SOUTHEAST
SUBAREA CONTINGENCY PLAN

BACKGROUND
SECTION

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BACKGROUND: PART ONE – SUPPORT 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 Southeast Subarea.

For its planning process, the federal government has designated the entire state of Alaska as a planning "region" and the southeastern portion of the state as a planning "area." The State of Alaska has divided the state into ten planning regions of which one is the "Southeast Region." As part of the Unified Plan, this SCP addresses this Southeast Region, but to avoid confusion with federal terms, the region is referred to as the Southeast Subarea.

The SCP 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 OPA 90. Any review for consistency between government and industry plans should address the recognition of economically and environmentally sensitive areas and the related protection strategies, as well as a 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.

An incident in the Canada/United States Dixon Entrance (CANUSDIX) trans-boundary area will result in the activation of the Annex 5 Canada-United States Dixon Entrance-Geographic Annex to the Canada-United States Joint Marine Pollution Contingency Plan (Joint Marine Pollution Plan).

B. SUBAREA DESCRIPTION

The Southeast Subarea matches the area of responsibility for the USCG Sector Juneau Marine Inspection and Captain of the Port Zone and is identical in area to that identified in State of Alaska statute as the Southeast Region. (Geographic boundary coordinates for Sector Juneau are detailed in Title 33, Code of Federal Regulations, Part 3.85-10.)

The Southeast Subarea is comprised of the State of Alaska east of a straight line commencing at 60.01.3 degrees north latitude, 142 degrees west latitude, thence proceeding northeasterly to its end at the international boundary between the United States and Canada at 60.18.7 degrees north latitude, 141 degrees west longitude. The offshore boundary is 142.00 degrees west longitude from shore to the offshore extent of the Exclusive Economic Zone (EEZ) thence southerly and easterly along the boundary of the EEZ to the international boundary at Dixon Entrance. This area includes all of Southeast Alaska from Dixon Entrance to the south up to and including Icy Cape to the north, a distance stretching over 530 miles. (See Figures E-1, E-2, E-3, E-4, E-5, and E-6 for boundary and map/nautical chart referral information.)

Southeast Alaska is a narrow panhandle 525 miles long and 120 miles from east to west composed of a narrow strip of mainland mountains and over a thousand offshore islands of the so-called Alexander Archipelago. An intimate interfringing of land and sea, most of the subarea is "wet" or temperate rainforest scattered in its northern aspect and higher altitudes with ice fields and glaciers. The region is heavily forested with spruce, hemlock and cedar. Average temperatures in winter are 20 to 40 degrees above zero, while mid-summer temperatures average 50 to 60 degrees. Average annual precipitation is heavy, ranging from 80 to over 200 inches.

Towns are generally nestled along the narrow strips of flat land lying between the water's edge and the steep mountain slopes. Travel in the region is mostly facilitated by private vessel, state ferries, float planes and larger commercial aircraft. The three largest cities in the Southeast Subarea are Juneau, the state capital with approximately 30,000 people, Ketchikan in the south with a borough population near 13,000, and Sitka, along the outer coast and site of the historic capital of Russian America, with a population just under 9,000. The central Southeast towns of Petersburg and Wrangell come in at approximately 3,000 and 2,000, respectively. The town of Haines in the north has nearly 1600 people, and the largest town on Prince of Wales Island to the south is Craig with 1100. All other towns in Southeast Alaska have less than 1000 inhabitants. Tourism, fishing, and logging comprise the primary industries. Southeast Alaska is home to Tlingit and Haida native groups, famous for their marine and forest adaptations and their totems.

The subarea encompasses a very diverse array of topographical features, including:

a vast archipelago with numerous small, uninhabited islands;
steep-sided fjords;
rocky or boulder-strewn shorelines;
pebble and gravel pocket-beaches;
areas of substantial forests, often old-growth, and other areas of clear-cut or recent forest growth;
extremely mountainous terrain;
tundra;
extensive ice fields;
numerous tidewater and piedmont glaciers;
river deltas and broad tidal mudflats;
and vast fields of muskeg.

Approximately 77% (16.8 million acres) of Southeast Alaska lies within the Tongass National Forest and within the forest are the largest tracts of virgin old-growth trees (600 years old on up) left in the United States. Moreover, Southeast Alaska contains the highest density of brown bears and bald eagles of any other place in the world. As with all areas within Alaska, the southeast region supports a wide range of wildlife. Larger, terrestrial mammals include moose, Sitka deer, brown, black and the elusive glacier bears, wolf, coyote, red fox, wolverine, and the mountain goat. Smaller mammals include beaver, hare, lemming, marmot, marten, mink, muskrat, pika, porcupine, river otter, shrew, squirrel, vole, and weasel. Marine mammals found in the Southeast Subarea include humpback whale, orca, porpoise, sea lion, harbor seal, and sea otter.

Many songbirds, shorebirds and waterfowl reside in the region or stay as seasonal residents. During the spring and fall, the inland and shoreline areas become a haven for migratory waterfowl and other birds. This is especially true for larger river deltas, such as the massive one at the Stikine River, which sees one of the larger influxes of migratory birds in North America. The lower Chilkat River near Haines witnesses every autumn one of the largest gatherings of bald eagles in the world.

Some residents engage in a subsistence lifestyle and have long depended upon the availability of plant and animal resources in the area. Several communities rely on certain marine mammals as a traditional food source, and these mammals are present in concentrated areas during certain times of the year. Any spill of significance could devastate the subsistence food harvest and seriously threaten the normal means of existence for many residents. Long-term impacts to these food resources could have a deleterious effect on Native and subsistence lifestyles. The Sensitive Areas Section provides detailed information on the specific resources vulnerable to spills and the locations of these resources within the subarea.

Figure E-1: Location of Southeast Subarea

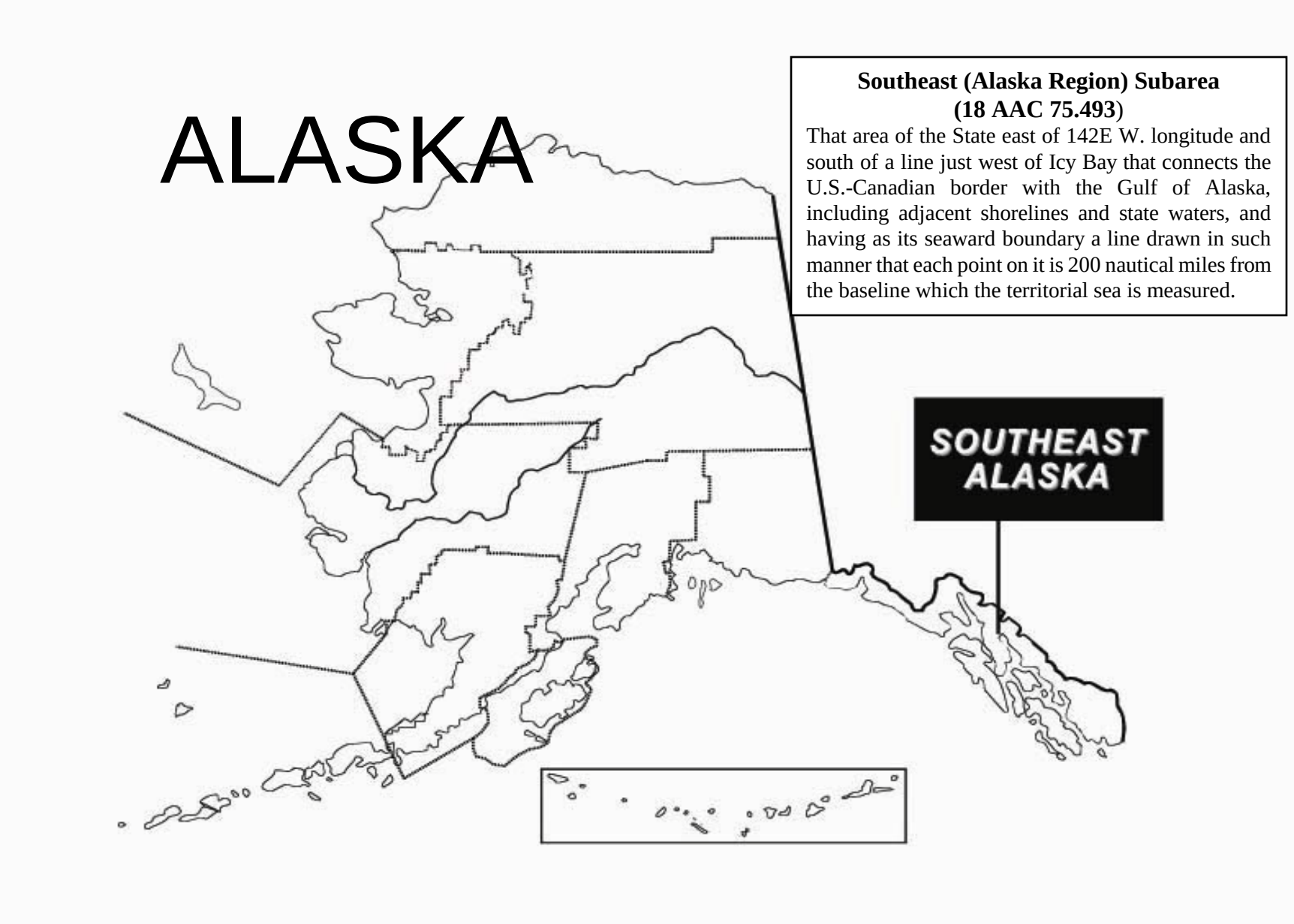
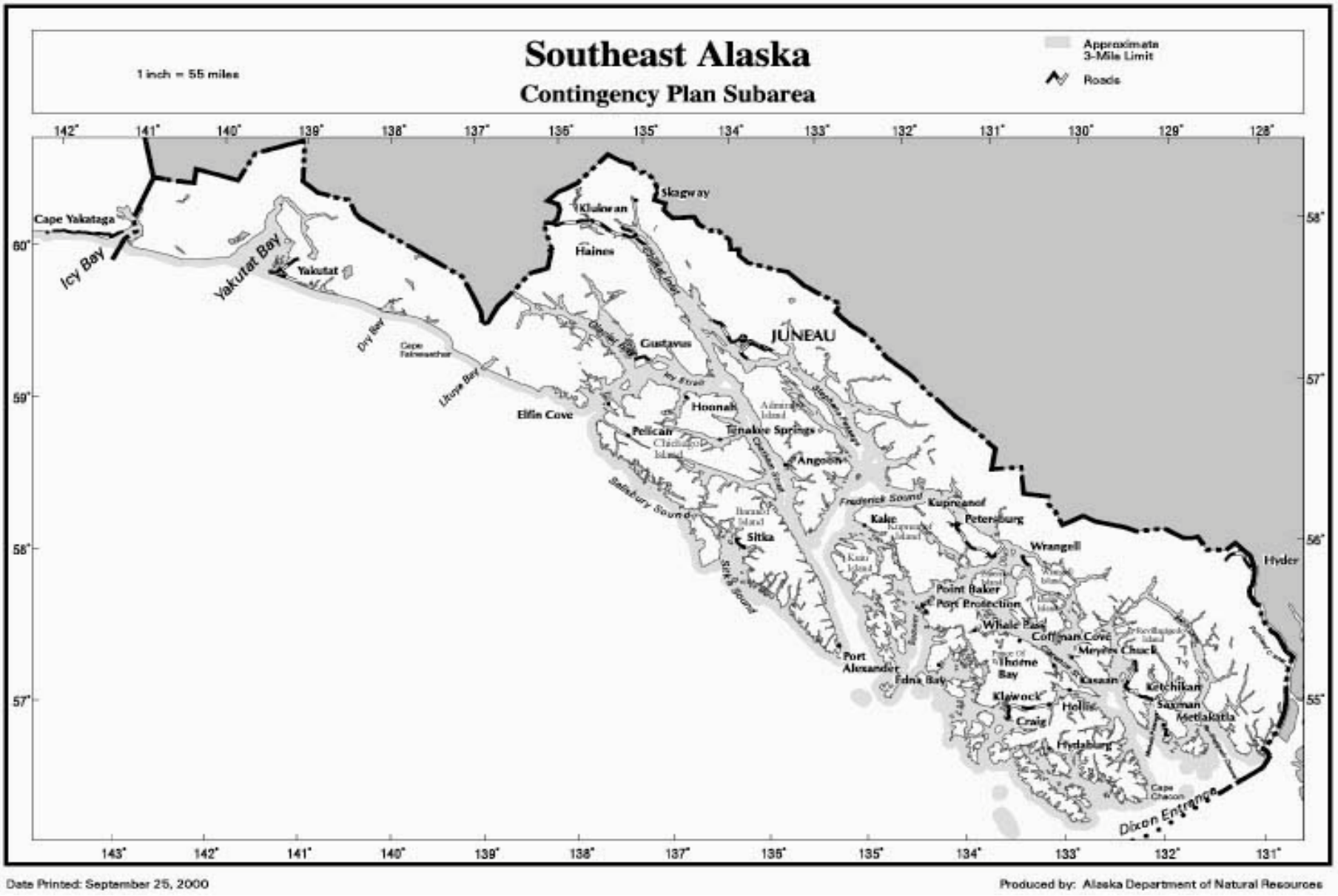


