KODIAK
SUBAREA CONTINGENCY PLAN

BACKGROUND
SECTION

BACKGROUND: PART ONE – SUBAREA INFORMATION

A. SUBAREA PLAN

This Subarea Contingency Plan (SCP) supplements the *Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases* (the **Unified Plan**). The SCP in conjunction with the **Unified Plan** describes the strategy for a coordinated federal, state and local response to a discharge or substantial threat of discharge of oil or a release of a hazardous substance from a vessel, offshore facility, or onshore facility operating within the boundaries of the Kodiak Subarea of Alaska.

For its planning process, the federal government has designated the entire state of Alaska as a planning "region" and the western half of the state, including Kodiak Island, as a planning "area." The State of Alaska has divided the state into ten planning "regions" of which one is the Kodiak Island Region. As part of the unified planning process, this SCP addresses the Kodiak Island Region, and to avoid confusion with federal terms, the region is referred to as the Kodiak Subarea.

This plan shall be used as a framework for response mechanisms and as a pre-incident guide to identify weaknesses and to evaluate shortfalls in the response structure before an incident. The plan also offers parameters for vessel and facility response plans under the Oil Pollution Action of 1990. Any review for consistency between government and industry plans should address the recognition of economically, culturally, and environmentally sensitive areas and the related protection strategies, as well as look at the response personnel and equipment (quantity and type) available within the area (including federal, state, and local government and industry) in comparison to probable need during a response.

B. SUBAREA DESCRIPTION

In addition to the statue definition for the subarea boundaries, descriptions and maps follow that provide a general overview of the physical, meteorological, geologic, and geographic characteristics of the Kodiak Subarea. This information, included in the plan to help familiarize responders with the Kodiak Subarea, was compiled from several sources, including the Kodiak Island Borough Coastal Management Plan, the US National Oceanic and Atmospheric Administration, the Alaska Department of Commerce, Community & Economic Development and the Alaska Department of Environmental Conservation.

1. Subarea Boundaries

The Kodiak Subarea planning region corresponds with the Kodiak Island Borough boundaries and encompasses the Kodiak Island archipelago, extending from the Barren Islands at the north to Chirikof Island and the Semidi Island group at the south, and the coastal area watershed draining to the Shelikof Strait on the south side of the Alaska Peninsula from Cape Kilokak to Cape Douglas. The Kodiak archipelago and west side of Shelikof Strait within the Kodiak Island Borough is approximately 100 miles wide and 250 miles long. It includes more than 5,000 square miles of land, no point of which is more than 15 miles from the sea.

2. Physical Setting

At 3,588 square miles, Kodiak Island is the largest island in Alaska and is the second largest island in the United States. Kodiak Island consists primarily of mountainous terrain with mountain ridges generally trending northeast-southwest. Although several peaks are greater than 4,000 feet in elevation, most range between 3,000 and 4,000 feet. About 40 small cirque glaciers (none greater than 2 miles) are evident along the main divide. Numerous hanging valleys feed into the main canyons radiating from the central divide. Relatively short, swift, clear mountain streams drain the uplands.

Kodiak Island Borough lands along the west side of Shelikof Strait extend inland to approximately the Gulf of Alaska drainage-divide within the Aleutian Range of the Alaska Peninsula. Similar to Kodiak Island, the mountain range is oriented northeast-southwest. Mountain elevations within this area are generally less than 5,000 feet and the stream and river drainages are generally short and steep. Higher elevations of the Aleutian Range along the west boundary of the subarea include glaciers and perennially snow-capped peaks of active and inactive volcanoes.

3. Climate

The Kodiak Subarea experiences a characteristic maritime climate. The North Pacific high pressure system dominates the area during the summer, bringing south to southwest winds and typical average air temperatures ranging from 50-54 degrees Fahrenheit. In winter the weather is controlled by the Aleutian low atmospheric pressure system. Winds associated with this system are generally north to northwesterly, resulting in low temperatures at or below freezing. Summer winds tend to be slightly higher than in winter and are more consistent in direction. Shelikof Strait is bounded by mountains on the north and south and can be subjected to high winds related to the funneling of air between these mountain ranges.

Kodiak is warmed by the Japanese Current, which prevents the extreme seasonal temperature variations encountered in mainland Alaska. Kodiak's climate is similar to that of Southeast Alaska, but with less precipitation. January temperatures in the Kodiak Subarea range from 14 to 46 degrees Fahrenheit. July temperatures vary from 39 to 76 degrees. Average annual precipitation is 54.5 inches, with considerable ranges in precipitation amounts throughout the Subarea.

4. Geology

Exposed bedrock and shallow soils prevail along the rugged coastline of the Kodiak Subarea. Northwest Kodiak shows effects of glaciation, with long, narrow fjords and U-shaped valleys. These lie perpendicular to the mountains and the geologic fault lines. Typically rivers enter at the heads of the fjords and are characterized by shorter, wider estuarine embayments. Southwest Kodiak Island and the Trinity Islands tend toward long, continuous shorelines with a few crenulate bays. Most of the sandy beaches occur on the western coast of Kodiak Island and the Trinity Islands.

Shelikof Strait is a trough formed by plate subduction tectonics. The Strait is a southwest continuation of Cook Inlet extending approximately 170 miles to a juncture with the waters of the North Pacific Ocean. The mountains and lowlands surrounding Shelikof Strait exhibit a full range of characteristic glacial features, and the offshore geology of the Strait also displays evidence of past glaciations. Ice scour and moraine deposits in Shelikof Strait attest to the fact that ice completely filled the Strait and spilled out onto the Continental Shelf during past glacial advances.

The seafloor in Shelikof Strait is broad and generally flat with closed basins. Along the south side of the Alaska Peninsula, Shelikof Strait has relatively steep slopes descending over 190 meters in the south; areas of deepest water in Shelikof Strait occur along the southeastern side adjacent to Kodiak Island where they reach to depths of 240 meters.

