clean water results in safe drinking water and provides water recreation opportunities that promote family well-being.

State Oversight and Regulatory Function:

DEC was delegated the responsibility from EPA for Water Quality Standards and nonpoint source pollution control activities in Alaska. Ensuring water quality protection through periodic field assessment is a fundamental step to effective and responsive watershed management programs. The State, rather than EPA, is in the best position to ensure water quality through field evaluations and working with local community teams.

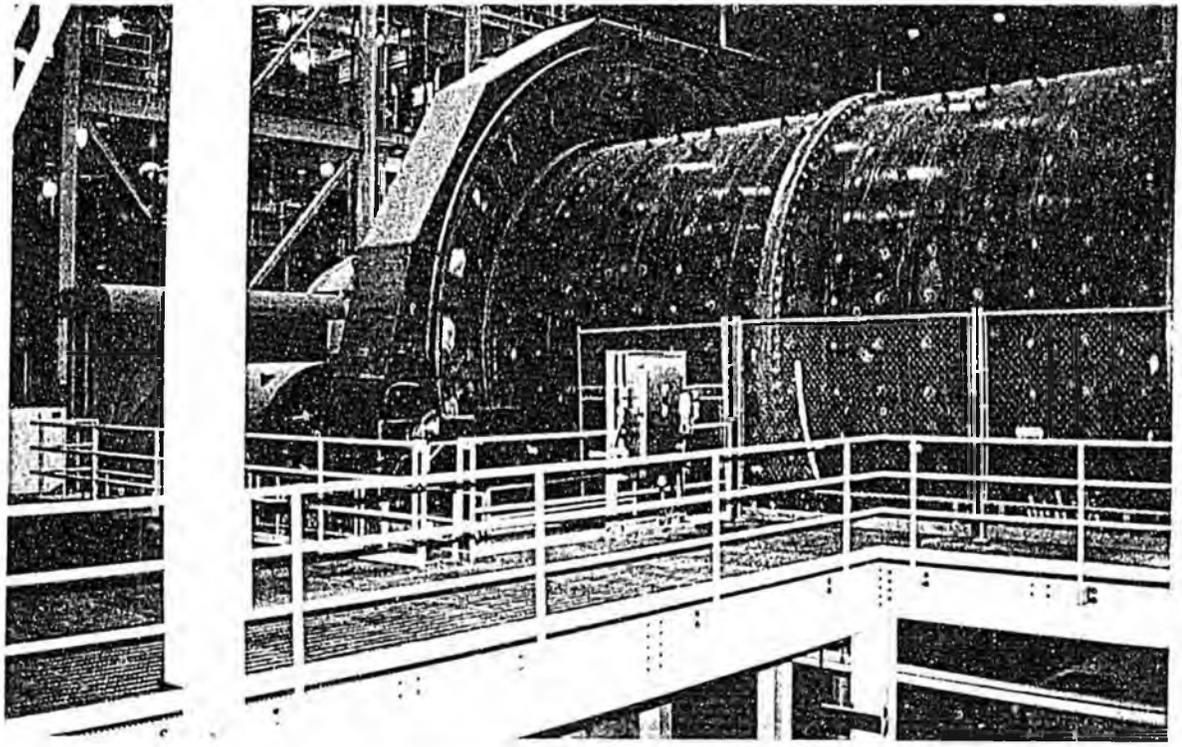
Accomplishments:

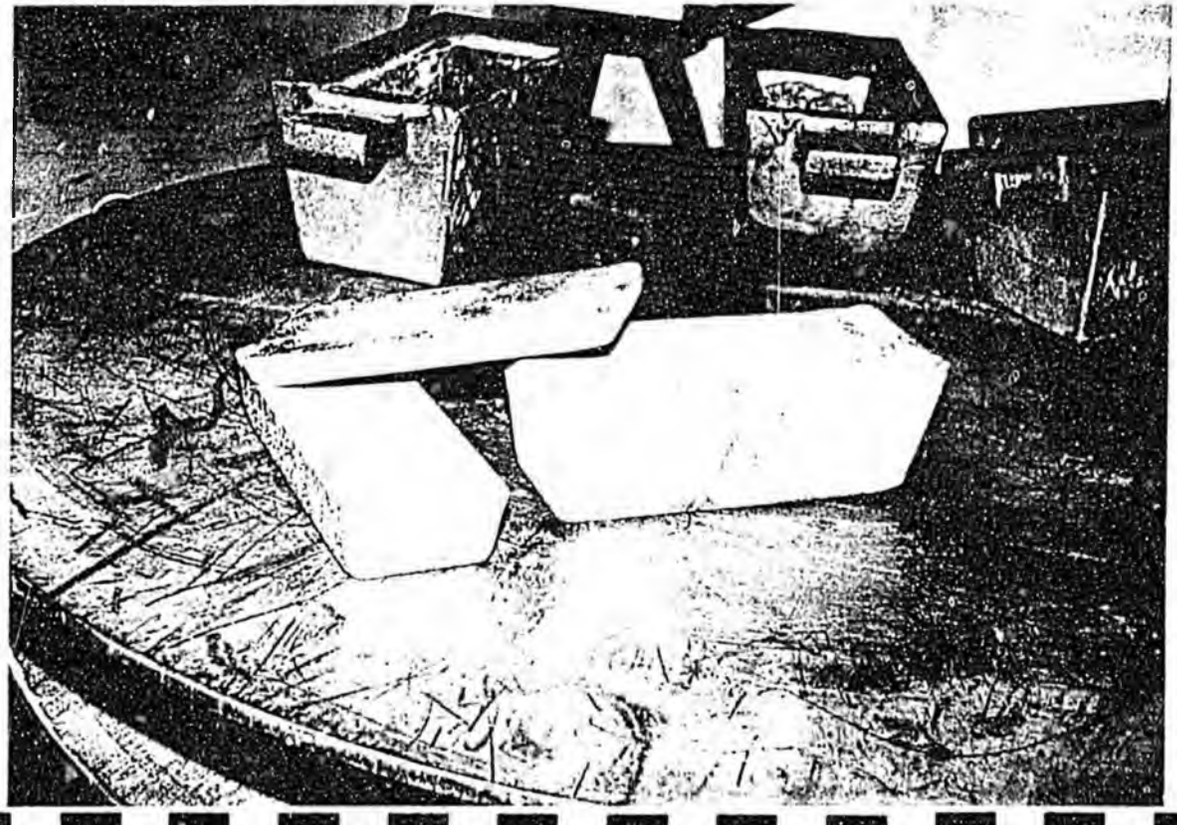
Dog mushing is Alaska's State Sport. Dog team owners deal with large amounts of waste each year. Proper waste management protects water quality as many dog yards are located on waterbodies for easy winter mushing access.

DEC initiated and leads an interagency placer mine reclamation grant for 101 Mile Steese Highway. The cooperative project is to reclaim Eagle, Ptarmigan, and Birch Creeks. Other projects in the Circle District are underway.

The Waterwatch in Schools Program educated Interior Alaska students how to do chemical and physical water quality sampling, interpret results, and learn about methods of preventing nonpoint source pollution. The program provides assistance for science fair projects, class lectures, and Environmental Science Camps.

DEC co-sponsors the Delta-Clearwater Watershed Rehabilitation Project. The Clearwater River is a spring-fed fishery that is protected by a wetland bog. The bog filters sediment from cleared areas that will be restabilized as a component of the project.





Fort Knox Mine

Description of above photographs:

Top Left: The ball mill which crushes ore-bearing rock using steel balls.

Bottom Right: Three gold bars, totaling 2,128.1 troy ounces, were poured Friday, December 20, 1996, at the Fort Knox Mine. The bars are worth approximately $800,000 at current prices.

Facility Description:

The Fort Knox Mine Project is a lode pit gold mine using vat cyanide leach to recover gold. The mine is located approximately 20 miles northeast of Fairbanks, in the upper headwaters of Fish Creek watershed. The ore pit will be one mile by one half mile by 1200 feet deep. Current reserves are 4.1 million ounces of gold, plus 2.7 million potential reserves. The project is nearing completion of a $350 million construction phase and is slated for full production in January 1997. An average of 36,000 tons of ore will be moved and processed a day, resulting in an average daily gold production of 1,000 ounces.

Jobs and Families:

Operation of the mine will employ 255 people for 12 years. Annual operating expenditures for labor, power, and support services are estimated at $76 million. The life expectancy of the Mine is 12 years or more.

State Oversight and Regulatory Function:

From the start of the proposed project, DEC has participated in the mine development team that included State and Federal agency people, mine representatives, and the public. A comprehensive permit has been developed that covers the disposal of spent tailings, the cyanide destruct circuit, wetlands, water monitoring and reclamation. A separate air quality permit was issued to address dust from the crusher, emissions from blasting, emissions from stationary sources, and road dust. The overall project design was evaluated to determine the effectiveness of the zero discharge wastewater design of the facility. Inspections have been ongoing for construction stormwater runoff and to substantiate quality control on construction of the tailings impoundment, the key element in managing spent detoxified ore.

Accomplishments:

Construction is complete and crushing of ore has begun. After final adjustments to the process are made, full gold production is expected to begin in January 1997. The first gold bar was poured on December 20, 1996. Ongoing review, monitoring and inspection of cyanide transportation and handling procedures have been performed by DEC to substantiate that spill prevention and cleanup capabilities are adequate.

Garrison Slough Joint Contamination Cleanup

Description of above photographs:

Top Left: Workers removing sediments in an area of PCB contamination in Garrison Slough.

Bottom Right: Some of the wastes removed from Garrison Slough during a remedial action designed to remove PCB contaminated sediments from Garrison Slough at Eielson Air Force Base.

Facility Description:

A Total Maximum Daily Load was developed to address nonpoint source loading of polychlorinated biphenyls (PCBs) in Garrison as part of Eielson Air Force Base's Record of Decision developed by the Department, EPA, and the U.S. Air Force. PCB contamination in Garrison Slough has resulted in elevated levels of PCBs in fish tissues in Garrison Slough.

Jobs and Families:

Garrison Slough is a waterbody that passes directly through the developed portion of Eielson Air Force Base. Designated beneficial uses include water contact recreation, and growth and propagation of fish, shellfish and other aquatic life and wildlife. Cleanup of this waterbody, along with institutional controls and continued monitoring, will allow these activities to continue in an environmentally safe manner.

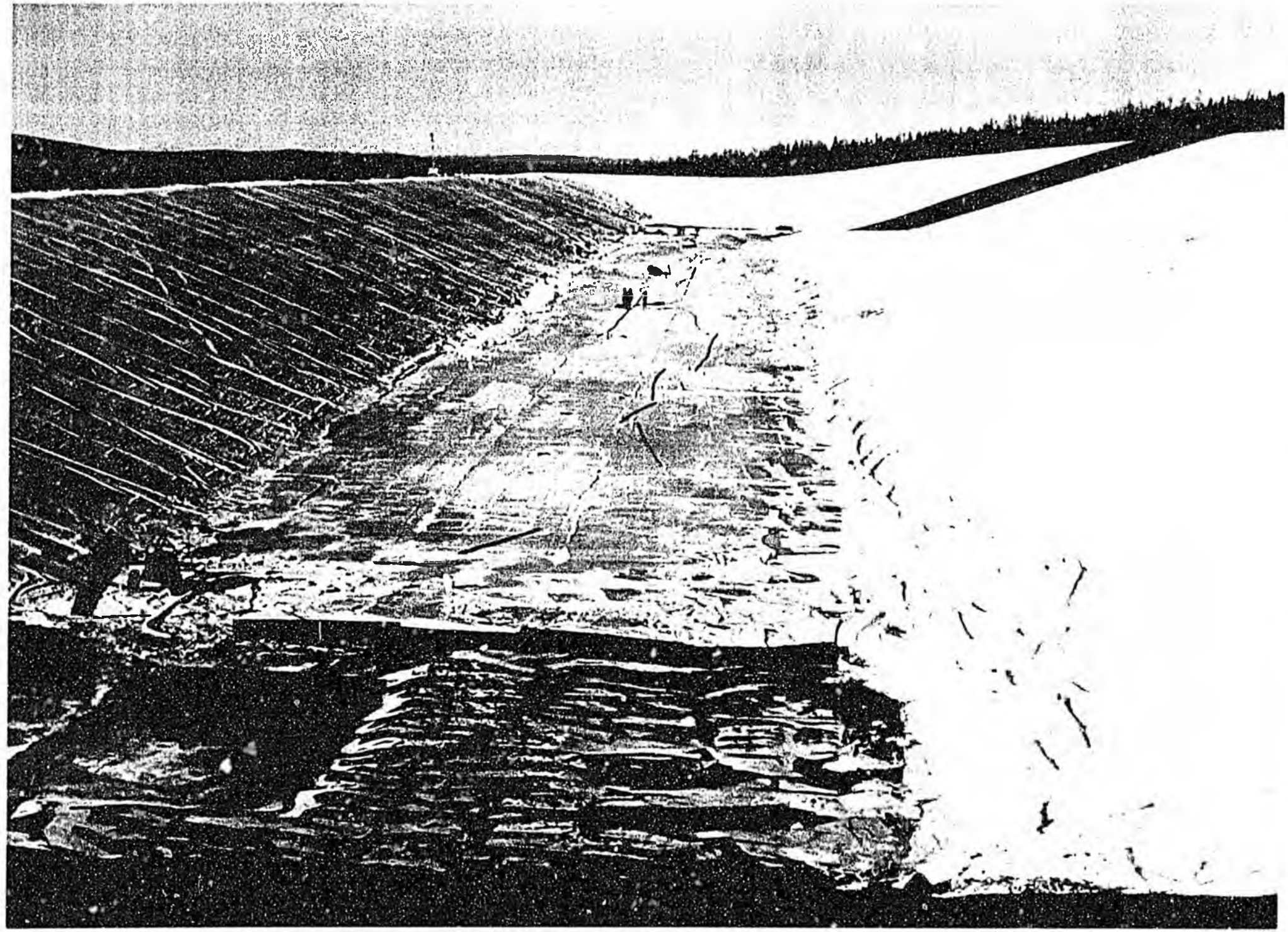
State Oversight and Regulatory Function:

The Federal Clean Water Act Section 303(d)(1)(A) requires states to submit to EPA every two years a list of waters which exceed Water quality Standards. Garrison Slough is on DEC's 1994/1996 303(d) list. The pollutant parameter of concern is PCBs. In addition, Eielson Air Force was placed on the National Priorities Listing for contamination with hazardous wastes. The impacts of contamination to Garrison Slough were evaluated through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process with a risk assessment and an evaluation of alternatives, with a chosen remedy selection documented in a Record of Decision under CERCLA signed by the State of Alaska, the U.S. Air Force, and EPA.

Accomplishments:

Cleanup objectives in the Record of Decision are three-fold: Reduce the PCB levels in sediments so that concentrations in fish tissue will be reduced to acceptable risk levels; prevent people from eating PCB contaminated fish until PCB tissue concentrations are lowered to acceptable risk levels, and to restore and protect the designated beneficial uses for Garrison Slough.

These actions were begun during summer of 1996 with: fishing advisories posted along the slough; installation of a weir near the downstream edge of EAFB to prevent fish movement during dredging; and mechanical dredging of PCB contaminated sediments, which is expected to result in removal of 80% of PCB volume in the slough. Some dredging and monitoring/evaluation will continue next season. These actions address public health and environmental concerns regulated by both the Clean Water Act and CERCLA.



Illinois Creek Mine

Description of above photographs:

The "trough" is the first phase of the heap leach facility at the Illinois Creek Mine. The trough is approximately 1600 feet long, 450 feet wide and 30 feet deep. Two synthetic liners with a leak detection system between them are used to contain and control the cyanide leach solution. Once ore is placed in the trough, the pregnant solution, or gold bearing solution, will reside in the bottom where it will be protected from freezing temperatures and inaccessible to wildlife.

Facility Description:

The Illinois Creek Mine Project is an open pit mine using heap leach technology for gold extraction. Located midway between McGrath and Galena, it is providing job opportunities for residents from nearby communities.

Jobs and Families:

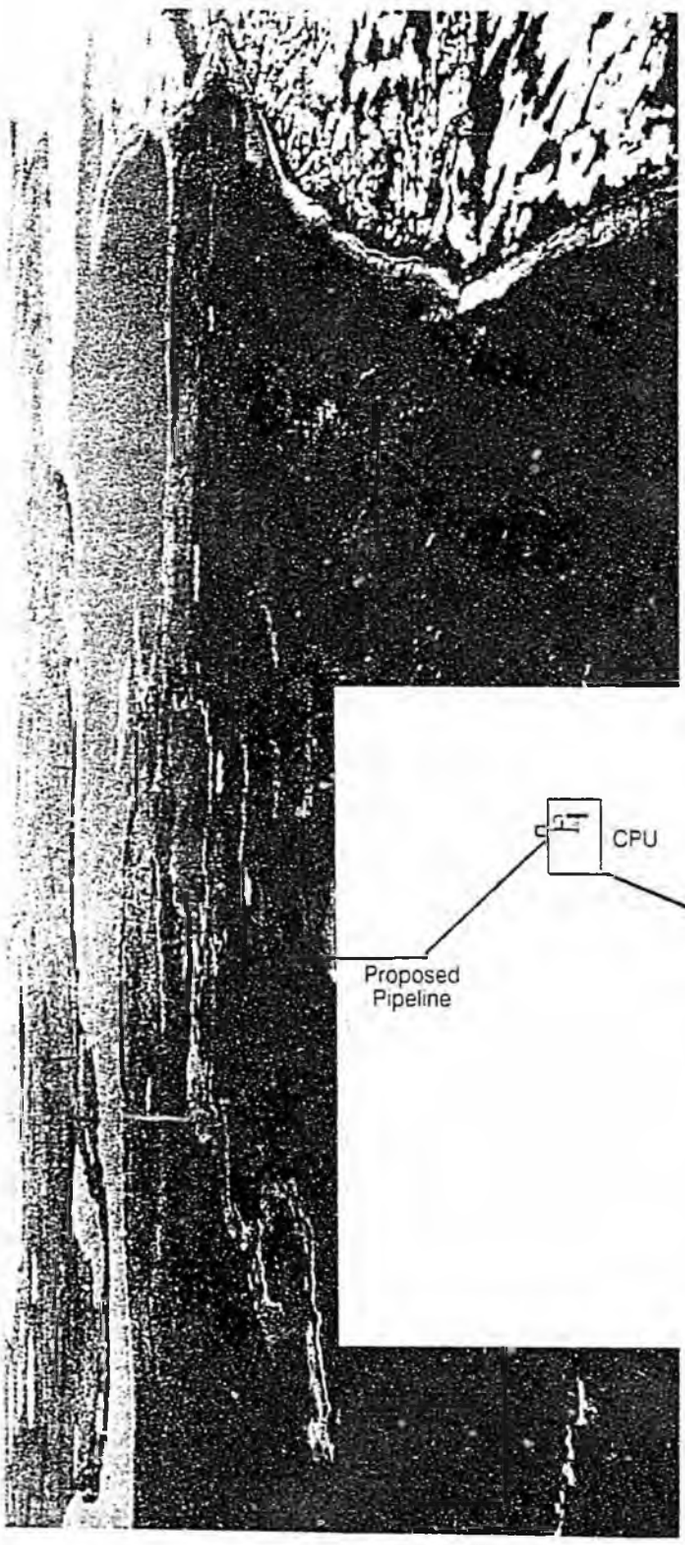
The Illinois Creek Mine has more than 500,000 ounces of gold reserves and will employ 100-110 people. The mine is in a part of the State with relatively low job opportunities, and so will provide a boost to the local economy. DEC heap leach experts will ensure the safe use of cyanide whilst enabling an increase in the volume of economically available gold reserves within the State, while still protecting the environment.