Figure E-2: The Southeast Subarea

Figure E-3: Southeast Subarea Detailed Map



Date Printed: September 25, 2000

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Figure E-4: Southeast Subarea USGS Topo Map Index

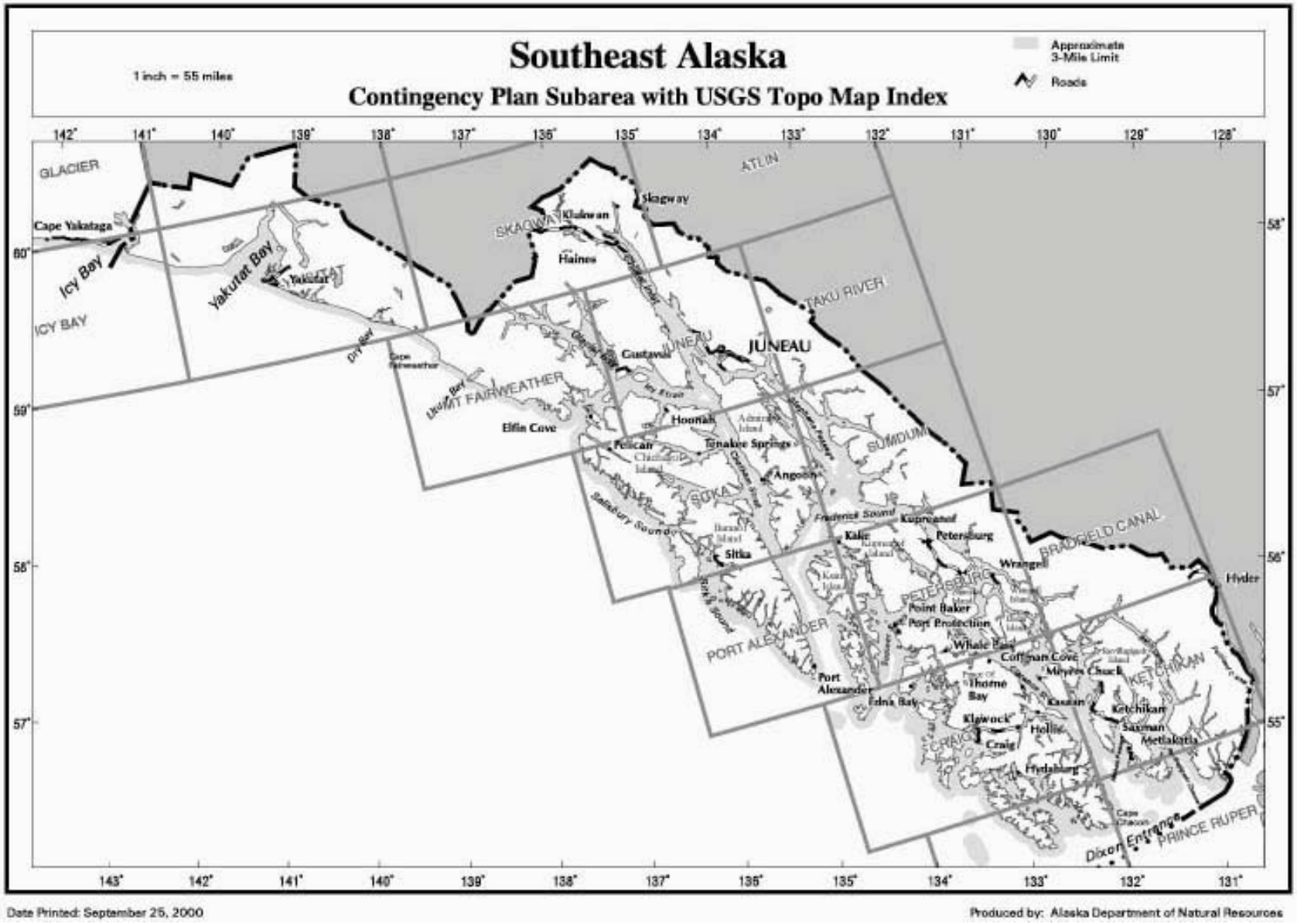


Figure E-5: Southeast Subarea Nautical Chart Map, North

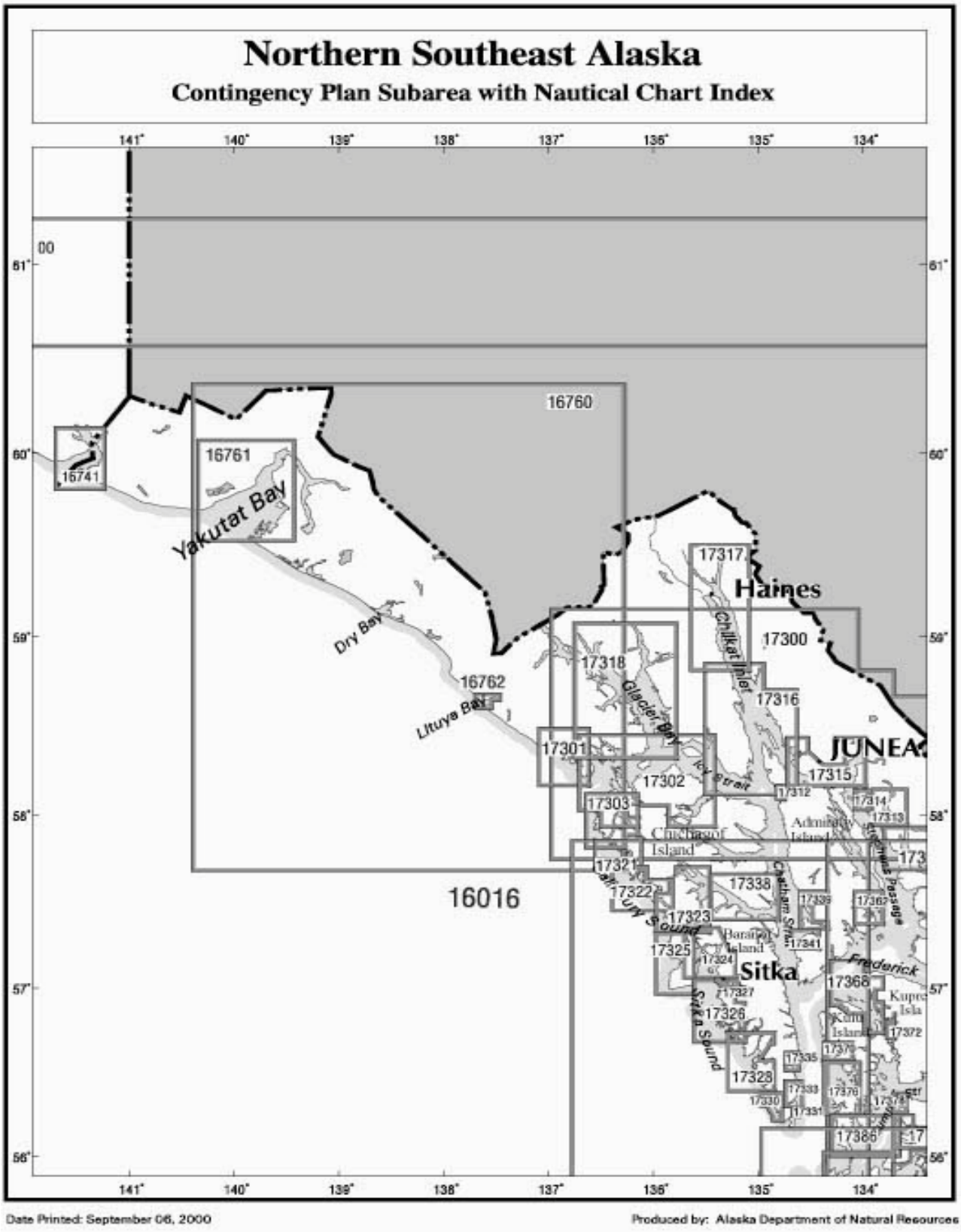
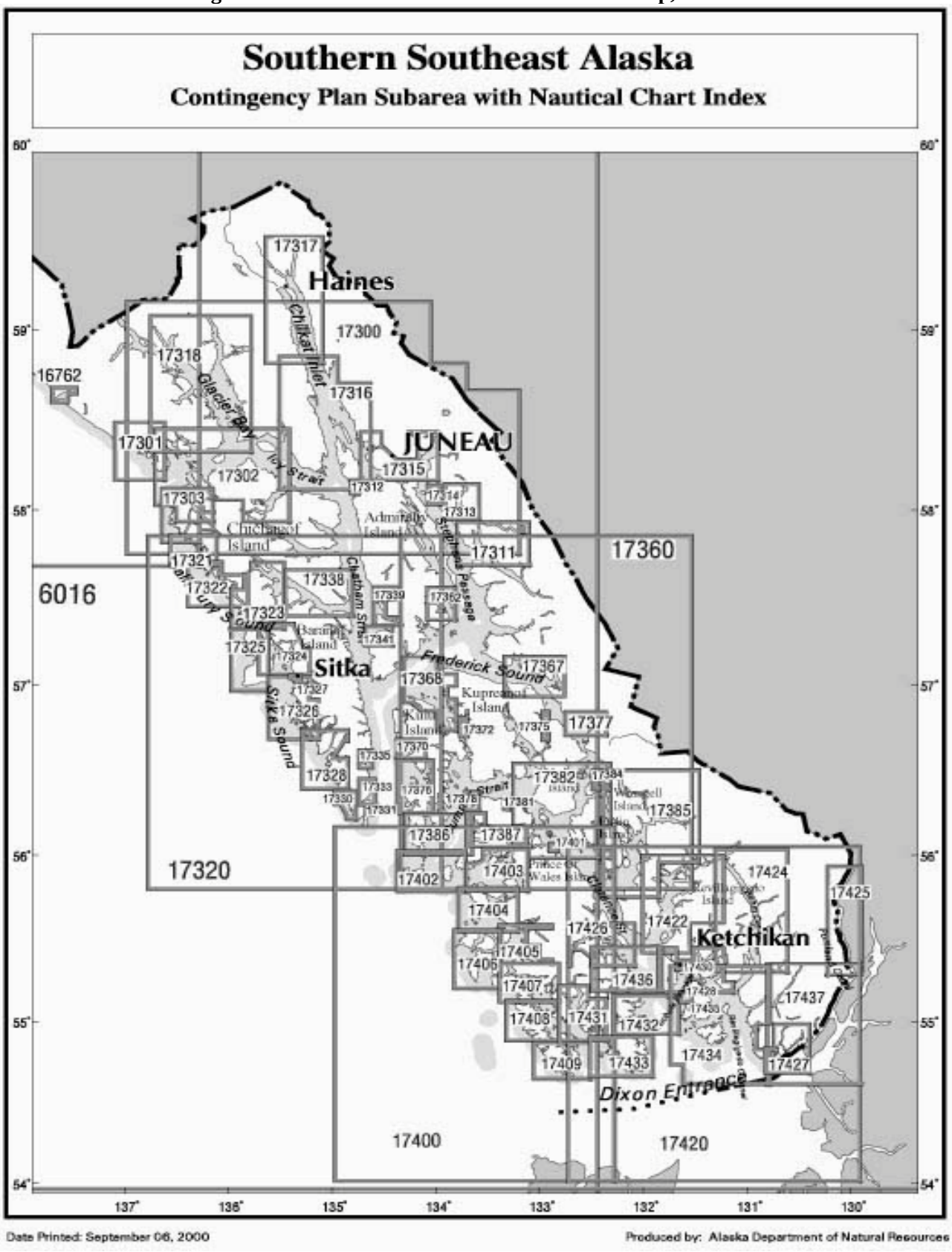


