



Safe Handling of Oil and Chemicals



PREVENTION
Safer



PREPAREDNESS
Better



RESPONSE
Cleaner



MISSION

Prevent, respond and ensure the cleanup of unauthorized discharges of oil and hazardous substances.

The Alaska Department of Environmental Conservation's Division of Spill Prevention and Response (SPAR) is responsible for protecting Alaska's land, waters, and air from oil and hazardous substance spills.

Alaskans have made a concerted effort to prevent and clean up spills. Significant progress has been made in the safe handling, storage and transportation of oil and chemicals and the cleanup of historic contamination.

We will never totally eliminate the risk of spills, but we are constantly learning how to better manage that risk.

SPAR pursues its mission in three important ways:

Prevention – Ensuring a “safer” Alaska through the spill-free handling of oil and chemicals.

SPAR ensures spill prevention through the review and approval of prevention plans for oil terminals, pipelines, tank vessels and barges, railroads, refineries, and exploration and production facilities; the underground storage tank spill prevention program; technical assistance to industry and the public; risk reduction measures; inspections; and education in proper spill prevention and response methods.



A railroad tank car derailment in October 1999 near Canyon resulted in a spill of over 12,000 gallons of jet fuel.

Preparedness – Making industry and government's ability to prepare and respond to spills “better.”

SPAR ensures response preparedness through the review and approval of oil discharge contingency plans; inspections; spill drills and exercises; partnerships with local communities and other state and federal agencies; pre-positioning of response equipment for local use; maintenance of statewide and regional spill response plans; and implementation of the Incident Command System for spill response.

Response – Keeping Alaska “cleaner” through rapid response and cleanup of contaminated sites. SPAR ensures an effective response through the identification and rapid abatement of dangerous acute human exposures to hazardous substances; timely characterization and remediation of chronic health exposure risks from hazardous substance releases; mitigation of the effects of spills on the

environment and cultural resources; and restoration of property value and usability through adequate cleanup.

Alaska's Response Fund

The Oil and Hazardous Substance Release Prevention and Response Fund (also known as the "Response Fund") was created by the Alaska Legislature in 1986 to provide funds for the safe handling and cleanup of oil and hazardous substances. The Response Fund is based on a per-barrel surcharge on crude oil production and is used for prevention, preparedness and response. State cleanup costs are recovered from the spiller, who is ultimately responsible for these costs. Although the fund has been largely self-sustaining for well over a decade, revenues are declining as crude oil production declines, making long-term budget planning a key concern.

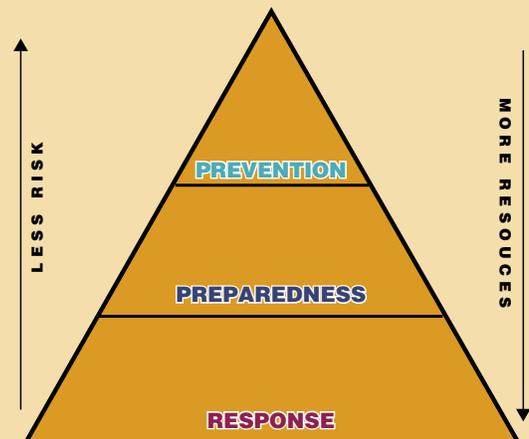
SPAR also receives federal funds for military and nonmilitary federal property cleanups, cleanup and remediation of rural bulk fuel facilities, voluntary site cleanups, operation of the underground storage tank spill prevention program, and cleanup of leaking underground storage tanks. SPAR may also seek federal reimbursement from the national Oil Spill Liability Trust Fund for costs incurred in oil spill response activities.



On-water oil recovery efforts from a fishing vessel that sank in Prince William Sound on August 4, 2001 with 35,000 gallons of diesel fuel and several hundred gallons of lube and hydraulic oil on board.



The Nanuq is one of two 10,000-horsepower, cyclodial-propelled tractor tugs with unique maneuvering capabilities that provide an escort to every laden tanker transiting Prince William Sound.