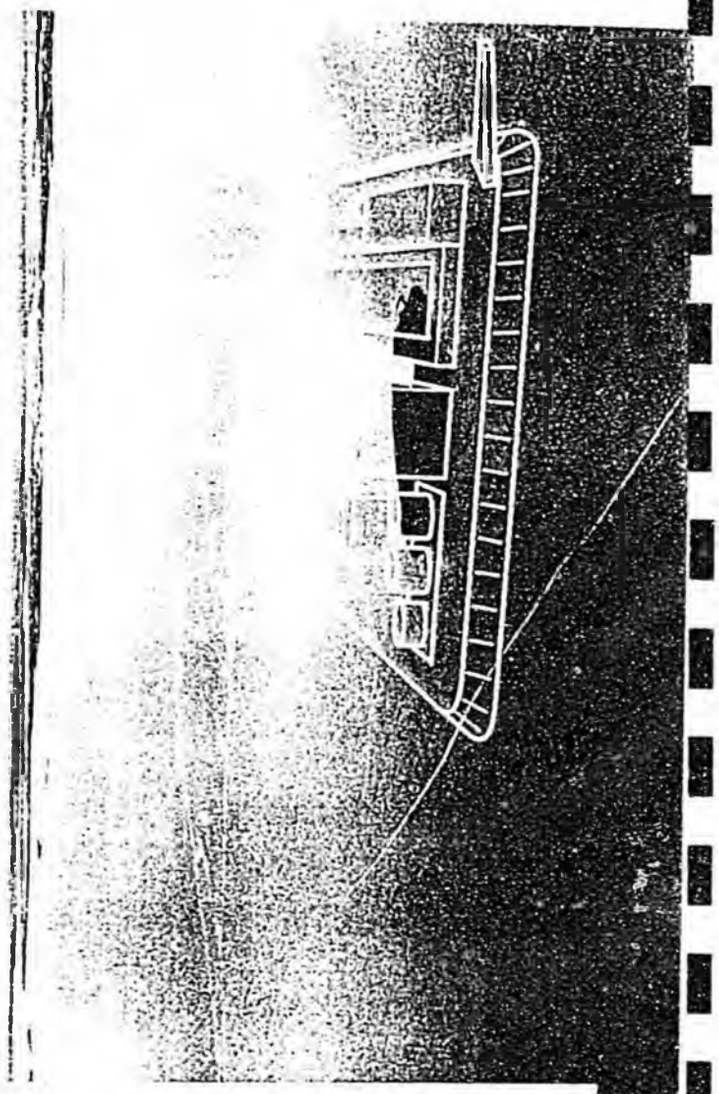
State Oversight and Regulatory Function:

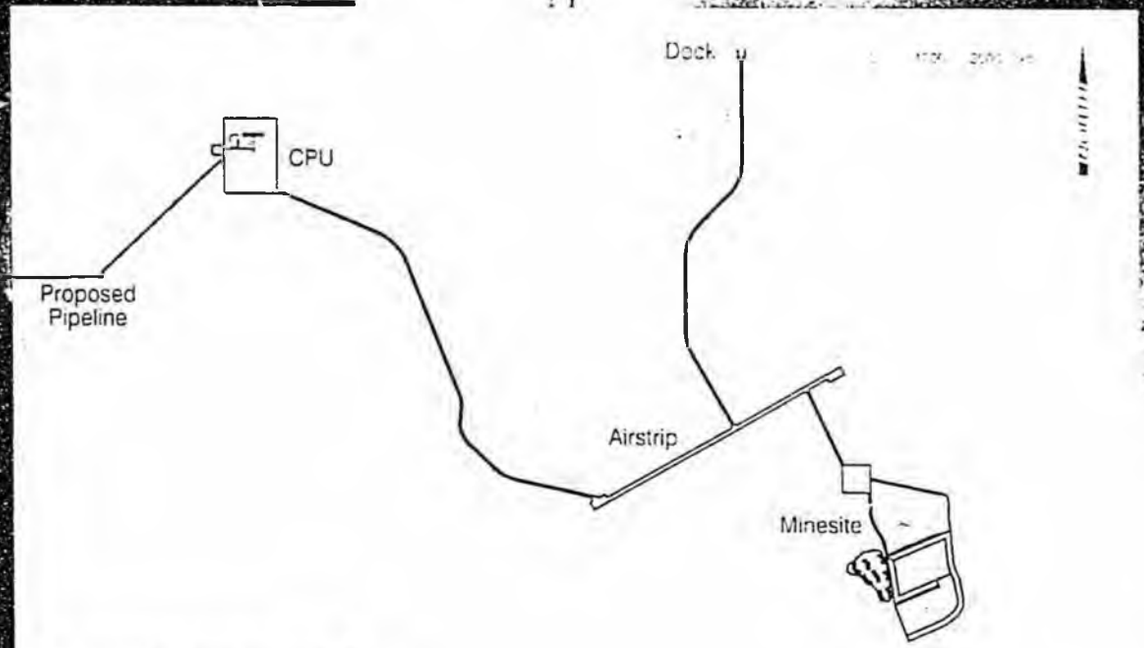
From project conception, DEC has participated in the mine development team that has included State and Federal agencies, mine representatives, and the public. Public meetings in local communities were held jointly by the company and the resource agencies. Permitting was coordinated with State and Federal agencies. Monitoring of construction and inspection of critical development milestones are conducted to assure safe and properly constructed facilities. Start up and operations will also be monitored to assure compliance with permits. Technical assistance will be provided as needed on the project.

Accomplishments:

State waste disposal permits were issued in June 1996. DEC participated on a State permitting team that issued permits in record time for a major development project. Construction of the process plant and the heap pad with placement of ore occurred over the summer construction season. Heap leaching is scheduled to begin by the spring of 1997.






Dock
CPU
Proposed
Pipeline
Airstrip
Minesite

Oil and Gas Exploration
North Slope Fields

Description of above Photograph:

Top: Proposed location for the Badami Central Processing Unit (CPU). Inset map shows layout of the project; the CPU is to be located beyond (West) the spit of Badami Creek (see photo).

Bottom: The artist's rendition of the Northstar project shows one possible layout for the offshore development island. The use of the picture gives perspective of where the island will be positioned in relation to other North Slope facilities such as the Seawater Treatment Plant on West Dock located in the background.

Facility Description:

As the Prudhoe Bay Oil Field reserves decline, new reserves of oil are needed to keep oil flowing through the Alyeska Pipeline. Engineering and permitting for three new reserves are being underway to open new fields. These are the Northstar, Badami, and Alpine Oil Fields. They presently have 145, 115 and 300 million barrels of recoverable oil identified, respectively.

Jobs and Families:

Development of the Northstar, Badami and Alpine North Slope Oil Fields will provide access to hundreds of millions of barrels of oil reserves. They will also provide new infrastructures that will help in developing other nearby reserves. Construction and oil field facility manufacturing jobs will encourage the development of support industries within the State. These new reserves will strengthen the oil industry job market and add to State revenues.

State Oversight and Regulatory Function:

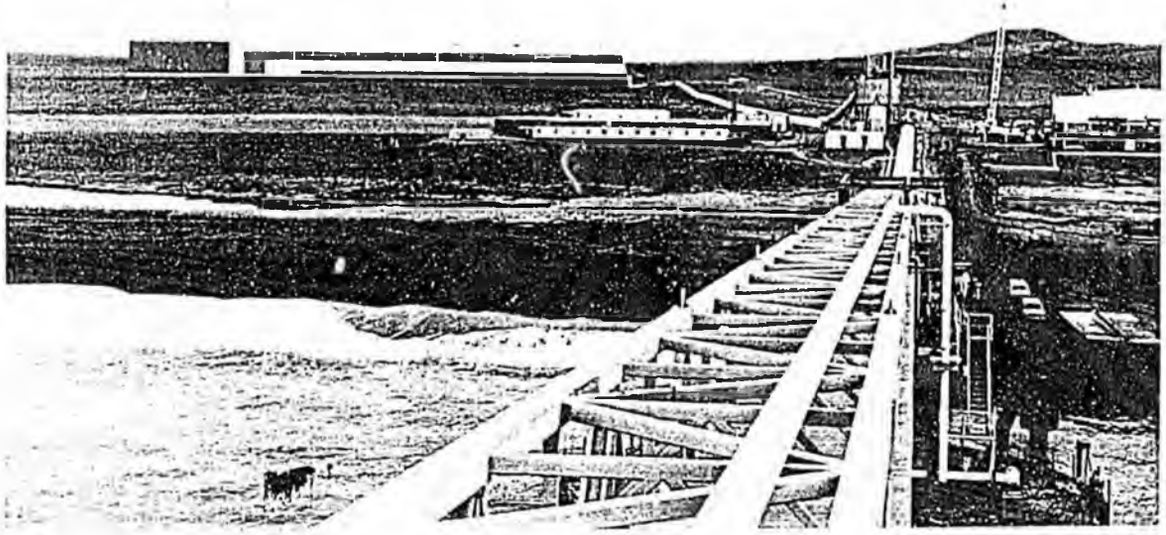
Starting from project conception, DEC has participated on project development teams that include State and Federal agency people, and oil company representatives. Permitting is being coordinated with other State and Federal agencies. New technologies which result in lower costs and improved environmental protection are cooperatively being developed by agency and oil industry employees through pre-permit workshops for these new oil fields. The public is involved through public meetings and by actively pursuing local knowledge to incorporate into the project design.

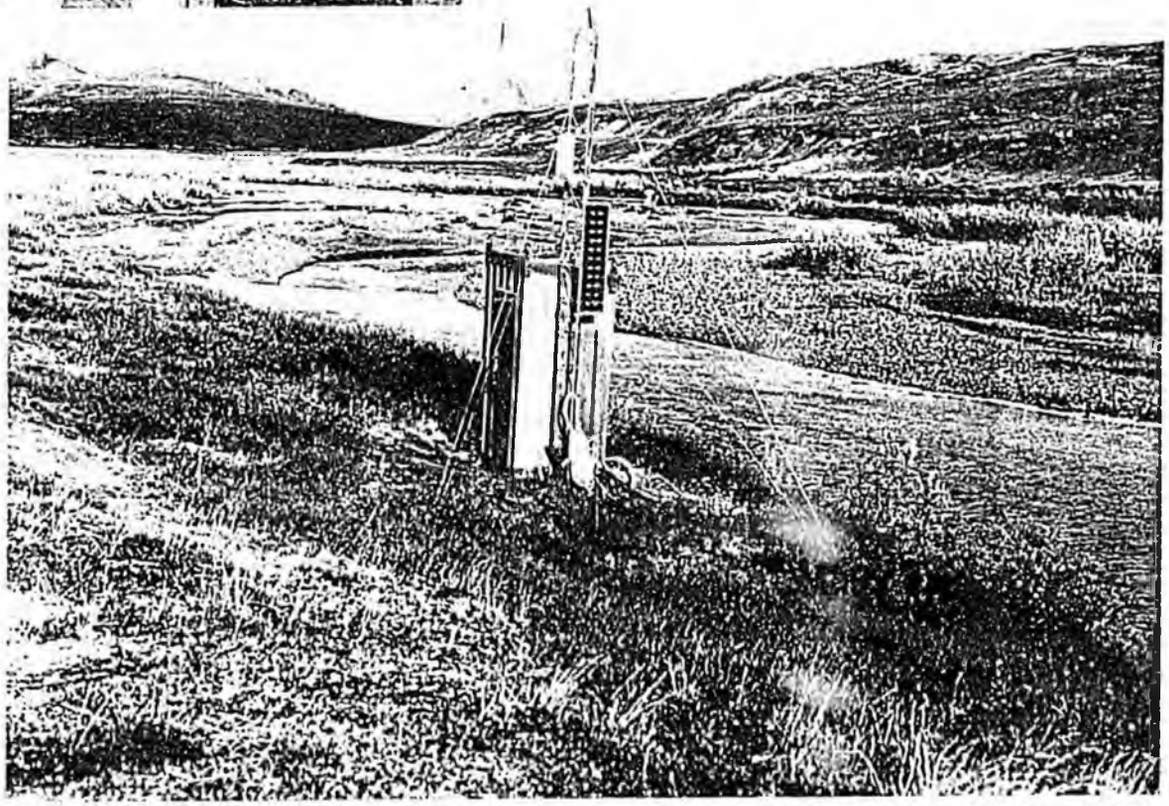
Accomplishments:

Badami Oil Field Project: Gravel construction is on schedule and will begin the winter of 1996/1997. This is the first oil field to be developed east of the Prudhoe Bay Oil Field. The Badami team, consisting of State, Federal, oil company and consultant employees have worked to redesign the project, resulting in an environmentally low impact project. Permits are scheduled to be issued in early January 1997 to allow for gravel placement.

Northstar Oil Field Project: The project team is reviewing engineering and developing information for the project Environmental Impact Statement. Pipeline routes have been evaluated and an environmentally safe route chosen. Test pipeline construction methods have been tried and proven to be environmentally safe. The development team includes a group currently evaluating a mixing zone for a proposed cooling water discharge. Construction is slated to begin no later than the winter of 97/98.

Alpine: Initial plans have been presented to agency staff and a pipeline right of way application has been submitted.





Red Dog Mine

Description of above photographs:

Cominco's Concentrate Storage Building on the sea coast. The annual production of concentrate is hauled from the mine site and stored here until it can be barged out during the short summer open water seasons. The building is 1450 feet long, 218 feet wide, and 125 feet high. It is often used as a navigation mark because it can be seen far out at sea.

A satellite telemetry station (Station 73) on the Ikalukrok River. This station collects and sends water quality data to the mine site to allow real time monitoring of downstream conditions.

Facility Description:

The Red Dog Mine, located 90 miles north of Kotzebue, is an open pit mine and mill complex. The Mine is operated by Cominco Alaska, Inc. in partnership with NANA Regional Corporation. The original reserves were 85 million tons at 17.1% zinc, 5.0% lead, and 2.4 oz./ton silver. With the new discoveries, reserves contain 152 million tons averaging 16.2% zinc, 4.4% lead, and 2.4 oz/ton silver.

Jobs and Families:

Cominco and NANA agreed in 1982 to develop one of the richest zinc deposits in the world, and to provide employment for and protect the subsistence lifestyle of the people of the region. The mine employs approximately 325 people with an additional 75 staff employed in housekeeping, catering, and concentrate hauling. In a normal summer, the workforce expands by about 100 people for loading concentrate and off-loading supplies at the port. Present expansion projects at both the port facilities and the mine are providing approximately 250 construction jobs.

State Oversight and Regulatory Function:

From the start of the project, DEC participated in the development of the mine, road and port. In 1990, DEC and Cominco entered into a Compliance Order By Consent, to rectify the problem of increased metals concentrations entering Red Dog Creek as a result of mining. By the spring of 1991, Cominco had constructed a clean water bypass system and a parallel mineralized water collection ditch and sump, pumping mineralized water to the tailings impoundment for treatment. Biological surveys since 1990 indicate that the aquatic life below the mine is healthy. Inspections are ongoing to monitor water and air quality. State involvement in Reclassification, Whole Effluent Toxicity, Total Dissolved Solids, site-specific criteria, and relief from the National Toxics Rule is essential to ensuring reasonable, flexible, and site-specific permit decisions in the Federal NPDES Permit.

Accomplishments:

DEC worked with the U.S. EPA, Cominco, and the Sierra Club Legal Defense Fund (SCLDF) to ensure operations of the Red Dog Mine continued without interruption, allowing the Mine to discharge wastewater to avoid an over-topping situation with the tailings disposal dam during the summer. DEC withdrew its original mixing zone actions and has been working on resolving water quality issues with the U.S. EPA, Cominco, and SCLDF regarding wastewater permit certification. The waterbody reclassification package is complete and was submitted to the Attorney General's Office for review in December 1996. Site specific criteria for Total Dissolved Solids (TDS) are being evaluated through laboratory studies on fish eggs and fry, and on larval chironomids. The results of the lab studies are pending.

Southcentral Watersheds

Southcentral Watersheds

Description of above photographs:

Top Left: Volunteer neighborhood kids, watering new plants along the bank of Chester Creek at Valley Street Park (Anchorage).

Bottom Right: Salmon fishing pressure both in the river and on the bank (Kenai River).

Program Description:

The Southcentral Watersheds Team is dedicated to working with local governments, agencies, industry, and the public to monitor, assess, protect, and restore water quality. DEC staff either develop community -based teams or join existing ones, whose members are composed of all interest groups. The local team members work together to identify and solve water quality problems. Key activities include inspecting pollution sources in sensitive watersheds, leading water body assessment efforts, and waterbody recovery planning and implementation in prioritized watersheds, as well as providing technical assistance and education to local governments, agencies, industry, and the public regarding Best Management Practices to assure high water quality.

Jobs and Families:

Good water quality is essential to good health in Southcentral Alaska. For example, Anchorage gets most of its drinking water supply from surface impoundments. Good water quality is also essential to Southcentral economy, particularly fisheries and tourism. Alaskans and tourists alike expect a quality experience whether fishing in Kenai River, glacier sight-seeing in the Prince William Sound, or jogging alongside Chester Creek in Anchorage. The best way to have good water quality is to involve those with the most at stake, the people who live or work on a waterbody. They can protect, maintain or enhance these waterbodies through wise, voluntary implementation of Best Management Practices. This cooperative effort is much more cost effective, both in preventing pollution and cleaning up past mistakes, than government acting alone to assure water quality. Clean water makes dollars and sense.

State Oversight and Regulatory Function:

DEC was delegated the responsibility from EPA for Water Quality Standards and nonpoint source pollution control activities in Alaska. Ensuring water quality protection through periodic field assessment is a fundamental step to effective and responsive watershed management programs. The State, rather than EPA, is in the best position to ensure water quality through field evaluations and working with local community teams.

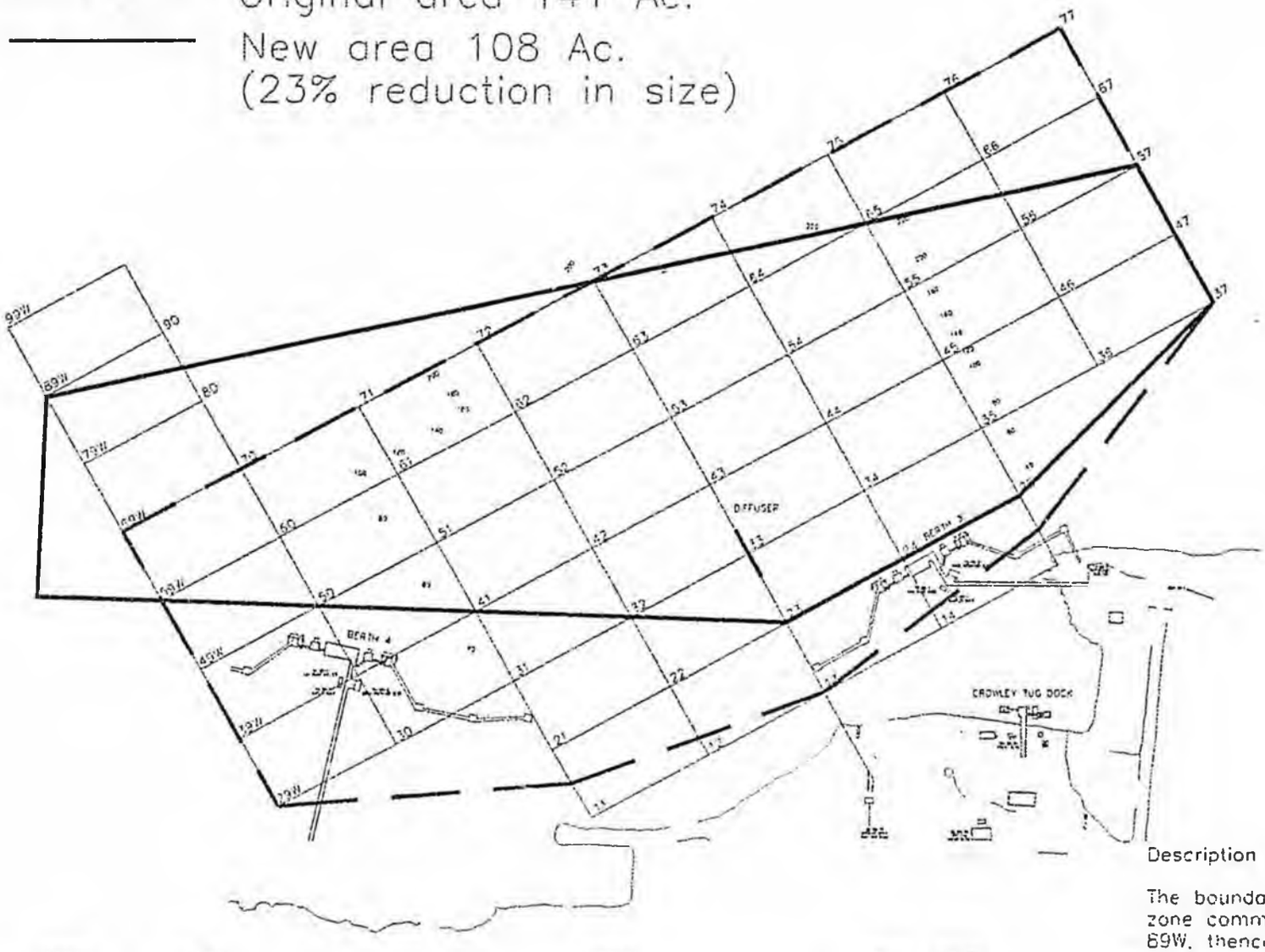
Accomplishments:

Anchorage Bowl: DEC coordinated with the Municipality of Anchorage and the Anchorage Waterways Council to identify waterbodies of concern, perform water quality assessments on Lake Hood and Ship Creek, participated in the Ship Creek Task Force, and identified business projects enhancing Chester Creek and other waterbodies. DEC chaired the interagency bioassessment workgroup to assist development of more cost-effective monitoring strategies. DEC conducted public workshops and aided in the development of 1996 EPA Nonpoint Source (319) proposals and work plans. Education efforts included chairing the Water Educators group, and providing information and making presentations on water quality to schools, the Palmer State Fair, resource groups, other agencies, and the public.

Kenai River: DEC renewed its participation on the Governor's Kenai River Special Management Advisory Board and Technical Working Group; initiated development of a Kenai River Systematic Data Collection Plan, and inspected Kenai River erosion and runoff problems.

Port Valdez: DEC participated in the Port Valdez Regional Citizens' Advisory Council (RCAC) efforts to develop an Ecological Risk Assessment, which lists multiple stressors as well as voluntary Best Management Practices.

Mixing Zone for the Alyeska Ballast Water Treatment Plant



Description of mixing zone boundary:

The boundary of the mixing zone commences at station 89W, thence goes to station 57, thence to station 37, thence to station 25, thence to station 23, thence to station 59W, thence to a point beyond station 59W such that a line from the beginning point meets perpendicularly an extention of the line from point 23 to 59W.