Figure E-6: Southeast Subarea Nautical Chart Map, South



Commercial and sport fisheries play an important part in the lives and the economies of Southeast Alaska. Dolly Varden, trout, halibut, herring, lingcod, and the five species of salmon are among the many fish sought from the waters of Southeast. Presently, the region boasts eighteen active salmon hatcheries. The mariculture industry is growing in size and importance, and the shellfish/aquatic plants being raised in Alaska include Pacific oysters, blue mussels, littleneck clams, scallops, bull kelp, and *Porphyra* species of red/brown algae. (Note: Alaska Statute prohibits finfish farming.)

This biologically rich and diverse maritime region sees significant vessel traffic ranging from pleasure craft and fishing boats to small tankers, freighters and large cruise ships. Marine-related petroleum products pose an everyday threat of spill and possible pollution to a largely pristine environment. The coastal vessel route extending from the State of Washington through Southeast Alaska is usually quite wet, with low ceilings and frequently changing weather conditions being typical. Surface winds are greatly affected by the mountainous terrain, and sudden wind changes of as much as 180 degrees are commonplace.

While there is more dependence on air transportation in Alaska than in other states, as well as a great reliance on marine vessel traffic, there is less weather reporting here. Of 168 weather radars in the country, only seven are in Alaska – an area one-fifth the size of the rest of the United States. While Florida's coast has 47 buoys collecting weather data, for example, there are none for an equivalent area off Alaska's Southeast coast. Alaska has one manned weather observation site for every 8,000 square miles. Effort is underway to increase the number of automatic weather stations that include live video feeds.

The *"Southeastern Alaska Oceanographic Conditions"* by John Whitney, NOAA, September, 2001, provides the following ocean current information, as well as further details:

> Aspects of the net surface ocean circulation for Southeast Alaska have been studied, but no overall model exists. The Pacific Subarctic Gyre and its associated northward flowing Alaska Current (see Figures E-6 and E-7) appear to influence the circulation in the region by producing a predominantly northward surface circulation along the outer coast and through the inland passages.
>
> Along the west coast of Baranof Island, coastal waters of the northward flowing Alaska current enter Sitka Sound from the south and exit around Cape Edgecombe, producing a weak counterclockwise gyre. But seaward of Sitka Sound, a large clockwise eddy, estimated at roughly 100km in diameter, persists in the Alaska Current for periods up to a half year, though duration, size and magnitude often vary. (See Figures E-8 and E-9)
>
> Wind data for Southeast Alaska show a preponderance of south southeasterly winds generated by a dominant low pressure region off the Prince of Wales/Queen Charlotte Islands region. These winds tend to reinforce the net northward water surface circulation, producing the characteristic rainy climate conditions with winds of 5 to 35 knots. Mountains and fjords, found throughout the subarea, tend to create localized channeled winds that may be at large angles to the regional climatic winds. Large glaciers at the heads of many of the fjords tend to produce drainage winds.
>
> Strong northerly and easterly Taku winds occur most commonly during the winter when the Yukon High over the interior land mass to the north extends into Southeastern Alaska. This causes katabatic winds to cascade from the interior of the continent through the Coast Range passes with wind speeds typically 30 to 70 knots, gusting to 100 knots. Taku wind conditions can persist for periods of three days to three weeks and can induce a massive flushing of surface waters throughout southeastern Alaska. Rapid surface transport out Icy Strait and Chatham Strait occurs during such wind-induced flushing.

Tidal currents vary considerably throughout the Southeast Subarea. During the spring and summer, freshwater runoff is at its highest. Drastically reduced fresh water runoff in the winter probably produces surface-water intrusion in some estuaries and fjords, which during the summer likely show a net surface outflow.

In southern Chatham Strait between Christian Sound and Frederick Sound, surface water generally circulates northward and southward dependent upon changes in local winds and runoff. In northern Chatham Strait surface circulation is generally north, followed by a westward flow through Icy Strait. Within Lynn Canal surface circulation tends to be northward on the eastern side and southward on the western side, discharging into Icy Strait. (See Figures E-10, E-11, and E-14)

A semi-diurnal tidal flushing takes place throughout Southeast Alaska, and many areas can experience tidal extremes as low as a minus four feet at a low tide to plus twenty feet on the high tidal cycle. Typical tidal heights on the outer, western coasts generally range from 8 to 15 feet, while the inner regions experience tidal heights in the 10 to 25 foot range. The spring high tide levels can be achieved in he northern and southern ends of Southeast Alaska within fifteen minutes of each other. As the incoming tide rushes through the passages, channels and fjords, the inner coastlines will experience high tide levels of 18 to 19 feet or higher. This tidal advance occurs reasonably simultaneously throughout all of Southeast Alaska.

Swift flowing tides, and even standing waves in a few locations, can create navigational problems for some smaller vessels and present even greater challenges for spill response teams acting to contain and recover a fuel spill. The tidal currents vary considerable throughout the Southeast Subarea. The figures below by R. Washburne, 1989, show the general flow patterns of flood tides and ebb tides in Southeast Alaska. (See Figures E-11 through E-16.)

Figure E-7: North Pacific Current and Precipitation Patterns

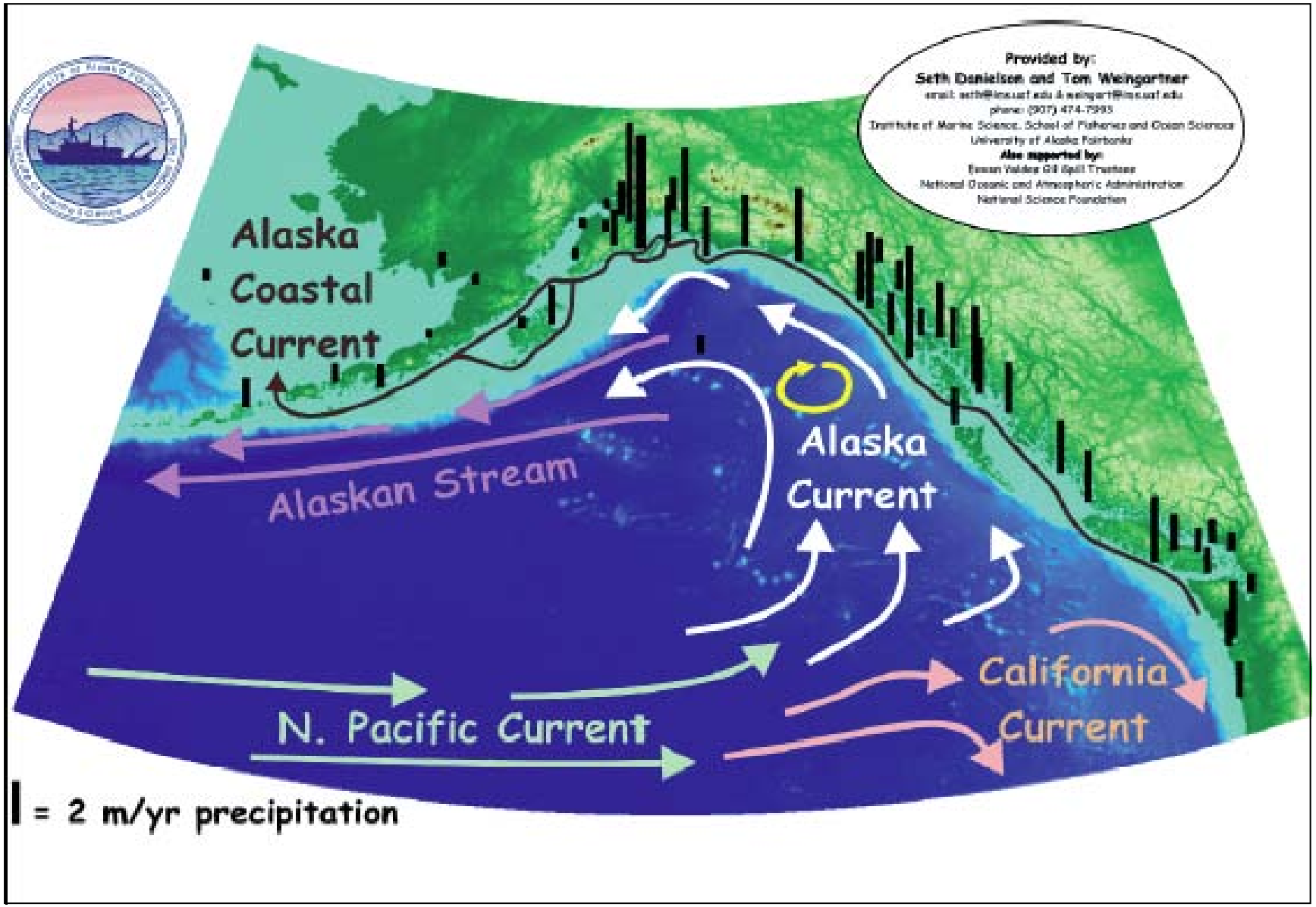
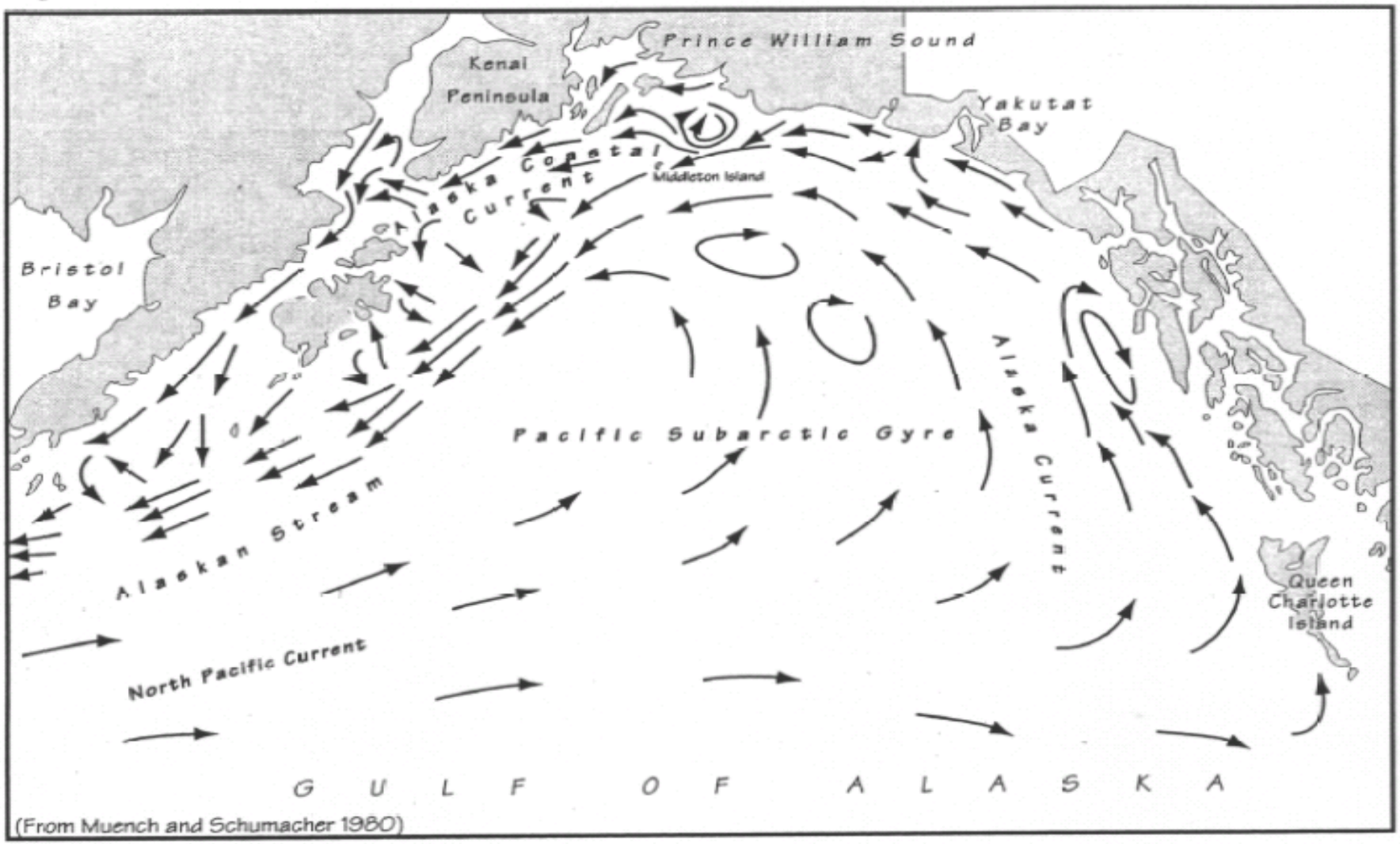