The "response pyramid" illustrates that increased emphasis on prevention reduces risk while increased emphasis on response requires greater resources.



PREVENTION

“Safer”

The first goal of SPAR’s mission is spill prevention - making the system “safer”.

The core elements of prevention include:

- oil spill prevention plans for oil terminals, pipelines, tank vessels and barges, nontank vessels, railroads, refineries, and exploration and production facilities;
- risk reduction program for underground storage tanks;
- chemical spill prevention;
- inspections of facility and vessel prevention programs;
- best-available technology reviews; and
- spill prevention education and technical assistance.



Leak detection systems are now required for all underground storage tanks in Alaska. A line leak detector is shown.

Spill prevention is critical because of the high risks posed by Alaska’s environment. The objective is to reduce the number and volume of oil and hazardous substance spills.

Oil Spill Prevention Plans

SPAR ensures that regulated operators engage in proper spill prevention techniques through review of prevention plans that must be submitted as part of

an operator’s oil discharge prevention and contingency plan. Corrosion monitoring, leak detection, overflow alarms, secondary containment, tank inspections, pipeline testing, and tanker escort systems are among the requirements that SPAR staff verify through plan review and follow-up inspections.

Chemical Spill Prevention

Chlorine and ammonia are used in many Alaska communities for seafood processing and water treatment, and pose the primary chemical threats to Alaskans. Other prevalent hazardous chemicals that pose a threat include hydrogen sulfide, formaldehyde, sulfuric acid, and sodium cyanide. SPAR maintains and updates information on Alaska’s chemical hazards for use by communities as an aid in preparing local response plans. This information is also used to identify communities at risk from a chemical release for non-regulatory prevention inspections and drills. The state’s hazmat response teams target the chemicals which may pose a threat.

Spill Prevention Inspections

Division staff trained to American Petroleum Institute standards conduct on-site inspections of regulated operations, including oil exploration and production facilities, pipelines, tank vessels and oil barges, and aboveground and underground storage

tank facilities. SPAR's privatized underground storage tank inspection program is working to ensure that the leak detection and corrosion monitoring systems at new installations protect Alaska's environment.

Best Available Technology Reviews

Industry prevention plans must incorporate the use of best available technology (BAT) to ensure that the oil is kept in the container. Operators must demonstrate that the technologies identified in their plans meet the BAT requirement. SPAR periodically conducts evaluations of technologies subject to the BAT requirements and may issue written findings for those technologies considered the best available. Operators who select established BAT technologies are not required to conduct an independent analysis of those technologies.



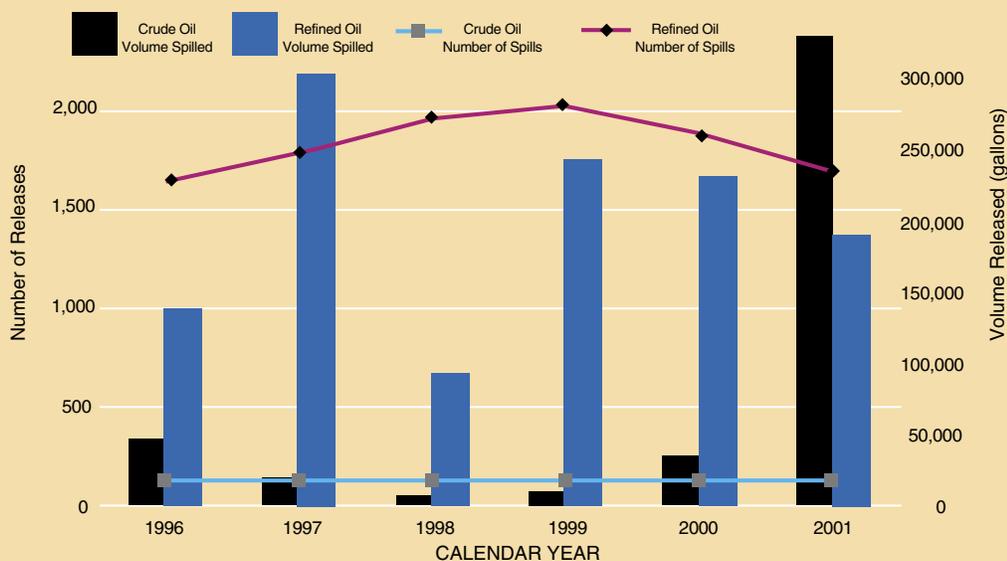
Escort vessels are a key prevention measure that enhances the safety of marine oil transportation in Prince William Sound.