Figure E-1: KODIAK SUBAREA

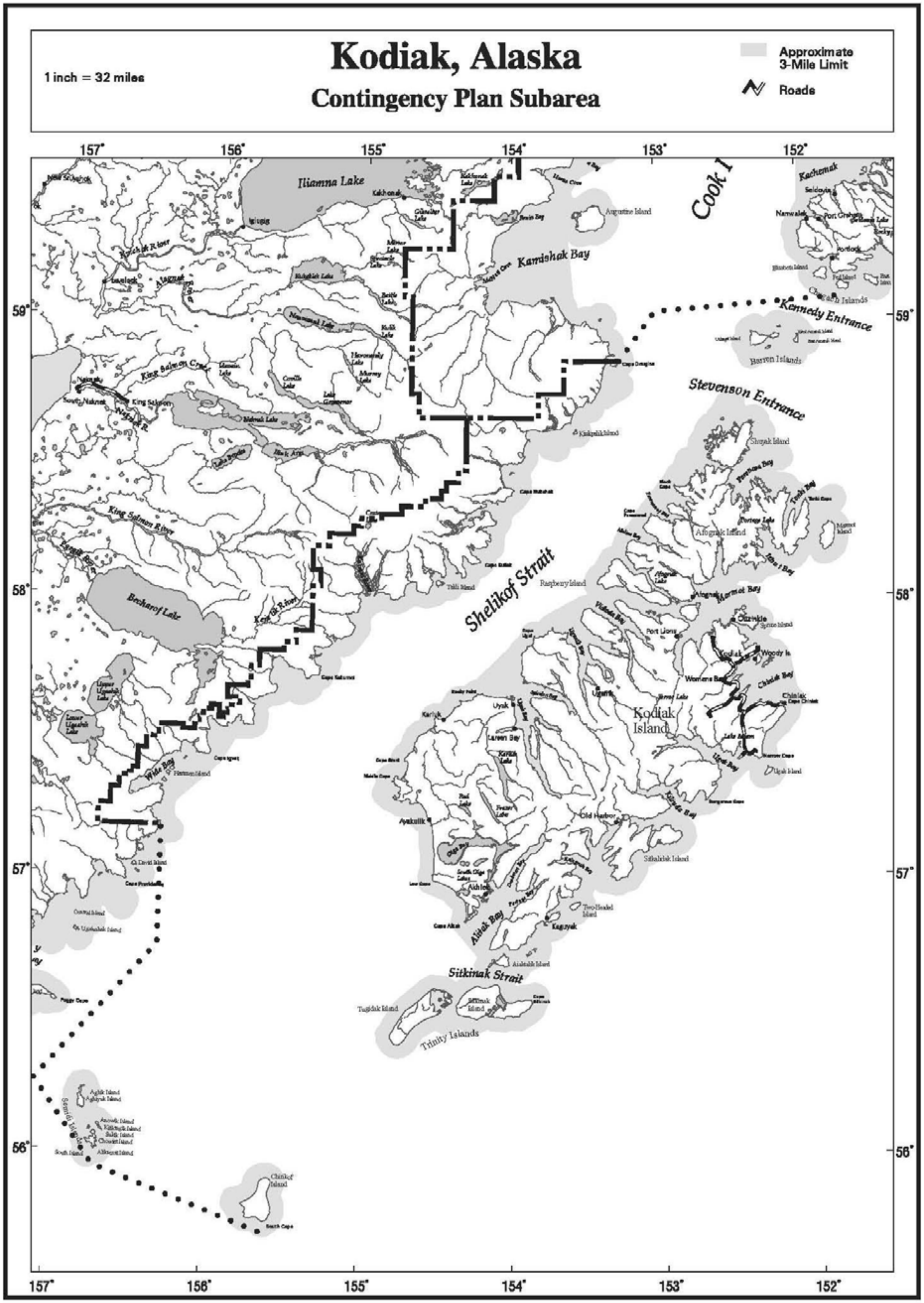


Figure E-2: SUBAREA USGS TOPO MAP INDEX

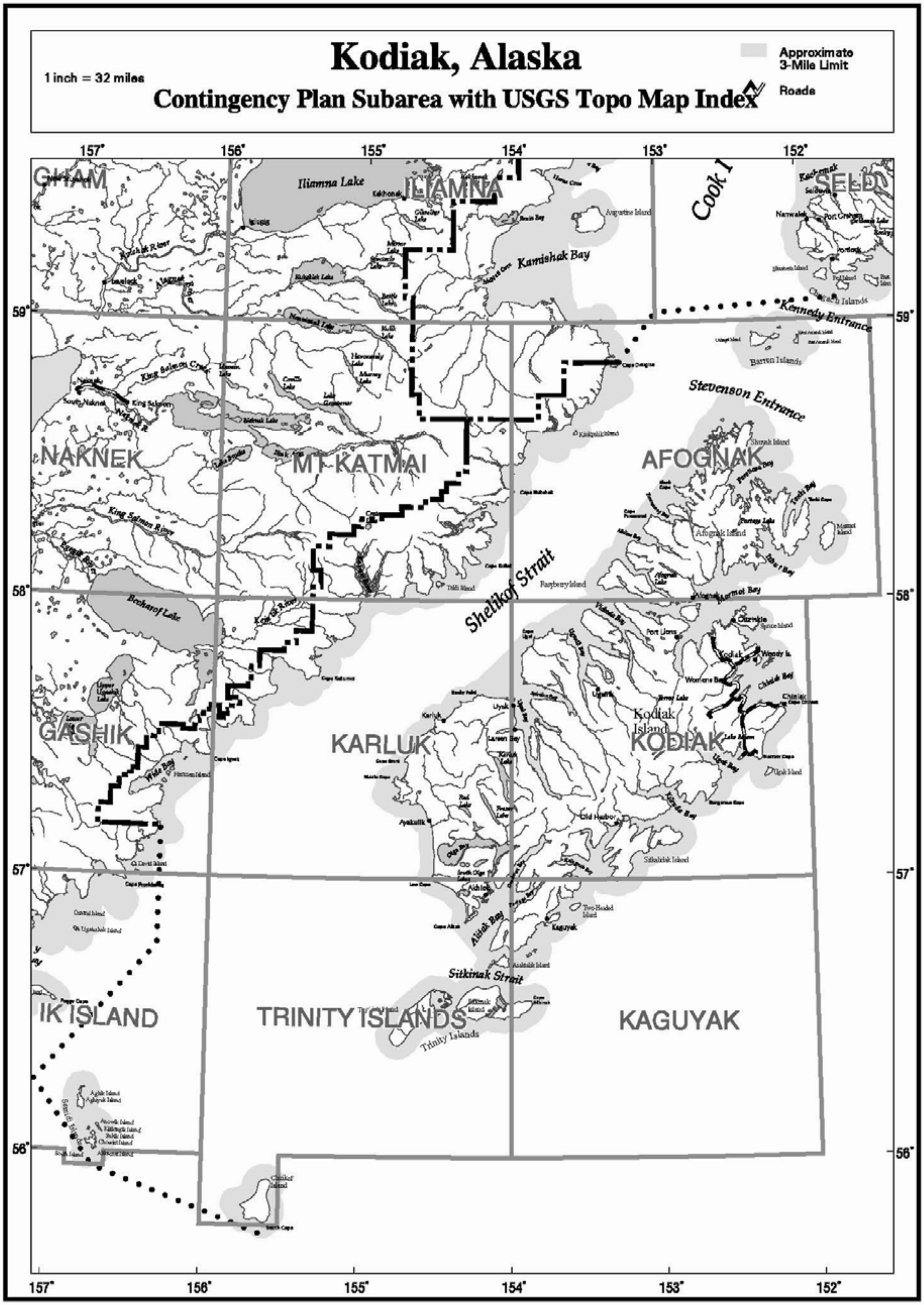
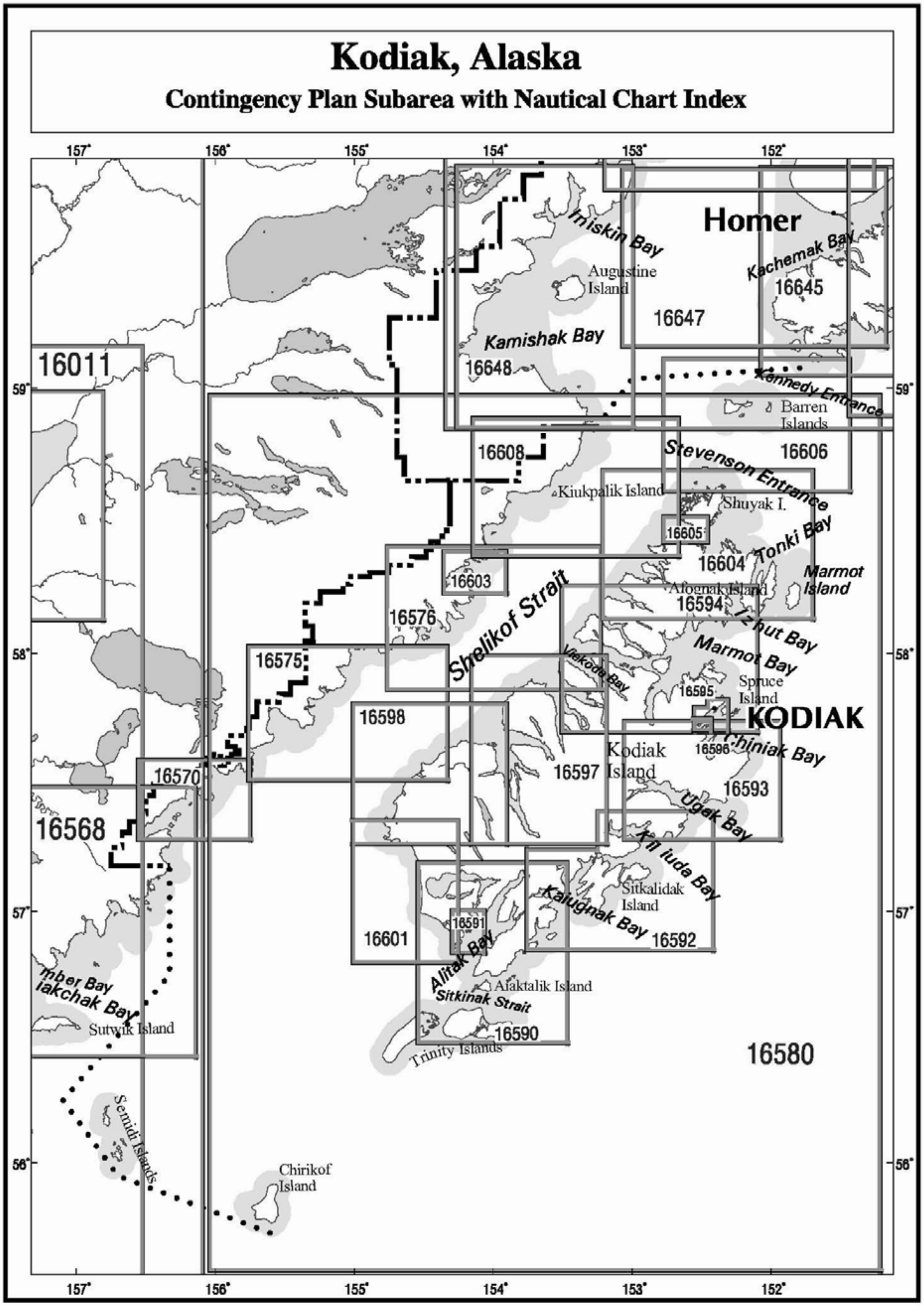


Figure E-3: SUBAREA NAUTICAL CHART MAP INDEX



5. Geography

Land development in the Kodiak Subarea has been limited to some extent by the dramatic topography of the archipelago, where elevations rise steeply from sea level to peaks of 2,000 to 4,000 feet. Most developable parcels of land are located on the relatively flat land along major bays and inlets. These bays and inlets generally form the terminus of the major drainages on Kodiak Island, and these populated areas often coincide with important wildlife habitat areas.

Until recently, the ownership status of many areas within the Kodiak Subarea was described as "unclear." While the status of certain areas may still be indeterminate, the Kodiak Island Borough Coastal Management Program has documented a trend over the last decade toward increased private ownership of discrete parcels of land in the subarea. The general pattern of land ownership has been described as numerous small parcels of privately owned land surrounded by federal or state lands which are managed for wildlife and retained in public ownership.

Major landowners in the Kodiak Subarea include the Kodiak Island Borough, the municipalities and villages in the subarea, state and federal agencies, and local and regional native corporations. Most of the borough land was originally obtained and selected under municipal entitlement from the State of Alaska; other parcels were obtained through trades with the State. Over 50 per cent of borough land is located on Shuyak Island and Raspberry Island. State lands fall under the jurisdiction of the ADNR, ADF&G, and occasionally other state agencies. Federal lands include Kodiak National Wildlife Refuge land, National Parks lands, and U.S. Coast Guard property. Much of the surface and subsurface land in the Kodiak Subarea is owned by regional and village Native corporations established under the Alaska Native Claims Settlement Act (ANCSA) of 1971. Some of these lands are located within the boundaries of the Kodiak National Wildlife Refuge.

The Kodiak Subarea includes the City of Kodiak, the U.S. Coast Guard Base, the road system communities of Bells Flats, Pasagshak, Anton Larson Bay and Chiniak, the rural communities of Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions, and numerous remote facilities and settlements, including Ben Thomas Logging Camp (Kazakof/Danger Bay), Big Sandy Lake Logging Camp, Lazy Bay/Alitak Cannery, Munsey's Bear Camp and Lodge, Olga Bay Cannery, Port Bailey Cannery, Port O'Brien/Uganik Bay Cannery, Port Williams Lodge/Cannery (Shuyak Island), Uyak Bay Cannery, and Zacher Bay Lodge/Cannery (Uyak Bay). Most of these communities and facilities are profiled in the Resources Section of this plan.

6. Coastal Resources

The diverse habitats of the Kodiak Subarea support extensive fish and wildlife populations that are extremely important to the social, economic, and cultural welfare of local residents. Offshore areas support a highly productive marine ecosystem, rich with intertidal, benthic, and pelagic plant and animal life which supports extensive populations of marine and anadromous finfish, shellfish, seabirds, and marine mammals. Rocky shorelines and cliffs provide nesting areas for seabirds and pupping/haul-out areas for seals and sea lions. An assortment of shorebirds and waterfowl utilize the resources of the Kodiak Subarea, either as permanent residents or for nesting, wintering, or staging/feeding sites along their migratory paths. The rivers, lakes and streams in the subarea provide aquatic habitats for resident and anadromous fish important to commercial fisheries, subsistence harvests, and recreational activities. These fish resources are also a critical food source for upland populations of the Kodiak brown bear. In addition to the brown bear, elk, Sitka black-tailed deer, mountain goats, and numerous smaller mammals also populate upland areas in the Kodiak Subarea. The south side of the Alaska Peninsula also provides habitat for moose.

These resident and migratory populations of fish and wildlife depend on the availability of appropriate habitat and environmental conditions in order to exist in the Kodiak Subarea. A healthy coastline and continued abundance of marine, intertidal, and upland food sources are vital to the survival of all inhabitants of the Kodiak Subarea, including human populations. The protection of marine and coastal resources from the devastating effects of oil pollution is of primary concern to local residents, and these concerns are reflected in the Sensitive Areas section of the KSCP. For additional information on fish and wildlife diversity and abundance in the Kodiak Subarea, refer to the Sensitive Areas portion of this document.

7. Ocean, Tides, and Winds

Oceanographic conditions for the Kodiak Archipelago can be slit into two regimes. Areas inside the continental shelf break, such as Shelikof Strait and Cook Inlet, are dominated by local runoff, winds and tides. The offshore areas beyond the continental shelf break are dominated by the Alaska Stream, a permanent current fixture flowing to the southwest between one to two knots off the Kodiak shelf. It is the northern branch of a large counterclockwise cell, the Pacific Subarctic Gyre. The gyre extends seaward off the shelf break from British Columbia north to Alaska and westward along the south side of the Aleutian chain. (See Figures E-4 and E-5)

The major current feature on the shelf is the narrow, intense Alaska Coastal Current (ACC). For most of the year this is driven by the large volume of fresh water that enters the system from Southeast Alaska and the Gulf of Alaska. The largest current velocities occur during the fall when runoff is at a maximum. Off the Kenai Peninsula the ACC is 20 to 30 km wide and constrained by bottom topography to traverse an arcuate, east-west path across lower Cook Inlet. Off Cape Douglas, this flow merges with a weaker, southward current generated by the freshwater input to upper Cook Inlet, creating a convergence zone and a particularly intense southward flow off Cape Douglas.

The resulting flow through Shelikof Strait is southwesterly, with the ACC inducing a strong mean flow on the Alaskan Peninsula side with speeds of 0.2 to 0.5 knots. This flow continues to the southwest in a well-defined channel bounded by relatively shallow banks. Current observations suggest that the ACC bifurcates near the Semidi Islands, with one branch flowing along the Peninsula and the other merging with the Alaska Stream some 220 km southwest of Kodiak Island. (See Figure E-6)

Unlike Cook Inlet to the north, tidal current effects in Shelikof Strait and on the southeast, or outer, side of Kodiak Island are minimal. The spring high-tide level throughout Shelikof Strait attains a coastal height of 13 to 16 feet and does so all within a 30-minute timeframe. Similarly, the coastal spring high tide on the outer Kodiak coast is 8 to 10 feet, occurring within approximately 40 minutes. As a result, no significant water-height gradients develop parallel to the length of Kodiak Island on either its Shelikof or outer side. The tidal currents throughout Shelikof Strait and the outer Kodiak Island coasts are thus small.

The semi-diurnal movement of water into and out of Shelikof Strait, though, creates some very significant tidal currents in the passes through and around the ends of the Kodiak archipelago. These areas, whose tidal velocities range 3 to 5 knots, include Kennedy Entrance, Stevenson Entrance and Shuyak, Kupreanof and Sitkinak Straits.

Historical wind data for the marine area east, west, and north of Kodiak Island show no dominant direction prevailing for more than one month of the year. However, at the town of Kodiak, northwest winds dominate for eleven months of the year, particularly from September through April. During the summer, northeasterly and northwesterly winds appear to be roughly equally dominant. Mountains throughout this region often create localized, channeled winds that may be at large angles to the regional climatic winds.