Alyeska Ballast Water Treatment Facility

Description of above Photograph:

The mixing zone from the original wastewater NPDES permit is shown as a dashed line. For the permit renewal, the Department re-defined the size and shape of the mixing zone based upon an additional analysis of existing data, and data collected since the first permit was issued. Additional data included effluent discharge data and pollutant concentrations presently achievable. Discussions on mixing zone data, regulation requirements, including acute, chronic and human health criteria, and effluent parameters were held with the applicant, the Department and oversight public participation groups. The resultant mixing zone was changed as depicted by the solid line, and an overall reduction in the mixing zone area was achieved.

Facility Description:

The Ballast Water Treatment Facility (BWTF) is located at the Alyeska Valdez Marine Terminal, which is the terminus of the Trans Alaska Pipeline carrying crude oil from the North Slope of Alaska to Valdez. Most oil tankers carry sea water as ballast in oil cargo tanks on the voyage north to Alaska. Prior to loading Alaska North Slope crude oil onto tankers, the oil-contaminated ballast water must first be discharged to the BWTF for treatment before being discharged into Port Valdez. The Department continues to work closely with community advisory groups and Alyeska to help ensure compliance with regulatory standards.

Jobs and Families:

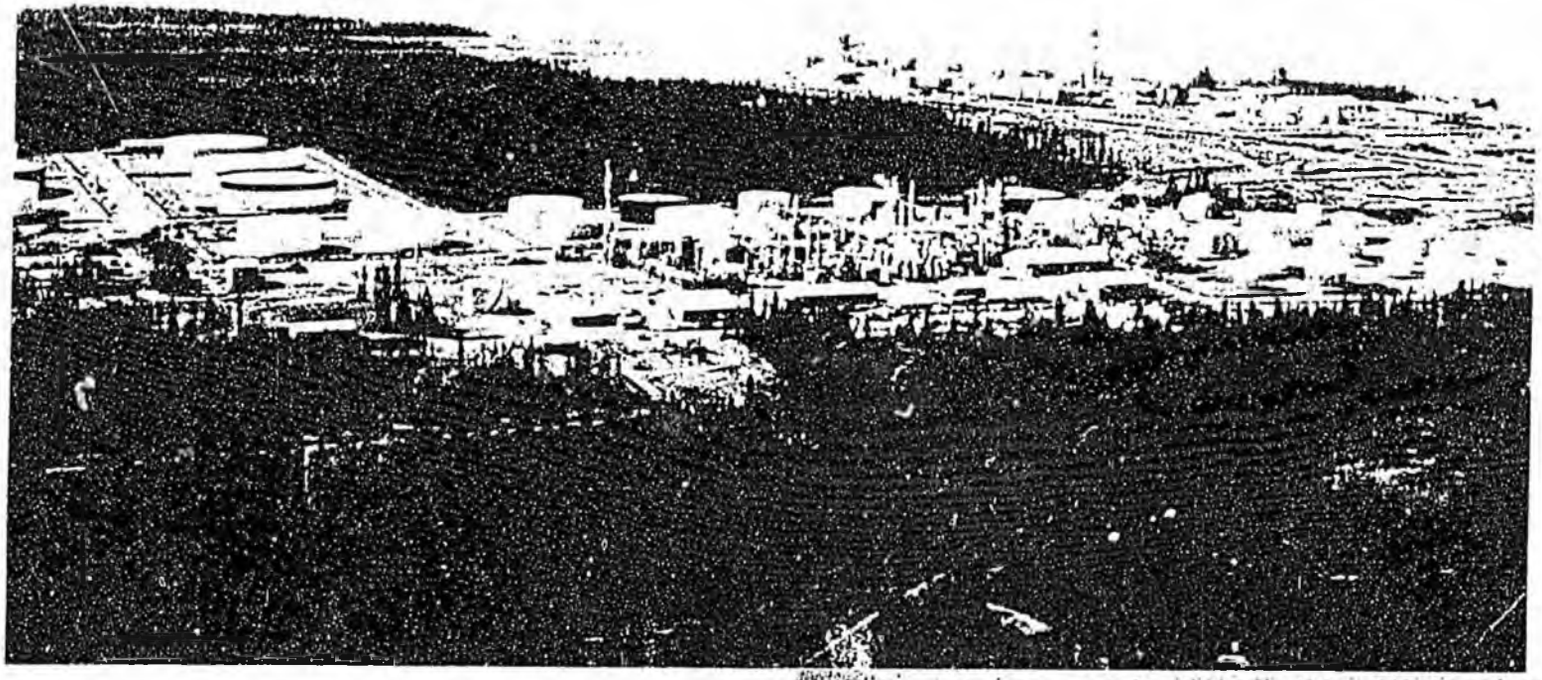
Approximately 1.6 million barrels of crude oil are loaded on tankers each day, which is an important source of revenue for the State of Alaska as well as providing approximately 3,000 direct and contract jobs for the Alyeska Pipeline Service Company. The Federal effluent discharge permit that is certified by the DEC allows Alyeska to accept and treat large volumes of oily ballast water from tankers and discharge the treated water into Port Valdez. Rarely is there a delay in deballasting and loading tankers and delivering Alaska's crude oil to market.

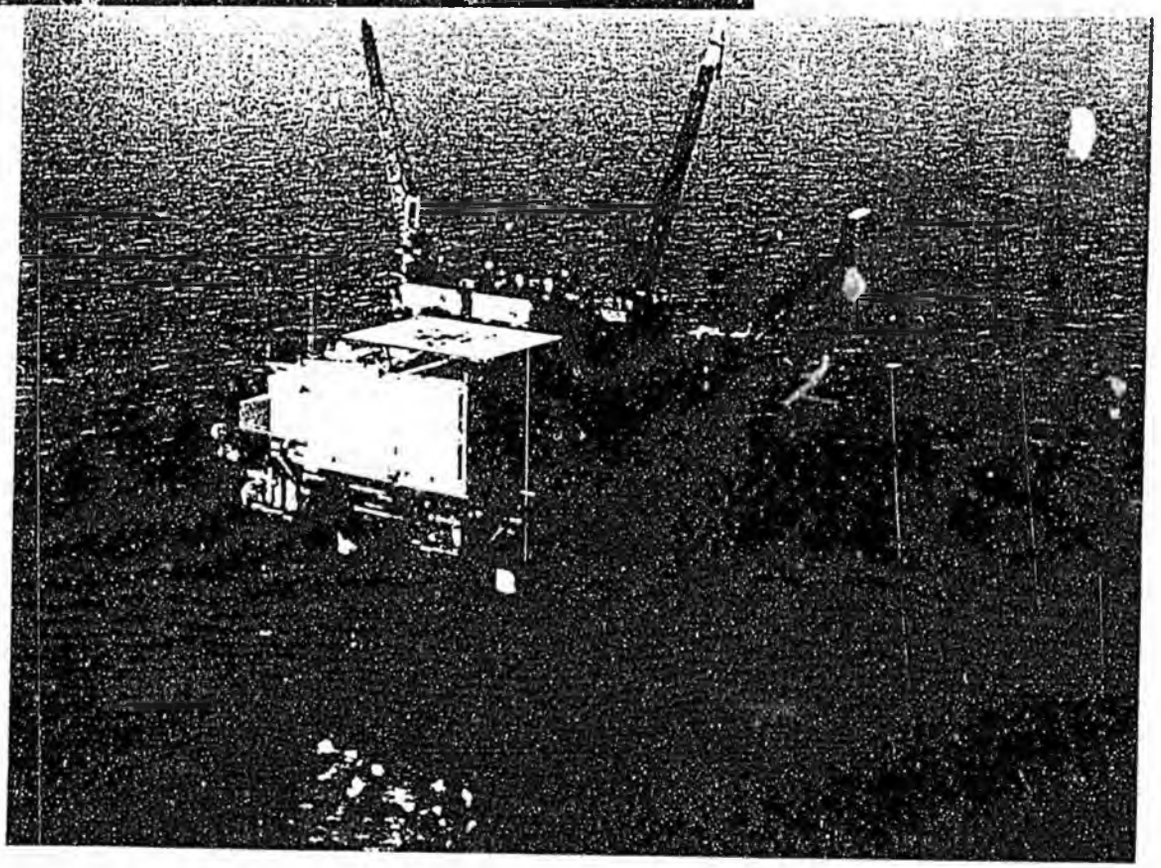
State Oversight and Regulatory Function:

The BWTF processes up to thirty million gallons per day of oil-contaminated water in a three-step process: gravity separation, dissolved air floatation, and biological treatment. Air strippers are used occasionally to prevent exceedance of the permit limit for aromatic hydrocarbons. The effluent discharge permit controls pollutants discharged from the BWTF into Port Valdez to levels that are protective of human consumption of fish and shellfish and protective of the Port Valdez marine environment.

Accomplishments:

Through 1996, DEC continued working with Alyeska and EPA via a public review process toward the reissuance of the NPDES permit. A draft Federal NPDES Permit and State Preliminary Certification were issued on July 11, 1996. The public review included three work group meetings chaired by DEC, with representatives from industry, the public and agencies. During the meetings, permit terms and conditions were proposed and discussed to address concerns by all interested parties. A major milestone achieved during the year was the Department's authorization of new smaller mixing zone (see discussion above) acceptable to all interested parties. It is anticipated that a final permit and State certification will be issued in December 1996.





Oil and Gas Exploration
Cook Inlet

Description of above Photograph:

Top Left: Tesoro Petroleum Inc. Nikiski Refinery (foreground).
Unocal Fertilizer Plant (background left).
Phillip Petroleum Inc. Liquidifed Natural Gas Plant (background right).

Bottom Right: Phillips Petroleum Inc. Tyonek A Platform (Cook Inlet).

Facility Description:

The major companies involved are Unocal Inc., Phillips Petroleum Inc., Shell Western Inc., Marathon Oil Co., and Tesoro Alaska Petroleum Inc. There are currently 15 oil and gas production platforms located in the upper portion of Cook Inlet, and additional production facilities located onshore. These production platforms produce crude oil for export, and for conversion to locally used products, such as propane, gasoline, diesel, heating fuel, and aviation fuel. The platforms also produce natural gas for export, conversion to nitrogen-based fertilizer, and for local heating and power generation purposes. Japan is the primary consumer of their export products.

Jobs and Families:

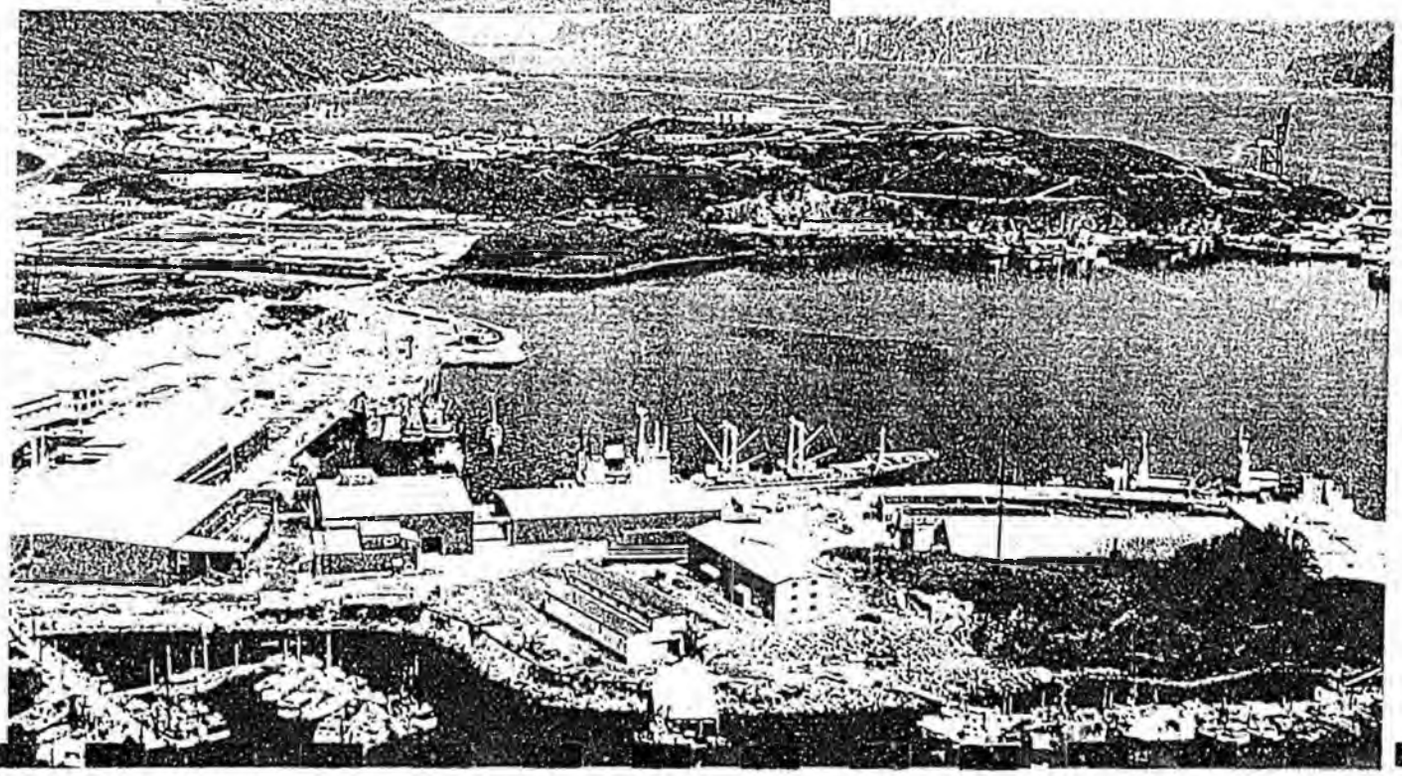
The oil industry located in Cook Inlet has provided jobs and tax revenues for the Kenai Peninsula community for 30 years. Phillips and Marathon Oil Companies operate the only land-based Liquefied Natural Gas (LNG) Plant in North America. The plant annually produces 15 million barrels of liquefied natural gas for shipment to Japan. Total oil and gas industry jobs amount to approximately 36% of the Kenai Borough's workforce while accounting for 41% of the workforce revenue. Total salaries for industry in the Kenai Borough amount to $292.3 million (1994). The industry accounts for approximately 33% of the Kenai Borough's assessed value. Employment in the Kenai Borough for the entire oil and gas industry, extraction and manufacturing, was 1,755 in 1991, or 12% of borough employment. Employment in the businesses that service the industry is estimated at between 3,348 and 4,185 in the Borough for 1991, or an additional 24-30% of the total employment for the Borough.

State Oversight and Regulatory Function:

Regulatory oversight of this industry is administered through the National Pollutant Discharge Elimination System (NPDES) by both the U.S. EPA and DEC. Permits are issued to facilities under this program that address potential and/or actual water quality impacts resulting from waste disposal practices. Staff conduct inspections of these facilities and participate in environmental monitoring studies of water bodies. The Department has been reviewing and permitting mixing zones for produced water, domestic wastewater, and other discharges from the facilities.

Accomplishments:

The State issued its 401 Certification of Reasonable Assurance for this general permit in October 1996. This permit will cover 15 offshore oil/gas production platforms and three associated shore-based facilities. The permit includes provisions that will require a higher level of treatment for the water discharges from these facilities thereby reducing the amount of hydrocarbons that are discharged. There is also an agreement between the oil company operators (Phillips Petroleum, Shell Western, Unocal, and Marathon) to develop a pollution prevention program for the facilities.



Seafood Processors

Description of above photographs:

Top Left: Trident Seafoods Inc. (Akutan Harbor).

Bottom Right: Unisea Inc. (City of Unalaska).

Facility Description:

There are more than 400 individual seafood processing operations within the State of Alaska. The seafood industry includes both shore-based facilities located in coastal communities, and vessels operating at sea. The disposal of fish and/or shellfish waste products from these production facilities is regulated by DEC. Industry is encouraged, and in some cases, required, to reuse waste products, as in the production of fish meal. The fish meal is used as a food supplement in various products, including dog and cat food.

Jobs and Families:

This industry provides the largest number of jobs for Alaskans of any resource-based industry. Peak winter employment at each facility is 800-900 people. Main product lines are crab, cod, and pollock. The finished products of this industry are exported to Japan, Europe, and the lower 48.

State Oversight and Regulatory Function:

Regulatory oversight of this industry is administered through the National Pollutant Discharge Elimination System (NPDES) by both the U.S. EPA and DEC. Permits are issued to facilities under this program that address potential and/or actual water quality impacts resulting from waste disposal practices. Staff conduct inspections of these facilities and participate in environmental monitoring studies of water bodies.

Accomplishments:

Unalaska/Akutan Seafood Processor NPDES Permits: The State issued its 401 Certification of Reasonable Assurance for six companies and eight separate major seafood processing facilities located in Unalaska and Akutan. The new permits for these facilities include provisions that will reduce the amount of pollutants that will be discharged by the facilities in the future. The objective of the permits is to reduce the pollutant load on the receiving water bodies, Unalaska Bay and Akutan Harbor, so that water quality will be improved and the water bodies can be removed from the State's impaired waterbodies list.

Southeast Watersheds

Southeast Watersheds

Description of above Photograph:

Southeast Alaska is blessed with urban salmon streams and clean water. Urban expansion, mining, and forest resource use are significant industries that affect water quality. Promoting hands-on, cooperative working relationships in the field with developers, local government and the public help ensure water quality is protected. Assessing water quality and applying Best Management Practices, such as erosion control, are key functions.

Project Description:

The Southeast Watersheds Team works on-the-ground with local governments, agencies and industry to monitor, assess and restore water quality and promote healthy watersheds through application of Best Management Practices. This voluntary, cooperative process focuses on a team approach to control nonpoint, or diffuse, sources of pollution. Key activities include: inspections; technical assistance; permitting; monitoring water quality; overseeing watershed restoration projects; completing waterbody assessment and recovery plans; and educating students in water quality monitoring.

Jobs and Families:

Clean water makes dollars and sense. Waters supporting healthy salmon runs are important to residents, and the fisheries and tourism industries. A "clean water bill of health" means reduced sanctions for developers and less Federal EPA oversight of wetland fill permits. Less Federal EPA oversight and control translates to lower costs to the developer. Working at the local level in Petersburg, Wrangell, Sitka, Juneau and Haines during FY'97 has developed greater trust between parties and led to positive results. Clean water results in safe drinking water and provides water recreation opportunities that promote family well-being.

State Oversight and Regulatory Function:

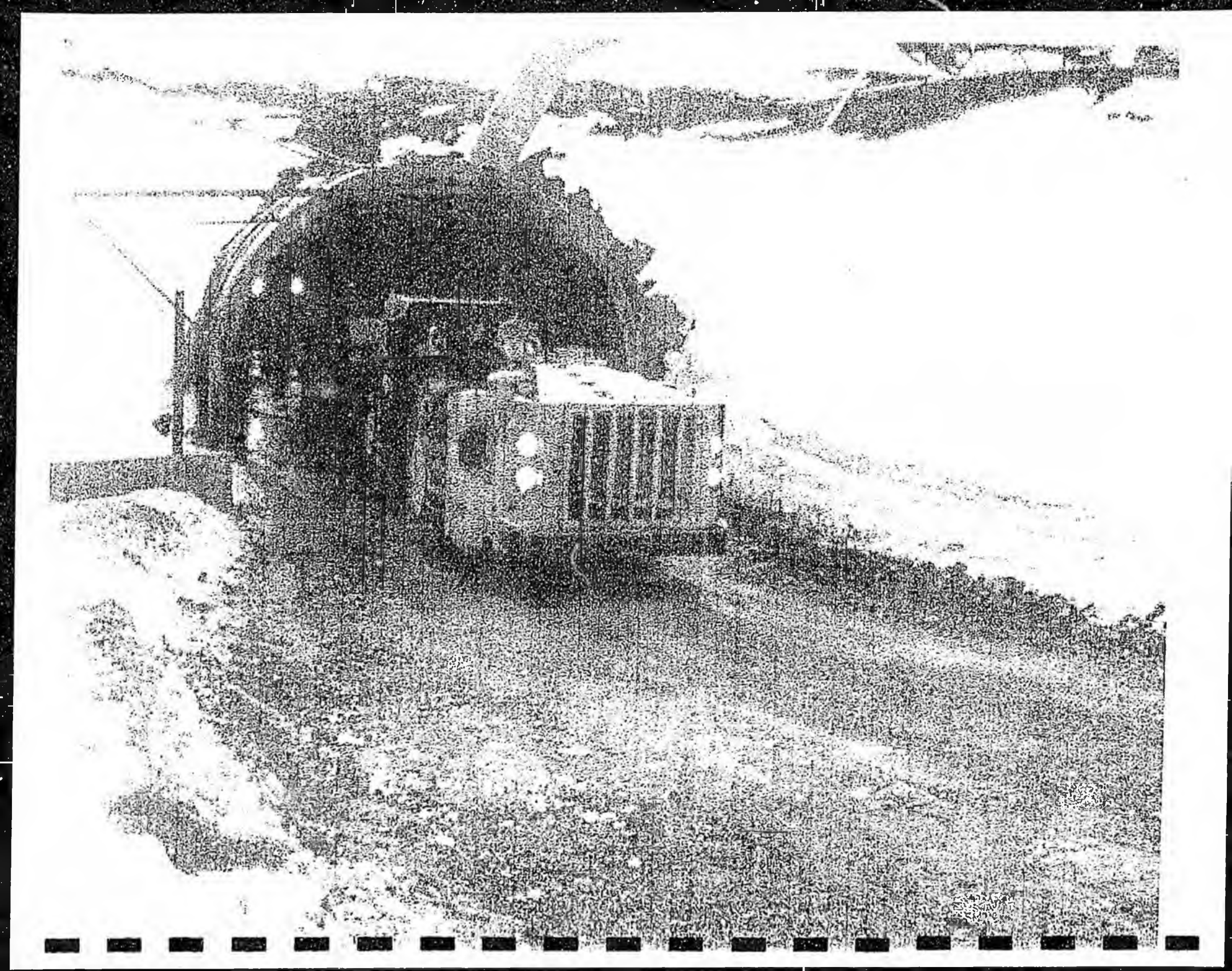
DEC was delegated the responsibility from EPA for Water Quality Standards and nonpoint source pollution control activities in Alaska. Ensuring water quality protection through periodic field assessment is a fundamental step to effective and responsive watershed management programs. The State, rather than EPA, is in the best position to ensure water quality through field evaluations and working with local community teams.