Spill Prevention Education and Technical Assistance

SPAR engages in public outreach to prevent and reduce the occurrence of oil and hazardous substance releases from home heating oil tanks, marinas, aboveground storage tanks, facilities that handle hazardous chemicals, and other unregulated sources. Efforts may include manuals, handbooks and other educational materials, public service announcements, training in proper spill prevention techniques, and non-regulatory audits and inspections.

Number and Total Volume of Oil Spills Reported

FY 1996–2001



Historically, most oil spills are of refined oil. The Trans-Alaska Pipeline System bullet-hole release (cover picture) spilled 285,000 gallons of crude oil and accounts for the spike in spill volume in 2001.



PREPAREDNESS

“Better”

The second goal of SPAR’s mission is preparedness - making industry and government’s ability to prepare and respond to spills “better”.

The core elements of preparedness include:

- government and industry oil spill response plans;
- Alaska Incident Management System for Oil and Hazardous Substance Response;
- spill drills and training exercises;
- response contractor registration;
- spill response depots and corps; and
- financial preparedness.

The ability to respond quickly and effectively to spills requires continuous self-improvement and close coordination with stakeholders. The objectives are to reduce spill impacts to public health and the environment, reduce costs for spill response, and increase recovery of spilled product.

Oil Spill Response Plans

SPAR oversees government response planning through the joint state/federal Unified Plan and its ten Alaska subarea plans for government response. These plans provide the framework for coordinated agency response to oil and hazardous substance spills statewide. Response plans also exist at the local level.

SPAR reviews and approves industry oil discharge prevention and contingency plans for oil terminals, pipelines, tank vessels and barges, nontank vessels, railroads, refineries, and exploration and production facilities. These plans describe the equipment, resources, and strategies required to quickly respond in the event of a spill.

The Alaska Incident Management System

In partnership with industry and other government agencies, SPAR has developed the Alaska Incident Management System (AIMS), a standardized Incident Command System for spill response. Utilizing a Unified Command, common incident objectives are quickly defined and the resources immediately brought to bear to get the job done. By tailoring the ICS to Alaska’s unique circumstances, all parties effectively work toward the same common objectives. Dedicated emergency operations centers have been established in critical operating areas.



A tank truck carrying 13,000 gallons of jet fuel rolled over and ignited on the Richardson Highway in August 2001.

Drills and Exercises

Drills and exercises test the viability of oil spill response plans and the ability of operators to carry them out. Announced and unannounced drills are conducted, ranging in size and complexity. Periodic exercises also test the ability of government agencies to carry out their duties and obligations under the Unified Plan. As part of its technical assistance activities, SPAR conducts community-based exercises to test and improve the ability of local responders to deal with oil and chemical releases.