In 2009, NOAA’s National Current Observation Program completed a major current meter survey in Alaska, which oversaw the deployment of acoustic Doppler current profilers around the islands of Kodiak, Afognak and Sitkinak, Shuyak and Kupreanof Straits, Larsen Bay, and Geese Channel. This data provides information to enhance safe and efficient navigation, resource protection, and incident prevention and response and is published annually in the U.S. Tidal Current Tables.

Updated predictions for all occupied stations can be found at:
http://tidesandcurrents.noaa.gov/curr_pred.html

Additional NOAA tides and Currents available at: http://tidesandcurrents.noaa.gov.

Figure E-4: NET SURFACE CURRENTS IN THE GULF OF ALASKA

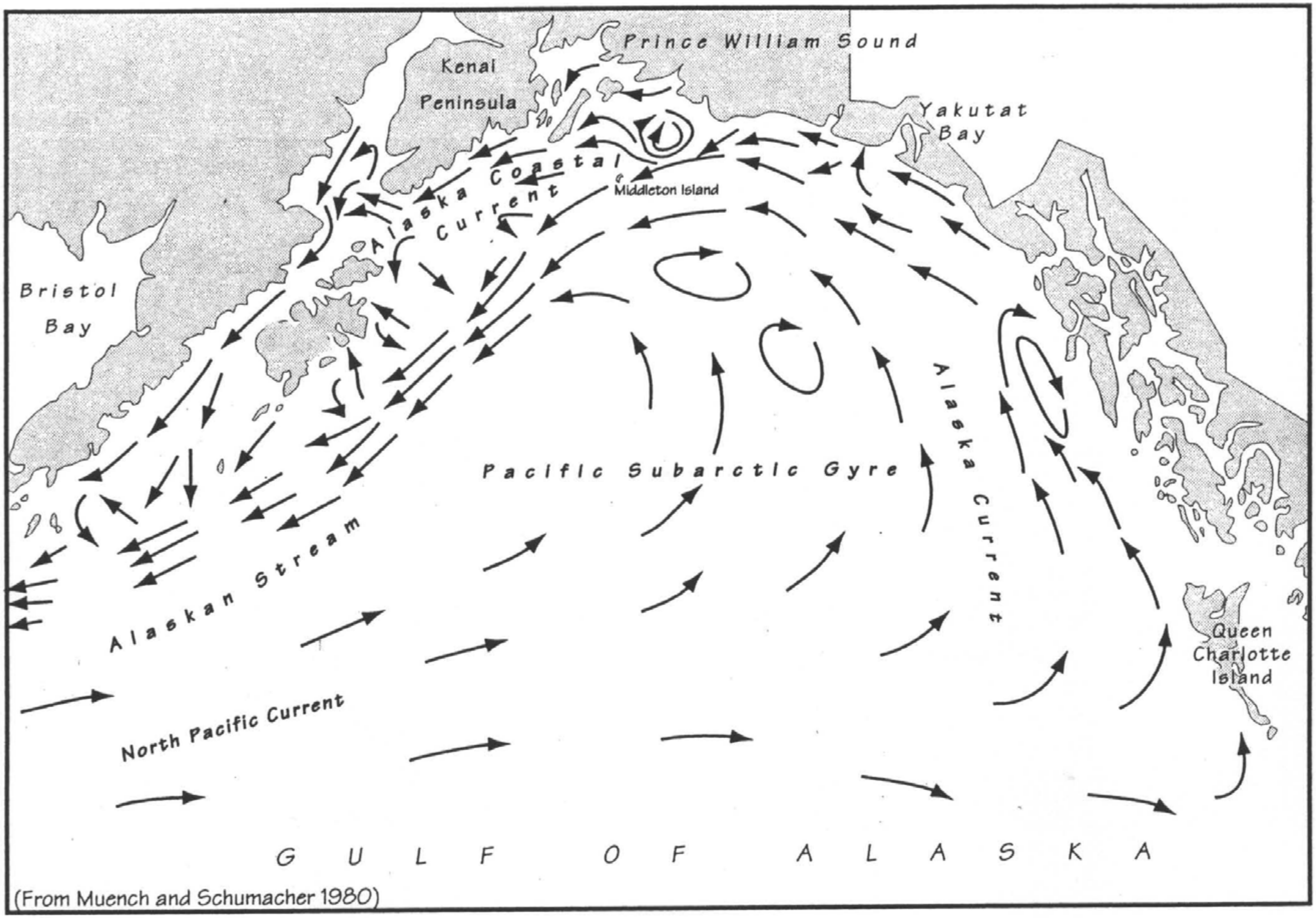


Figure E-5: NORTH PACIFIC CURRENT, ALASKA CURRENT & ALASKA STREAM

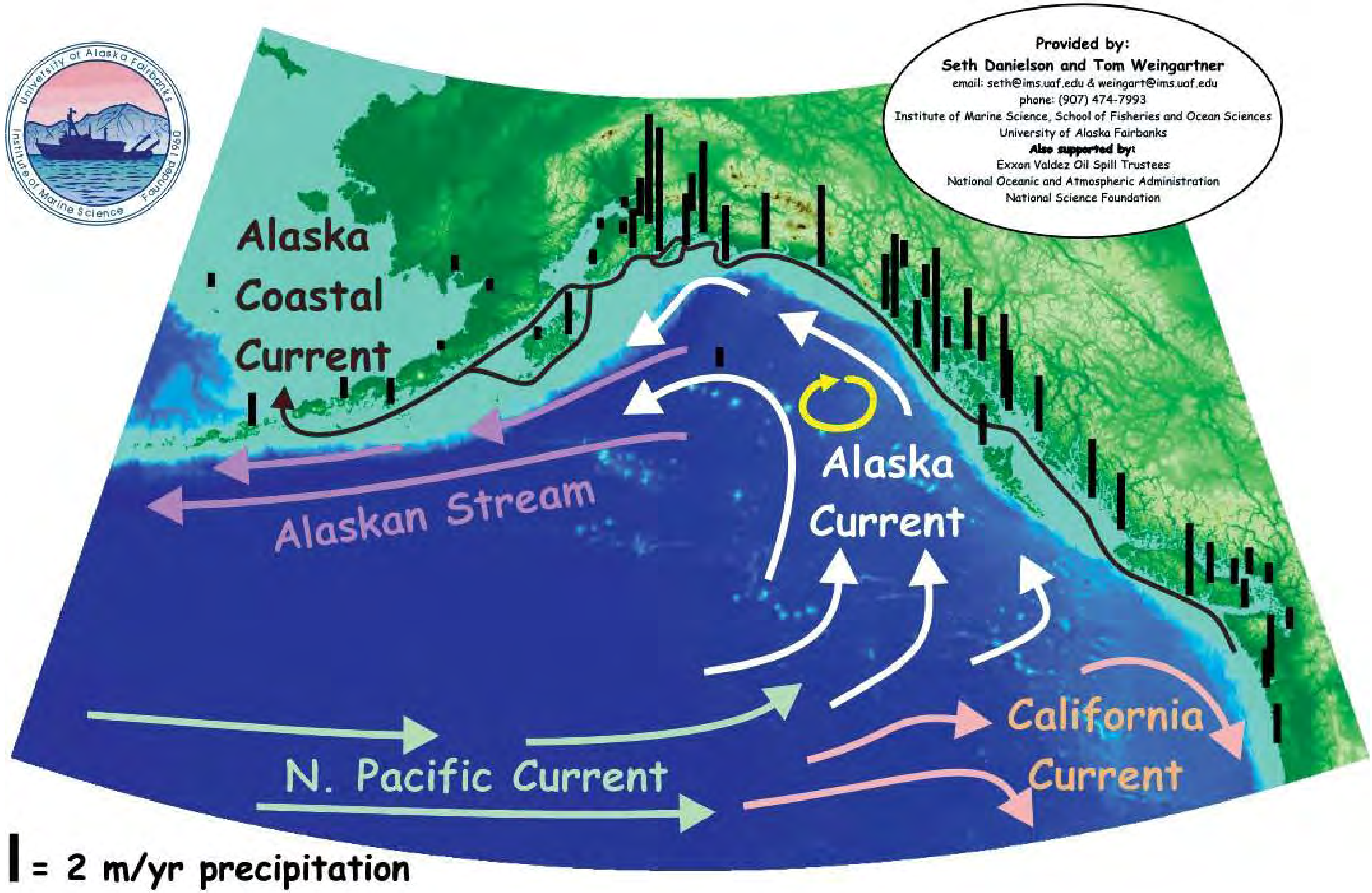


Figure E-6: NET CIRCULATION IN THE NORTHWEST GULF OF ALASKA

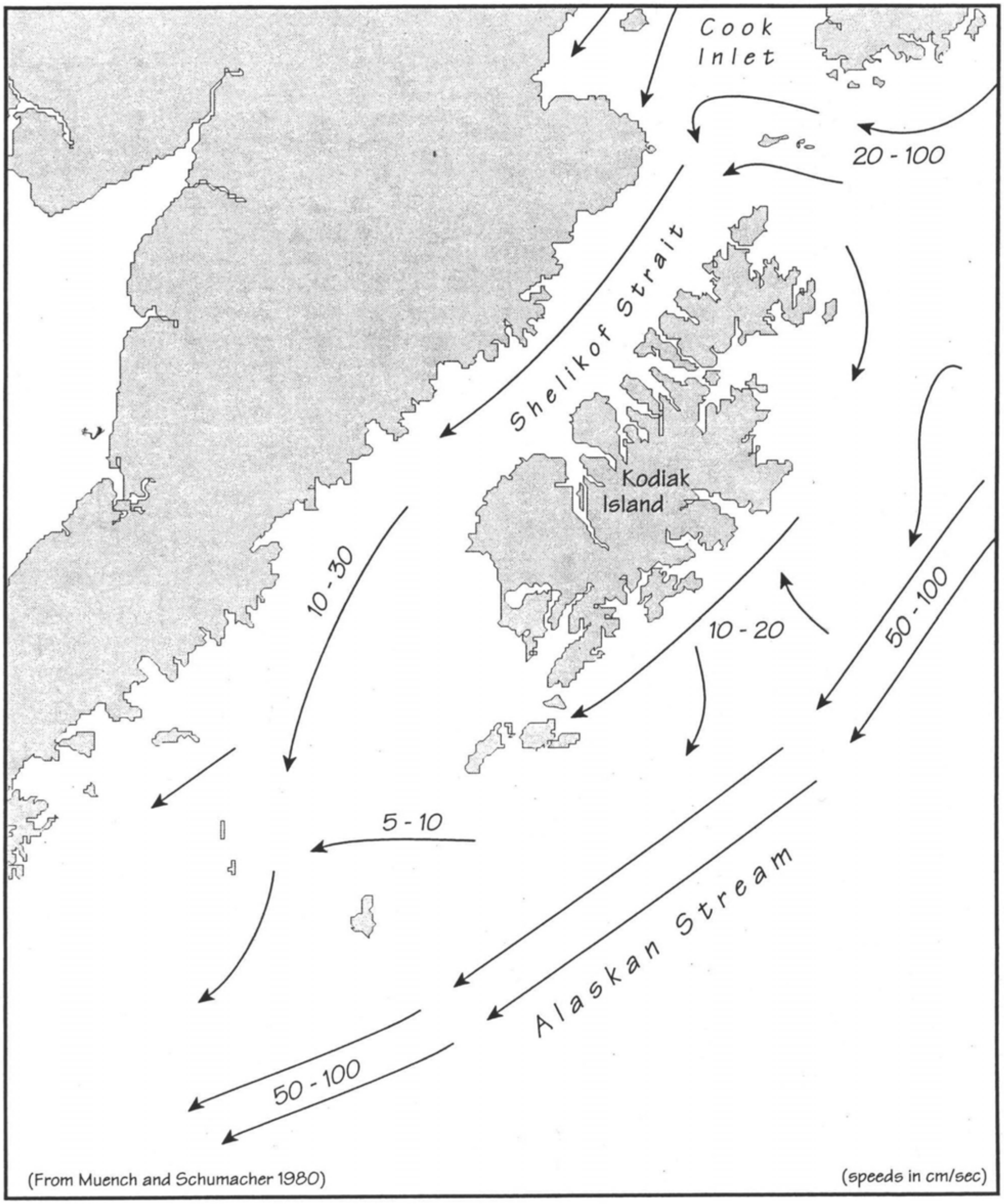
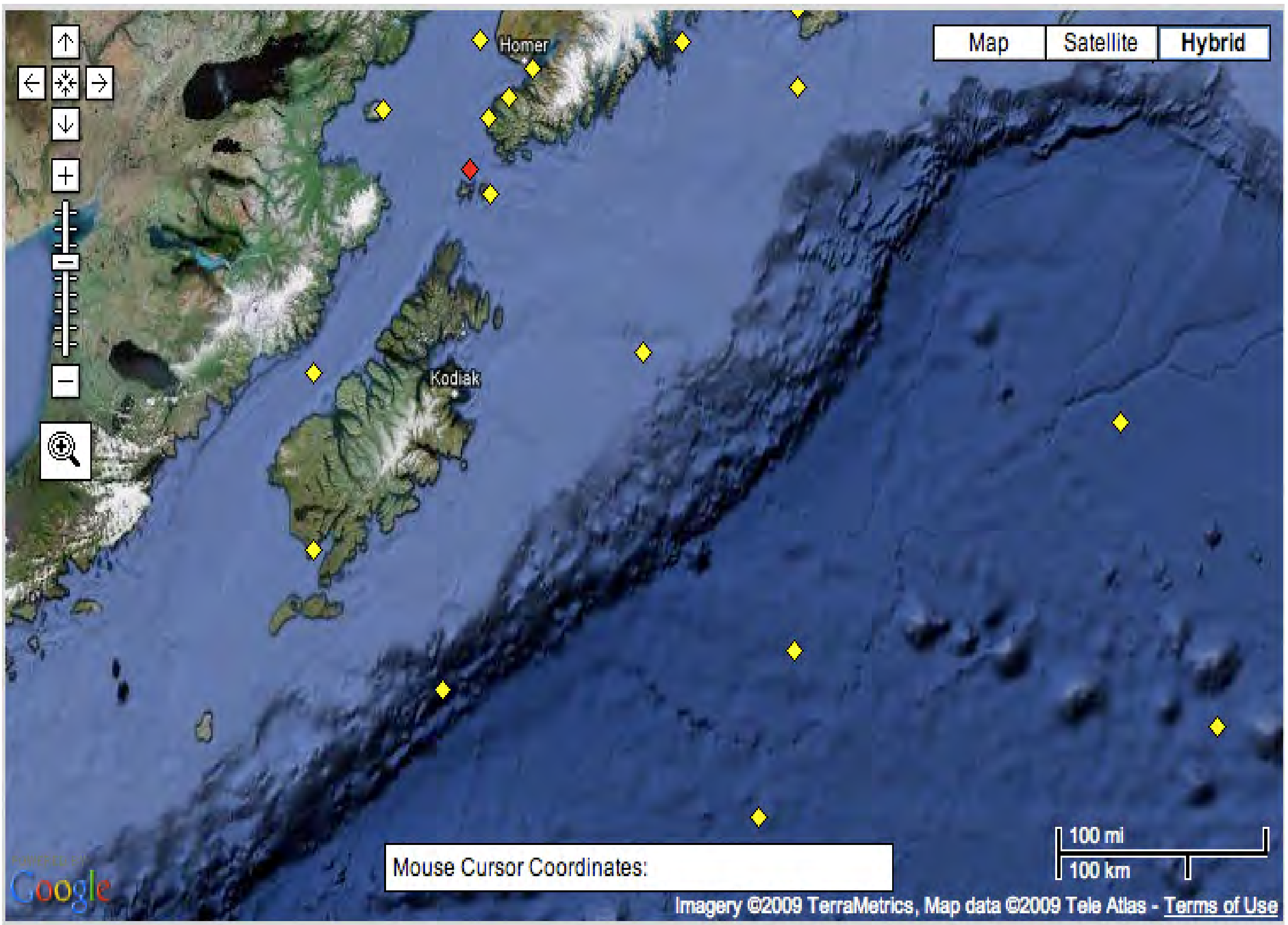


Figure E-7: NORTHWESTERN GULF OF ALASKA NOAA DATA BUOY ACCESS/LOCATIONS

NOAA offers a website (as displayed in the graphic below) to obtain recent meteorological and oceanographic information in the northwestern Gulf of Alaska, including the area around Kodiak Island.

This same website can be used for accessing recent data from any other NOAA buoys or fixed recording stations around Alaska: http://www.ndbc.noaa.gov/index.shtml



8. History, Culture and Economy

Kodiak Island has been inhabited since 8,000 BC by Sugpiaq Eskimos. In 1792, Russian fur trappers settled on the island. Sea otter pelts were the primary incentive for Russian exploration at that time, and the commercial harvest of sea otter fur eventually led to the near-extinction of the species. Kodiak was the first capital of Russian Alaska, and Russian colonization had a devastating effect on the local Native population. By the time Alaska became a U.S. territory in 1867 (the same year in which the capitol was moved from Kodiak to Sitka), the Koniag region Eskimos had almost disappeared as a viable culture.

In 1882, a fish cannery opened at the Karluk spit, and this sparked the development of commercial fishing in the area. The City of Kodiak was incorporated in 1940, and the Kodiak Island Borough incorporated in 1963. During the Aleutian Campaign of World War II, the Navy and Army built bases on Kodiak Island; the Air Force has also been active in Kodiak in the past. Fort Abercrombie was constructed in 1939, and later became the first secret radar installation in Alaska. The Coast Guard eventually assumed the U.S. Navy property on Kodiak, and today the Kodiak Coast Guard base includes approximately 2,000 military personnel and their families.

The 1960s brought growth in commercial fisheries and fish processing in the Kodiak Subarea until the 1964 earthquake and tsunami virtually leveled the downtown area, destroying the fishing fleet, processing plant, canneries and 158 homes. The infrastructure was rebuilt, and by 1968 Kodiak had become the largest fishing port in the U.S. in terms of dollar value of landings (since surpassed by Unalaska/Dutch Harbor). When the 1976 Magnuson Act extended U.S. fisheries jurisdiction to 200 miles offshore, Alaskan groundfisheries saw a significant reduction in foreign competition and the groundfish processing industry in Kodiak began to develop as well. Today, Kodiak culture is grounded in commercial and subsistence fishing activities. Kodiak is one of the nation’s top ports in both seafood volume and value. Municipal, State and federal agencies are the second largest local employer, and summer tourism continues to expand throughout the Kodiak Subarea.

9. Pollution Risks from Oil and Hazardous Chemicals

The waters and coastline of the Kodiak Subarea are vulnerable to the introduction of petroleum products, oil, or hazardous chemicals from a variety of sources. Marine vessel fuel, jet fuel, lubricants, toxic chemicals, crude oil and other refined petroleum products are transported through the Kodiak Subarea and adjacent waters. Refined fuels and several hazardous chemicals are stored in facilities throughout the subarea in varying quantities.

Pollution risks faced by the Kodiak Subarea include spills of all sizes and severity as well as chronic leaks or low-volume inputs. While chronic discharges may be less noticeable than major spills, they can introduce potentially more oil into the marine and coastal environment and cause devastating long term impacts. The Kodiak Subarea is also plagued by the threat of more acute spill events, from tank ships, barges, or freight vessels transiting nearby waters. The 1989 *Exxon Valdez* oil spill demonstrated that the Kodiak Subarea faces significant pollution risks from spills originating outside the subarea.