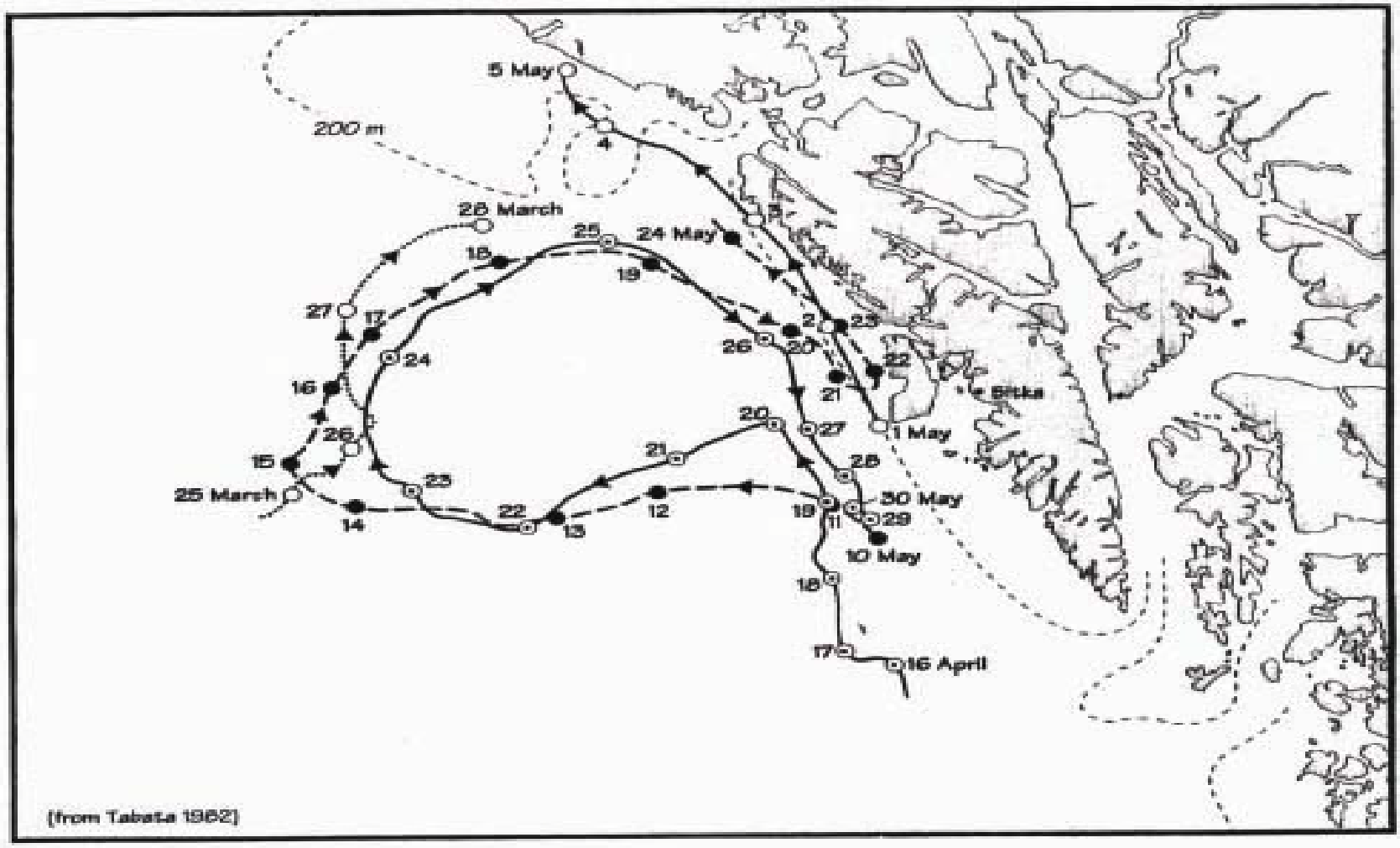
Figure E-8: Net Surface Currents – Gulf of Alaska



Net surface currents in the Gulf of Alaska

Muench, R.D. and J.D. Schumacher; 1980, Physical oceanographic and meteorological conditions in the Northwest Gulf of Alaska, NOAA Techni Memorandum ERL PMEL-22; Seattle: Pacific Marine Environmental laboratory, National Oceanic and Atmospheric Administration.

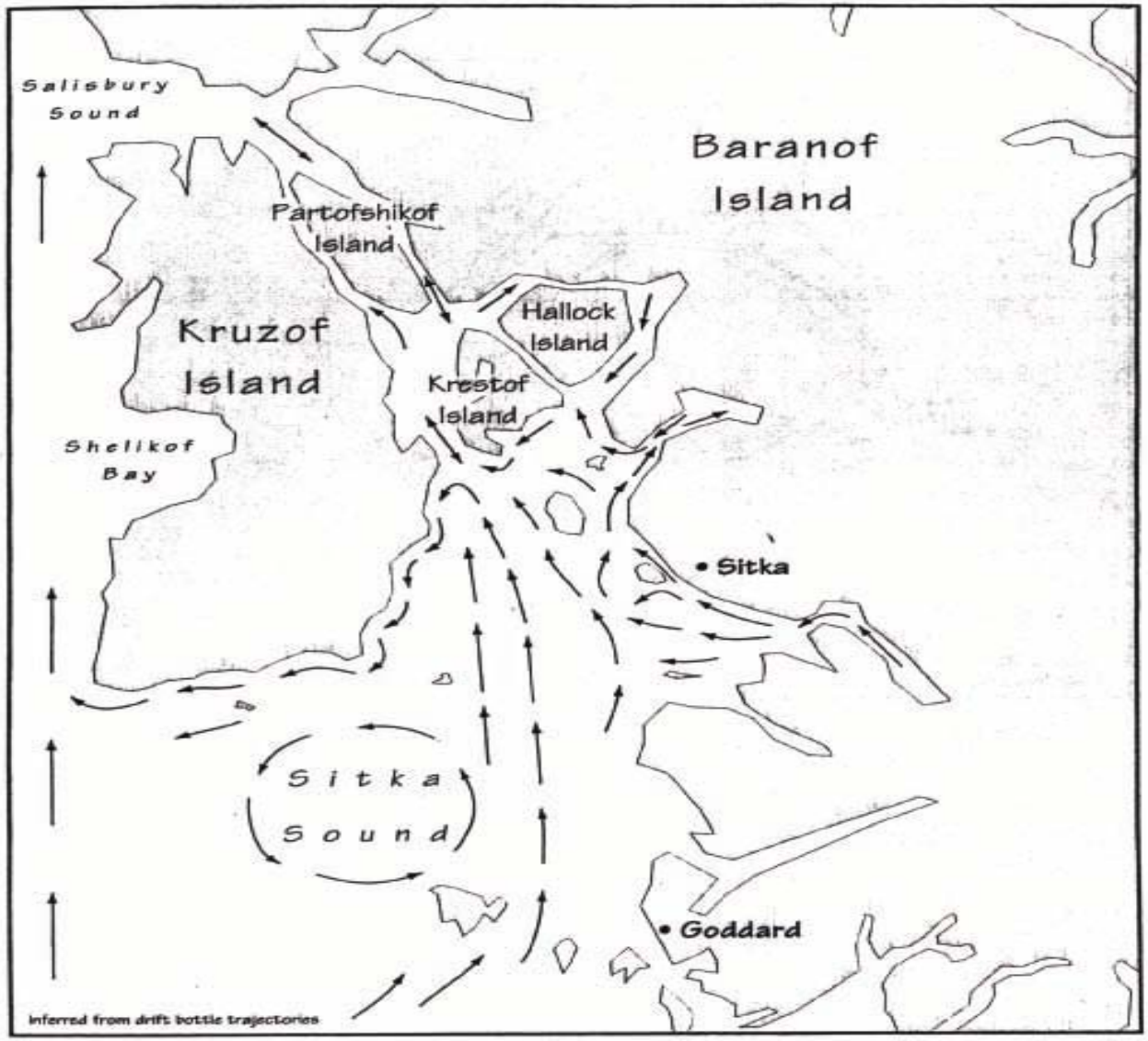
Figure E-9: Drift-buoy Mapping of Sitka Coastal Eddy



Trajectories of Norpax satellite-tracked drifting buoys in the vicinity of Sitka Eddy (1977)

Tabata, S., 1982, The anticyclonic, baroclinic eddy off Sitka, Alaska, in the Northeast Pacific Ocean, Journal of Physical Oceanography 12, 1260-1282.