Response Contractor Registration

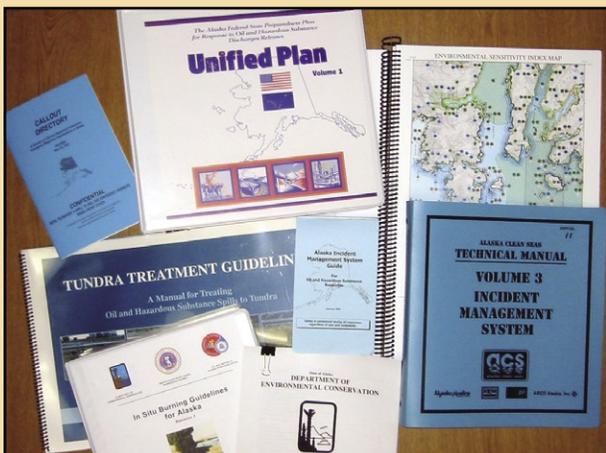
A response contractor must be registered by the state in order to offer response services. Contractors whose resources are listed in oil spill response plans for this purpose must meet the state's registration requirements. Five outstanding spill response cooperatives have grown and matured since new oil spill response requirements came into effect in the early 1990's. Today these cooperatives, along with industry-owned resources, form the backbone of Alaska's response capability.



The 156-foot Wilderness Adventurer, which ran aground in Glacier Bay National Park in June 1999, spilled about 50 of its 4,300 gallons of fuel before being successfully refloated four days after the grounding.

Spill Response Depots and Corps

Because of Alaska's size and the remoteness of many of its communities, local residents play an important role in responding to spills and minimizing their impacts. SPAR has signed over 35 community response agreements that provide a mechanism to integrate local resources into a single state response and reimburse local governments for costs incurred in responding to spills. Pre-positioned response equipment caches provide a local source of equipment tailored to the types of spills likely to be encountered. Agreements with the Anchorage and Fairbanks Hazardous Materials Response Teams allow them to respond to a hazmat incident anywhere in the state at the direction of the State On-Scene Coordinator.



The Division ensures response preparedness through the development of planning tools such as the Unified Plan, geographic response strategies, and the Alaska Incident Management System Guide.

Financial Preparedness

Demonstration of financial responsibility – the ability to pay for a spill – is required for all regulated operators. The amount required is based on the volume of oil produced, stored, or transported. SPAR verifies the financial resources of regulated operators through the examination of financial records required by law.



RESPONSE

“Cleaner”

The third goal of SPAR’s mission is response – keeping Alaska “cleaner”.

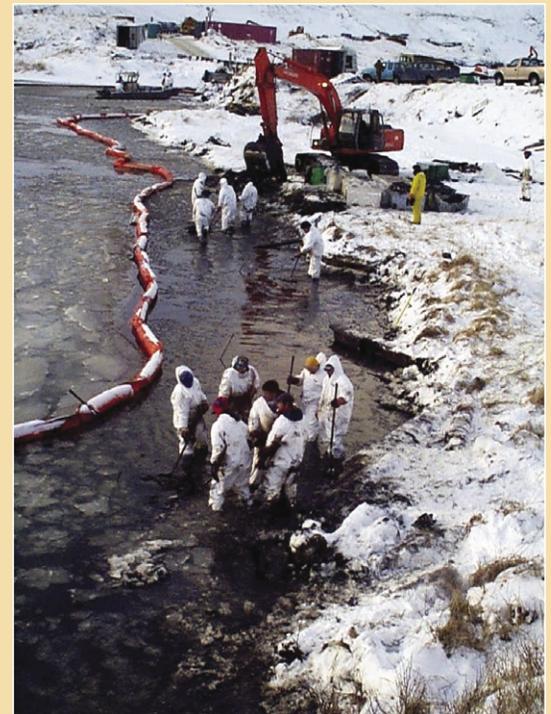
The core elements of response include:

- emergency response;
- contaminated site cleanup;
- financial assistance program for underground storage tank owners;
- voluntary cleanup program (VCP); and
- area-wide and risk-based assessments.

SPAR’s main response objectives are the protection of public safety, public health and the environment from the direct or indirect effects of the spill; adequate cleanup of the spill; assessment and restoration of damages to property, natural resources and the environment; and the recovery of costs from the responsible party to the Response Fund.