A qualitative risk analysis was performed as part of the Kodiak Subarea Contingency Planning process in 1998, and the results of this analysis are presented later in this section.

C. AREA OF RESPONSIBILITY

This subarea contingency plan covers the region outlined above in Subpart A. The U.S. Coast Guard Captain of the Port (COTP) for Western Alaska is the pre-designated FOSC for the Coastal Zone which encompasses all navigable waters seaward of the mean high tide line and an area of shoreline 1,000 yards inland of the coastline. The Environmental Protection Agency is the pre-designated FOSC for the Inland Zone which encompasses all lands, rivers, streams, and drainages inland of the 1000-yard wide band which parallels the Alaskan coastline. These zones are clearly defined in the **Unified Plan**. Yet the possibility exists, though minimal, for spills to occur in locations that do not fall under federal jurisdiction and there will be no FOSC in these instances.

The State of Alaska places jurisdiction of spill response for the Kodiak Subarea under the Central Alaska Response Team (CART) of the Department of Environmental Conservation (DEC). The SOSC for the CART is the pre-designated SOSC for the entire Aleutians Subarea.

Memoranda of Understanding/Agreement (MOU/MOA) between the USCG/USEPA and the USEPA/State of Alaska further delineate the OSC responsibilities. **Annex K** of the **Unified Plan** includes copies of these MOUs/MOAs.

D. REGIONAL STAKEHOLDER COMMITTEE

A Regional Stakeholder Committee (RSC) will normally be activated for significant incidents. The RSC was previously referred to as the Multi-Agency Coordination Committee (MAC). Unlike the MAC defined in the ICS of the National Incident Management System, the RSC for a spill response does not play a direct role in setting incident priorities or allocating resources. The RSC can advise the Unified Command (under the guidance of the Community Liaison Officer) and provide comments and recommendations on incident priorities, objectives and action plans.

Figure E-7 provides the general location of the RSC in relation to the Unified Command organizational structure. Additionally, the suggested/potential membership of the RSC is provided in Figure E-7. Membership on the RSC is dependent upon the location of the incident and the interests or jurisdiction of the affected communities, landowners, and special interest groups. Government agencies will not normally use the RSC to provide input to the Unified Command. Federal agency personnel will participate within the ICS structure under the leadership of the FOSC; state personnel will do so under the guidance of the SOSC. During an incident in which no FOSC is taking part, federal agencies with jurisdictional responsibilities for resources at risk could participate as a member of the RSC, thus retaining a channel for input on containment, oversight, and cleanup. The preferred approach is to include these agencies as part of the overall ICS structure.

As indicated above, the RSC is not directly involved in tactical operations, though some of its members may be. The RSC's role is to convey to the Unified Command information relating to the authority, concerns and expertise of its members. RSC members may recommend to the Unified Command overall objectives and priorities, as well as review the Incident Action Plans developed by the Unified Command.

RSC activities will be coordinated by the Community Liaison Officer. RSC discussions will be documented, and recommendations or dissenting opinions expressed outside of the RSC meetings with the Unified Command may be communicated to the Unified Command through the Liaison Officer. The RSC will be chaired initially by the Community Liaison Officer. After convening, the RSC will then elect its own chair.

E. SUBAREA COMMITTEE AND WORKGROUPS

The primary role of the Subarea Committee is to act as a preparedness and planning body for the subarea. The primary membership of the Subarea Committee is composed of the pre-designated Federal On-Scene Coordinators (EPA and USCG) for the subarea and the pre-designated State On-Scene Coordinator from the Alaska Department of Environmental Conservation. Depending upon the event or the issues to be addressed, a representative from the Kodiak Island Borough or local or tribal government representatives may also serve on the Kodiak Subarea Committee. Each member is empowered by their own agency to make decisions on behalf of their organization and to commit the organization to carrying out roles and responsibilities as described in this plan and the **Unified Plan**.