Accomplishments:

Nine waterbody *assessments* completed in FY'97: Wrinkleneck Creek, Granite Creek and Swan Lake (Sitka); Shoemaker Bay (Wrangell) and Thorne Bay (Prince of Wales); Sawmill Creek (Haines); Duck Creek, Jordan Creek, Switzer Creek and Peterson Hill Creek (Juneau).

Recovery plans are completed for Hammer Slough (Petersburg), Sawmill Creek (Haines), and Vanderbilt Creek and Lemon Creek (Juneau). A Duck Creek recovery plan is in progress. Monitoring the effectiveness of these plans is a priority for FY'98.

Technical assistance to permit applicants and development and *routine monitoring* of over 15 waterbodies in Southeast Alaska.



AJ Mine

Description of above Photographs:

An Echo Bay truck exiting the underground facilities via the Sheep Creek Portal.

Facility Description:

Echo Bay proposes to reopen the historic AJ Mine in a manner similar to how the mine had been operated for 40 years before it was closed in 1944. The project would excavate new underground workings and rehabilitate some old workings in order to mine both the north and south ore bodies at a rate of 15,000 tons per day. The mining method has been modified from Echo Bay's initial approach involving mass blasting techniques to a more selective method of sublevel caving, which involves substantially smaller blasts.

The milling and gold refining processes, which would be located underground, would use standard technology of grinding and crushing the ore, gravity separation to remove a portion of the free gold, and then flotation to remove most of the remaining gold as well as a significant portion of the metal sulfides. Echo Bay no longer plans to use cyanide as part of the onsite gold recovery process. A surface support facility is proposed for the old AJ Rock Dump between the diesel tank farm and CBJ wastewater treatment plant. The surface facility would include mine offices, employee parking, a small shop, warehouse, power plant facilities, tailings thickener and mine water settling ponds.

No water affected by the mining operations would be allowed to enter Gold Creek. Excess mine water would be collected, treated and discharged into Gastineau Channel.

The tailings are proposed to be disposed of at the mouth of Taku inlet via a nine-mile long underwater pipeline. The submarine disposal method would replace the Sheep Creek tailings disposal alternative.

Jobs and Families:

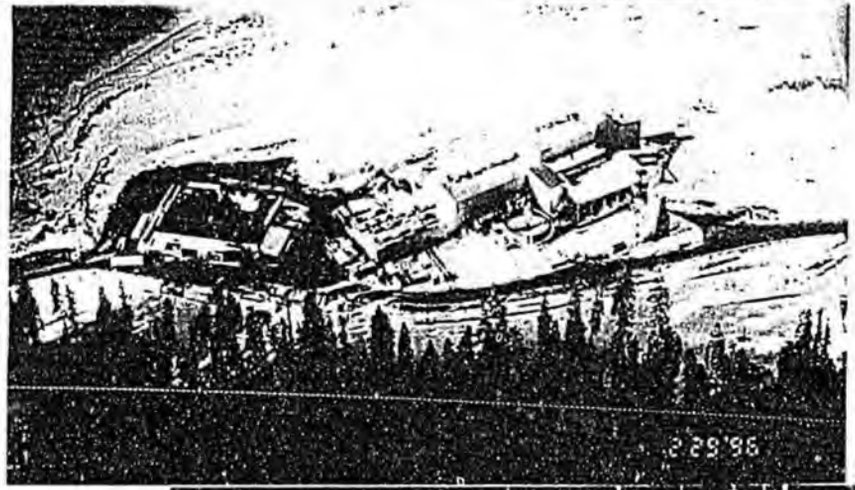
When in full production, the Alaska-Juneau Mine will create nearly 400 new jobs, with an estimated annual payroll of $20 million. Royalties to the City of Juneau from the AJ project are estimated to be about $3 million annually. In partnership with the University of Alaska Southeast, Echo Bay has helped to develop a program to train local people for jobs in mining and Echo Bay's plans call for local and in-state hire.

State Oversight and Regulatory Function:

Presently, DEC's role is to evaluate Echo Bay's proposals for mill tailings disposal, both upland (Nevada Creek) and Submarine Tailings Disposal (STD) near Gastineau Channel. With a current focus on STD, DEC must consider the appropriateness, limits and monitoring necessary for each mixing zone and zone of deposit area. DEC is working closely with other state and federal agencies in evaluating Echo Bay's supplemental environmental impact statement. DEC is also reviewing, for certification, Echo Bay's site specific criteria and mixing zone requests for discharges into Gold Creek. With any permit certification by DEC, there must be the assurance that discharges will comply with the state's water quality standards, which are set to protect environmental quality.

Accomplishments:

DEC has organized an internal AJ Mine Project Team of 10 scientists and permit reviewers to evaluate Echo Bay's proposals for permit certifications. DEC also provides direct comments to the multi-agency Technical Review Team, the U.S. EPA and its contractor, CH2M-Hill.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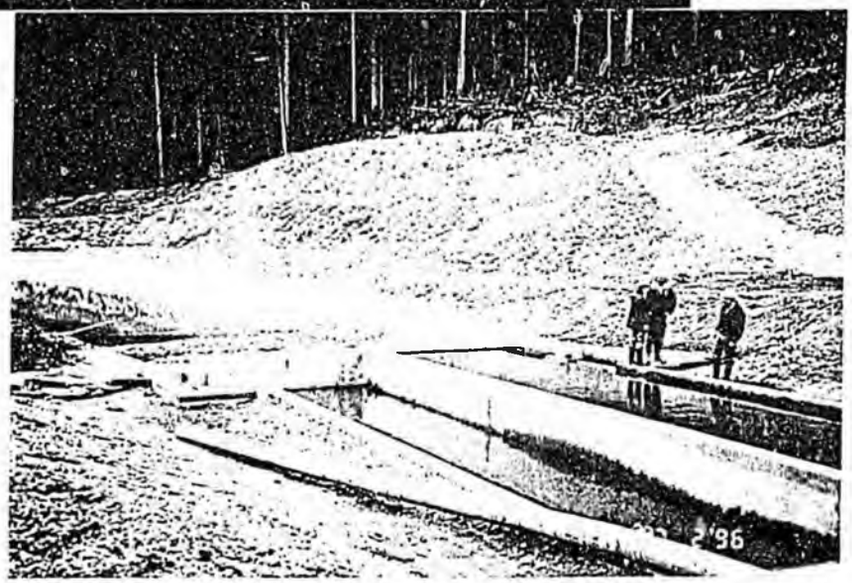
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Greens Creek Mine

Description of above Photograph:

Top Left: Aerial view of the millsite at Greens Creek Mine. The mill is near the main 920 adit of the mine and borders Greens Creek.

Center: Newly constructed ponds called "degritting basins" collect sediment in runoff from a waste rock site near the mill. The basins are designed to be cleaned out with a backhoe and the fine materials are trucked to the dry tailings pile for disposal.

Bottom Right: As part of the redesigned project, the tailings area pond (seen drained in the photo) was replaced by a 1.2 million gallon water storage tank

Facility Description:

Kennecott Greens Creek Mine, 18 miles southwest of Juneau on Admiralty Island, is a lead-zinc-precious metals mine. Greens Creek is the largest producer of silver concentrate in the U.S. Because Greens Creek is located within a national monument, environmental standards for the mine operations are high. Mine production temporarily stopped in April 1993 due to depressed markets for metals. Far from being idle during this shutdown, Kennecott began extensive upgrades to the wastewater systems and mine infrastructure. These improvements will make the mine more efficient with more predictable water quality discharge. Exploration has revealed additional ore reserves at higher grades. The Mine will be in full operation again by December 1996, processing around 1300 tons per day. Ore concentrate is shipped overseas for further refining.

Jobs and Families:

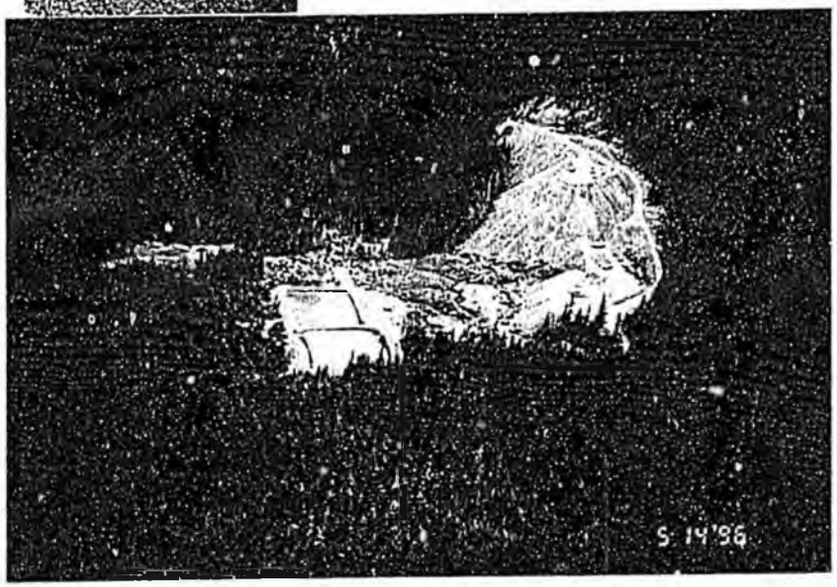
The mine currently employs 220 workers. This number will increase when the mine reaches full production. The company has modified its three-shift scheduling to two longer shifts and rotating weeks on and off, giving workers longer blocks of personal leave. During the past two years, over $100 million has been spent for facility upgrades and water treatment improvements. Alaskan contractors were used for much of the construction work.

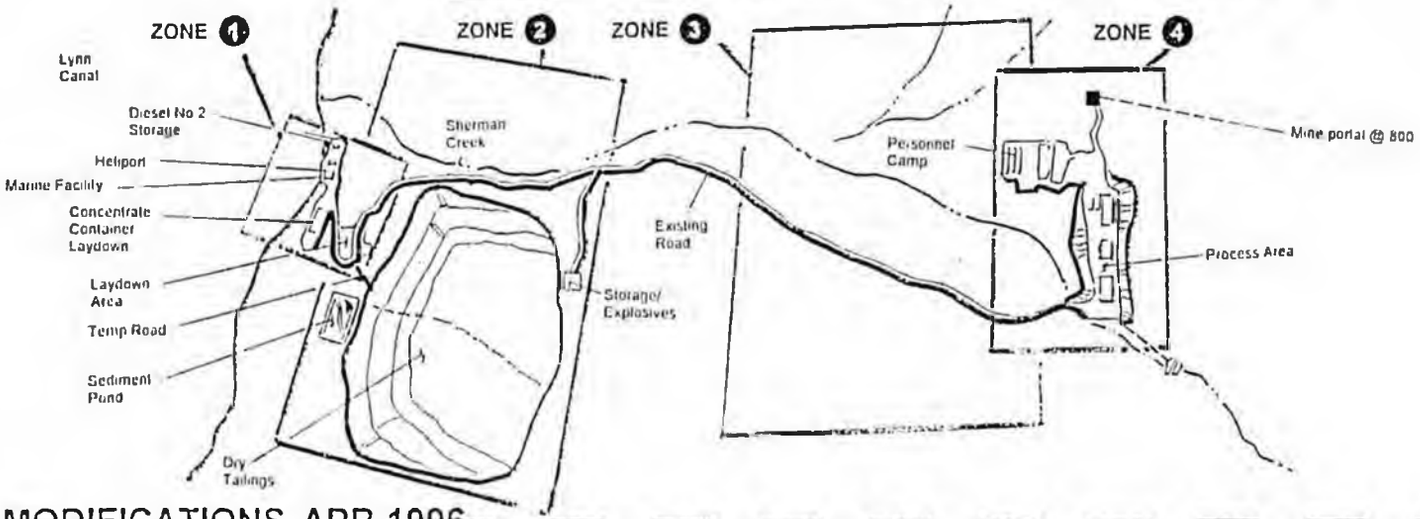
State Oversight and Regulatory Function:

DEC has a team of specialists in water quality, solid waste, engineering, and air quality involved in permits and oversight of the mine operations. Most site visits are coordinated with the land manager, the U.S. Forest Service, who this year renewed round table meetings with the company and other agencies to exchange information. DEC staff is working with EPA on the renewal of the NPDES Permit which is nearing completion for public review. Key features of this permit will be water quality-based limits and a smaller mixing zone. Staff is also reviewing the tailings disposal area and will be issuing a solid waste permit for this activity. DEC's fee structure for solid waste will help support staff time for this project. Engineering staff has reviewed the plans for the wastewater upgrades.

Accomplishments:

Resumed ore production after three year shutdown and extensive upgrades to wastewater systems. DEC is continuing work on the dry tailings disposal and a revised NPDES permit, including analysis of a mixing zone.





MODIFICATIONS APR 1996

Kensington Mine

Description of above photographs:

Top Left: Coeur staff explains the layout of the proposed dry tailings facility to State officials at the mine site.

Center: Aerial view of the Kensington mine adit, rock dump and settling ponds. When the facility is constructed, the ponds will be reconfigured and waste rock will be used on site.

Bottom Right: Schematic of main elements of the revised project. A major modification was the elimination of a 200+ acre tailings impoundment in favor of dry tailings disposal.

Facility Description:

The Kensington Mine is located 45 miles north of Juneau on Lynn Canal. The owner/operator, Coeur d'Alene Mines Corporation, is developing the property, and when fully permitted and constructed, the mine will produce 4000 tons of ore per day. In April 1996, Coeur announced significant modifications to the project, including dry tailings disposal and off-site processing, which will not require the use of cyanide in milling the ore. Plans are to discharge mine drainage and process water to Sherman Creek instead of Lynn Canal as previously proposed. Coeur expects to meet Water Quality Standards without a mixing zone.

Jobs and Families:

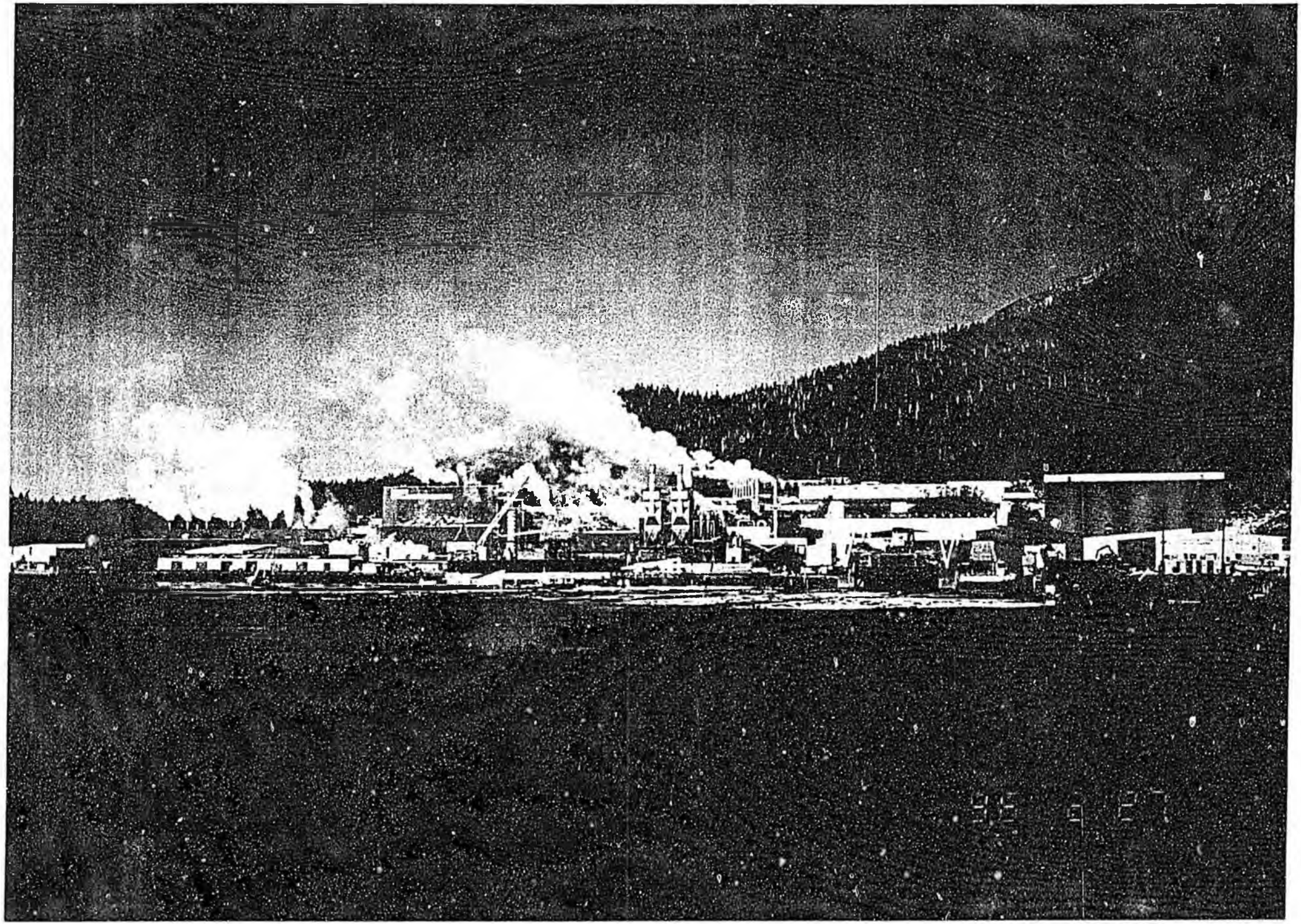
When in full production, a workforce of 250 will live on site and commute by helicopter from outlying communities on a rotating schedule. Coeur Alaska is committed to local hire for both construction and production and has worked with local Native corporations to joint venture some elements of the project, such as housing. Coeur is also committed to working with a consortium of conservation groups, the Kensington Coalition, to ensure an environmentally sound project. The Kensington Mine infrastructure will cost $200 million to build. The life of the Mine is estimated at 10 or more years, with 200,000 ounces of gold produced annually.

State Oversight and Regulatory Function:

DEC has established a project team from water quality, solid waste, spill prevention, air quality and other disciplines for the review and permitting of this project. The modifications announced by the company in April 1996, have required extensive technical review by the Department. DEC staff has also cooperated with the U.S. Forest Service and EPA as they develop a supplemental EIS, due out in December 1996. DEC and EPA have worked together on Water Quality Standards to assure that the discharge meets State and Federal requirements.

Accomplishments:

In 1996, Coeur entered into a funding agreement with DEC for staff time required to process the many permits for this project. The agency signed a Memorandum of Understanding with EPA and Coeur Alaska which outlined project permitting expectations by all parties. Progress on the solid waste permit and water quality certifications is on schedule. Coeur sponsored many technical workshops for the agencies to apprise them of the changes and improvements to the project with the elimination of on-site processing.



Ketchikan Pulp Company

Description of above photograph

View of the Ketchikan Pulp Mill from across Ward Cove.

Facility Description:

Ketchikan Pulp Company (KPC) was a sulfite dissolving pulp mill that produced an ultra-pure cellulose product used to manufacture rayon and cellophane, which were subsequently made into rayon fabrics, rayon tire cords, carpets, drapes, food packaging cellophane, and a number of specialty items by KPC's clients. The mill was in operation since 1954, and is located five miles north of the City of Ketchikan. KPC operates two sawmills, and several logging camps around Southeast Alaska. The primary sources of fiber for KPC's pulp process and sawmills were logs and chips from the Tongass National Forest under a long-term contract with the U.S. Forest Service.

Jobs and Families:

Unfortunately, the closure of KPC will have a profound effect on jobs and families in the Ketchikan, Metlakatla and Prince of Wales areas. Dept. of Commerce and Economic Development, Health and Social Services, and DEC have offices in Ketchikan and are working with KPC and the Ketchikan City and Borough to stabilize the area's economy.