Emergency Response

Emergency response – a combined effort to contain, control and clean up a spill -- is the best way to mitigate impacts and keep costs down in a world where natural resource damage costs can outstrip the costs of the response itself. Emergency response focuses on immediate containment, cleanup and removal of gross contamination. Abandoned drums may contain unknown material with a serious health or environmental threat, and must be secured, characterized and disposed of appropriately. A clandestine drug lab can contain dangerous and environmentally damaging chemicals and required complicated cleanup. The variety of spills reported to SPAR is great and no two emergency responses are alike. Over 2,000 spill reports are received annually.



The M/V Kuroshima grounding at Summer Bay near Dutch Harbor in December 1997 resulted in a spill of 39,000 gallons of heavy fuel oil and an intensive cleanup effort lasting several months.

Contaminated Site Cleanup

Spill cleanup becomes more difficult once a spill soaks into the ground and migrates through groundwater, across property lines or under buildings. Significant progress has been made to clean up the state’s most threatening military, state-owned, and industrial contaminated sites. There are currently over 2,000 known contaminated sites in Alaska. Hydrocarbons are the primary contaminant at 80% of these sites.

These cleanups benefit the health of Alaska’s citizens by reducing exposure to hazardous and toxic substances. With the improvement in chemical, fuel and hazardous-

materials handling by both the military and Alaskan industry, we are not creating the same contaminated site problems today that we had in the past. Alaska is getting cleaner, and will stay cleaner, as a result.

Financial Assistance Program

A program to assist owners of leaking underground storage tanks has helped to upgrade or close over 6,000 underground storage tanks across Alaska and clean up the contamination from these tanks.

Voluntary Cleanup Program

The Voluntary Cleanup Program accelerates the cleanup of historic contaminated sites by allowing owners and operators of low- and medium-priority sites to undertake voluntary cleanup actions according to Division guidelines with minimal oversight. This allows property transactions to occur that might otherwise be delayed due to higher-priority Division work. SPAR verifies the cleanup results and offers technical assistance as needed to participants in the program.



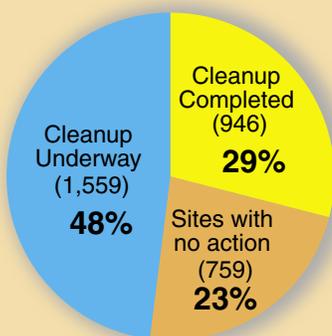
New tanks installed in Emmonak in 2000. With approximately 410,000 gallon capacity, secondary containment and regular maintenance, this facility will safely serve the needs of the community for years.

Area-wide and Risk-Based Assessments

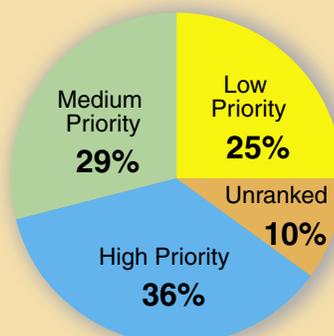
Area-wide assessments help determine the cumulative risk from multiple sources of contamination to target the best options for remediation on an area-wide basis. Risk-based assessments consider present and potential use, affected population, and other site-specific factors to determine an appropriate cleanup strategy. If cleanup is technologically or economically unfeasible, institutional controls allow contamination to remain in place subject to property use restrictions that protect public health and the environment.