1. Subarea Committee Members

The Kodiak Subarea Committee is comprised of representatives from the following federal, state and local agencies:

- ❖ Alaska Department of Environmental Conservation
- ❖ U.S. Coast Guard, COTP Western Alaska
- ❖ U.S. Environmental Protection Agency
- ❖ Kodiak Island Borough or local/village government, when applicable

The Kodiak Subarea Committee also seeks advice and expertise concerning environmental and economic issues from international, federal, state and local agencies and private industries, such as the following:

- Local borough, city and tribal governments
- Federally-recognized tribes
- Community members/local residents
- Charter boat operators
- Regional/local businesses, especially petroleum-related
- Local Emergency Planning Committees
- Alaska Department of Environmental Conservation
- Alaska Department of Fish and Game
- Alaska Department of Natural Resources
- Alaska Department of Military and Veteran Affairs
- Alaska Chadux Corp., spill response coop
- Commercial fishing industry groups
- Cook Inlet Spill Response and Prevention, Inc., spill response coop
- Cook Inlet Regional Citizen’s Advisory Council
- Kodiak Area Native Association
- Kodiak local & regional fishing organizations
- Kodiak Island Borough Community Development Department
- Kodiak Emergency Services Organization
- Kodiak Fisheries Technology Center
- Kodiak Oil Sales

- National Marine Fisheries Service
- National Oceanic and Atmospheric Administration
- Petro Marine, Inc.
- Prince William Sound Regional Citizen's Advisory Council
- SERVS Vessel Response Corp.
- Tesoro Alaska Petroleum Company
- U.S. Coast Guard
- U.S. Department of the Interior – Office of Environmental Policy and Compliance
  - U.S. Fish and Wildlife Service
  - Kodiak National Wildlife Refuge
  - National Park Service
  - Bureau of Land Management
  - Mineral Management Service
- U.S. Forest Service

2. Subarea Workgroups

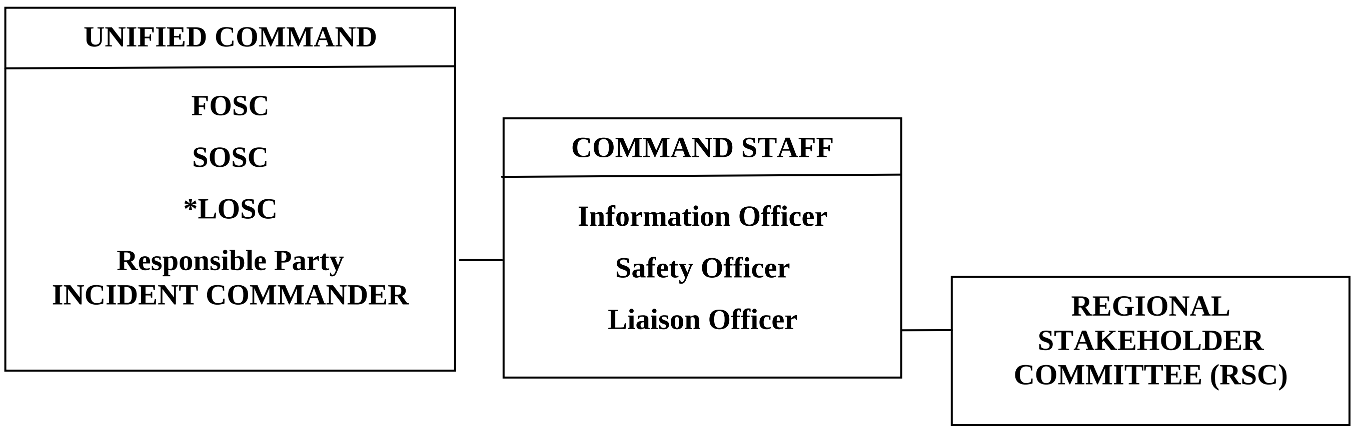
The Kodiak Subarea Committee has formed the following work groups:

The Sensitive Areas Workgroup is chaired by the Department of Interior-Office of Environmental Policy and Compliance representative. This work group coordinates the preparation of the necessary information for each separate subarea and ensures that the information is submitted in a common format. Participation by local community staff is vital to acquire local input and validate existing information. The subarea-specific sensitive areas information has been prepared and incorporated into the Sensitive Areas Section of this plan.

The Logistics Workgroup is co-chaired by representatives from the ADEC, the EPA, and the USCG. This workgroup is responsible for preparing the Resources Section of this plan.

The Operations Workgroup is co-chaired by representatives from the USCG, the ADEC, and the EPA. This workgroup is responsible for scenario development and the refinement/expansion of the Emergency Notification Lists located in the Response Section of this plan.

Figure E-8: KODIAK SUBAREA REGIONAL STAKEHOLDER COMMITTEE, ICS ORGANIZATIONAL POSITION, AND MEMBERSHIP



Suggested RSC Membership:

- Representatives or Community Emergency Coordinators from affected communities. These may include:
  - Akhiok
  - Aleneva
  - Chiniak
  - Karluk
  - Kodiak
  - Larsen Bay
  - Old Harbor
  - Ouzinkie
  - Port Lions
  - Uganik Bay
- State/federal/local or private landowners and leaseholders (e.g., National Parks Service, Alaska Dept. of Natural Resources)
- Native corporations, organizations and communities
- Special interest groups affected by the incident

** The Local On-Scene Coordinator is part of the Unified Command and the Incident Commander during an incident as long as there is an immediate threat to life, health and safety.*

BACKGROUND: PART TWO – RESPONSE POLICY & STRATEGIES

The strategy for responding to a specific spill or hazmat incident depends upon numerous factors. The strategy can change as the situation changes. As a general rule, the policies listed below should be used as a guide in developing an effective response. One must consider all factors that may affect the particular situation and revise/modify/expand these priorities as the situation dictates. The Response Section of this plan contains some specific information on response procedures and ramp-up timelines. Additional information can be found in the **Unified Plan**. The Kodiak Subarea Geographic Response Strategies (GRS) and the Potential Places of Refuge (PPOR) Sections, as well as the Spill Tactics for Alaska Responders (STAR) Manual and the spill cooperative Alaska Chadux Corporation's technical manual, provide specific tactics, methods, and outlined resources necessary to support a given strategy.

A. FEDERAL RESPONSE ACTION PRIORITIES/STRATEGIES

The following priorities are general guidelines for response to a pollution incident within the COTP Western Alaska Zone. They are based on the premise that the safety of life is of paramount importance in any pollution incident, with the protection of property and the environment, although important, being secondary. Nothing in this part is meant to indicate that higher priority items must be completed before performing a lower priority task. They may be carried out simultaneously or in the most logical sequence for each individual incident.

Priority One – Safety of Life. For all incidents which may occur, the safety of personnel, including response personnel, must be given absolute priority. No personnel are to be sent into an affected area without first determining the hazards involved and that adequate precautions have been taken to protect personnel.

Priority Two – Safety of Vessel/Facility and Cargo. The facility and/or vessel and its cargo shall become the second priority, behind the Safety of Life.

Priority Three – Protection of the Environment by elimination of the pollution source. Containment and recovery of oil must be effected expeditiously to preclude sustained impacts to the inland waters of the U.S. Due to remote locations and restricted accessibility, it is extremely difficult to protect these locations through diversion or exclusion methods. Therefore, securing the source and rapid containment and recovery is especially critical and should normally be the first line of defense to protect the environment. Likewise, spills which occur on land or in upland water courses will be dammed, boomed, diked, etc., as feasible to prevent the spread of the pollutant downstream. NOTE: *In situ* burning (see below) of a vessel and its pollutant may be an alternative considered by the OSC which places environmental protection priorities above saving the vessel and its cargo.

Priority Four – Protection of the Environment by diversion/exclusion, dispersion, or *in situ* burning. Mechanical recovery is always the preferred response option by diversion/exclusion booming and collection of oil by skimmers and manual labor. **Non-mechanical dispersion or *in situ* burning is to be considered only when an effective conventional/mechanical response is not feasible or not wholly adequate in containing or controlling the spill.** In the event that the location of a spill or the weather conditions do not permit rapid recovery, protection of the inland waters of the U.S. becomes paramount, especially areas of greatest sensitivity. It may not be possible to protect some areas entirely or even in part. The UC/OSC may consider *in situ* burning as a response option: refer to the **Unified Plan** for an *in situ* burning checklist. The use of dispersants must be considered early in the response phase while the oil is in the open water. NCP (Subpart J) and the **Unified Plan (Annex F)** address in detail the responsibilities of the UC/OSC in the use of chemicals.

Priority Five – Protection of the Environment by beach cleanup and the use of Sacrificial Areas. It may not be possible to protect the inland waters adjoining shoreline from oil. In fact, it may be allowed purposely to come ashore in some areas as an alternative to damaging others. Selection of the proper shoreline cleanup technique depends on many different factors including the following:

- Type of substrate
- Amount of oil on the shoreline
- Depth of oil in the sediment
- Type of oil (tar balls, pooled oil, viscous coating, etc.)
- Trafficability of equipment on the shoreline
- Environmental or cultural sensitivity of the oil shoreline
- Prevailing oceanographic and meteorological conditions

The best way to minimize debate over the most appropriate response is to involve all interested government and private agencies. The shoreline assessment groups shall attempt to agree on the amount and character of the oil that is on the shorelines, anticipate interactions between the stranded oil and the environment, and the geological and ecological environment of the involved shorelines. Once a consensus is met, a process is necessary to determine the proper treatment required.

Shoreline cleanup options may include the use of physical and/or chemical processes. Chemical shoreline cleanup products may increase the efficiency of water-washing during the cleanup of contaminated shorelines. However, the product must be listed on the EPA National Contingency Plan Product Schedule and authorization must be obtained from the ARRT and the government on-scene coordinators at the spill. Physical shoreline cleaning methods include techniques such as: natural recovery, manual sorbent application, manual removal of oiled materials, low pressure flushing (ambient temperature), vacuum trucks, warm water washing, high pressure flushing, manual scraping, and mechanical removal using heavy equipment. Bioremediation also may be considered as a shoreline cleaning method. Bioremediation is the application of nutrients to the shoreline to accelerate the natural biodegradation of oil.

B. STATE OF ALASKA RESPONSE PRIORITIES

1. **Safety:** Ensure the safety of persons involved, responding, or exposed to the immediate effects of the incident.
2. **Public Health:** Ensure protection of public health and welfare from the direct or indirect effects of contamination of drinking water, air, and food.
3. **Environment:** Ensure protection of the environment, natural and cultural resources, and biota from the direct or indirect effects of contamination.
4. **Cleanup:** Ensure adequate containment, control, cleanup and disposal by the responsible party or supplement or take over when cleanup is inadequate.
5. **Restoration:** Ensure assessment of contamination and damage and restoration of property, natural resources and the environment.
6. **Cost Recovery:** Ensure recovery of costs and penalties to the Response Fund for response, containment, removal, remedial actions, or damage.

BACKGROUND: PART THREE – OIL FATE & RISK ASSESSMENT

A. FATE OF SPILLED OIL

Natural processes that may act to reduce the severity of an oil spill or accelerate the decomposition of spilled oil are always at work in the aquatic environment. These natural processes include weathering, evaporation, oxidation, biodegradation, and emulsification.

- Weathering is a series of chemical and physical changes that cause spilled oil to break down and become heavier than water. Winds, waves, and currents may result in natural *dispersion*, breaking a slick into droplets which are then distributed throughout the water. These droplets may also result in the creation of a secondary slick or thin film on the surface of the water.
- Evaporation occurs when the lighter substances within the oil mixture become vapors and leave the surface of the water. This process leaves behind the heavier components of the oil, which may undergo further weathering or may sink to the ocean floor. For example, spills of lighter refined petroleum-based products such as kerosene and gasoline contain a high proportion of flammable components known as *light ends*. These may evaporate completely within a few hours, thereby reducing the toxic effects to the environment. Heavier oils leave a thicker, more viscous residue, which may have serious physical and chemical impacts on the environment. Wind, waves, and currents increase both evaporation and natural dispersion.
- Oxidation occurs when oil contacts the water and oxygen combines with the oil to produce water-soluble compounds. This process affects oil slicks mostly around their edges. Thick slicks may only partially oxidize, forming *tar balls*. These dense, sticky, black spheres may linger in the environment, and can collect in the sediments of slow moving streams or lakes or wash up on shorelines long after a spill.
- Biodegradation occurs when micro-organisms such as bacteria feed on oil. A wide range of micro-organisms is required for a significant reduction of the oil. To sustain biodegradation, nutrients such as nitrogen and phosphorus are sometimes added to the water to encourage the micro-organisms to grow and reproduce. Biodegradation tends to work best in warm water environments.
- Emulsification is a process that forms *emulsions* consisting of a mixture of small droplets of oil and water. Emulsions are formed by wave action and greatly hamper weathering and cleanup processes. Two types of emulsions exist: water-in-oil and oil-in-water. Water-in-oil emulsions are frequently called "chocolate mousse," and they are formed when strong currents or wave action causes water to become trapped inside viscous oil. Mousse emulsions may linger in the environment for months or even years. Oil and water emulsions may cause oil to sink and disappear from the surface, thus giving the false impression that it is gone and the threat to the environment has ended.