State Oversight and Regulatory Function:

KPC announced closure of the pulp mill facility in October 1996. KPC is currently negotiating a timber contract with the Forest Service for a log supply to run both the Metlakatla and Ketchikan sawmills. KPC withdrew their application for an NPDES permit. Louisiana Pacific (KPC's parent company), KPC, DEC, and EPA are initiating a joint clean up effort for the pulpmill and associated facilities. The goal of the clean up effort is to determine the nature and extent of contamination at KPC's facilities and oversee clean up activities as quickly as possible so the facility can be put back into productive economic use.

Accomplishments:

During the last year the KPC team continued to work closely with KPC to process their mixing zone request and issue a Certificate of Reasonable assurance for the NPDES permit. KPC withdrew their NPDES Permit request before the permit was issued. The contaminated sites program, with the assistance of watershed development and other DEC staff, will be in charge of the KPC clean up efforts.

This presentation was made possible through the contributions and effort s of:

Watershed Management Team Members
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DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEPARTMENT OVERVIEW

Michele Brown, Commissioner

January 24, 1997

1. Organization Overview
2. Reductions Linked to Changes in Service Delivery
3. Change from FY 97 Authorized to FY 98 Request - All Funding Sources
4. Change from FY 97 Authorized to FY 98 Request - General Funds
5. Change from FY 97 Authorized to FY 98 Request - Staffing

1. ORGANIZATION OVERVIEW

The Department of Environmental Conservation is organized in six divisions which provide services statewide.

Environmental Health **Funding $9,520.8** **118 PCNs**

Mission: In order to protect the health of Alaskans and their visitors, support the continued growth in the tourism industry, the businesses it supports, and the continued growth of food processing in the state, the division of Environmental Health works with businesses and municipalities to ensure the safe processing and delivery of food and drinking water, as well as the proper management of solid waste and pesticides.

FY 96/97: The Seafood Processing program was awarded the Hammer Award by Vice President Gore for work on a joint inspection form and the creation of a multi-state database on seafood inspections. This will facilitate seafood export to the European Union. The Hammer Award is given in recognition of efforts to "reinvent" government.

The Food Safety program, in recognition of its efforts related to Food Safety Awareness, was asked to participate in the planning of the first national conference on Food Safety Education.

Alaska's meat inspection program was publicly recognized this fall when new federal meat inspection rules were issued. The new rules require microbiological inspection — procedures Alaska had already been using for 1½ years.

The Drinking Water program continues to issue waivers to requirements for testing for unlikely contaminants, with an additional 305 waivers issued at a cost savings of nearly $2 million annually to water system operators.

The Solid Waste program worked with the Governor's Washington D.C. office and Congressional delegation to secure passage of the Land Disposal Program Flexibility Act which provides Alaska-specific exemptions from certain solid waste regulations. This will allow our solid waste program to be tailored to Alaska's needs, saving Alaska communities from needless expense on solid waste disposal.

FY 98: Environmental Health is emerging as the main point of contact for large clusters of small- and medium-sized Alaska businesses that make up much of the state's community economic base: restaurants and hospitality, seafood processing, and basic community sanitation (drinking water, solid waste). The division is continuing its focus on regulatory streamlining and improvements that incorporate efficiencies and ensure that requirements add value to these key economic and public health sectors.

Spill Prevention and Response **Funding $12,058.4** **129 PCNs**

Mission: The division of Spill Prevention and Response prevents, responds to and ensures the cleanup of unauthorized discharges of oil and hazardous substances.

FY 96/97: Approved the cleanup and final "close-out" of 135 contaminated sites around the State.

Negotiated and signed a three-party agreement with the U.S. Air Force and EPA for the investigation and cleanup of the King Salmon Air Force Station Barrel Bluffs. This agreement is the first of its type in the nation in which a state worked with the Air Force and EPA to move ahead on cleanup without the site being a Superfund listing.

Completed the initial investigation of contamination at the Alaska Pulp Corporation mill facility and marine environment near Sitka.

Signed local spill response agreements with seven communities which provide State technical and financial assistance to local governments that are willing to take initial response actions to control, contain or cleanup to oil or hazardous substance spills in the community. Placed initial first-tier emergency spill response equipment in Nome, Kotzebue, Fairbanks, Bethel, Anchorage, Seward, Kodiak, Dutch Harbor, Wrangell, Skagway, Juneau, Hoonah, Craig and Sitka.

Approved oil spill prevention and response contingency plans for 21 tankers operating in Prince William Sound with the condition that the shippers would develop improvements to the tug escort system for tankers transiting Prince William Sound.

Adopted regulations that clarify how operators are to meet the "best available technology" requirements in the state's oil pollution control statute.

FY 98: Working with Ketchikan Pulp Corporation, the City and Borough of Ketchikan and the EPA, complete site characterization and short- term cleanup actions for the Ketchikan pulp mill which is scheduled to close in March 1997. Develop a plan to ensure the closure and cleanup of the pulp mill properties will facilitate the economic re-use of the property.

Adopt cleanup standards that will serve as a uniform statewide "measuring stick" for determining when no further cleanup is needed to protect public health and the environment at a site contaminated by oil or hazardous substances.

In consultation with the shippers, the U.S. Coast Guard, marine pilots and the Prince William Sound Regional Citizens Advisory Council, approve and put in place technological and procedural improvements to the tanker escort system.

Bring publicly- and privately-owned underground fuel storage tanks into compliance with the federal 1998 tank upgrade and spill prevention deadline.

Facility Construction & Operation **Funding $4,484.2** **37 PCNs**

Mission: The division of Facility Construction and Operation promotes public health and environmental protection by providing financial and technical assistance to local governments for the construction and operation of water, sewerage, and solid waste projects.

FY96/97: Provided new water and sewer services to over 520 households where residents previously had hauled water or utilized honey buckets. Provided improvements to water, sewer, and/or solid waste systems serving 900 homes. This improved the lives of approximately 800 rural Alaska children through the provision of safe drinking water and sanitary sewage disposal systems. Village sanitation projects generated seasonal employment for over 1,000 rural residents and paid over $8 million in wages. Municipal grants and loans resulted in an estimated 300 construction jobs this year. Likewise, urban Alaska-based engineering firms, vendors, and freight operators benefitted from approximately $12 - $15 million in additional business.

Participated in efforts to reauthorize the Safe Drinking Water Act and Farm Bill, including language authorizing up to $30.0 million in federal appropriations annually for rural Alaska sanitation improvements.

Successfully introduced and secured passage of legislation authorizing the sale of state-issued revenue bonds to leverage the Alaska Clean Water Fund, providing up to $15.0 million per year for funding for low interest loans for wastewater systems.

The State funded nine Remote Maintenance Workers (RMWs) who provided training and technical assistance to 126 rural communities. An additional 280 individuals from across the state passed operator certification exams.

Response by RMWs in one service area saved four village sanitation facilities valued at several million dollars each. Similarly in the Northwest Arctic, the quick response by a RMW is credited with preventing the catastrophic failure of another village water system.

FY98: Implement a State revolving loan program for drinking water projects.

Provide leveraged financing of the Alaska Clean Water Fund for low-interest loans on wastewater projects.

Continue to seek federal matching appropriations for state efforts to support construction of sanitation projects, the Remote Utility Business Advisor (RUBA) and RMW programs, project administration and village capacity development. Support and participate in developing new technology for rural sanitation solutions.

Provide new water and sewerage service to 1,000 households where residents previously hauled water or utilized honey buckets. Provide improved water, sewer and/or solid waste systems to 1,100 households.

Air and Water Quality **Funding $9,606.9** **93 PCNs**

Mission: The division of Air and Water Quality prevents, monitors and controls emissions in the air and water to protect public health and the environment.

FY 96/97: The division obtained an exemption from the national highway low-sulfur diesel fuel requirements, saving Alaskans millions of dollars in increased highway fuel costs. Extended Anchorage's deadline for carbon monoxide standards attainment allowing Anchorage more time to meet the standards. Obtained federal funding to establish a permanent particulate monitoring network and public alert system in the Matanuska-Susitna valley to protect public health.

Worked with other western states and federal agencies to help develop a national policy for granting waivers for communities that experienced air quality violations resulting from natural events, such as volcanic eruptions and wind blown dust from glacial rivers.

Issued certification for three placer mining general permits for mechanical, medium-suction dredges, and small-suction dredges.

Entered into a three-party Memorandum of Understanding with the EPA and Coeur Alaska, Inc. (Kensington Mine) which specified reasonable project permitting expectations by all parties.

The state issued its certifications of EPA water quality permits for six processing companies operating eight major seafood processing facilities in Unalaska and Akutan to improve water quality so Unalaska Bay and Akutan Harbor can be removed from the state's impaired water bodies list.

FY 98: Following Environmental Protection Agency "final interim" approval of Alaska's air quality program, facilities have three years to complete the permitting process. Over the next three years, the division will be processing an additional 400-500 operating and construction air quality permits annually.

Assist 500 operators in preparing air permit applications for construction and operating permits; issue 50 construction permits and 150 operating permits annually; and assist 250 permittee meet compliance obligations by making technical support site visits each year. We are continually improving the permit process to reduce permit costs and reduce permit review time.

Retain primacy of the air quality program to avoid more costly and less flexible federal permitting of Alaska facilities. Assist local communities in solving their air pollution problems through technical assistance, flexibility, and innovative approaches.

Air & Water Quality Continued

Develop a monitoring plan for Amchitka Island; monitor any radioactive material leaking from the site; and develop an Agreement in Principle for monitoring U.S. Department of Energy activities.

Issue wastewater permits using sound technical water quality principles to protect the public health. This includes:

- certification of federal NPDES permits for four major facilities and for 20 municipal wastewater discharges with mixing zones;
- verify permit compliance by inspection of 12 major facilities (mines, sewage treatment plants, seafood processors, oil and gas facilities) with NPDES permits;
- approve 60 major forest plans and provide technical assistance to 15 timber operations;
- complete water quality certifications for dredge and fill operations (300 received annually), inspect 25 dredge and fill projects, and review another 200 projects for compliance with State water quality requirements, focusing on those with significant watershed impact potential.

Statewide Public Service **Funding $4,097.8** **51 PCNs**

Mission: The Statewide Public Service (SPS) division helps Alaskans meet laws and regulations designed to protect human health and environmental resources. The division provides a focal point for the public, local governments and businesses to fully access the department's services. This is accomplished through the local public service office and programs of community and compliance assistance, domestic wastewater management and an enforcement unit.

FY 96/97: The SPS division helps communities assess environmental priorities and focus limited resources to achieve positive results. The division provides locally-based assistance for environmental issues and emergencies. Some examples are:

Adak: assisted the military in solving a lagoon treatment problem.
Municipality of Anchorage: worked with Elmendorf Air Force Base in the closeout of landfills; assisted in finding solutions to the thousands of junk automobiles abandoned in Anchorage annually; participated with a multi- agency task force to address environmental problems with a proposed golf course in Anchorage that could impact Ship Creek;
Bethel: assisted the city in protection of a community water well; worked to reduce community waste and develop a back haul program; provided training for hazardous material management;
Chignik Lake: assisted school with a sewage overflow problem;
Delta: assisted the community and local farmers in solving agricultural waste issues;
Dillingham: provided assistance in finding a private party (seafood operator) to operate public water and sewer facilities for a community recreational area;
Fairbanks: assisted the 6-Mile "Badger/Richardson Safe Water Association" in their organization efforts and work toward a feasibility study; worked with local contractors, installers and engineer to review small residential wastewater treatment systems;
Karluk: assisted the community in repairs for the community sewage management system;
Kenai: worked with trailer court owner to resolve overflowing sewage inside mobile homes and areas open to children and pets; Provided technical assistance which avoided expensive nitrate modeling by using innovative treatment technology; through cooperative community effort with City of Soldotna and ADOT, provided technical assistance and expedited plan reviews for treatment systems for shop wastes that were going into the treatment plant and ultimately to the Kenai River; provided daily air quality advisory reports to public media during summer forest fires to help protect public health; worked with the community and DOT to correct an untreated storm water discharge to the Kenai River.
Mat-Su: developed a program for the reuse of some contaminated soils for roads; participated as a member of the response team for the Miller's Reach Fire;
New Stuyahok: provided technical assistance with a lift station operation to eliminate discharge of sewage directly onto the ground;

Statewide Public Service Continued

Ninilchik/Homer Burn: worked with DNR Forestry and 50 timber harvesters to implement open burn approval system for burning efficiency and preventing public health concerns and conflict resolution; facilitated the disposal of fish carcasses impacting local beaches;
St. Paul: ensured that new water and sewer lines were properly installed for a new housing area, identifying serious construction problems early in the construction to reduce major delays.

Reduced the costs of doing business in Alaska through the Alaska Materials Exchange Program, resulting in savings for businesses of over $522,840 through exchange of excess materials. For example, the Municipality of Anchorage Water and Wastewater Utility was able to receive excess water treatment filter media from the North Slope, rather than ordering new material which saved $33,400.

FY 98: Provide the public and businesses a wide range of technical assistance to help them comply with laws and regulations through the Small Business Assistance program, the Hazardous Waste program, the Pit Stop program focused on the automotive sector, Rural Outreach Initiatives, and the daily activities of the SPS Area Offices.

Provide pollution prevention technical assistance to communities, businesses, and the general public through partnerships and cooperative efforts to reduce pollution at the source, investigating alternative production processes, recycling and reuse efforts such as the Alaska Materials Exchange and the Green Star Program, and other initiatives aimed at assisting businesses and the public in saving money and resources

Create positive economic incentives for businesses to voluntarily achieve compliance and pollution prevention through the Environmental Leadership project.

Create partnerships with industry associations, such as the Associated General Contractors to educate small businesses about environmental compliance and provide them an avenue for addressing their concerns.

Increase options for manufacturing compost products, and processing waste paper and waste wood for use in the development of recycled products in Alaska.

Administrative Services **Funding $3,611.0** **58 PCNs**

Mission: The division of Administrative Services provides timely and efficient support for the department's programs and personnel, and provides information to the public and communities during spills, hazardous releases and other environmental emergencies.

FY 96/97: Continued development and improvements to simplify and make more efficient the billing system for fee-based programs. The cost-recovery staff assisted in the development of financial agreements with industry, and provided comprehensive "user friendly" billings documenting costs incurred by the department.

The division increased efficiency in processing invoices and making quicker payments to businesses and communities.

Improved and increased efficiency for accounting for major funds under the purview of the department such as the Oil and Hazardous Substance Prevention and Response Fund, the Storage Tank Assistance Fund, the Alaska Clean Water Fund, and the Clean Air Protection Fund.

FY 98: As a result of numerous funding sources with strict auditing requirements, DEC continues to be a state agency with a diverse and complex revenue base. We will continue to implement more streamlined and efficient financial management systems to enable us to better serve the other DEC divisions, businesses and communities. We will also be working with the Office of Management and Budget and the Department of Administration on their efforts to develop a simpler, automated budget system.

The FY 98 budget reflects a net reduction of four positions (decrease 6 full-time, increase 4 part-time). This reduction is a concrete demonstration of successful centralization and continuing efforts to get the job done with less resources and lower costs.

The division will continue to increase cost recovery from the federal government by the optimal use of a cost allocation plan. In the last two years, federal cost recovery has increased from as low as 11 percent to as high as 41 percent for some programs.

The division will continue to prepare and distribute a newsletter to businesses, industry and the public (729 on the mailing list) which provides a snapshot of department activity allowing interested parties to note at a glance DEC activity. We will also continue to support the DEC homepage that provides regulations, calendar of activities, and contact persons information on line.

2. REDUCTIONS LINKED TO CHANGES IN SERVICE DELIVERY

Participation in Reduction Process - General Funds Reduced 43 percent

The Department of Environmental Conservation is fully aware of the need to reduce usage of general funds. Since FY 91, general funds (including fees) have been reduced **43 percent**, from 27.3 million to 15.6 million dollars. This major decrease in general funds has been offset by increases in other funds such as federal funds and specialized funds. This includes the Response Fund, Alaska Clean Water Fund, the Storage Tank Fund and the Clean Air Protection Fund.

The **43 percent** reduction in general funds contributed by this agency has made a significant impact in closing the fiscal gap. Of the total department budget of 46.1 million, only 8.7 million or 19 percent is general fund. The remaining **81 percent** of the department's budget is tied to restricted funding sources and can only be used for specific services.

As the state pursues the goal of minimizing the use of general funds, this action limits the department's flexibility in setting service and program priorities. DEC is increasingly dependent on federal funds and program fees. Our programs are becoming increasingly dictated by the federal agencies or the providers of restricted fee source. With fees included in budget reduction targets, we can not provide services to customers who are willing and able to pay for them.

Ranking Service Delivery

To meet its continuing goal of improving service delivery and reducing state costs, the department conducted a ranking process for its services. For each component, services were assigned costs and ranked. Completing this process allowed the department to again contribute to the goal of reducing usage of general fund dollars. Suggestions for specific service reductions resulted from this self-examination and ranking process, which reduce usage of general fund, are included in this budget. These are described below.

Oxygenated Fuels (73.4) General Fund Program Receipts

General fund program receipts are being reduced in the oxygenated fuels project. New regulations being adopted will reduce the need for contractual support. This reduction eliminates the public education portion of the program. The greatest resultant risk is if ethanol blended fuel is inappropriately stored or dispensed, there will be no state technical assistance available to assist vehicle owners.

Biennial Emissions (50.0) General Funds

General fund dollars are being eliminated for the implementation of the biennial vehicle inspection program, for which the new regulations have been developed. To achieve these savings, the department will discontinue its public awareness program and additional modifications to the test analyzer software.

Planning, Air Attainment Plans (76.6) General Fund Match

General fund match dollars are being reduced in planning efforts of the Air Quality program. This reduction will limit the state's ability to plan for air quality problems in Anchorage and Fairbanks. Anchorage and Fairbanks will be responsible for planning for maintenance of attainment plans. The department will not conduct emission inventories for Anchorage or Fairbanks. The responsibility for documentation and associated scientific analysis will rest on local government.

State Subsidy of Match on Pass Through Grants (102.0) General Fund Match

General fund match dollars are reduced in the local watershed project. This general fund money is used to provide the third- party match requirement for grantees unable to afford the 40 percent match required for Clean Water Act Section 319 grants. This reduction will affect the client base potentially impacting small communities and non-profit organizations.

State Technical Participation on Impaired Water Body List (109.8) General Fund
(106.6) General Fund Match

General funds and general fund match for the impaired water body listing project are being reduced. Alaska will meet federal requirements for the state water quality report, but will participate only at a policy level in the development of the EPA section 303(d) list. Responsibility for the development of this list will revert to the EPA. The department will continue to track and monitor water bodies which have been de-listed as reduced time and resources allow.

Effect of Budget Reductions on Department Services

It is the Legislature's prerogative to further reduce the department's funding. Each additional reduction will result in an additional reduction in services the department provides to the public. As the Legislature proposes reductions, the department will ensure that the committees fully understand the impact of their actions on department services. For example, during the last session, reductions were proposed to the Statewide Public Service component. The department immediately advised the committees that their proposed reductions would eliminate funding for subdivision plan review services. Impacts of the elimination of this service were noted and the Legislature decided to make this reduction.