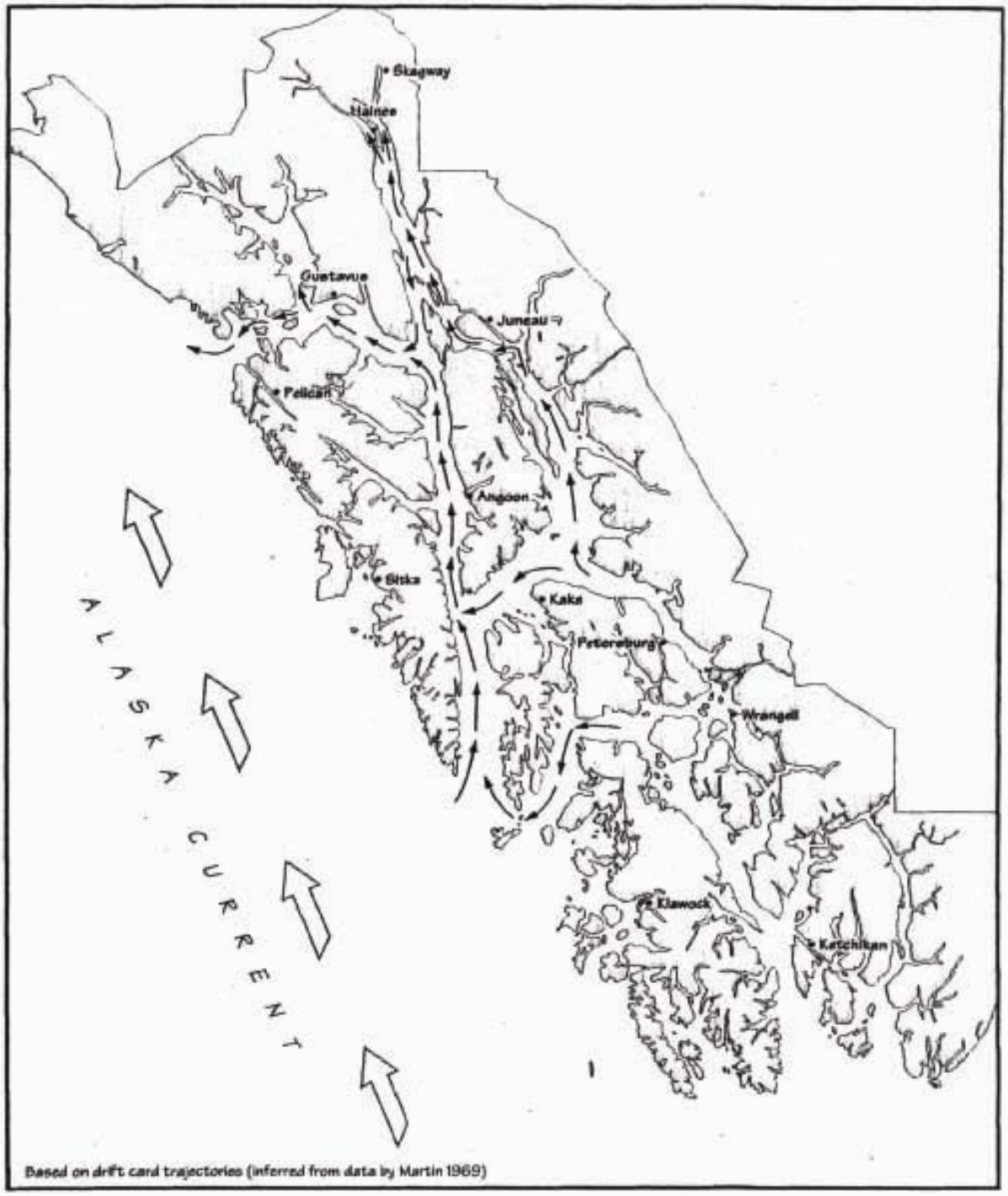
Figure E-10: Net Circulation in Sitka Sound



Net Circulation in Sitka Sound

Sundberg, K.A., 1981, Marine Biology and Circulation Investigations in Sitka Sound, Alaska, ADFG, Habitat Section, Anchorage, AK.

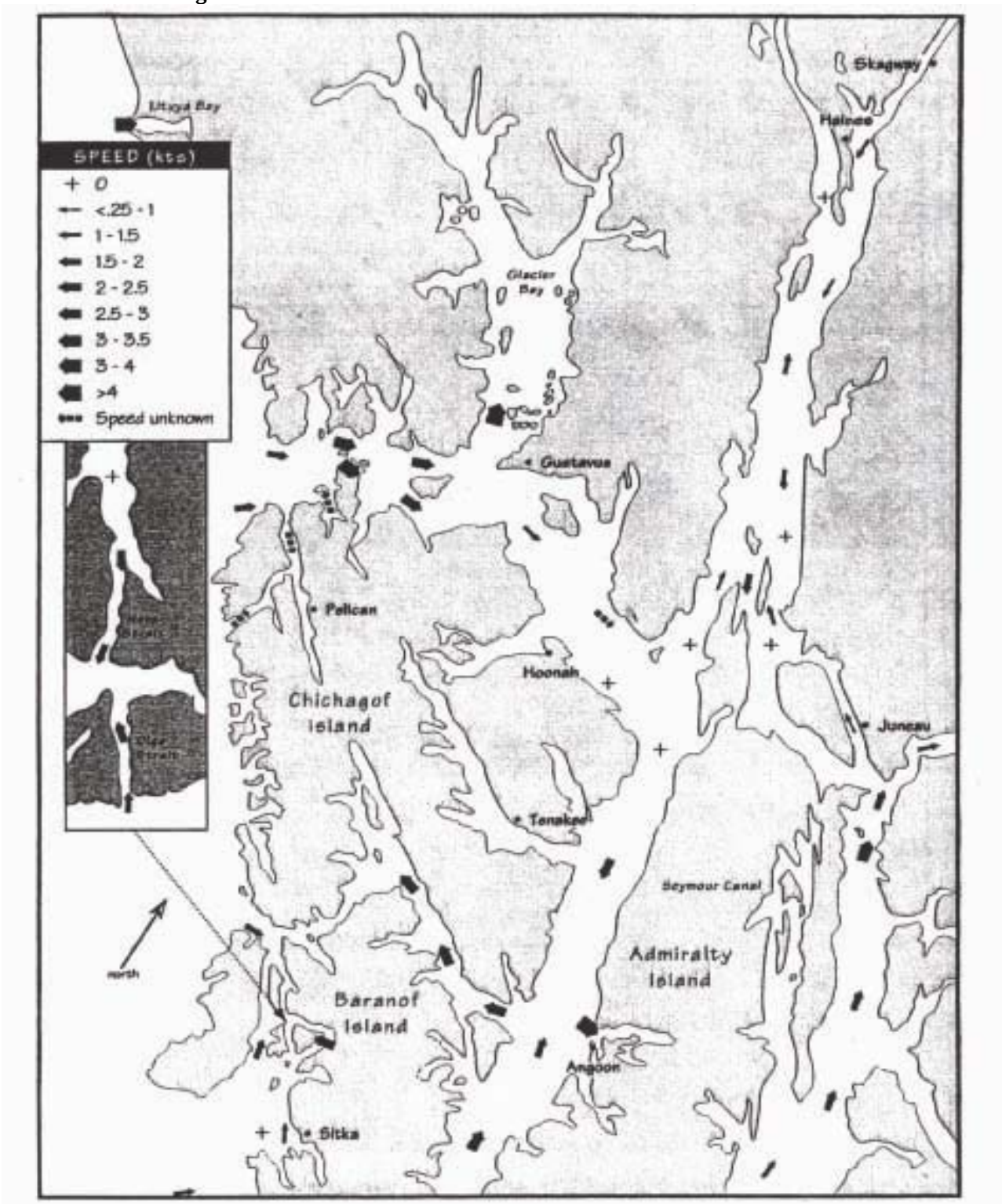
Figure E-11: Surface Currents in Northern Part of Southeast Alaska



Generalized surface currents in northern SE Alaska

Martin, J., 1969, Sea Surface Current Studies in SE Alaska, Spring and Summer 1967, U.S. Fish and Wild life Service, Auke Bay Alaska.

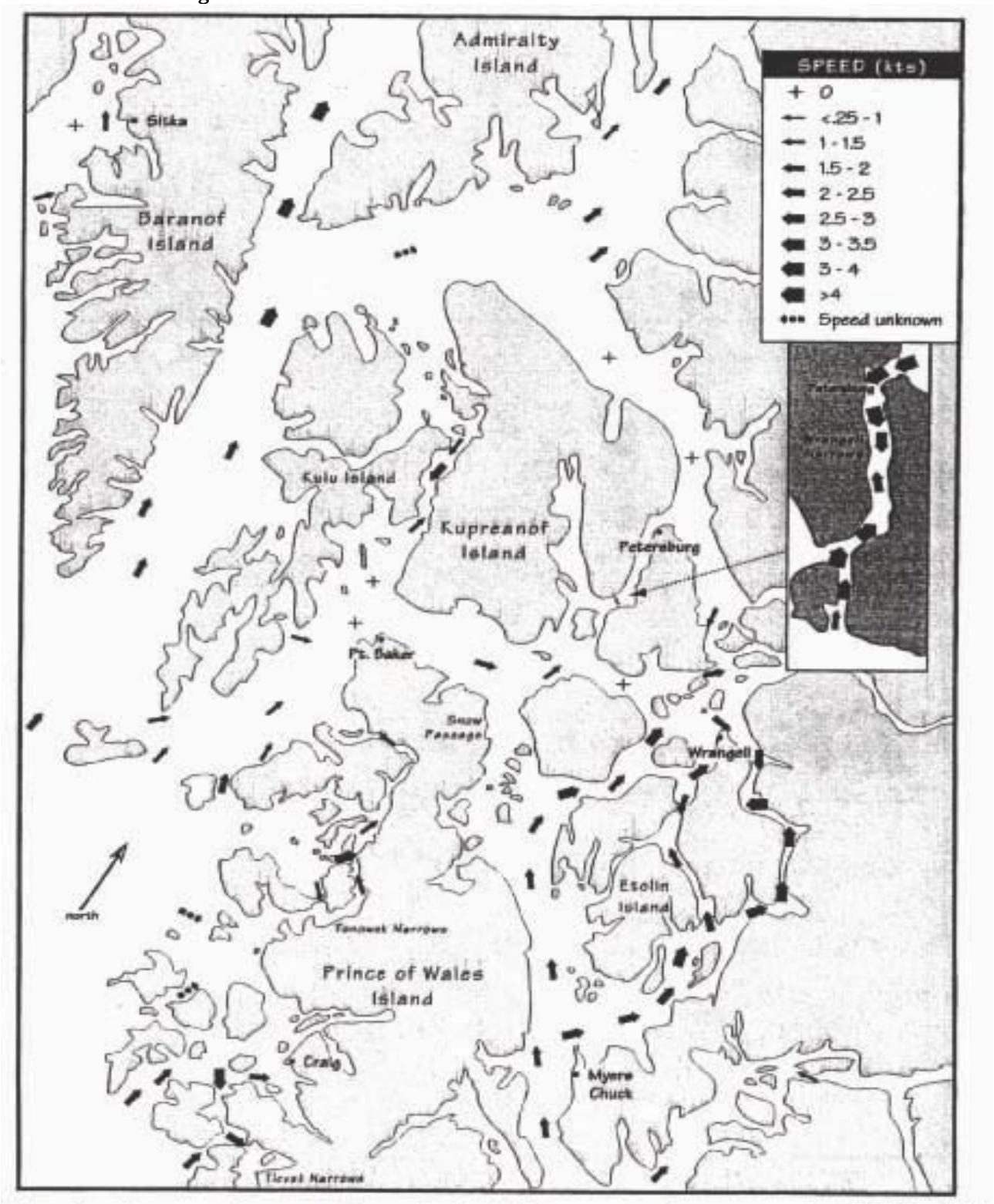
Figure E-12: Flood Tide Currents for northern Southeast Alaska



Typical maximum flood tide currents - northern SE AK

Washburne, R., 1969, Southeast Alaska Current Atlas, Weatherly Press, Bellevue, WA., 206-881-5212.