B. GENERAL RISK ASSESSMENT

Each of the communities and remote settlements in the Kodiak Subarea faces the risk of oil or hazardous materials pollution from local shoreside facilities and/or vessel traffic. Considerable vessel traffic transits the waters of the Kodiak Subarea, ranging from small fishing and recreational vessels to large oil tankers and freight vessels. Both crude (though uncommon) and refined oil products are shipped through the waters adjacent to Kodiak Island. In addition, Liquefied Natural Gas and crude oil tank ship traffic in Cook Inlet and Prince William Sound pose a threat to Kodiak Island and its adjacent waters.

By comparison with some regions in the state, the threat of an inland spill on Kodiak is minimal. There are no refineries in the Kodiak Subarea, but the subarea does support a number of fish canneries and processing plants, which are a potential source for chemical spills (primarily ammonia). The largest inland facility on Kodiak is the USCG base, which has several fuel farms containing gasoline, diesel, aviation fuel, and bunker fuel oil.

In the remote villages, where refined products are stored in tank farms, the highest probability of spills occurs during fuel transfer of refined products to the tank farm from another source, such as the fuel barge, or from feeder lines from the tank farm onto users. Another threat for spills or chemical releases exists in the loading/unloading activities with vessels at port. This is not to say that these spills are common, but that precautions should be observed.

The various types of petroleum products respond quite differently when released into the environment. Spills of refined product that enter the water generally will disperse and experience significant evaporation and spreading, making recovery difficult (See above: *A. Fate of Spilled Oil*). Crude oil and Intermediate Fuel Oils (bunker fuel) will be affected by the same natural degradation factors but to a much lesser degree; these oil spills are "persistent" in nature and will require aggressive actions and innovative techniques to successfully mitigate harm.

Spills in this subarctic-maritime climatic zone require careful preplanning to overcome the effects imposed by the moist, cold-weather environment. Machinery and people face significant challenges when operating in acute cold. The severe stresses imposed by winter conditions, with extreme temperatures and the extended darkness, can seriously reduce individual efficiency over a given period.

Cold weather conditions can prove beneficial, at times: ice and snow can act effectively as natural barriers, impeding the spread of oil, and can be used effectively to create berms for spill containment. Techniques for organizing and responding to spills in arctic environments have been developed and applicable supporting information should be consulted during an event.

The summer months expose many more species, both in diversity and numbers, to the negative effects of an oil spills. Whereas in winter, most species have left the regions and the snow and ice conditions may buffer the soil from the impact of released oil, during the warmer months the land, flora and fauna are all quite vulnerable to an oil spill. Though summer daylight increases the available work hours to allow almost continuous operations, the extended light does not increase the number of hours response personnel can safely perform tasks.

C. <u>FINDINGS FROM 1998 RISK ASSESSMENT OF KODIAK SUBAREA</u>

In 1998, the Kodiak Subarea Committee formed a workgroup to conduct, with the assistance of a contractor, a qualitative risk assessment of oil and hazardous substance spill threats in the Kodiak Subarea, undertaken as part of the subarea contingency planning process. The Kodiak Subarea Committee Workgroup members relied on historical oil spill data recorded by the Alaska Department of Environmental Conservation, NOAA, and the U.S. Coast Guard MSD Kodiak and, in combination with observations by the Subarea Committee and its workgroup members, identified potential sources and types of oil spills that may occur in the Kodiak Subarea. This risk assessment assisted the planning process in several respects. The level and types of spill risks observed in the remote villages of Kodiak were used to help determine the contents of the equipment packages that were later staged at these locations. The response priorities described in the Response Section of this plan were developed to be useful for the types of spills, including those described in the Scenarios Section of this plan. The Kodiak Subarea Contingency Plan has been designed so that it can be utilized not only during catastrophic, large-scale spills but also during smaller, fishing vessel source spills, which are more commonly encountered by Kodiak response personnel.

These categories of spill risk have been qualitatively analyzed for the purpose of this plan, and include the following possibilities:

- crude oil tanker spills in adjacent waters
- crude oil tanker spills originating in Prince William Sound or Cook Inlet
- operational spills at fixed facilities
- catastrophic spills due to equipment failures or tank ruptures at fixed facilities
- operational spills from fishing vessels during refueling
- fishing vessel-source spills due to vessel casualties
- freight vessel non-persistent spills due to casualties or groundings
- freight vessel bunker fuel spills due to casualties or groundings
- "orphan" spills which originate from underground storage tanks or other unidentified sources
- operational spills from tank vessels during refueling at Kodiak facilities
- tank vessel non-crude spills which result from casualties or groundings
- fish processing vessels with hazardous substances (ammonia/chlorine)

Upon examining historical spill data, and analyzing near-miss events and other observations and data regarding the threat of oil spills workgroup members from the Kodiak Subarea Committee determined that the risk of oil spills in the Kodiak Subarea varies among the communities. Important variables such as season, prevailing weather, and time of day may aggravate the risk of certain types of spills.

1. Conclusions of the 1998 Risk Assessment

The Kodiak Subarea Committee Workgroup made the following conclusions regarding the risk of oil and hazardous substance spills in the Kodiak Subarea in 1998. These findings are still considered relevant for consideration today, and as such, remain as part of this plan. These observations are reflected in varying degrees in the scenarios chosen for inclusion in this plan (see Scenarios Section), in the response priorities identified in previous sections, and in contents of the borough-owned spill response equipment packages, which have been staged for use as first response resources in the remote communities of the Kodiak Island Borough.

(Respective order of findings does not necessarily reflect severity or priority of risk)

a. The most common type of oil spill in the Kodiak Subarea is a fishing vessel-source diesel spill which occurs during refueling. Fishing vessel diesel spills are the most common type of oil spill in the Kodiak Subarea, according to the records of the USCG MSD Kodiak and the ADEC and a NOAA report documenting oil spills on Kodiak Island during an eleven year period (1985-1995).

b. Foreign-flag freight vessels, especially log ships, pose a formidable spill risk, especially early in transit when such vessels carry significant quantities of bunker crude oil on board. In the fall of 1996, a near-miss occurred when the Korean flag logship PAN DYNAMIC suffered a loss of propulsion in Danger Bay. The PAN DYNAMIC had onboard nearly 500,000 gallons of bunker crude oil, and had the vessel grounded or the hull ruptured, the resultant spill would have presented significant challenges to responders, including a possible language barrier, an unresponsive Responsible Party, no vessel contingency plan, and the remote location of the threatened shoreline areas. Freight vessels like the PAN DYNAMIC frequently transit the waters adjacent to Kodiak, particularly during the summer months. The recent grounding of the M/V KUROSHIMA (November, 1997 and the more recent M/V SELENDANG AYU in December, 2004)) on Unalaska Island, further illustrates the risk posed by foreign cargo vessels. The M/V KUROSHIMA grounded in a winter storm and spilled approximately 40,000 gallons of bunker fuel. This scenario could easily have occurred in Kodiak. (The M/V SELENDANG AYU grounded and broke apart after losing power during a severe storm, resulting in the loss of crew members and 300,00 gallons of bunker fuel, which fouled miles of shoreline.)

c. In several of the remote communities on Kodiak, the municipal/village tank farms pose a considerable risk for both operational spills during refueling and catastrophic spills resulting from old or poorly maintained tanks and piping. Limited funding and resources in many smaller communities contribute to this problem.

d. The U.S. Coast Guard Integrated Support Command (ISC) Kodiak has the largest quantity of fuel stored at their upland facility in Women's Bay, and a tank failure at this facility presents the potential for a large volume spill. The fact that a large quantity of response equipment and personnel are collocated with the facility serves to mitigate the risks from a large-scale spill or release at ISC Kodiak.

e. In Kodiak, as in many parts of rural Alaska, the term "worst case scenario" may be linked more closely to geographic location, type of fuel, and weather/seasonal conditions than to the actual quantity of oil involved. Most areas and communities in the Kodiak Subarea are not accessible by road system, and adverse weather conditions often complicate air and sea travel in the region. For this reason, a spill which originates in or threatens remote areas, especially environmentally sensitive or subsistence use areas, will pose many logistical challenges during a response. Other factors, such as the type of product spilled, nationality of vessel master and crew, and attitude and resources of the Responsible Party, can seriously complicate a spill response.

f. The large number of underground storage tanks on former defense sites poses a potential spill risk, especially when the location and/or contents of these tanks is unknown. The risk of leaks from underground storage tanks is chronic in the Kodiak Subarea, and while the quantity of oil or other hazardous materials stored in these tanks is generally limited, it is important to recognize that underground storage tanks on Formerly Used Defense Sites and other such locations do pose a spill risk.

g. A crude oil tank ship operating in Prince William Sound, Cook Inlet, or other regions adjacent to Kodiak could potentially affect the Kodiak Subarea, even if the spill source is located considerably beyond the limits of the subarea. This lesson was learned during the T/V EXXON VALDEZ spill, which devastated many shoreline areas in the Kodiak Subarea. It is important that the Kodiak Subarea plan be linked through notification procedures, communications, and response actions with subarea plans for adjacent regions. It is important that, when more than one local government is affected by a spill, the local governments work together within the command structure.

h. The fish processing plants located in the City of Kodiak, as well as in several remote communities, pose a moderate threat of hazardous substance releases, due to the quantities of ammonia (and sometimes chlorine) involved in processing fish products.

2. Summary Elements Included in the Plan

Based on the findings summarized above, the following elements were included in the body of the Kodiak Subarea Contingency Plan.

- A fishing vessel spill scenario has been developed for the Scenarios Section of this plan. This scenario is presented not only to reflect a common spill source in Kodiak, but also to demonstrate that the response strategies in the Kodiak SCP can be applied during small, routine spill responses, as well as during larger spills.
- The M/V PAN DYNAMIC and M/V KUROSHIMA (as well as the M/V SELENDANG AYU) incidents illustrate the significant spill risk posed by logging and freight vessels, and a spill scenario was developed to reflect the possibility of such a spill in the Kodiak Subarea. The workgroup members considered the inclusion of the log ship scenario to be significant because it

- ADEC provided funding for the Kodiak Island Borough to purchase oil spill response equipment. This equipment has been packaged into small, transportable units, and staged at various locations within the remote communities in the Kodiak Subarea. These packages contain moderate quantities of boom and sorbent materials to supplement first response efforts in these communities. Larger response equipment (skimmers, additional boom, etc.) has been staged in the City of Kodiak and may be transported for use with the village equipment packages, as needed. These equipment packages ensure that a first line of defense exists should an oil spill threaten one of the remote communities in the Kodiak Subarea. While these equipment packages have not been designed to replace State- or federally-required response equipment at municipal and village-owned fuel tank facilities, the packages may be used to respond to a major discharge from one of these facilities.
- In evaluating the oil and hazardous substance spill risks facing the Kodiak Subarea, the workgroup discussed at length the fact that "worst case" scenarios may be aggravated by a number of factors, including weather, season, location, nationality/language of captain and crew, flag state, type of product, and Responsible Party attitude and resources. In fact, these factors may often do more to complicate a spill response than the actual quantity or type of substance spilled. Therefore, the scenarios developed for this plan should attempt to address as many of these potentially complicating factors as possible, instead of simply focusing on the quantity of product spilled as the determining factor in a spill response.

BACKGROUND: PART FOUR – AREA SPILL HISTORY

While it is difficult to accurately quantify the risks posed by vessel transits and upland storage facilities in the Kodiak Subarea, an examination of the oil spill history in the subarea provides some insight into the types of oil spills which have plagued Kodiak in the past. The tables that follow summarize oil spill data for the Kodiak Subarea for two periods: 1991-1997 (as compiled by the ADEC, NOAA, and U.S. Coast Guard MSD Kodiak) and 1995-2005 (as compiled by the ADEC). These data illustrate that Kodiak is threatened both by major releases from tank vessels and upland facilities and by smaller, chronic releases from the local vessel fleet.