3. **CHANGE FROM FY 97 TO FY 98 - All Funds** **Increase $295.7**

Category	Description	Funding Source(s)	Amount
Statewide Costs	98 COLA Adjustment	All	387.2
	98 Health Adjustment	All	136.4
	Better Business Practices	General Fund	(33.4)
Increased Service Delivery	Alaska Pulp Corporation Cleanup Oversight	Response Funds	101.3
	Ketchikan Pulp Corporation Closure Oversight	Des GF Pgm Recpts	455.0
	Air Program, Title V Delegation	Clean Air Protection Fund	400.0
	Water Permit Contracts	Des GF Pgm Recpts	382.4
	Drinking Water Primacy	Federal	263.6
	Construction Project Travel	Federal	22.5
	Joint Pipeline Officer Liaison	I/a Receipts	125.0
	Remote Maintenance Workers	Federal	450.0
	Rural Sanitation	Federal	120.0
Decreased Service Delivery	Oxygenated Fuels	GF Pgm Receipts	(73.4)
	Biennial Emissions	General Fund	(50.0)
	Planning, Air Attainment Plans	Gen Fund Match	(76.6)

3. **Continued - CHANGE FROM FY 97 TO FY 98 - All Funds**

Category	Description	Funding Source(s)	Amount
Decreased Service Delivery (continued)	Reduce Other Agency Response Fund Emergency Communications, Disaster Planning, Increase Dispatch and Cost Recovery	General Fund and Response Fund	(175.2)
	Reduce Community and Compliance Assistance Indirect	Federal	(213.0)
	Reduce State subsidy of match on pass through grants	Gen Fund Match	(102.0)
	Reduce State Participation in Technical Preparation of the 303(d) Impaired Water Body Listing	General Fund and Gen Fund Match	(216.4)
Technical Adjustments	Federal Increment - Indirect Funding	Federal	368.6
	COLA Correction	Federal	(0.1)
	Transfer Storage Tank Grants to Capital Budget	Storage Tank Assistance Fund	(1,976.2)

4. **CHANGE FROM FY 97 TO FY 98 - General Funds** **Decrease ($1,127.8)**

Description	General Fund Match	General Fund	General Fund Program Receipts
Oxygenated Fuels			(73.4)
Biennial Emissions		(50.0)	
Planning, Air Attainment Plans	(76.6)		
State Subsidy of Match on Pass through Grants	(102.0)		
State Technical Participation on Impaired Water Bodies Listing	(106.6)	(109.8)	
Health Certificates for Transport of Domestic Animals		(15.0)	15.0
Domestic Wastewater Fees		(253.0)	253.0
Spill response telecommunications transferred from general fund to Response Fund		(106.8)	
General Fund Program Receipts to Clean Air Protection Fund (Title V)			(653.1)
Convert General Fund Program Receipts to IA Receipts (Indirect)			(25.9)
98 COLA Adjustment	23.4	98.8	33.1
98 Health Adjustment	8.3	35.0	11.2
Better Business Practices		(33.4)	
Fund Source - Drinking Water	97.8	(97.8)	
Fund Source - FCO	730.0	(730.0)	

5. **CHANGE FROM FY 97 TO FY 98 - Staffing** **Decrease (1) Full Time (PFT)**
Increase 3 Part Time (PPT)

Category	Description	Funding Source	PFT	PPT
Increased Service Delivery	Alaska Pulp Corporation Site Cleanup	Response Fund	1	
	Joint Pipeline Office Liaison	Inter Agency	1	
	Spill Tracking and Projection - Contaminated Site Ranking - Database Support	Federal & Response Fund	1	
	Drinking Water Operator Certification, Sanitary Surveys, and System Capacity Development	Federal	5	(1)
	Contract Management - Chenega	Exxon	1	
	Clerical Support - Spill Response	Response Fund	1	
	Response Equipment Inventory Control, Allocation and Disposition	Response Fund		1
	Hazardous Waste Compliance Assistance	Federal	1	
	Certified Installer Program	GF Program Receipts	1	
	Industrial Wastewater Permit Cost Tracking and Recovery	GF Des Pgm Receipts	1	
Decreased Service Delivery	Administrative Support - Payroll, Clerical, Contracts, Programming	General Fund	(6)	2
	Planning, Air Attainment Plans	Gen Fund Match	(1)	
	Lab Services Consolidation	General Fund	(1)	1
	Seafood Inspections	General Fund	(1)	
	Domestic Wastewater, Subdivision Plan Review	General Fund	(2)	
	Impaired Water Bodies, Technical Support to Listing	General Fund and Gen Fund Match	(3)	

ALASKA DEPARTMENT of ENVIRONMENTAL CONSERVATION

PROPOSED EPA REVISIONS TO THE NATIONAL AMBIENT AIR QUALITY STANDARDS FOR PARTICULATE MATTER

Impacts on Alaskans

- **Anchorage:** No expected $PM_{2.5}$ impact. Anchorage's fine particulate levels are below the proposed $PM_{2.5}$ standards. Anchorage's coarse particulate levels occasionally exceed the PM_{10} standard. The proposed changes make it easier for Anchorage to meet the standards.
- **Juneau:** $PM_{2.5}$ impact is expected. Juneau will need to tighten its wood smoke control strategy to meet the new $PM_{2.5}$ standard. PM_{10} no impact. Juneau currently meets the coarse particulate matter standard.
- **Fairbanks:** No suspected impacts. Fairbanks currently meets the coarse particulate standard. Further investigation into fine particulate matter impacts will be undertaken.
- **Rural Alaska:** No suspected $PM_{2.5}$ impacts. Communities with high wood stove usage will require further investigation and could potentially have problems with fine particulate. As under the current coarse particulate matter standard, communities with high levels of dust require further investigation.

Basic Facts on the Proposed Particulate Matter Standards and Health Effects

- The current particulate matter standard (PM_{10}) is based on particulate matter smaller than 10 microns in diameter. EPA is proposing to set an additional standard for fine particulate matter ($PM_{2.5}$) smaller than 2.5 microns in diameter. $PM_{2.5}$ is about two-hundredths the width of a human hair.
- New health research suggests that smaller particulate may have a more significant impact on public health, with $PM_{2.5}$ causing premature death and diseases such as asthma.
- The proposed standards would replace the existing PM_{10} standard with a two tier system designed to control both the fine particulate which cause respiratory illness and the coarse particulate which may trigger reactions in sensitive persons with pre-existing respiratory problems.
- The proposal also changes the form of the standards to one which could allow more days with unhealthy air quality before an area was designated as non-attainment.

EPA Time Line for Review of the Particulate Matter Standards

- EPA is required under the Clean Air Act to review the ambient air quality standards for certain pollutants every five years to determine if the current form of the standard is still protecting public health.
- EPA failed to conduct a timely review and was sued by the American Lung Association. EPA is under court order to complete a review of the health standard by June 28, 1997.
- EPA released a proposal to revise the national ambient air quality standards for particulate matter on November 27, 1996. The public comment period is open through February 18, 1997.

--For More Information Please Contact--
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December 23, 1996

Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter and Ozone

This fact sheet provides general information regarding the U.S. Environmental Protection Agency's (EPA's) proposed revisions to the National Ambient Air Quality Standards, including how to obtain copies of the proposals and provide EPA with your comments.

What's Happening?

Based on evidence of harm to human health and the environment, the EPA has proposed to revise the national ambient air quality standards (NAAQS) for both particulate matter (PM) and ground-level ozone.

Public Comment Period

Because of the significance of these proposals, EPA is seeking broad public comment on the recommended options. Written and oral comments will be accepted during a public comment period from **December 13, 1996, to February 18, 1997.**

Based on public comments and any new information received during this comment period, EPA plans to issue final standards for both ozone and particulate matter by June 30, 1997.

What is EPA proposing?

EPA has outlined four proposals for public review and comment:

1) Revisions to the national ambient air quality standards for ozone;

2) Revisions to the national ambient air quality standards for particulate matter;

3) Revisions to the national monitoring requirements for particulate matter; and

4) Interim policy steps to implement these standards, should the current standards be changed.

The deadline for comments on the EPA air quality proposals is February 18, 1997.

In This Fact Sheet:

National Air Quality Standards

Primary standards are "health-based," meaning they are established to protect public health. **Secondary standards** are considered to be "welfare-based" and are meant to protect the environment which includes crops, vegetation, wildlife, buildings and national monuments, visibility of scenic vistas, etc.

Air quality standards are generally expressed as a function of *concentration*, *duration*, and *frequency*. *Concentration* is a numerical value, addressing how much of a pollutant is allowed, *duration* addresses the period of time over which the level of pollution occurs, and *frequency* addresses how often that level occurs.

What are the current air quality standards for ozone and PM?

Pollutant	Indicator	Concentration	Duration	Frequency
Ozone (Primary and Secondary)	Ozone	0.12 ppm	1-hour	maximum 1-hour average/day
Particulate Matter (Primary and Secondary)	PM_{10}	50 ug/m^3	annual	arithmetic mean
	PM_{10}	150 ug/m^3	24 hour	1/year

The current health and welfare-based **ozone** standards are both set at 0.12 parts per million (ppm), as the maximum 1-hour average per day, not be exceeded more than once per year. The ozone standards were last revised in 1979.

The current health and welfare-based standards for **particulate matter** are measured as PM_{10}, denoting particles with a nominal size less than 10 micrometers in diameter. Identical primary and secondary PM_{10} standards were set for two averaging times: 1) 50 microgram per cubic meter (ug/m^3), expected annual arithmetic mean, and 2) 150 ug/m^3, 24-hour average, with no more than one expected exceedance per year. The PM standards were last revised in 1987.

Why is EPA reviewing these standards?

The U.S. Congress, through the federal Clean Air Act, requires that EPA review the scientific information that forms the basis for the standards every five years. EPA is concerned about the health effects that have been reported in a number of recent studies of particulate matter and ozone, including premature death and increased lung disease.

What is the Concern about the Effects of Ozone?

Ozone, or smog, is formed when gases like nitrogen oxides and volatile organic compounds react in the presence of heat and sunlight.

EPA's proposal to revise the ozone standard is based on recent health studies which indicate that the current ozone standard does not provide adequate health protection.

Exposure to ambient ozone concentrations has been linked to increased hospital admissions for asthma and other respiratory causes.

Repeated exposure to ozone increases the susceptibity to respiratory infection and lung inflammation, and can aggravate preexisting respiratory diseases.

Studies conducted in the Northeastern United States and Canada show that ozone air pollution is associated with 10-20% of all of the summertime respiratory-related hospital admissions.

Children are most at risk from exposure to ozone, because they are active outdoors during the summer when ozone levels are highest. For example, summer camp studies in the Eastern U.S. and Southeastern Canada report significant reductions in lung function for children.

Adults who are moderately active outdoors during the summer months, such as construction workers and others, are also among those most at risk.

These individuals, as well as those with existing respiratory illnesses like asthma, may experience reduced lung function and increased respiratory symptoms (such as chest pain and cough) when exposed to relatively low ozone levels during periods of moderate exertion.

Long-term exposures to ozone can cause:
- repeated inflammation of the lung,
- impairment of lung defense mechanisms, and
- irreversible changes in lung structure.

These effects can lead to chronic respiratory illnesses such as emphysema, chronic bronchitis, and/or premature aging of the lungs.

Concerns are also associated with ozone effects on vegetation for which the current ozone standard does not provide adequate protection. Effects linked with ozone exposure include: reduction in agricultural/commercial forest yields, reduced growth, decreased survivability of tree seedlings, increasing susceptibility to disease/environmental stresses, and potential long-term effects on forests ecosystems.

What is EPA's Proposal on the Ozone Standard?

EPA proposes to replace the current 1-hour primary standard with a new 8-hour standard to protect against longer exposure periods that are of concern at concentrations below the current ozone standard.

EPA proposes a revised standard established at 0.08 ppm to provide for increased health protection beyond that afforded by the current 0.12 ppm standard.

Consistent with the advice of its independent panel of scientific advisors, EPA is asking for comment on alternative levels of 0.09 and 0.07 ppm, 8-hour average.

EPA proposes to define a new 8-hour standard in terms of a "concentration-based" form, specifically the 3-year average of the annual third-highest daily maximum 8-hour ozone concentration.

EPA also proposes to replace the current secondary standard to protect the environment with either a standard identical to the proposed new primary standard or a new seasonal standard.

What is the Concern About Particulate Matter?

The characteristics, sources, and potential health effects of larger or "coarse" particles (from 2.5 to 10 micrometers in diameter) and smaller or "fine" particles (smaller than 2.5 micrometers in diameter) are very different.

Coarse particles come from sources such as windblown dust from the desert or agricultural fields and dust kicked up on unpaved roads from vehicle traffic. Coarse particles can deposit in the respiratory system and contribute to health effects such as asthma.

Fine particles are generally emitted from industrial and residential combustion and from vehicle exhaust. Fine particles are also formed in the atmosphere from gases such as sulfur dioxide, nitrogen oxides, and volatile organic compounds emitted from combustion activities which become particles as a result of chemical transformations in the air. Fine particles deposit deep in the lungs, and contribute to the health effects documented in a number of recently published community epidemiological studies

These recent community studies find adverse public health effects associated with particles at levels well below the current PM standards.

Health effects include:

- *premature death, increased hospital admissions and emergency room visits* (primarily among the elderly and individuals with cardiopulmonary disease);
- *increased respiratory symptoms and disease* (among children and individuals with cardiopulmonary disease such as asthma);
- *decreased lung function* (particularly in children and individuals with asthma); and
- *alterations in lung tissue structure and in respiratory tract defense mechanisms.*

EPA believes that the current standards do not adequately protect the public from the adverse health effects of particles and need to be revised.

In addition, EPA also believes that there are welfare effects from particles for which the current PM_{10} secondary standards do not provide adequate protection. Chief among those is visibility impairment of scenic vistas, or regional haze. Particles primarily in the fine size range are responsible for regional haze because the particles both scatter and absorb light.

What is EPA'S Proposal for the Particulate Matter Standard?

EPA proposes to revise the current primary PM standards by adding a new annual $PM_{2.5}$ standard set at 15 micrograms per cubic meter (ug/m^3) and a new 24-hour $PM_{2.5}$ standard set at 50 ug/m^3.

EPA also seeks comment on two alternative combinations of primary $PM_{2.5}$ standards that reflect different scientific views as to the appropriate policy response to the available health effects evidence:

(1) A "limited" policy response option, consisting of an annual standard up to 20 ug/m^3, and a 24-hour standard up to 65 ug/m^3.

(2) A "highly precautionary" policy response option, consisting of an annual standard down to about 12 ug/m^3, and a 24-hour standard set within a range from 20 ug/m^3 - 50 ug/m^3.

EPA proposes to retain the current annual PM_{10} standard of 50 ug/m^3. EPA also proposes to revise the current PM_{10} 24-hour standard of 150 ug/m^3 by changing the form of the standard; EPA is also soliciting comment on the option of revoking the 24-hour PM_{10} standard entirely.

EPA proposes to revise the current secondary standards by making them identical to the proposed primary standards. EPA believes that the proposed $PM_{2.5}$ and PM_{10} standards, combined with the regional haze program required by the Clean Air Act, will provide protection against the major PM-related welfare effects, including visibility impairment, soiling, and materials damage.

What is EPA's Proposal on $PM_{2.5}$ Monitoring Requirements?

This proposal provides the framework for establishing an extensive ambient air quality monitoring network for fine particles, which is critical for determining which geographic areas would meet any new $PM_{2.5}$ health standards. Quality assurance and control requirements and monitoring methodology are included as well.

EPA is proposing a new federal reference monitoring methods (and equivalent methods) for measuring $PM_{2.5}$ as part of the previously discussed PM NAAQS proposal.

EPA will issue a final $PM_{2.5}$ monitoring rule concurrently with final PM standards in June 1997.

What is EPA's Proposal on the Interim Implementation Policy?

This proposal outlines the initial policies EPA and the State agencies will use to continue existing air quality control programs in the interim period between the issuance of any final ozone and PM standards until EPA approval of State plans implementing any new or revised standard(s). This policy will be issued in final form in June 1997, when the ozone and PM standards are finalized.

How can I get copies of the proposals?

EPA's air quality proposals are available to the public in the following ways:

Via the Internet: You'll find the electronic files by accessing the following World Wide Web address: *http://www.epa.gov/airlinks*

Via computer modem: The proposals are posted on EPA's Technology Transfer Network (TTN) at (919) 541-5742 [backup number for access problems is (919) 541-5384], listed on the TTN's Clean Air Act Amendments Bulletin Board, under the subheading "Recently Signed Rules."

Please note: Each proposal is quite lengthy (~200 pages), requiring substantial memory/ disk space.

Via the *Federal Register*: As the official daily publication for federal government regulatory actions, the *Federal Register* is available through designated libraries carrying government publications. Contact your local public or university library about access to the *Federal Register (FR)*.

The air quality proposals were published in the *FR* on Friday, December 13, 1996. Citations for the proposals are:

Citation	Title
61 *FR* 65637	National Ambient Air Quality Standards for Particulate Matter: Proposed Rule
61 *FR* 65715	National Ambient Air Quality Standards for Ozone: Proposed Rule
61 *FR* 65779	Proposed Requirements for Designation of Reference & Equivalent Methods for ..... PM
61 *FR* 65751	Interim Implementation Policy on New/Revised Ozone & PM: Proposed Rule

Copies of the December 13, 1996, *Federal Registers* are available for public review during regular business hours at the EPA Region 10 office in Seattle, WA, and at EPA Offices in Boise, ID; Olympia, WA; Anchorage, AK; Juneau AK; and Portland, OR. Refer to page 8 for more information.

The *Federal Register* is also available for sale through U.S. Government Printing Office (GPO) Bookstores. Refer to page 8 for GPO Bookstore locations and phone numbers. GPO Bookstores require prepayment, and accept all major credit cards.

Via the Region 10 Air Quality Request Line: Copies of all proposals are available on request by calling (800) 424-4372, extension 6706 during normal business hours. Please allow 3-5 working days for delivery.

The following packages are available, free of charge:

1) Ozone National Ambient Air Quality Standards Proposal

2) Particulate Matter National Ambient Air Quality Standards Proposal

3) Particulate Matter Monitoring Regulations Proposal

4) Interim Implementation Policy Proposal

Where do I send my comments?

Comments can be provided by toll-free telephone number, electronic mail, or U.S. mail.

Toll-free Telephone Line: 1-888-TELL-EPA (1-888-835-5372)

The toll-free telephone line will accept public comments 24 hours a day, 7 days a week, except Christmas, New Year's Day and the Dr. Martin Luther King, Jr., holiday. Listen to the instructions and leave a message (up to two minutes long). The message will be recorded and transcribed to be included in the official docket.

Electronic Mail:

The following five electronic mail addresses are established to receive comments:

General comments: ***general.comments@epamail.epa.gov***

Ozone National Ambient Air Quality Standards: ***o3naaqs.comments@epamail.epa.gov***

Particulate Matter National Ambient Air Quality Standards:
pmnaaqs.comments@epamail.epa.gov

Particulate Matter Monitoring Regulations: ***monitors.comments@epamail.epa.gov***

Interim Implementation Policy: ***iip.comments@epamail.epa.gov***

Please note: Do not include any Confidential Business Information. Comments should be in ASCII text; encrypted e-mail messages cannot be read. A user-friendly link from EPA's Internet Homepage can be accessed by *http://www.epa.gov/airlinks*

U.S. Mail:
Written comments should be submitted (in duplicate) to:

U.S. Environmental Protection Agency
Air Docket (6102)
Attn: Docket # (as identified below)
Waterside Mall, 401 M Street, SW
Washington, DC 20460

Identify comments with the specific docket numbers:

Ozone NAAQS Proposal:	Docket # A-95-58
Particulate Matter NAAQS Proposal:	Docket # A-95-54
Particulate Matter Monitoring Proposal:	Docket # A-96-51
Interim Implementation Policy:	Docket # A-95-38

Comments and data will also be accepted on disks in WordPerfect 5.1 file format or ASCII file format. All comments in electronic form must also be identified by the appropriate docket number (as identified above).

Please note: All comments must include the author's name, address and affiliation (e.g., company, organization, private citizen, etc.). All comments are available for public review.

For More Information

Region 10 Air Quality Request Line at (206) 553-6706
or toll-free (800) 424-4372 ext. 6706.

The air quality proposals listed in this document are available for public review during regular business hours at the following EPA locations. For your convenience, please call ahead for availability:

EPA Region 10 Library
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-1289

Washington EPA Operations Office
300 Desmond Drive SE
Lacey, WA 98503
Contact: Christi Lee (360) 753-9079

Oregon EPA Operations Office
811 S.W. 6th Avenue, 3rd floor
Portland, OR 97204
Contact: Paul Koprowski (503) 326-6363

Idaho EPA Operations Office
1435 North Orchard Street
Boise, ID 83706
Contact: Jim Greaves (208) 378-5771

Alaska Operations Office- Juneau
410 Willoughby Avenue, Suite 100
Juneau, AK 99801
Contact: Chris Meade (907) 586-7619

Alaska Operations Office-Anchorage
Federal Building, Room 537
222 West 7th Street, #19
Anchorage, AK 99513-7588
Contact: John Pavitt (907) 271-3688

Copies of the Friday, December 13, 1996 Federal Register may be purchased through:

U.S. Government Printing Office Bookstores

Seattle 915 2nd Avenue; (206) 553-4270
FAX (206) 553-6717

Portland 1305 SW First; (503) 221-6217
FAX (503) 225-0563

For general information about air quality, contact your state air quality program:

ALASKA: Department of Environmental Conservation (907) 465-5109

IDAHO: Division of Environmental Quality (208) 373-0517

OREGON: Department of Environmental Quality (503) 229-6488

WASHINGTON: Department of Ecology (206) 649-7192

Announcement of Public Hearings

EPA will conduct three public hearings on the proposed revisions to the national ambient air quality standards (NAAQS) for ozone and particulate matter. A separate public hearing will be held on the proposed reference monitoring method, and the proposed requirements for designation of reference and equivalent methods for monitoring $PM_{2.5}$, as well as ambient air quality surveillance for particulate matter.

January 14, 1997
10:30 am - 8:00 pm (local time)

January 15, 1997
9:00 am - 3:00 pm (local time)

Westin Copley Place
10 Huntington Avenue
Boston, MA 02116
617-262-9600

Midland Hotel
172 West Adams at LaSalle
Chicago, IL 60603
312-332-1200

Red Lion Hotel
255 South West Temple Street
Salt Lake City, UT 84101
801-328-2000

The public hearing on monitoring requirements for particulate matter will be held:

January 14, 1997
9:00 am to 5:00 pm (local time)

Omni Durham Hotel
201 Foster Street
Durham, NC 27701
919-683-6664

The record of each hearing will be held open for 30 days to allow for submission of any rebuttal or supplementary information.

If you wish to make an oral presentation at the hearing(s), notify EPA at least 7 days prior to the date of the hearing(s) by contacting:

Ms. Linda Metcalf, (MD-15)
Air Quality Strategies and Standards Division,
Office of Air Quality Planning and Standards, U.S.EPA
Research Triangle Park, NC 27711
(919) 541-2865

Oral presentations will be limited to five minutes each. Any member of the public may file a written statement before, during, or within 30 days after the hearings. Written statements (duplicate copies preferred) should be submitted to the appropriate docket at the address specified on page 7.