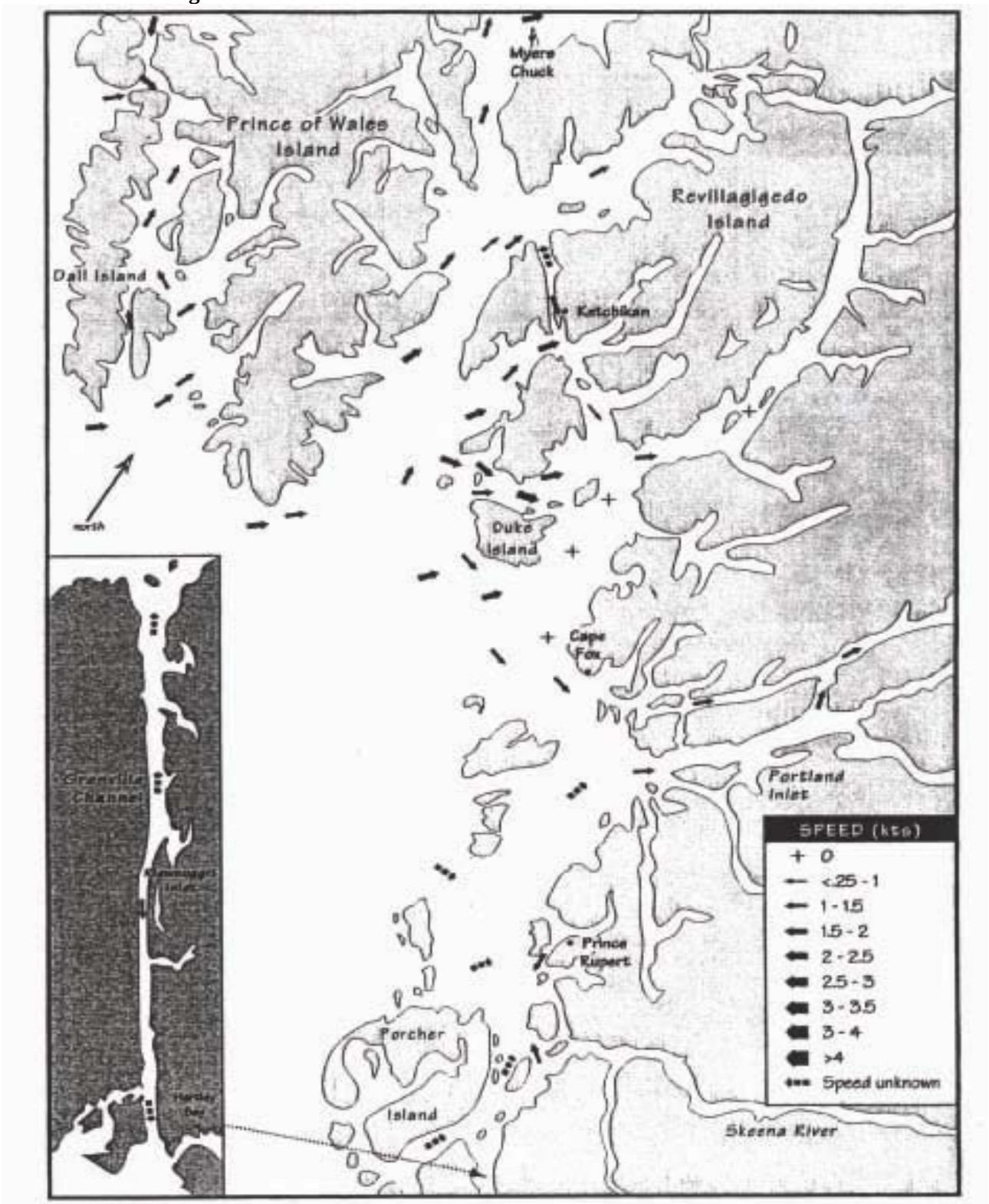
Figure E-13: Flood Tide Currents for central Southeast Alaska



Typical maximum flood tidal currents - central SE AK

Washburne, R., 1989, Southeast Alaska Current Atlas, Weatherly Press, Bellevue, WA., 206-881-5212.

Figure E-14: Flood Tide Currents for southern Southeast Alaska



Typical maximum flood tidal currents - southern SE AK

rne, R., 1989, Southeast Alaska Current Atlas, Weatherly Press, Bellevue, WA., 206-881-