Status of Contaminated Sites in Alaska

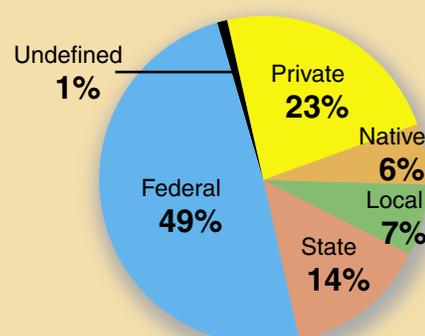
3,462 Total at end of FY 2002



CLEANUP STATUS



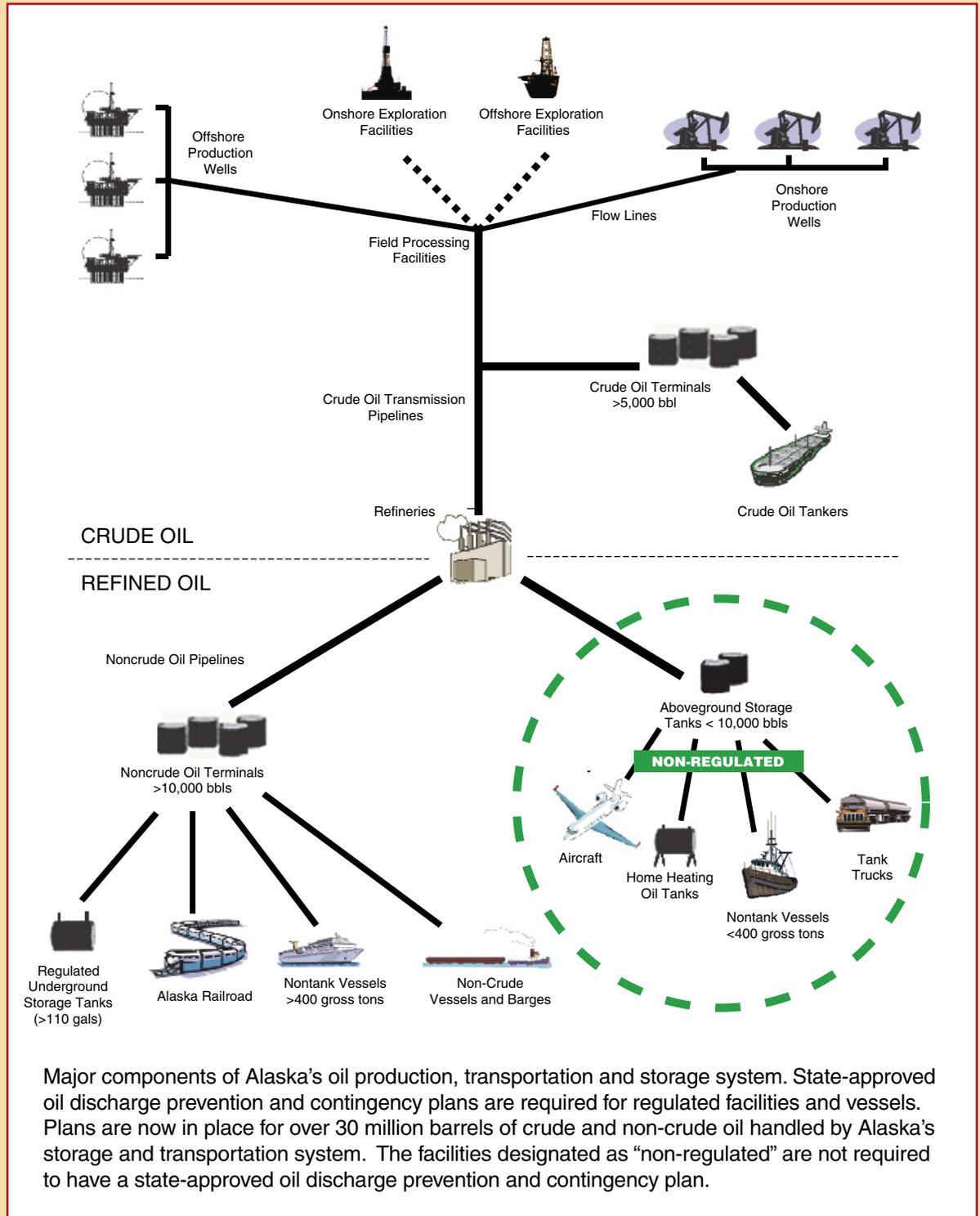
HAZARD RANKING

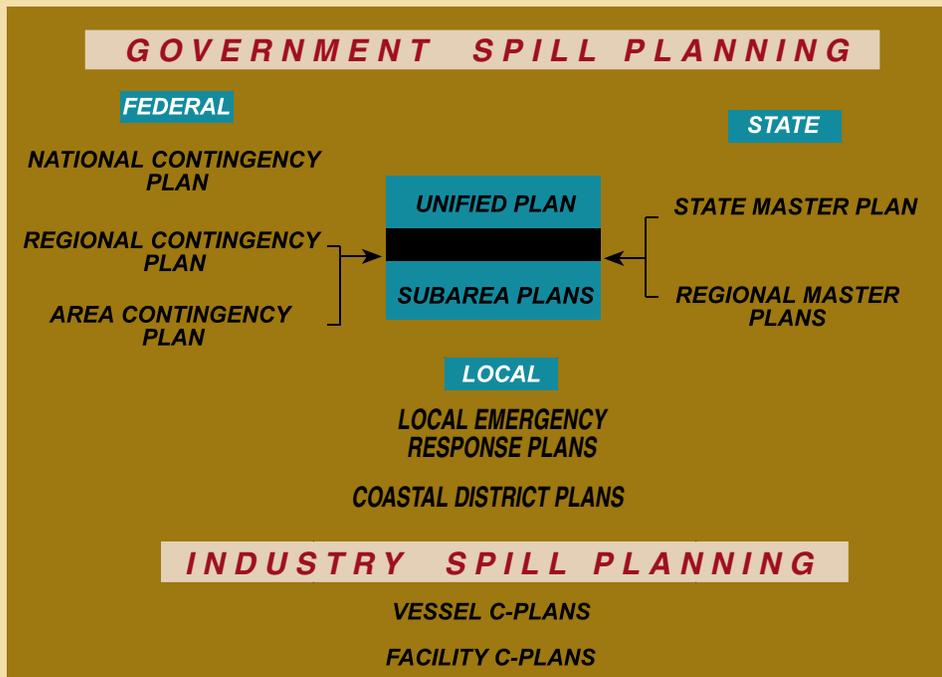


LANDOWNERS



Oil Production, Transportation and Storage in Alaska





PREVENTION TOOLBOX



- Prevention Plans
- Best Available Technology Reviews
- Technical Assistance
- Risk Reduction
- Inspections
- Leak Detection
- Secondary Containment
- Operator Training
- Escort Vessels
- Seasonal Drilling Restrictions

PREPAREDNESS TOOLBOX



- Unified and Subarea Plans
- Environmental Sensitivity Maps
- Geographic Response Strategies
- Safety Manual
- Tactics Manual
- Situation Reports
- Spill Reporting
- Training
- Mutual Aid
- Response Agreements

RESPONSE TOOLBOX



- Cleanup Standards
- Certified Laboratories
- Approved Soil Treatment Facilities
- Analytical Standards
- In Situ Burning Guidelines
- Dispersant Guidelines
- Institutional Controls
- Cleanup Manuals
- Persistent Bioaccumulative Toxics Strategy
- Unexploded Ordnance Cleanup

Alaska Department of Environmental Conservation
Division of Spill Prevention and Response

REPORT ALL

**OIL AND HAZARDOUS
SUBSTANCE SPILLS**

**During normal business hours
contact the nearest DEC Area Response Team office:**

Central Alaska Response Team

Anchorage

269-3063

FAX: 269-7648

Northern Alaska Response Team

Fairbanks

451-2121

FAX: 451-2362

Southeast Alaska Response Team

Juneau

465-5340

FAX: 465-2237

Outside normal business hours, call 1-800-478-9300

ALASKA LAW REQUIRES REPORTING OF ALL SPILLS

The State of Alaska Department of Environmental Conservation complies with Title II of the Americans with Disabilities Act of 1990. This publication is available in alternative communication formats upon request. Please contact the Department at 465-5220 to make any necessary arrangements.

Alaska Department of Environmental Conservation

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