Public Comment Period

The U.S. Environmental Protection Agency (EPA) invites you to comment on the proposals to revise the national ambient air quality standards for particulate matter and ozone during a public comment period from **December 13, 1996 to February 18, 1997.**

Public input on these proposals is important. Based on comments received during this comment period, EPA plans to issue final standards for both ozone and particulate matter by June 30, 1997.

Comments should be addressed to:
U.S. Environmental Protection Agency
Air Docket (6102)
Waterside Mall, 401 M Street, SW
Washington, DC 20460

For further information on providing comments via electronic mail or by phone, please refer page 7 for further details.

People with impaired hearing or speech may contact EPA's telecommunications device for the hearing impaired (TDD) at (206) 553-1698. To ensure effective communication with everyone, additional services can be made available to persons with disabilities by contacting one of the numbers listed above.

EPA

United States
Environmental Protection
Agency

Region 10 ECO-081)
1200 Sixth Avenue
Seattle WA 98101

Air & Water Quality Division
Senate Resources Committee Overview Summary

Water Quality Activities. During FY 97, the Department has focused on a number of water quality issues, attempting to resolve the most pressing water quality issues for Alaskans and to gain flexibility from the federal government in applying water quality standards in the State.

1. The Governor established a citizens work group on October 8, 1996 to work on water quality issues identified in responses to his 1,200 letters to Alaskans asking for their most pressing issues. The Work Group has met twice -- once to prioritize the 12 issues identified, and once to endorse the DEC work plan in addressing those issues. Attached is a listing of the issues with a short description of the approach the Department is taking.

2. After extensive dialogue and meetings with U.S. EPA Region 10 and EPA Headquarters, we agreed to a strategy to get the State out from under the National Toxics Rule (NTR), which will allow the State to have more flexibility in issuing and certifying wastewater permits. I submitted a request to the Regional Administrator of EPA Region 10 last month to partially remove Alaska from the NTR (for acute aquatic life criteria). What this means for the State is we will have flexibility in permitting, such as setting site specific criteria for acute aquatic life criteria which is needed for permitting the Red Dog Mine's wastewater discharge.

3. I am in the process of petitioning U.S. EPA to withdraw the arsenic criteria imposed on Alaska by the 1992 National Toxics Rule (NTR). We have justification that Alaska's criteria (50 μg/l for fresh water and 36 μg/l for salt water) provides human health protection equivalent to the NTR standards. Also, there is evidence that EPA has applied different arsenic standards to different states.

4. The Department is completing its revisions to the mixing zone requirements, which have been under public review and comment during the last year. Mixing zones allow waste water discharges to exceed the water quality standards within a certain volume of the receiving water. Our intent is to clarify the requirements and considerations for granting mixing zones. This key activity has been full of public involvement and citizen participation at work shops has been valuable.

Air Quality Activities.

1. EPA's Proposed Particulate Matter 2.5 (PM2.5) Health Standard. EPA has proposed to establish a new particulate standard for particulates less than 2.5 microns in size. These particles are a mixture of solid and liquid droplets. They are approximately two-hundredths the width of human hair. While individual particles cannot be seen with the naked eye, collectively they can appear as black soot, dust clouds or gray haze.

These particulates penetrate deep into lungs, and new medical research indicates there is a health problem. New studies indicate fine particle health effects include: premature death, increased

hospital admissions and emergency room visits, increased respiratory symptoms and disease, and alterations in lung tissue structure.

a. Action Taken: The department has sent letters to elected officials, communities and interested individuals regarding EPA's proposal and request for comments. The information has been posted on our Internet home page and a public information teleconference was held to provide additional information to all individuals interested.

b. Future Plans and Recommendations: ADEC is working with DHSS on comments associated with the proposed new health standards and implementation requirements. The comment period closes on February 18, 1997. EPA is expected to take final action on the proposed standards June 28, 1997.

At this time, we do not believe that the new requirements will have significant impacts on Alaska except for areas with high wood stove usage. Wood stoves emit large quantities of fine particulates. We will be monitoring to ensure that these areas do not exceed the health standard established by EPA.

Review of legislation passed in 19th Legislature.

1. Biennial I/M Program (SB-28 and SB-226). The legislature enacted Senate Bill 28 in 1995 which required vehicle inspection programs to inspect vehicles no more than once every two years. The implementation date was modified by the legislature in 1996 by the adoption of SB-226 which converted the vehicle registration program to a two year and provided for simultaneous implementation of the two biennial programs

a. Action Taken: The department worked with local inspection programs, inspection facilities and the Division of Motor Vehicles. New regulations were adopted, required software changes at DMV have been accomplished. Required changes to our field systems have not been completed, but the department has provided for a temporary solution that has allowed the program to be implemented on time.

b. Future Plans and Recommendations: The program has been implemented and is proceeding. Some individuals have been concerned about the total fees required to be paid since the inspection and registration fees must cover a two year period.

One particular concern is the potential doubling of the inspection fees. The department is monitoring inspection fees and will be working with local inspection programs. Local programs current have fee limits.

The current limits will not allow an actual doubling of the fees prior to the program conversion to a biennial program. Based on the inspection fees going to a maximum of $50 and the local communities adopted fees, the citizens of Anchorage and Fairbanks will realize a savings in excess of $1.3 million dollars per year.

2. Title V, Clean Air Act Primacy. The Department was directed to obtain primacy in Title V of the Clean Air Act. This action has been completed. The Clean Air Protection Fund (CAPF) is established and general fund program receipts converted to the CAPF. The Department is now working with applicants on their air permits, under Title V.

Senfin.wpd

ISSUE	APPROACH	TO WQWG	TO COMMISSIONER
petroleum hydrocarbons -- re-evaluate Total Aromatic Hydrocarbon, Total Aqueous Hydrocarbon, and oil & grease standard	Research and report available information, including background of current standards, alternative compound specific data, and other states' criteria	4/30/97	5/15/97
dissolved metals -- criteria for metals should be based on dissolved metal and bioavailable metal species	Research and report on derivation of EPA criteria, federal guidance, evolution of EPA conversion factors, and bioavailability of dissolved vs. Particulate metals.	3/31/97	4/15/97
reclassification -- define in detail the process and requirements for petitioners to follow	Draft reclassification guidance document for petitioners, including a decision treee and application information.	5/1/97	5/15/97
fecal coliform -- sampling frequency should be changed from 5/month to once/week.	Review origin of fecal coliform sampling requirements in permits and make changes in DEC written guidance on monitoring requirements, as appropriate.	12/31/96	1/15/97
total dissolved solids -- State should re-evaluate the TDS standards	Review TDS information on other states, Canada, DEC paper, and DPA TDS research ... look at differences between WQS and DW regs, review in-state TDS studies ... report results and recommendations for TDS changes to consider regs changes.	5/15/97	6/5/97
compliance schedules -- change regulations to allow DEC and/or EPA to enter into water quality compliance schedules in permits	Review court decisions on need for compliance schedule language in standards and propose language for regulation change.	1/30/97	2/15/97
National Toxics Rule -- Alaska needs to get out from under the NTR	DEC to discuss approaches with EPA and make appropriate request, after conceptual approval given.	12/19/96	letter signed by Commissioner
303(d) Listing -- develop science-based criteria and guidelines for adding and removing streams from the listing of impaired water bodies	Review federal and other states regulations and guidance ... develop guidance document for Alaska.	4/22/97	5/6/97
Arsenic -- State should adopt its own human health criteria	Petition EPA for exemption during interim period of EPA research, allowing Alaska standard to be in effect.	Advised @ 12/19 meeting	1/15/97
acute toxicity -- consider an acute whole effluent toxicity criterion for effluents	Review and report on whole effluent toxicity information and make recommendations for changes.	2/1/97	2/15/97
pH -- re-evaluate the State's pH criteria	Review regulations and resolve discrepancies with State and federal regulations.	1/31/97	2/15/97
non-indigenous species -- address this issue and consider adopting WQS to protect State waters from such a threat	Assemble information about the issue and consult with federal agencies on situation ... make recommendations.	1/20/97	2/3/1997

MEMORANDUM

State of Alaska
Department of Environmental Conservation
Office of the Commissioner

TO: Division Directors

DATE: September 11, 1996

PHONE NO: 465-5065

FROM: Michele Brown, Commissioner

SUBJECT: Regulatory Policy for Coal Bed Methane Generation

In response to the passage and signing of HB 394, by Governor Knowles, the Department has developed draft regulatory policies consistent with the statutory changes. These statute changes modify Department regulatory policy in four areas relevant to the exploration and production of coal bed methane gas from formations shallower than 3,000 feet. Regulatory policy is affected in the following areas:

1) Oil spill prevention and contingency planning;
2) Proof of financial responsibility;
3) Management of waste drilling muds and cuttings; and
4) Discharge of produced water

The proposed policy has been reviewed internally and by the affected industry. No comments were received from industry representatives. Internal comments have been addressed. Therefore, the draft policies are now finalized and should be utilized by your staff in regulating coal bed methane gas exploration and production.

Please circulate the attached policies to your program managers with instructions that it is to be implemented immediately. Our overall approach in implementing these policies is to be clear and helpful and to encourage the environmentally safe development of these localized energy sources. If you have any questions please let me know.

Attachments: Policy Papers
SCS CSHB 394 (RES)

cc: John Shively, Commissioner, Department of Natural Resources (w/policy papers)

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BRIEFING TOPIC: Oil Spill Prevention and Contingency Plans

STATUTE: AS 46.04.030(b) states "A person may not cause or permit the operation of a pipeline or an exploration or production facility in the state unless an oil discharge prevention and contingency plan for the pipeline or facility has been approved by the department and the person is in compliance with the plan."

HB 394 amends this statute adding the following language after the word "plan". **This subsection does not apply to an exploration facility used solely to explore for shallow natural gas by means of drilling a well on a lease authorized under AS 38.05.177.**

AS 46.04.050(b) provides an exemption to some facilities as stated "The provisions of AS 46.04.030 and 46.04.040 do not apply to a natural gas production facility and a natural gas terminal facility; for purposes of this subsection the terms "natural gas production facility" and "natural gas terminal facility"

> (1) mean a platform, facility, or structure that is used solely for the production, compression, storage, or transport of natural gas;
> (2) do not include a platform, facility, or structure that produces, stores, or transports natural gas in combination with oil."

DISCUSSION: Current law exempts natural gas production facilities from preparing and obtaining approval of a oil spill contingency plan because a natural gas spill does not threaten the land or water environment. Exploration drilling for natural gas has not been previously exempted due to the potential of encountering oil while drilling for gas. Preparing an oil spill contingency plan is a significant cost and can become a sizable and even preclusive cost burden to small oil and gas exploration companies. In general, oil and gas exploration involves a level of risk even with current technology due to unknown or imprecise subsurface geological information. Oil spills can and do happen in well drilling. Having a spill contingency plan when oil may be encountered greatly facilitates response by establishing the means to minimize environmental impacts and to quickly secure spill response equipment and labor.

Coal bed methane exploration may not be subject to the same risks even where the geological information is uncertain. Discussions about coal bed methane development center mostly on shallow well activities: approximately 3000 feet in depth or less. Should the well drilling be limited to shallow depths, factual information about Alaska's oil bearing structures provides compelling support for a very low probability of oil being encountered in such wells. The information further suggests that should oil be encountered in shallow locations, subsurfaces pressures are too low to push the oil to the surface where a spill could occur in the event the well blow out preventor fails.

DEPARTMENT POLICY: Current law exempts natural gas production facilities from the requirements to prepare oil spill prevention and contingency plans. HB 394 extends this exemption to

onshore exploration facilities used solely to explore for shallow natural gas. A multi-purpose facility would still be required to prepare and obtain approval for an oil spill prevention and contingency plan. In summary, oil spill prevention and contingency plans are not required for drilling to explore solely for natural gas at depths of less than 3000 feet.

BRIEFING TOPIC: Proof of Financial Responsibility

STATUTE: AS 46.04.040 (b) as amended by HB 394 reads:

"(b) A person may not cause or permit the operation of a pipeline or an exploration or production facility in the State unless the person has furnished to the Department. and the Department has approved. proof of financial ability to respond in damages. Proof of financial responsibility required for:

(3) An onshore exploration facility is
(A) $25,000 per incident for a facility used solely to explore for shallow natural gas by means of drilling a well to explore for gas, whether methane associated with and derived from coal deposits or otherwise, from a source that is within 3,000 feet of the surface; and
(B) except as provided by (A) of this paragraph, $1,000,000 per incident."

AS 46.04.050(b) provides an exemption: "The provisions of AS 46.04.030 and 46.04.040 do not apply to a natural gas production facility and a natural gas terminal facility; for purposes of this subsection the terms "natural gas production facility" and "natural gas terminal facility"

(1) mean a platform. facility. or structure that is used solely for the production. compression. storage. or transport of natural gas:
(2) do not include a platform. facility. or structure that produces. stores. or transports natural gas in combination with oil."

REGULATION: Administrative regulations in 18 AAC 75.205 - .290 provide specific requirements and alternatives for proving financial responsibility. but do not substantively affect the Department's policy on this topic. Financial instruments used by drillers of oil or gas wells. or coal bed methane would be similar to those used by the broad range of facilities required to prove financial responsibility.

DISCUSSION: Regardless of whether an operator has secured financial responsibility. any party who spills oil is obligated by law to clean it up and bear the associated costs. Proof of financial responsibility is a primary instrument providing assurance to the state that an oil operator will not default on his obligation in an environmental accident and create a large financial burden upon the state for clean-up and damage repair. The law provides several financial instruments acceptable for the proof. such as self-insurance. a surety bond or insurance. among others.

Current law exempts natural gas production facilities from proof of financial responsibility because a natural gas spill does not threaten the land or water environment. Exploration drilling for natural gas is

not exempted due to the potential of encountering oil while drilling for gas. Alaska geological conditions and past history indicates, however, a very low probability of encountering oil if wells are limited to shallow depths. HB 394 recognizes this low probability by amending Alaska Statutes to require $25,000 proof of financial responsibility per incident for on-shore exploratory gas wells within 3,000 feet of the surface.

DEPARTMENT POLICY: Current law exempts natural gas production facilities and natural gas terminals from the requirement of financial responsibility. HB 394 requires $25,000 of financial responsibility per incident for shallow on-shore wells drilled solely to explore for gas. This requirement applies to wells with depths of less than 3,000 feet. Wells drilled to depths greater than 3,000 feet or for purposes not solely to explore for gas are required to provide proof of financial responsibility at $1,000,000 per incident.

BRIEFING TOPIC: Management of Waste Drilling Muds and Cuttings

STATUTE: AS 46.03.100 (f) is amended by HB 394 to read: (f) This section (waste disposal permit) does not apply to discharges of solid or liquid waste material or water discharges from the following activities if the discharge is incidental to the activity and the activity does not produce a discharge from a point source, as that term is defined in regulations adopted under this chapter, directly into any surface water of the state:

> (3) water well drilling, geophysical drilling, or coal bed methane drilling **or other natural gas drilling to recover gas from a reservoir at a depth of less than 3,000 feet;** or

REGULATION: Administrative regulations in 18 AAC 60.200-.265 provide requirements for solid waste facility permitting, management planning, and closure. Specific requirements for drilling waste storage and permitted drilling waste disposal facilities are provided in 18 AAC 60.430, and address conventional, heavy drilling muds (rather than bland, water-based muds used in shallow drilling). These regulations do not substantively affect the Department's policy on this topic.

DISCUSSION: Drilling activities in support of hydrocarbon exploration programs rely upon a variety of mud systems. The mud satisfies several requirements critical to the drilling process, including: 1) lubricating and cooling the drill bit; 2) flushing cuttings from the hole; and, 3) providing a pressure gradient which minimizes fluid/gas communication between strata. The basic composition of muds for drilling shallow wells includes water, bentonite (a naturally-occurring clay mineral), and an organic polymeric viscosifying agent (which suspends the bentonite and increases the viscosity of the fluid). The polymer is non-toxic and biodegradable. These bland, water-based muds are commonly used for shallow (<3000 ft) drilling of water wells and geophysical test holes, and pose no human or environmental threat. The mud and cuttings are typically left in-place, or in some cases, are used for surface improvements of roads and pads.

Drilling programs at greater depths require more sophisticated mud systems. A weight additive (barite - barium sulfate; a naturally occurring mineral) is typically added below 3000-3500 foot depths to increase the mud weight from a hydrostatic to lithostatic range. The greater weight protects against gas blowouts from over-pressured zones. Diesel may be added sparingly, or 'spotted' at various depths, for greater lubrication; whereas, pre-1985 muds were occasionally diesel-, or 'oil-based'. Past practices included the addition of certain heavy metals such as lead in pipe-doping and chromium as a corrosion inhibitor. These toxic components have been eliminated from current mud systems. Numerous additives are commonly used to adjust pH (NaOH), salinity (NaCl), and many other parameters. The final mud composition is often unique to the well and, although less of an environmental threat than earlier systems, today's muds still require special handling due to additives.

Current drilling practice utilizes bland, water-based muds for shallow drilling programs. The same muds are used in the upper 3,000 foot sequence of deeper wells: the mud system is amended at greater depths. The preference to use simple, water-based muds is based upon their non-toxic properties and relatively inexpensive cost. The use of such muds is expected in drilling shallow coal bed methane gas wells.

DEPARTMENT POLICY: Current law exempts the disposal of drilling muds and cuttings from coal bed methane well drilling from the requirement of a waste disposal permit. HB 394 further extends this exemption by specifically including natural gas drilling in reservoirs at depths less than 3,000 feet. The statute makes no distinction between exploratory or production well drilling. The discharge of muds and cuttings will not require a waste disposal permit when produced incidental to the drilling activity from a point source, if the discharge does not go directly into a surface water. This exemption applies only to drilling activities in reservoirs of less than 3,000 feet in depth.

Should coal bed methane drilling be undertaken for deeper reserves where heavy drilling muds are required, or when muds and cuttings produce a point source discharge directly into a surface water of the State the Department may require waste disposal permits. Disposal may also occur in the well annular space as allowed by AS 46.03.100 (d).

BRIEFING TOPIC: Discharge of Produced Water

The management of liquid waste discharges from coal bed methane gas drilling is subject to two distinct and separate regulatory authorities: permitting under AS 46.03.100 (f) and water quality standards under 18 AAC 70.010 (a). The relationship of these two authorities is critical to understanding the Department's regulatory responsibility for liquid waste discharges (produced water) as a result of coal bed methane gas drilling and production. This briefing paper will explain these two authorities and provide policy direction for the drilling industry and to agency personnel.

PERMITTING: AS 46.03.100 which establishes when liquid waste discharges must be permitted, was amended by HB 394. It now contains two permitting exemptions pertinent to liquid wastes generated from coal bed methane drilling. The first, AS 46.03.100 (d), states that, "this section [waste disposal permit] does not apply to:

(1) disposals subject to regulation under AS 31.05.030 (e) (2); or
(2) injection projects permitted under AS 31.09.030 (h).

In short, an operator is not required to obtain a waste disposal permit for non-hazardous drilling wastes disposed of in the annular space of an oil, gas or water well. Reinjection of produced waters into the annular space of a methane bed gas well does not require a waste disposal permit.

The second exemption if found in AS 46.03.100 (f) which states that, "This section [waste disposal permit] does not apply to discharges of solid or liquid waste material or water discharges from the following activities if the discharge is incidental to the activity and the activity does not produce a discharge from a point source, as that term is defined in regulations adopted under this chapter, directly into any surface water of the state:

> (3) water well drilling, geophysical drilling, or coal bed methane drilling ***or other natural gas drilling to recover gas from a reservoir at a depth of less than 3,000 feet**; (* underlined language added by HB 394)

The permit exemption under 46.03.100 (f) applies only when wastes are not directly discharged to surface waters as a point source. The term "point source" is defined in 18 AAC 70.990 as "a discernible, confined, and discrete conveyance, including a pipe, ditch, channel, tunnel, conduit, well, container, rolling stock, or vessel or other floating craft, from which pollutants are or could be discharged." Based on this definition, liquid wastes from drilling a gas well discharged directly to surface waters would constitute a point source discharge and require a permit. Liquid wastes discharged in an overland flow from methane gas wells do not require waste disposal permits.

In summary, the Department requires a waste disposal permit under AS 46.03.100 for the discharge of produced water from activities associated with coal bed methane or natural gas well drilling where those activities constitute point source discharges directly into surface waters.

WATER QUALITY STANDARDS: The management of liquid waste discharges is also subject to the State's water quality standards (WQS) in addition to permit requirements that may apply. 18 AAC 70.010 (a) states, "no person may conduct an operation that causes or contributes to a violation of the water quality standards set by this chapter." The pertinent standard would limit increases of surface water constituents to no more than one-third above normal background concentrations. For example, produced water from a gas well could be discharged on land without a permit. If that discharge indirectly impacts surface water, that impact cannot increase the total dissolved solids concentration of the surface water by more than one third of the normal background concentration.

Therefore, regardless of whether a permit is required under AS 46.03.100, water quality may not be impaired beyond the limits established in 18 AAC 70. AS 46.03.100 (f) does not expand or diminish the application of the water quality standards. An activity could be enjoined, even if legally operating without a permit, if the activity resulted in a violation of the water quality standards.