Figure E-15: Ebb Tide Currents for northern Southeast Alaska

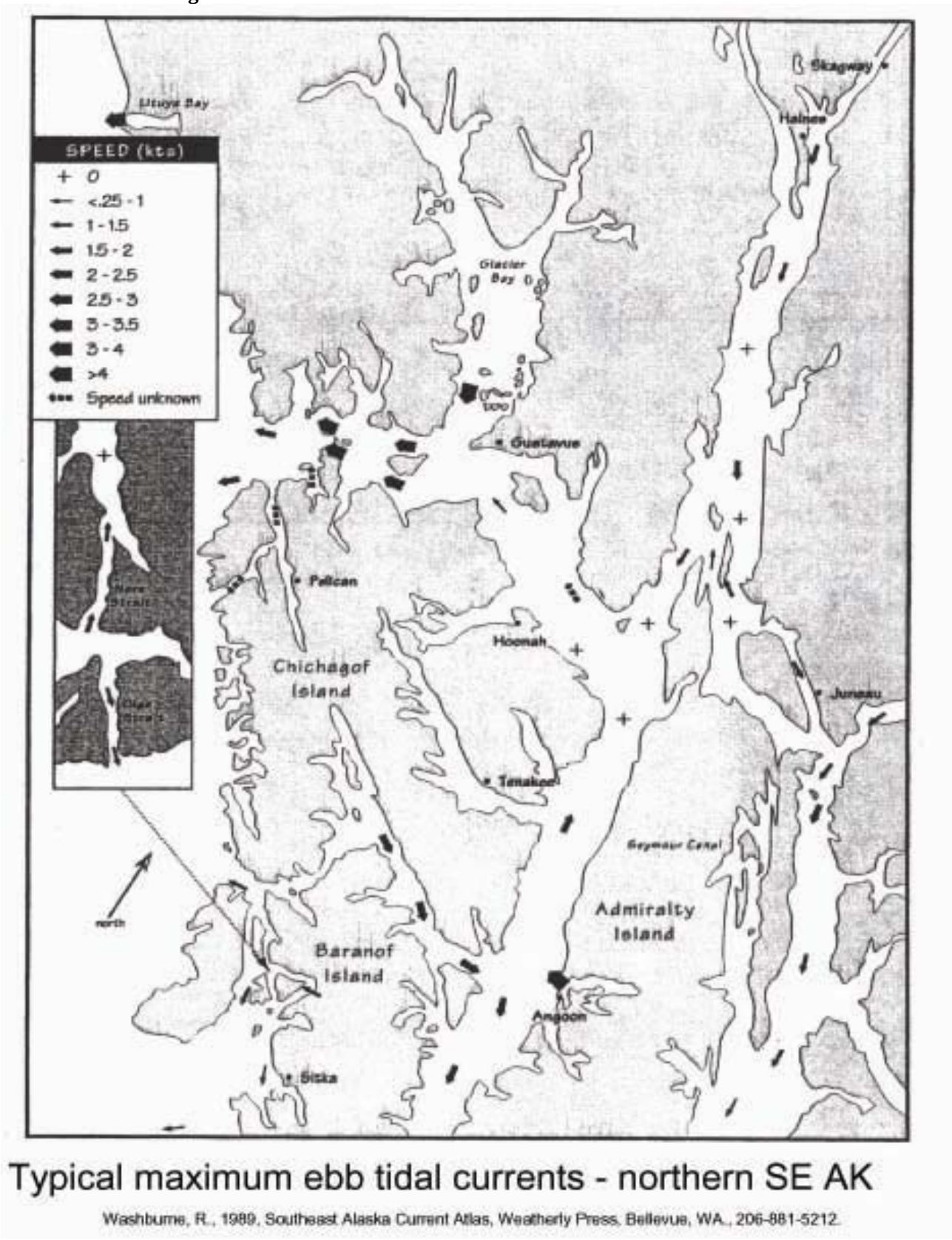


Figure E-16: Ebb Tide Currents for central Southeast Alaska

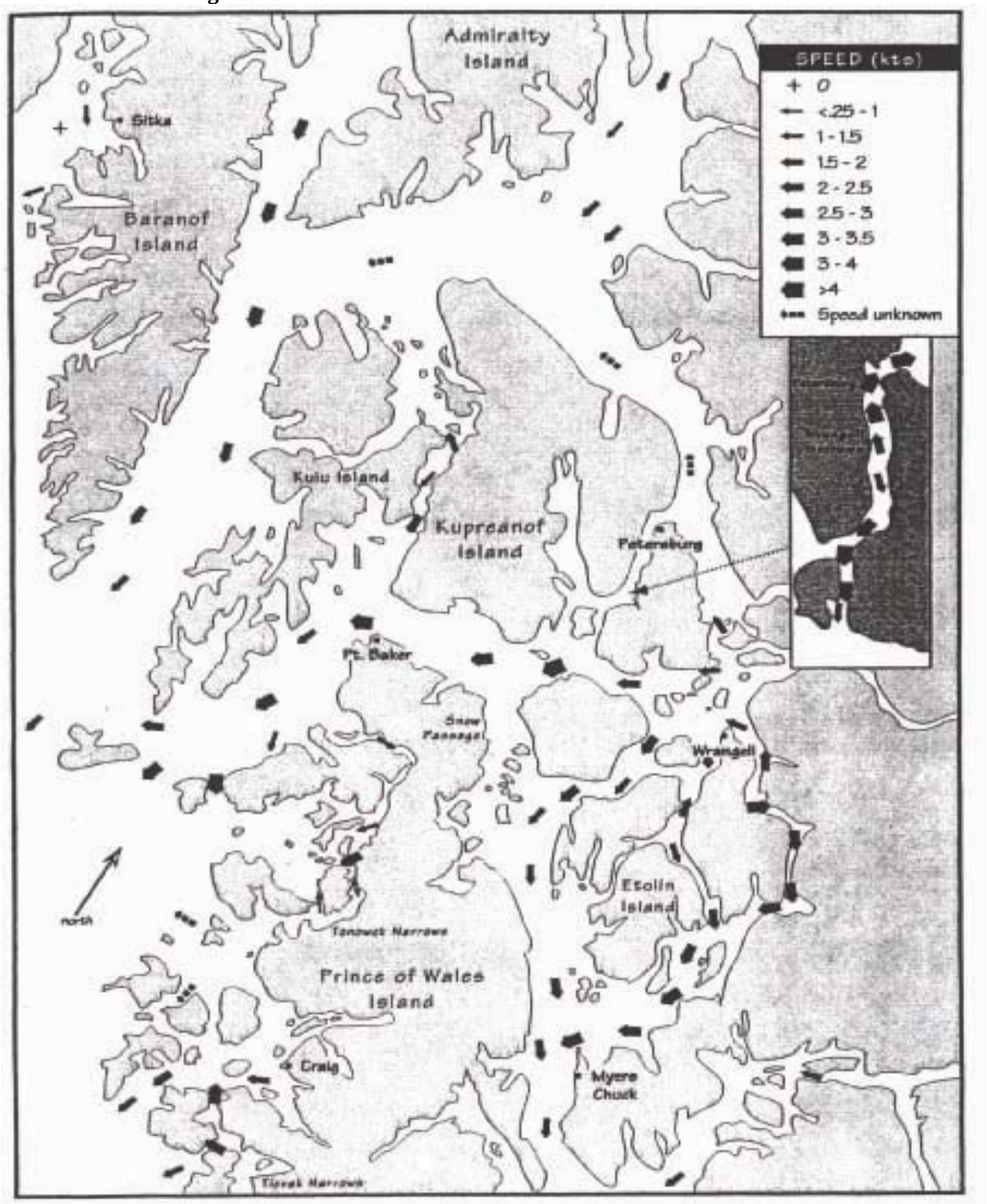
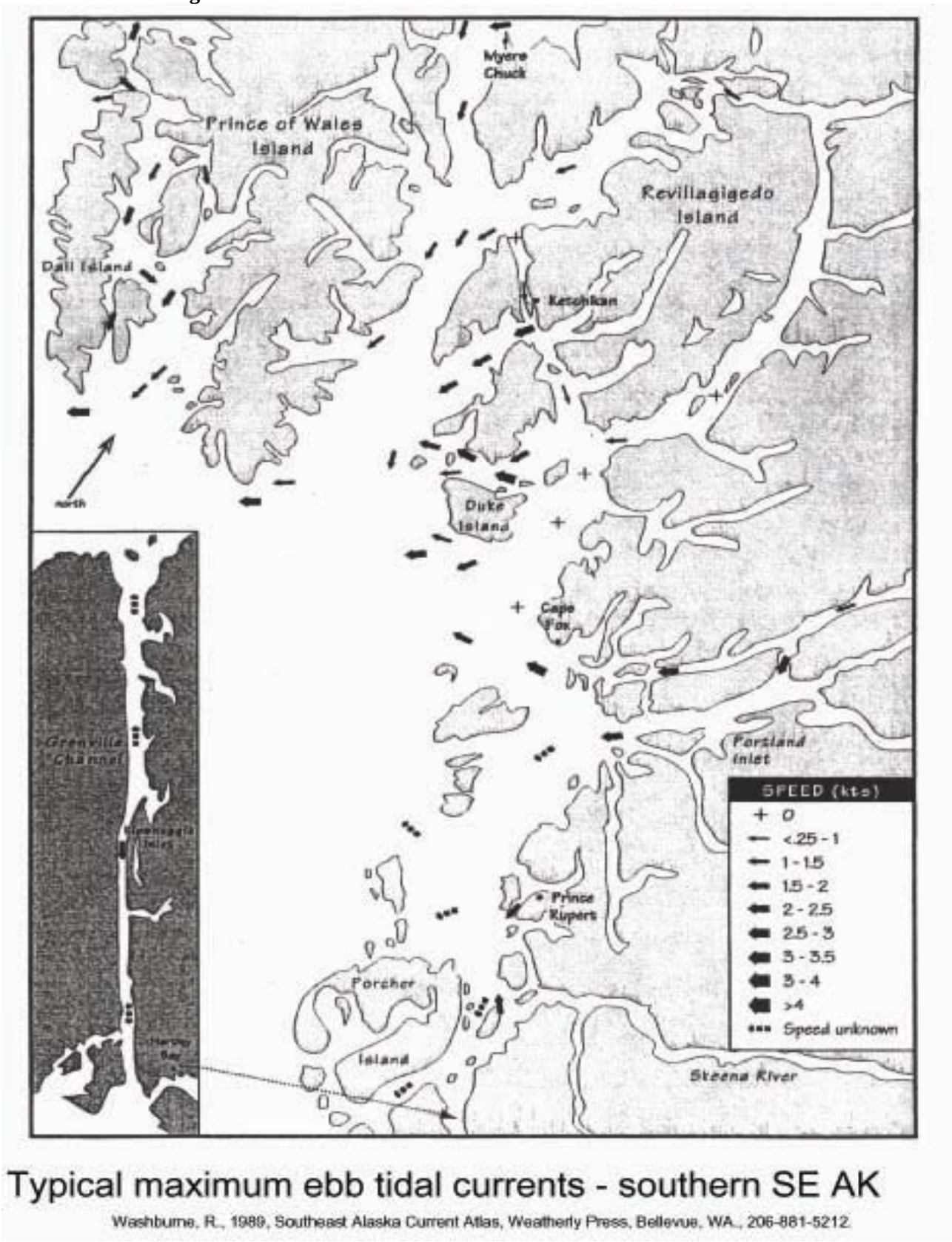


Figure E-17: Ebb Tide Currents for southern Southeast Alaska



Typical maximum ebb tidal currents - southern SE AK

Washburne, R., 1989, Southeast Alaska Current Atlas, Weatherly Press, Bellevue, WA., 206-881-5212

C. AREA OF RESPONSIBILITY

This Subarea Contingency Plan covers the region outlined above in subpart B. The USCG Captain of the Port (COTP) is the predesignated 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 predesignated FOSC for the Inland Zone, which encompasses all lands, rivers, streams, and drainages inland of the 1000-yard wide band that parallels the Alaskan coastline. These zones are clearly defined in the Unified Plan. It is possible that incidents may 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 Southeast Subarea under the Southeast Alaska Response Team (SART) of the Department of Environmental Conservation. The SOSC for the SART is the predesignated SOSC for the entire Southeast 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. An incident in the Canada/United States Dixon Entrance (CANUSDIX) trans-boundary area will result in the activation of the Annex 5 Canada-United States Dixon Entrance-Geographic Annex to the Canada-United States Joint Marine Pollution Contingency Plan (Joint Marine Pollution Plan).

D. REGIONAL STAKEHOLDER COMMITTEE

A Regional Stakeholder Committee (RSC) will normally be activated for significant incidents that involve resources under the jurisdiction of several agencies. The RSC was previously referred to as the Multi-Agency Coordination Committee (MAC). Unlike the MAC defined in the ICS of the National Interagency 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 Officers) and provide comments and recommendations on incident priorities, objectives, and action plans.

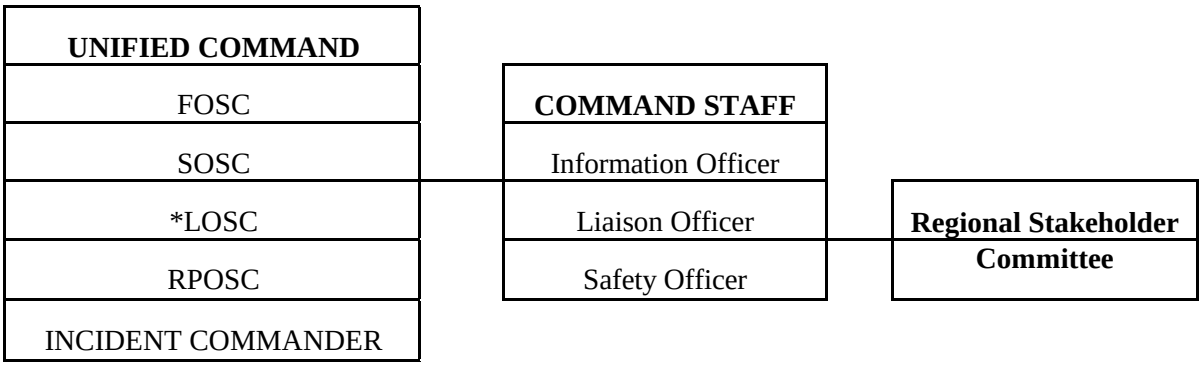
Figure 18 provides the general location of the regional RSC in relation to the Unified Command organizational structure. Additionally, the suggested/potential membership of the RSC is provided in Figure 18. Membership on the RSC is dependent upon the location of the incident and the interests or jurisdiction of the affected communities, landowners, and special interest groups. During incidents where there is no FOSC, federal agencies with jurisdictional responsibilities for resources at risk could participate as a member of the RSC, thus retaining their input on containment, oversight, and cleanup.

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 recommend to the Unified Command overall objectives and priorities and review the Incident Action Plans.

The Community Liaison Officer will coordinate RSC activities. RSC discussions will be documented and recommendations or dissenting opinions that occur outside of the RSC meeting with the Unified Command will be communicated to the Unified Command through the Liaison Officer. The Community Liaison Officer will chair the RSC initially. After convening, the RSC will then elect its own chair.

Figure 18: Southeast Subarea Regional Stakeholder Committee

ICS ORGANIZATIONAL POSITION AND MEMBERSHIP



Suggested Membership:

☐ Representatives or Community Emergency Coordinators from affected communities, which may include:

☐	Angoon	☐	Ketchikan
☐	Craig	☐	Klawock
☐	Elfin Cove	☐	Metlakatla
☐	Gustavus	☐	Meyers Chuck
☐	Haines	☐	Pelican
☐	Hoonah	☐	Petersburg
☐	Hydaburg	☐	Saxman
☐	Hyder	☐	Sitka
☐	Juneau	☐	Thorne Bay
☐	Kake	☐	Yakutat
☐	Kasaan	☐	Wrangell

☐ Private landowners and leaseholders

☐ Federally-recognized tribes, Native corporations, organizations and communities

☐ Special interest groups affected by the incident

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

E. SUBAREA COMMITTEE

The primary role of the Subarea Committee is to act as a preparedness and planning body for the subarea. The Subarea Committee consists of the predesignated FOSCs and SOSC for the subarea and, depending upon the event or the issues to be addressed, local government representatives. Each member is empowered by their own agency to make decisions on behalf of the agency and to commit the agency to carrying out roles and responsibilities as described in this plan and the Unified Plan. The predesignated Federal On-Scene Coordinators for the area (EPA & USCG) will serve as chairpersons of the committee.

The Subarea Committee is encouraged to solicit advice, guidance or expertise from all appropriate sources and establish work groups as necessary to accomplish the preparedness and planning tasks. Work group participants may include facility owners/operators, shipping company representatives, cleanup contractors, emergency response officials, marine pilot associations, academia, environmental groups, consultants, response organizations and representatives from regional citizens' advisory councils.

Subarea Committee Members
The Southeast Subarea Committee is comprised of the following:

- U.S. Coast Guard, COTP Southeast Alaska;
- U.S. Environmental Protection Agency;
- Alaska Department of Environmental Conservation;
- and local government where applicable.

The Southeast Subarea Committee also seeks advice and expertise concerning environmental, resource, and economic issues from local agencies and private industries, such as the following:

- Local borough, city and tribal governments
- SEAPRO spill response cooperative
- Regional and local businesses, especially petroleum-related
- Local Emergency Planning Committees
- Alaska Department of Fish and Game
- Alaska Department of Natural Resources
- Alaska Department of Military and Veteran Affairs
- National Marine Fisheries Service
- National Oceanic and Atmospheric Administration
- U.S. Department of the Interior-Office of Environmental Policy and Compliance
- U.S. Fish and Wildlife Service
- National Park Service
- U.S. Forest Service
- Marine Exchange of Alaska

Subarea Workgroups
The Southeast Subarea Committee relies on the input from the three workgroups listed below. The Subarea Committee welcomes interested participants to serve on workgroups in accordance with each individual's area of expertise and the particular needs of the workgroups.

- The Sensitive Areas Workgroup is chaired by a representative from the U.S. Department of Interior-Office of Environmental Policy and Compliance. The primary purpose of the Sensitive Areas Work Group is to develop and maintain the Sensitive Areas Section of the plan.

- The Logistics Workgroup is chaired by a representative from the Alaska Department of Environmental Conservation. The primary purpose of the Logistics Workgroup is to develop and maintain the Resources Section of the plan.
- The Operations Workgroup is chaired by representatives from the U.S. Coast Guard and EPA. The primary purpose of the Operations Workgroup is to develop and maintain the Response Section, the Hazmat Section, and the Scenarios Section of the plan.

Each of the above workgroups is also involved in reviewing and providing comments on the other sections of the plan (including the Geographic Response Strategies Section and the Potential Places Refuge Section.)