A. KODIAK OIL SPILL DATA 1991-1997

Table E-1: OIL PRODUCT SPILLS in the KODIAK SUBAREA by SOURCE & FUEL TYPE

TOTAL NUMBER OF OIL SPILLS, 1991-1997

	Fishing Vessels	Commerce Vessels	Commerce Facilities	Public Vessels	Public Facilities	Recreation Vessels	Aircraft	Unknown
Diesel	121	3	2	6	0	0	0	77
Waste Oil	45	1	0	3	6	1	0	27
Lube Oil	15	2	0	4	0	0	1	2
Hydraulic	27	2	3	1	0	0	0	6
Jp-5	0	0	0	4	2	0	0	0
Unknown	7	0	3	1	0	1	0	26

TOTAL QUANTITIES OF OIL SPILLED (in Gallons), 1991-1997

	Fishing Vessels	Commerce Vessels	Commerce Facilities	Public Vessels	Public Facilities	Recreation Vessels	Aircraft	Unknown
Diesel	23,108	409	14	9	0	0	0	1,873
Waste Oil	182	200	0	14	32	5	0	111
Lube Oil	332	160	0	5	0	0	8	53
Hydraulic	122	2	55	1	0	0	0	24
Jp-5	0	0	0	191	502	0	0	0
Unknown	220	0	16	1	0	10	0	257

Table E-2: SPILL TOTALS and AVERAGES by VESSEL TYPE

Vessel Type	Total # Spills, 1991-1997	Average # of spills per year	Total Amt. Spilled Product, 1991-1997	Average Amt. spilled product per year
Fishing Vessels	**215**	30.7	**23,964**	3,423
Commercial Vessels (Tugs, Barges, Tankers)	**8**	1.1	**771**	110
Commercial Facilities	**8**	1.1	**85**	12
Public Vessels	**19**	2.7	**221**	32
Recreational Vessels	**2**	.3	**15**	2
Aircraft	**1**	.1	**8**	1
Unknown	**136**	19.4	**2,318**	331
Public Facilities	**8**	1.1	**534**	76

Figure E-9: TOTAL NUMBER OF OIL SPILLS BY SOURCE, 1991-1997

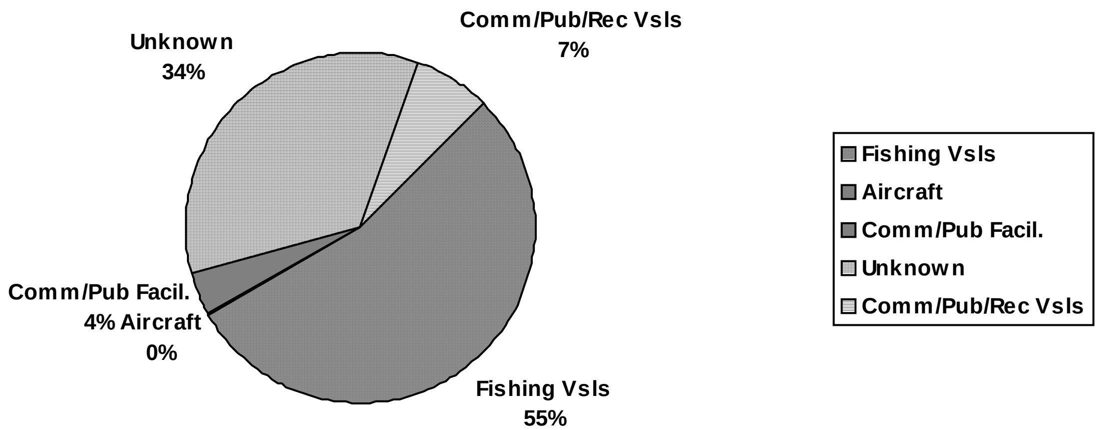
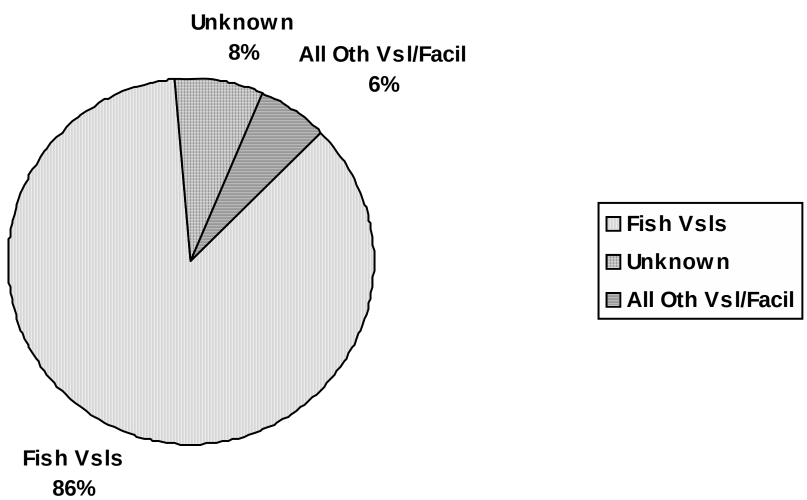


Figure E-10: TOTAL QUANTITIES OF OIL SPILLED BY SOURCE, 1991-1997



B. KODIAK OIL SPILL DATA 1995-2005

In 2007, ADEC staff completed and published the report “Ten Year Statewide Summary of Oil and Hazardous Substance Spill Data.” This spill data analysis report provides findings related to spills reported to ADEC for the 10-year period extending from July 1, 1995 to June 30, 2005 [State Fiscal Year (FY) 1996-2005]. A ‘static’ data set was established, which allowed staff to carefully review and QA/QC data. The report covered the entire State and outlined the results for each of the ten subareas.

The data for the Kodiak Subarea presented some discernible trends:

The average number of spills per year have been decreasing since FY 2002. There also appears to be a seasonal decline in the number of spills between the months of October thru March. For facility types, the reported spills were evenly distributed between Storage (30%), Transportation (26%), Vessels (22%), and Other (22%). Yet, in terms of total volume, Vessels contributed 63% of the total volume spilled.

Turning to causes, Structural/Mechanical (45%) and Human Factors (35%) were the primary causes in 80% of the spills, while Human Factors causes resulted in 62% of the total volume spilled, followed by Structural/Mechanical causes at 23%. Noncrude oil was the primary product spilled in 95% of the reported spills, and also accounted for 99% of the total volume.

Total Spills: 590 Total Volume: 25,796

Average Spill Size: 44 Average Spills/Year: 59 Average Volume/Year: 2,580

Top 5 Causes

Cause	Spill	Gallons
Sinking	27	12,692
Unknown	76	2,601
Overfill	76	2,204
Valve Failure	16	1,254
Line Failure	93	1,240

Top 5 Products

Product	Spills	Gallons
Diesel	252	23,096
Hydraulic Oil	116	554
Aviation Fuel	23	467
Gasoline	29	352
Other	39	293

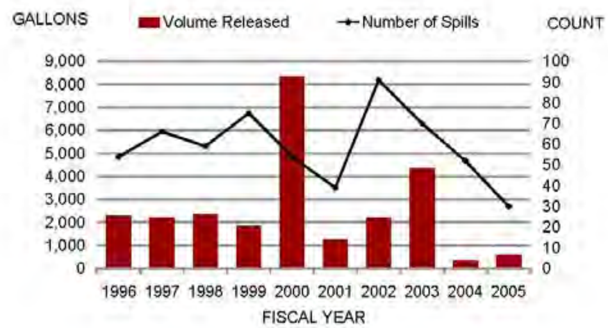
Top 5 Facility Types

Facility Type	Spills	Gallons
Vessel	129	16,246
Residence	46	2,427
Unknown	52	1,936
Other	78	1,686
Vehicle	98	851

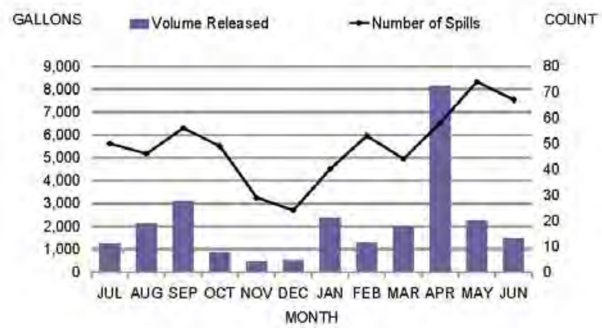
Presented on the following four pages are selected tables, pie charts, and graphs from the Kodiak Subarea section of the above-referenced report.

Summary Oil and Hazardous Substance Spills by Subarea, July 1, 1995-June 30, 2005

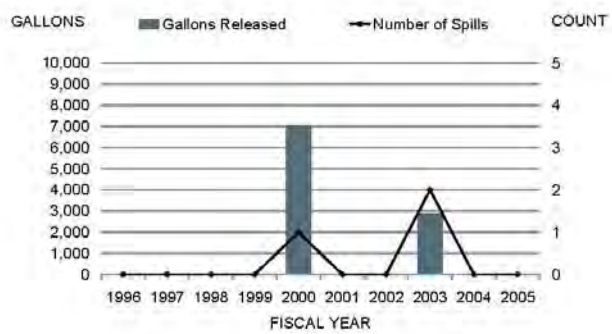
All Spills by Fiscal Year



All Spills by Month



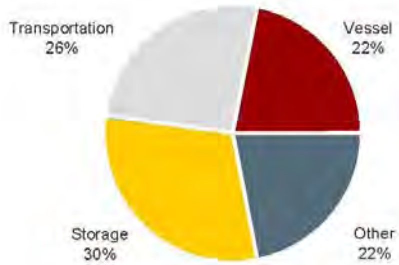
Spills >1,000 gallons



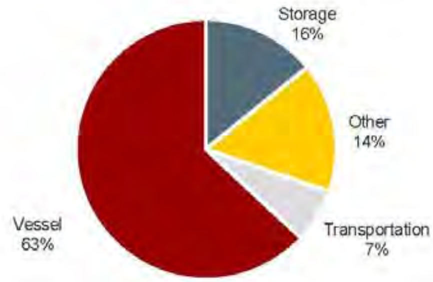
NOTE: Graphs do not include spills reported in pounds or potential spills.

Kodiak Island Subarea Spills by Facility Type

Number of Spills

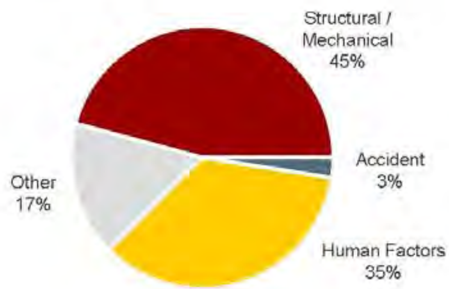


Gallons Released

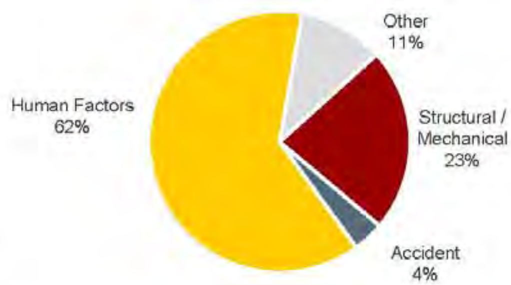


Kodiak Island Subarea Spills by Cause

Number of Spills

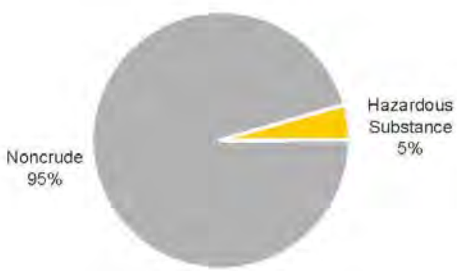


Gallons Released



Kodiak Island Subarea Spills by Product

Number of Spills



Gallons Released

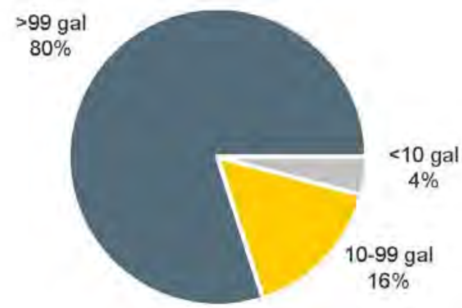
NOTE: Graphs do not include spills reported in pounds or potential spills.