DEPARTMENT POLICY: It is the department's policy to encourage the development of coal bed methane gas wells as an alternative energy source for rural areas of the State. Enforcement actions by the Department to correct violations of WQS from non-permitted wells would require costly, resource intensive monitoring and compliance agreements and create an equally costly imposition on the drilling industry. This policy proposes that the agency work with industry to obtain the information up-front to prevent or minimize the subsequent environmental impacts of coal bed methane gas well drilling. Consequently, we propose to work with industry:

(1) to site exploratory wells to minimize the potential impact of liquid waste discharges to surface waters;
(2) To develop timely permits, when required, to promote maximum gas production with minimum impact to the receiving waters; Injection of wastes will not require a permit or plan approvals;
(3) To assist in developing effective, low cost treatment technologies to bring discharges into compliance with the WQS. We will rely upon industry to provide the agency with quantity and quality data for both the produced water and the surface water receiving body; and
(4) To develop, when practicable, general permits for similar discharges that will produce predictable and acceptable impacts on receiving waters.

SENATE RESOURCES COMMITTEE
January 27, 1997
3:35 P.M.

MEMBERS PRESENT

Senator Rick Halford, Chairman
Senator Lyda Green, Vice Chairman
Senator Loren Leman
Senator Bert Sharp
Senator Robin Taylor
Senator Georgianna Lincoln

MEMBERS ABSENT

Senator John Torgerson

COMMITTEE CALENDAR

Department of Environmental Conservation Overview Presentation by Commissioner Michelle Brown and Mr. Keith Kelton, Director, Division of Facility Construction and Operation

ACTION NARRATIVE

TAPE 97-3, SIDE A
Number 001

CHAIRMAN HALFORD called the Senate Resources Committee meeting to order at 3:35 p.m. and announced the DEC Overview.

COMMISSIONER MICHELLE BROWN stated that the quality of Alaska's air, water, and land resources is central to our social and economic future. The management of these resources should be based upon sound science, fairness, consistency, public involvement, and common sense. She said they are here to solve problems and to do development right, working toward compliance and technical assistance as their mission.

She pointed out that 25% of their core services are in the areas of safe food and drinking water, proper sanitation, and better waste disposal. In Alaska many of these fundamental services are performed by the State.

COMMISSIONER BROWN explained that disciplined budgeting has been done with some sacrificing their core services. Their general fund dollars have decreased by 70%. Some of this has been replaced with GF matched and program receipts, but even accounting for these the funding had decreased 43%. This decrease is very problematic, she said, because there are no other sources of funding available for the core public health services.

Number 82

COMMISSIONER BROWN reported that their facilities construction and operation mission is to eliminate the honey bucket systems in rural Alaska. The Division of Facility Construction and Operation (FC&O) administers grants and loans and provides operational systems on a daily basis to municipal and village governments for water, sewer, and solid waste systems. They also work with the Governor's Washington Office and the Congressional delegation to secure consistent funding for these projects. Last year the work in this division improved the lives of approximately 800 rural Alaskan children by providing safe drinking water and sanitary sewage disposal to 520 households where it was previously being hauled. They have also improved water and sewer handling to an additional 900 households. In '98 they plan to add another 1,100 households.

Their remote maintenance workers provide training and technical assistance to 126 rural communities and 280 individuals have been trained to pass operator certification exams. These projects also generate seasonal employment for over 1,000 rural resident and provide about $8 million in wages. The municipal program results in about 300 construction jobs yearly. Urban Alaska engineering firms, vendors, and freight operators also benefit from about $12 - $15 million in business from these projects, she said.

The Environmental Health Division inspects almost 900 fish processing facilities in the State. Alaska is the largest producer of wild salmon in the country and our processors produce 50% of the nation's seafood. They recently won the Vice President's Hammer award for streamlining government by creating with FDA a regional seafood data base that enable our products to get on the European market quicker.

There is a food safety program that inspects over [illegible]00 facilities each year, **COMMISSIONER BROWN** said. They are m[illegible]ng to a risk based inspection program to ensure that their resources are devoted to the areas posing the greatest health risk. Both their meat inspection and food safety programs received federal recognition this year as exemplary programs.

COMMISSIONER BROWN reported that the Air and Water Division assists 500 operators who need air permits. Yearly they issue 50 construction permits and 150 operating permits and do site specific technical assistance visits to 250 operators. They work with local governments in solving their air quality programs and are developing a monitoring plan for radio-active material that may be leaking on Amchitka Island. They have pending before EPA a request to exempt Alaska from the low-sulphur fuel diesel requirements for cars and trucks, because the millions of dollars it would take can not be justified by the small health benefits to be achieved.

Number 140

CHAIRMAN HALFORD asked if that included all uses of diesel. **COMMISSIONER BROWN** answered that this requirement deals with mobile sources like cars and trucks. Stationary sources are covered by permits and they have emissions limits. A problem is created when mobile sources move in as part of a stationary operation for some period of time - like a drilling rig. There are two alternatives: to remodel the emission permits or to use low-sulphur fuel.

CHAIRMAN HALFORD asked what would be the availability and cost of low-sulphur fuel which is not available in Alaska. **COMMISSIONER BROWN** replied that the operators felt it was not a particular hardship, but the refiners felt it caused them a serious problem, because if they weren't producing it, they would loose the market share. Therefore, they pulled the regulation back and are continuing to work on it.

CHAIRMAN HALFORD commented that there are mobile sources, fixed engines, and non-road engines. He asked what a D10 would be. **COMMISSIONER BROWN** replied that it would be covered under the permit for the stationary facility.

Number 176

COMMISSIONER BROWN continued saying that the Division of Water certifies federal water discharge permits for about four major facilities per year and about 20 municipal waste water discharges. They also approved 60 major forest plans and provide technical assistance to 15 timber operations. They complete approximately 300 water quality certifications for dredge and fuel permits and review another 200 permits for compliance with State water quality requirements, focusing on those that have significant water-shed impacts.

This year they launched a public water quality work group to work on 12 standards which were identified by the public and industry as causing them day-to-day problems.

The State-wide Public Service Division routinely gets about 13,000 requests for information and assistance each year. This group works with communities and large facilities to prioritize issues on a department-wide basis. This group also works with local communities to find solutions to avoid costly replacement of equipment or shipment outside of waste materials. They helped develop an excess materials exchange that saved Alaska business about $500 thousand dollars so far as well as reduced loads on land fills. They also have a pit-stop program, a service to the automotive sector which provides technical assistance to 220 small businesses on how to manage and reduce pollution.

The Spill Prevention and Response Division last year cleaned up 135 additional contaminated sites from previous years and they have major clean-ups underway at King Salmon, the Pribiloff Islands, the

PAPC Site in Sitka, and they are beginning on KPC Site in Ketchikan. They turned over initial spill response equipment to 14 local communities to enhance their efforts to respond to spills rather than have them depend upon the State. They have also adopted best-available technology regulations for the State's Oil Pollution Prevention and Response Statute.

Right now, they have launched an initiative to develop State-wide risk based clean-up standards for contaminated sites which tailors clean-up standards to the risks that are posed by the type of contaminant and the location. She said there has been a major achievement in Prince William Sound where the TAPS owners have agreed to enhance the current tug escort and rescue capacity and are bringing up new state-of-the-art vessels and the first one will be here in about three months.

Administrative Services was put under single management about a year and a half ago allowing them to be more efficient, to decrease staff, and to simplify department-wide practices such as billings.

Number 261

COMMISSIONER BROWN reviewed the status of adopted legislation that the committee requested by reading the hand-out available in the packets.

Number 281

SENATOR LEMAN asked regarding HB 208 if the Department's adopted seafood quality regulations was the same as the HASP Program. **COMMISSIONER BROWN** replied that they are different, but she said she would check on it for him.

Regarding SB 69, **SENATOR LEMAN** noted that he had seen a newsletter from the Prince William Sound Aquaculture Association saying that they had some concerns about their liability regarding disposal and asked what their concern was. **COMMISSIONER BROWN** explained that with the glut of salmon last year, the food banks were afraid to accept some of the food that was past its prime, so they asked them for guidance.

SENATOR TAYLOR said he agreed that the quality of the product once it was distributed was an important issue.

COMMISSIONER BROWN said that they license pesticide applicators and noted that is one of the professional licenses that can be withheld if a person is behind on child support payments.

SENATOR HALFORD asked if they were coming up with a temporary license for those who lose their license under the "must be withheld" as other agencies were doing. She said she would find

out for him.

COMMISSIONER BROWN said the National Toxics Rule has created serious permitting problems without adding any health protections, because Alaska's water is naturally high in arsenic and she met with the EPA to get a stay until they do further studies.

SENATOR LEMAN said he remembered other problems with the Toxics Rule having to do with the tabulation of the discharge waste of oil operations as toxic. She answered that she is negotiating with EPA on that issue as well as a number of others.

COMMISSIONER BROWN said since last year's budget they have sought and received three increases for this year: $570,000 in designated program receipts for water permits and increases for clean-up oversite from the Exxon Valdez Trustee Council for specific projects. The department has two funding requests for increases. One is for the storage tank assistance program and the other is for APC for teaching clean-up oversite. They may also seek an additional $100,000 in federal receipt authority for requirements under the reauthorized Safe Drinking Water Act.

COMMISSIONER BROWN explained that there was a more detailed summary of their division in their packet. Pages 11 and 12 have a detailed list of changes in their budget. She said she thought they had made a lot of progress in DEC in achieving budget clarity and they have provided a valuable service for the dollars that have been spent. All in all they have nurtured a cooperative mediated approach to environmental management. They have some continued budget challenges due to the decrease in general funds. Some of these have been offset by increases in federal funds and general program receipts.

She said they want to increase their ability to do compliance assistance with industry agency work groups and ambient conditions monitoring. The department needs to do a better job on handling water discharge permits quicker and with better analysis particularly for operators who are unable to pay the fees for that. There are no general funds to do that, she noted.

Number 453

SENATOR LINCOLN requested a breakdown and comparison of communities that are still on the honey bucket system with unsafe water conditions because she thought that would give them a better idea of where they are in the State. **COMMISSIONER BROWN** replied that she would do that for her and said that they are at a little over 50% with households that need to have systems put in. They anticipate being at about 79% in 2000.

CHAIRMAN HALFORD asked if they had come up with some way to deal with households three feet above sea level. **COMMISSIONER BROWN**

replied that they use a mix of systems and work with a community to figure out what will work best.

MR. KEITH KELTON responded that there was no one answer. There were two choices in a situation like that - a vacuum system that's above ground or a hauling system in closed containers.

SENATOR TAYLOR said he didn't think there were many people in the room who were on a developed system. If they were going to include the cost of running water and sewer lines, he wanted his and his neighbor's house included. He would also like to see what the cost per household was for developing the systems they have put in so far.

Number 524

SENATOR LINCOLN said they had to also look at the economy in a given area as well. Otherwise a simple solution would be for everyone to just move. She said the State has the responsibility for providing basic health care. She was also concerned with the military sites being cleaned up, because they leave behind some of the worst contaminated areas that she has seen.

COMMISSIONER BROWN responded that with the help of our Congressional delegation, the department had been aggressive on this issue. The agreement they have with King Salmon is a one-of-a-kind for the nation in which the military is letting the State determine when the site is clean.

SENATOR LINCOLN asked who monitors the sites. **COMMISSIONER BROWN** answered that she works with DOD to rank sites and ultimately Congress decides where the money is going to come from. The Department monitors the sites.

CHAIRMAN HALFORD asked if general fund money was being used to do the monitoring on Amchitka. She replied no.

SENATOR LINCOLN said she wanted to know how much money we had lost for programs the department wanted to continue and what the impact of centralization was on rural communities.

TAPE 97-3, SIDE B
Number 590

COMMISSIONER BROWN replied that they are down slightly on federal dollars, but the problem is that federal dollars direct them to do certain programs that may not be what the department thinks is the most important. It's the loss of general funds that's the problem. She said they had not centralized, but they have programs that have united so that the program development and implementation is all under single leadership for continuity.

SENATOR GREEN asked about disposal of hazardous material. **COMMISSIONER BROWN** explained that generally hazardous waste disposal is run by land fill operators who set the terms and conditions for them. There are periods in the summer when the department does hazardous material pick-ups. A new program funded by Exxon Valdez money covered the Prince William Sound Communities, but they are fairly expensive programs.

MR. KELTON added that Anchorage has facilities for paints, batteries, etc.

Number 529

SENATOR TAYLOR asked if it was true that five years ago there were five DEC employees in Fairbanks and today there are 45. **COMMISSIONER BROWN** said she would get the exact numbers.

SENATOR TAYLOR asked where they were on plan approvals for oil spill response. She replied that every operator has to have contingency plans and they are approved as they come in.

SENATOR TAYLOR said that now two men are required to be on the bridge of the tug boat because the person at the wheel may be rendered unconscious. **COMMISSIONER BROWN** responded that the risk assessment recently done in Prince William Sound by a coalition of emissions systems advisory groups pointed that out as a risk. Industry has determined that they want to have extra personnel to offset that, but it hasn't been a requirement in the contingency plan.

SENATOR TAYLOR noted that right now Ketchikan has to ship its solid waste to the Columbia River which seems to be an inordinate expense. He asked if they could expect some help from DEC to assist communities in finding a centralized place for all of it.

Number 473

COMMISSIONER BROWN responded that solid waste disposal was a problem and that they were dealing mostly with federal standards. Last year they worked with the Congressional delegation and got an Alaskan specific exemption to solid waste laws so we could develop programs and regulations for very small facilities that allow us to focus on continual incremental improvements rather than an all or nothing compliance scenario. EPA has indicated interim approval of those and she expects to get primacy of the program this year.

MR. KELTON added that the Southeast Conference has put solid waste as a number one priority and have looked at regionalization concepts. He said the State can't develop **regional** concepts and he hoped their regulations were developed so as to promote regional interest in taking on this responsibility.

SENATOR TAYLOR commented that the garbage regulations are so difficult to comply with that nobody can meet them.

Number 435

MR. KELTON responded that it is working in Southeast Alaska at a fairly reasonable cost in the small community of Thorne Bay. DEC has assisted that community in putting in a bailer and a new land fill which they are able to operate for a reasonable amount of money. The situation in Ketchikan was a local decision that he personally didn't support since he had funds for an incinerator which the city didn't use for three or four years. It was their choice to haul it south.

CHAIRMAN HALFORD asked if it was legal under State laws to have a burn barrel and burn your trash and bury what's left in the barrel every three months. **MR. KELTON** answered that as long as you are outside an area that has a local ordinance, it's legal. Individual on-lot disposal is approved.

Number 392

SENATOR LEMAN asked if there were any plans approved for tankers operating in Cook Inlet. **COMMISSIONER BROWN** answered that all operators in Cook Inlet do have plans. She explained that the operators apply together because they have a single responder who does a portion of it for them.

SENATOR LEMAN asked her to comment on the progress of the storage tank efforts. **COMMISSIONER BROWN** said she would get the figures to him and said the legislature each year has provided funding to them for upgrades as well as clean-ups.

SENATOR HALFORD asked what happened if they didn't fund the capital portion of it this year. **COMMISSIONER BROWN** replied that projects under way and new ones slated just wouldn't happen. The operators have come to depend on this program.

SENATOR TAYLOR asked if areas other than Southeast Alaska that don't percolate, requiring an unconventional system, need to have DEC have DEC approval. She answered that an unconventional system's plan still needed to be approved by DEC throughout the State. She added that lenders sometimes require more than one health authority to say it will work.

SENATOR TAYLOR asked if honey buckets were conventional systems in the areas Senator Lincoln was referring to (like in Rampart). **COMMISSIONER BROWN** answered that they didn't offer permits or plan approval, because that's a system that is already in place. She explained that those situations are usually where local governments are not allowing the building permit, because they want someone to review the plan. She said they encourage local government to run

their own domestic waste water program and it is up to them to determine their standards.

SENATOR TAYLOR commented that it seemed to him that a community could choose to opt out of the process entirely. That way they would never see DEC in their community. **COMMISSIONER BROWN** replied that if a local government takes over the program, they can run it however they chose. However, it wouldn't take long for a program like that to crash and burn. It has happened all over the State. **SENATOR TAYLOR** explained that he was concerned that it was possible for a community to let things go until it was so bad that it became some one else's problem when other communities were spending money and putting in approved systems. He wanted to see some uniformity. **COMMISSIONER BROWN** replied that their regulations were uniform. An unconventional system required plan approval for single families. If a local community takes over an entire program, they could change it. To the extent that a community hasn't done that, their regulations are uniform throughout the State.

SENATOR TAYLOR commented that he saw the same pictures of disposal problems year after year.

Number 300

CHAIRMAN HALFORD asked if it was their opinion that conventional systems in the average Alaska climate work or are they simply storage and transportation systems to eventually fill up the entire leach capacity of the area. **MR. KELTON** said his opinion was that any septic tank system in this State is ultimately going to fail. It's a question of time and conditions vary greatly.

CHAIRMAN HALFORD clarified that it seemed to him that if someone wanted to try something new that very well may work, a person needed a permit, but if you put in a conventional system that they know doesn't work, a person doesn't need a permit. **COMMISSIONER BROWN** said it was important to note that conventional systems that will ultimately fail, will work for periods of time. It is imperfect, but it does work temporarily.

CHAIRMAN HALFORD said it was his opinion that they should be easier on some alternative technologies and to encourage them more than their set of criteria seems to be doing.

Number 232

SENATOR LEMAN commented that "fail" was an unfortunate use of words, because it's the same as tires on a car. They will fail eventually, but that doesn't mean you shouldn't use them. You should use them and then replace them at an appropriate time. A septic system may eventually clog, but if it's done properly he thought it could be quite adequate in many cases. He agreed with Senator Halford, though, that alternative technologies should be

considered as part of the conventional that don't require plan approval.

COMMISSIONER BROWN clarified that regulations now approve a certain kind of package plant. A person needs to submit how it will work under his conditions.

CHAIRMAN HALFORD asked the Department's view of combustion incinerator toilets. **COMMISSIONER BROWN** replied that they are expensive. **MR. KELTON** said they have estimated up to $200 per month for a family of four to operate. In areas with natural gas it would be more economical. The system is good.

SENATOR LINCOLN asked if there was a housing project, did there need to be an approved plan for waste. **COMMISSIONER BROWN** answered that a dwelling for multiple families required approval. **SENATOR LINCOLN** said that wasn't what was happening in some communities like Rampart where there is a project going in right now. The system that they are using is dumping their waste on a hole in the snow on top of the ground. No one has monitored that.

MR. KELTON asked if the liquid lagoon in Rampart was being used. **SENATOR LINCOLN** explained that the lagoon in Rampart goes from the laundromat and the school and that no one hauled their waste to the lagoon. She said the point was that in most villages people don't haul their waste to a lagoon.

COMMISSIONER BROWN explained that DEC doesn't have legions of inspectors who go out to check on how things are done. Generally inspections happen in urban areas. She added that she didn't think they wanted inspectors coming in to a community and "cracking down." She thought it would be good for communities to come to them to work together on solutions for safer ways of disposing of waste. **SENATOR LINCOLN** said she thought there might be a plan for the whole State to follow.

Number 66

CHAIRMAN HALFORD commented that because the State was unwilling to support individual systems in the urban and suburban areas, they tend to collectivize systems in small villages where they would be better off with individual systems. He thought part of the reason was the political objection to building individual systems for some and not for others. However, he thought it would be better to build something that would be used rather than to build something that wouldn't be used and which no one would feel responsible for maintaining.
COMMISSIONER BROWN agreed.

Number 28

There being no further business to come before the Committee,

CHAIRMAN HALFORD adjourned at 5:07 p.m.

Department of Environmental Conservation

Key Contacts:

Michele Brown, Commissioner
Al Ewing, Deputy Commissioner
465-5065

Janice Adair, Director
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Program Areas:

-Drinking Water
-Solid Waste
-Seafood Processing
-Milk, Dairy, Meat Processing
-Food Safety & Environmental Sanitation
-Pesticides
-Laboratory Services (chemical and microbial)

Keith Kelton, Director
Division of Facilities, Construction & Operations & Alternate Legislative Liaison
465-5135

Program Areas:

-Village Safe Water
-Municipal Grants & Loans
-Operator Training and Certification

Mike Conway, Acting Director
Division of Air & Water Quality
465-5266

Program Areas:

-Watershed Development (mining & industrial/municipal wastewater permitting
-Air Quality Maintenance (permits & compliance)
-Air Quality Improvement (mobile sources, technology, ambient monitoring, radiation)
-Water Quality Protection (watershed teams, water quality standards, ACMP, wetlands, groundwater, nonpoint sources of pollution)

Kurt Fredriksson, Director
Division of Spill Prevention and Response
465-5250

Program Areas:

-Underground Storage Tanks (financial assistance and technical assistance for upgrade, closure and cleanup)
-Emergency Response (unified command response with responsible party, Coast Guard & EPA, State Emergency Response Commission, response drills)
-Contaminated Sites Cleanup (Department of Defense, EPA Superfund sites)
-Industry Spill Prevention and Response Contingency Plans (plan approvals, inspections, Joint Pipeline Office liaison)

Marianne See, Director
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Program Areas:

-Domestic Wastewater
-Compliance Assistance
-Rural Issues
-Environmental Crimes Unit

Larry Jones, Director
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465-5059

Program Areas:

-Accounts Payable/Receivable
-Grant Management
-Operating Budget
-Personnel
-Information Systems Support
-Leasing