Kodiak Island Subarea Spills by Size Class

- Nearly two-thirds of the spills during the report period were less than 10 gallons in volume.
- Approximately 80% of the total volume released resulted from spills larger than 99 gallons.

Number of Spills

Gallons Released



NOTE: Graphs do not include spills reported in pounds or potential spills.

Kodiak Island Subarea Spills at Regulated vs. Unregulated Facilities

Numerous oil facilities and vessels operating in Alaska are subject to Alaska's spill response planning and financial responsibility statutes. This section summarizes spills from:

- facilities and vessels required by statute to have an approved oil discharge prevention and contingency plan; and,
- non-tank vessels which are required to have an approved certificate of financial responsibility are also included.

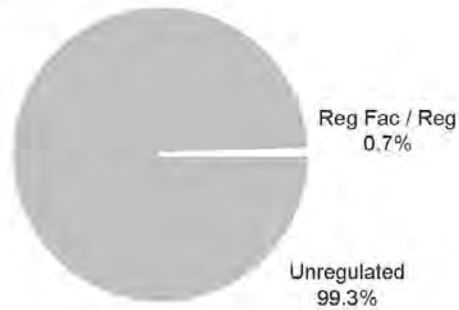
Spills from underground storage tanks are not included in this analysis.

Alaska's contingency planning requirements apply to specific aspects (components) of a facility's or vessel's operations. The analysis in this report distinguishes between spills from regulated versus unregulated components. Examples of spills from unregulated components include:

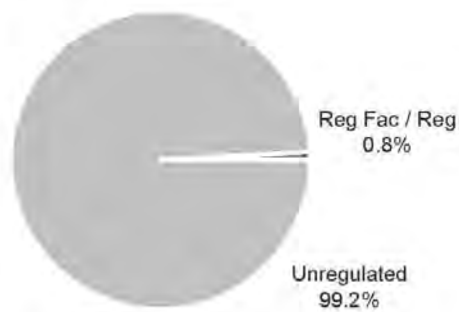
- a spill from a vehicle at a regulated facility;
- a spill from a fuel tank (below the regulatory threshold of 10,000 barrels) at a regulated facility

- Virtually all the spills during the 10-year period were from unregulated facilities, primarily vessels.

Number of Spills

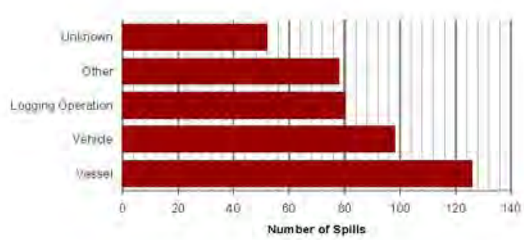


Gallons Released

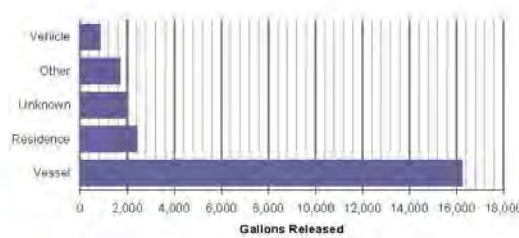


Top Unregulated Facilities

Number of Spills



Gallons Released



NOTE: Graphs do not include spills reported in pounds or potential spills.

C. NOTABLE SPILLS in the KODIAK SUBAREA, 1988 – 2010

Vessel/type or Source	Month /Year	Type of product	Amount (gallons)	Comments
TankBarge 283	12/88	diesel	2 million	storm-caused sinking
T/V Exxon Valdez*	3/89	crude	11 million	devastating wildlife loss
M/V Powhatan (tug)	6/91	diesel	300	
F/V Windrunner	11/91	diesel	840	derelict vessel release
F/V Alaska Spirit	1/92	diesel	200	
F/V Mahato	1/92	diesel	2,000	vessel sank
USCG Air Station	4/92	JP-5	4,700	fuel valve failure
USCG Air Station	4/92	diesel	46,200	onshore pipe broke
F/V Dutchess	5/92	diesel	500	grounding
M/V La Poncena	7/92	waste oil	200	
F/V Ocean Hope 3	7/92	diesel	250	
F/V Judy M	7/92	diesel	200	vessel fire, partial sinking
Kodiak Power Plant	9/92	diesel	125	tank overfill
F/V Miss Angel	10/92	diesel	2,000	vessel sank
F/V Massacre Bay	1/93	diesel	5,040	
USCG Air Station	1/93	Jet A	10,000	fuel valve frozen
F/V Yukon	3/93	diesel	1,000	vessel sank
Safeway Store	4/93	diesel	50	overfill heating tank
F/V Francis Lee	7/93	diesel	10,000	vessel sank
M/V Arctic Dream	9/93	diesel	100	vessel grounded, sank
F/V Edith Mae	10/93	diesel	200	
USCG ISC Kodiak	10/93	diesel	300	hose failure
USCG ISC Kodiak	1/94	diesel	980	fuel overflow
Kodiak Baptist Mission	1/94	diesel	600	aging pipe fittings leaked
F/V Eagle	2/94	diesel	4,000	vessel sank
FNT 180 (barge)	3/94	lube oil	110	55 gal. drums overboard
USCGC Jarvis	3/94	diesel	100	tank overfill
F/V Shakari	5/94	diesel	150	
F/V Serenity	6/94	diesel	150	vessel sank
Source unidentified	6/94	lube oil	50+	1 NM x .25 NM sheen
USCG ISC Kodiak	6/94	JP-5	1,300	drainline leaked
F/V Destiny	6/94	diesel	300	vessel burned & sank
F/V Dylan's Dream	8/94	diesel	600	vessel sank
F/V Dylan's Dream	8/94	lube oil	120	vessel sank
F/V Knight Island	8/94	diesel	4,000	vessel sank
F/V Knight Island	8/94	gasoline	200	vessel sank
Bells Flats Constr. Site	9/94	MC 70	10,500	buried drums road sealer
USCGC Sherman	9/94	diesel	150	tank overflow
USCG ISC Kodiak	11/94	waste oil	100	steam plant spill
F/V Hustler	1/95	diesel	1,000	grounding, tanks holed
Source unidentified	3/95	diesel	150	
Source unidentified	8/95	diesel	300	oil on shore
F/V Royal Baron	10/95	diesel/lube	2,050	vessel sank
USCGC Harriet Lane	10/95	av. fuel	90	
USCG Air Station	10/95	av. fuel	100	
F/V Sally J	1/96	diesel	1175	fire, vessel sank
F/V Blue Fox	1/96	diesel	300	
F/V Desiree C.	4/96	diesel	700	vessel sank
F/V Dutchess	4/96	diesel	250	
Source unidentified	8/96	diesel	1,000	federalized spill
USCG Air Station	12/96	av. fuel	500	

F/V Peril Cape	1/97	diesel	260	vessel sank
F/V Sandra W.	1/97	diesel	2,800	vessel sank
F/V Renegade	8/97	diesel	400	
F/V Destiny	4/00	diesel	7000	vessel sank
F/V Dakota	9/02	diesel	1400	vessel sank
F/V Rocona	5/03	diesel	1500	vessel sank
USCG Midgett	10/05	av. fuel	1000	piping / human error
F/V Hunter	1/07	diesel	900	vessel sank
BlackjackPrtnr - port	1/07	diesel	100	equipment failure
F/V Jade	2/07	diesel	2800	vessel capsize
USCG base	3/07	diesel	1900	pipeline / valve failure
Kodiak High School UST	8/07	diesel	500	tank corrosion
Furin Wy, Kodiak HHO tank	11/07	diesel	300	structural crack
Kodiak Airport	12/07	diesel		sheared fuel line / human error
Piper PA-31 Plane Crash	1/08	av.fuel	150	unsecured cargo / human error
F/V Velocity	2/08	diesel	950	vessel capsize
F/V Erin Lynn	3/08	diesel	150	tank overfill
TerrorLake Power Generation	3/08	tranfmr oil	275	external factors
Birch St, Kodiak HHO tank	12/08	diesel	150	line failure
Baranof St, Kodiak	5/09	diesel	250	unknown source
ChiniakSchool caretaker-house	11/09	diesel	500	tank corrosion

* The *Exxon Valdez* grounding, which occurred outside this region, is included because of the resulting oil spill's enormous size and the significance and effect of the spill upon Kodiak Island and it residents.

BACKGROUND: PART FIVE – ABBREVIATIONS AND ACRONYMS

ACC	Alaska Coastal Current
ACP	Area Contingency Plan
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game, also as ADFG
ADMVA	Alaska Department of Military & Veteran Affairs
ADNR	Alaska Department of Natural Resources
ADCRA	Alaska Department of Community and Regional Affairs
ADHSS	Alaska Department of Health and Social Services
ADOTPF	Alaska Department of Transportation and Public Facilities
AIRSTA	Air Station (USCG)
ANCSA	Alaska Native Claims Settlement Act
ARRT	Alaska Regional Response Team
AST	Alaska State Troopers
BLM	Bureau of Land Management
BOA	Basic Ordering Agreement
CART	Central Alaska Response Team (ADEC)
CCGD 17	Commander, Coast Guard District 17
CI	Cook Inlet
CISPRI	Cook Inlet Spill Prevention and Response, Inc. (industry cooperative)
COMMSTA	Communications Station (USCG)
COTP	Captain of the Port (USCG)
DES	Division of Emergency Services (part of ADMVA), also as ADES
DOD	Department of Defense
DOI	Department of the Interior
EOC	Emergency Operations Center
EOP	Emergency Operations Plan (Kodiak)
EPA	Environmental Protection Agency, also as USEPA
ESC	Emergency Services Council (Kodiak)
ESI	Environmental Sensitivity Index (Alaska)
ESO	Emergency Services Organization (Kodiak)
ESD	Emergency Services Director (Kodiak)
FAA	Federal Aviation Administration
F/V	Fishing Vessel
FOSC	Federal On-Scene Coordinator
GIS	Geographical Information System
GRD	Geographical Resources Database (Alyeska)
GRP	Geographic Response Plan
GSA	General Services Administration
HAZMAT	Hazardous Materials, also as hazmat
HAZWOPER	Hazardous Waste Operations and Emergency Response
ICS	Incident Command System
IC	Incident Commander
INMARSAT	International Maritime Satellite Organization
ISC Kodiak	Integrated Support Command Kodiak (USCG)
JIC	Joint Information Center
KANA	Kodiak Area Native Association
KIB	Kodiak Island Borough
KNWR	Kodiak National Wildlife Refuge

KSCP	Kodiak Subarea Contingency Plan
LEPC	Local Emergency Planning Committee
LNG	Liquefied Natural Gas
LOSC	Local On-Scene Coordinator
MAC	Multiagency Coordination Committee
M/V	Motor Vessel
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSD	Marine Safety Detachment (USCG)
MSO	Marine Safety Office (USCG)
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPFC	National Pollution Funds Center
NPS	National Park Service
NWR	National Wildlife Refuge (USFWS)
NRC	National Response Center (USCG)
NRDA	Natural Resource Damage Assessment
NSF	National Strike Force
NSFCC	National Strike Force Coordination Center
NWR	NOAA Weather Radio
NWS	National Weather Service
OPA 90	Oil Pollution Act of 1990
OPCEN	Operations Center
OSC	On-Scene Coordinator
OSRO	Oil Spill Response Organization
PIO	Public Information Officer
POLREP	Pollution Report (USCG)
PWS	Prince William Sound
RAC	Response Action Contractor
RCAC	Regional Citizens' Advisory Council
RP	Responsible Party
RPOSC	Responsible Party On-Scene Coordinator
RRT	Regional Response Team
SCP	Subarea Contingency Plan
SERVS	Ship Escort Response Vessel Service (Alyeska)
SHPO	State Historic Preservation Officer (ADNR)
SITREP	Situation Report (ADEC)
SONS	Spill of National Significance
SOSC	State On-Scene Coordinator
SSC	Scientific Support Coordinator (NOAA)
SUPSALV	U.S. Navy Supervisor of Salvage, also as NAVSUPSALV
TAPS	Trans-Alaska Pipeline System
T/V	Tank Vessel
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
USN	United States Navy
VOSS	Vessel of Opportunity Skimming System
VTS	Vessel Traffic Separation Scheme/System

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