Membership on the workgroups can vary and fluctuate but the list below provides some of the past participants:

- City & Borough of Juneau
- Haines Borough
- Ketchikan Gateway Borough
- City of Petersburg
- City and Borough of Sitka
- City of Wrangell
- representatives from other local governments
- Local Emergency Planning Committees
- SEAPRO spill response cooperative.
- Petro Marine Corporation
- Representatives from other industrial and commercial concerns
- Alaska Department of Environmental Conservation
- Alaska Department of Fish and Game
- Alaska Department of Natural Resources
- Alaska Department of Military and Veteran Affairs
- National Marine Fisheries Service
- National Oceanic and Atmospheric Administration
- U.S. Environmental Protection Agency
- U.S. Department of the Interior-Office of Environmental Policy and Compliance
- U.S. Fish and Wildlife Service
- National Park Service
- U.S. Forest Service
- U.S. Coast Guard, COTP, Southeast Alaska
- U.S. Coast Guard, 17th District

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 strategies listed below should be used as a guide in developing an effective response. Consider all factors that may affect the particular situation and revise/modify/expand these priorities as the situation dictates. The strategies are further delineated in the procedures contained in the Response Section. Additional information can be found in the **Unified Plan**.

A. FEDERAL RESPONSE ACTION PRIORITIES/STRATEGIES

The following priorities are general guidelines for response to a pollution incident within the COTP Southeast 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 that 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.
- Priority Three: Protection of the Environment by elimination of the pollution source. – Containment and recovery of oil in the open water must be effected expeditiously to preclude involvement of the beaches and shorelines. Due to remote locations and restricted accessibility, it is extremely difficult to protect the majority of the coastline by diversion or exclusion methods. Therefore, securing the source and open water containment and recovery are 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 Unified Plan, Annex F for checklist) of a vessel and its pollutant may be an alternative considered by the OSCs; this strategy 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. – In the event that the location of a spill or the weather conditions do not permit open water recovery, protection of the shoreline becomes paramount, especially areas of greatest sensitivity. It is not possible to protect some areas entirely or even in part. It may be necessary to sacrifice some areas in order to achieve the best overall protection of the environment. The OSC may consider *in situ* burning as a response option or the use of dispersants, but both must be considered early in the response phase while the oil is in open water and conditions are agreeable. Refer to the **Unified Plan** for an *in situ* burning checklist. Subpart J of the NCP and the **Unified Plan (Annex F)** address in detail the responsibilities of the FOSC in the use of chemicals.
- Priority Five: Protection of the Environment by beach cleanup and the possible use of sacrificial areas. – It may not be possible to protect the entire shoreline from oil; in fact, spilled product may be allowed purposely to come ashore in some areas as an alternative to damaging other, more sensitive areas. 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. 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, mechanical removal using heavy equipment. 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 coordinator at the spill. Bioremediation is also considered as a shoreline cleaning method. Bioremediation is the application of nutrients to the shoreline to accelerate the natural biodegradation of oil. The OSC shall request site-specific guidelines for resource protection measures required during shoreline cleanup operations.

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 – AREA SPILL HISTORY & OIL FATE

A. SUBAREA SPILL HISTORY

Southeast Alaska supports a wide variety of vessel traffic, everything from small recreational boats up to medium-sized tank ships and large cruise ships. Numerous opportunities exist for spills to occur due to the high volume of vessel traffic, the pervasive natural navigational hazards, and the large volume of oil products transported in the region. Because of the limited road system in Southeast Alaska, spills related to road vehicles are relatively rare. Most inland spills occur from home heating oil tanks or at fuel depots.

The majority of oil-related spills in SE Alaska consist of refined products - diesel, kerosene, aviation and automotive fuel. These products are carried primarily aboard tank barges originating in Seattle and destined to a variety of commercial users in the cities, towns, camps, mills, and mines in the region. These carriers use the Inside Passage for most all deliveries.

On the majority of spills, little if any product is recovered due to the rapid dissipation and evaporation of the product (See the explanation on the "Fate of Spilled Oil" below for further information.), the sea and weather conditions, and the often remote locations of the incidents. When response equipment is deployed, it usually involves the deployment of boom to prevent oil from entering sensitive areas or to encircle the source to prevent the spread of oil and the use of sorbent materials to collect the fuel. Spill responders generally prefer skimmers for collecting spilled products, but they are not always available in a timely manner when responding to spills in remote locations.

The most persistent oil transported in the region is #6 bunker fuel oil, which is carried as fuel aboard many cruise ships and some transiting freighters. Crude oil is not transported in Southeast Alaska. However, Trans Alaska Pipeline Service tankers regularly transit between 175-200 miles off the outer coast of the region. On two separate occasions between 1984 and 1990, major spills have occurred as the result of small hull fractures that slowly released North Slope Crude oil over long distances before the problem was discovered. No environmental damage or shoreline impact was ever recorded.

The largest persistent oil spill in the Southeast Subarea occurred on Christmas Day, 1979 when the M/V *Lee Wang Zin* capsized in Dixon Entrance, drifted into Alaska waters, and discharged over 100,000 gallons of #6 bunker fuel. The oil traveled with the prevailing winds and currents at about one mile per hour. Maximum extent of the oil reached Port Alexander on the southern tip of Baranof Island. Response personnel estimated 350 miles of shoreline were oiled, and cleanup activity lasted until April 25, 1980. Salvage and cleanup crews recovered approximately 25,000 gallons of oil and burned over 2,600 cords of oil-soaked wood.

The next largest spill of persistent bunker fuel occurred in 1984 when approximately 1000 gallons discharged from a ruptured fuel line at the Mt. Edgecumbe facility in Sitka Harbor. Boom was deployed to contain the spill, and a large portion of the oil was recovered with skimmers.

On average, 300-500 non-persistent oil spills are reported annually in SE Alaska to the USCG or the ADEC. Fishing vessels account for the majority of spills, especially those in the 50-500 gallon range. Many of these releases result from vessels sinking in remote locations. Sitka, Ketchikan, and Petersburg have the largest fishing fleets in the region. Most spills are less than 15 gallons and generally result from illegal bilge pumping operations, fuel tank overflows, or mystery spills. Cleanup is often not possible due to a combination of rapid natural dispersion and travel time to scene.

Spills larger than 500 gallons have occurred as a result of tank barge or tank ship groundings, fish processor sinkings, cruise ship discharges, and pipeline ruptures at land storage facilities. Southeast Alaska has had over 10 spills of greater than 1000 gallons from tank barge or ship groundings, due primarily to the navigation hazards associated with narrow channels and bedrock shoals.

Response operations have generally proven ineffective in removing oil from the water due to adverse weather and ocean current conditions, the often lengthy travel time to the incident location, and the lack of product concentration as a result of rapid natural dispersion and evaporation.

Some of the other larger examples of products spilled include the following:

Date	Location	Source	Gallons-Fuel Type	Cause
12/05/73	Sitka Sound	Tank Barge	4,500 Diesel	Grounding
1/26/79	Ketchikan, Ward Cove	Pulp Mill, tank	38,000 Bunker C	Leak
12/25/79	Dixon Entrance	Vessel	100,000+ Bunker C	Sinking
11/15/82	Wrangell Narrows	Tank Barge	32,631 Diesel	Grounding
11/18/82	Frederick Sound	Tank Barge	29,000 Diesel	Grounding
04/01/83	Skagway	Facility	50,000 Diesel	Pipeline Rupture
04/08/84	Hydaburg	Tank Barge	40,000 Diesel	Grounding
05/15/84	Hoonah	Tank Barge	7,000 Diesel	Grounding
10/25/85	Tongass Narrows	Tank Barge	1,500 Diesel	Unknown
04/11/86	Wrangell Narrows	Tank Barge	77,280 Diesel	Grounding
02/25/87	Hydaburg	Tank Barge	9,000 Diesel	Grounding
10/4-6/87	Along West Coast	Tanker	600,000 ANS Crude	Leak
10/08/87	Juneau	Propane Tank	1650lbs Propane	Leaking Valve
10/4-6/87	Along West Coast	Tanker	600,000 ANS Crude	Leak
10/27/87	Wrangell Narrows	Tank Barge	16,597 Diesel	Grounding
01/26/88	Skagway	Tank Vessel	3000 Gasoline	Leak
09/00/88	Dora Bay	Freight Ship	30,000 Diesel	Grounding
09/15/89	Tongass Narrows	Fish Processor	20,000 Diesel	Sinking
1/20/90	Petersburg	Tanker	36,000 Gasoline	Grounding
01/14/94	Juneau	Tank Farm	100,000 Noncrude	Collapse
10/05/94	Skagway	Pipeline	2,000 Diesel	Landslide
05/01/95	Douglas	Heating Tank	5,000 Diesel	Rupture
12/01/95	Lynn Canal	Tug	15,000 Diesel	Sinking
04/09/96	Ketchikan, Ward Cove	Pulp Mill	125,000 Acid	Line Failure
04/18/96	Hoonah	Cargo Barge	7,000 Diesel	Grounding
09/05/96	Ketchikan, Ward Cove	Pulp Mill, tank	3,000 Diesel	Leak
10/21/96	Ketchikan, Ward Cove	Pulp Mill, tank	3,500 Diesel	Overfill
04/16/98	Chatham Strait	Fishing Vessel	600lbs Ammonia and 6500 Diesel	Fire/Sinking
07/26/02	Prince of Wales I.	Fishing Vessel	6000 Diesel	Sinking
02/10/04	Haines	D-W Tank Farm	3400 Aviation Fuel	Leak

B. CLOSER LOOK AT SOME NOTEWORTHY SPILLS

January 26, 1979 Louisiana Pacific Pulp Mill
Location: Ward Cove, Ketchikan, Alaska
Product: 38,000 gallons #6 fuel oil (Bunker C)
A strainer on one of the pumps next to a 55,000-barrel oil storage tank came loose and allowed the fuel oil to an adjacent containment area. The containment held 13,000 gallons, but 25,000 gallons of product escaped into the waters of Ward Cove. A concrete wall on the downhill side of the containment area had not been sunk to bedrock. Consequently, oil seeped out under the wall and into the fast-moving watercourse adjacent to the storage tank. Workmen had to break a hole into the roof of the pumphouse to gain access to the pump and shut off the valves. Response workers constructed a log boom across the cove in an attempt to contain the spill. Sorbents pads and pillows were placed between the logs to minimize leakage, but spilled fuel still managed to enter the Tongass Narrows.

December 25, 1979 M/V Lee Wang Zin
Location: Dixon Entrance
Product: Over 100,000 gallons #6 fuel oil (Bunker C) and more than 9000 gallons of diesel fuel
During violent weather in the early hours of Christmas morning, the Taiwanese ore freighter capsized in Dixon Entrance along the ocean border between Canada and Alaska. Canadian Coast Guard found no sign of survivors. Southeast winds, blowing up to 40 knots, pushed the product onto Alaskan shores, contaminating over 350 miles of shoreline, mostly along Prince of Wales Island, the longest amount of affected shoreline from a marine spill up to that time. On December 26, lawyers representing the ship's owners advised the FOSC that they would not assume responsibility for the oil spill. The FOSC then "federalized" the response effort. The cleanup effort was complicated by the remoteness of the shoreline, lack of road access and the rugged terrain. Salvage and cleanup crews recovered approximately 25,000 gallons of oil and burned over 2,600 cords of oil-soaked wood. Cleanup activities ceased April 25, 1980, though additional oiled shoreline was located later. ADEC attempted burning oil with heavy=-duty propane-fired torches at some of the sites; results were mixed. Several other stretches of contaminated shore were set aside for scientific studies.

October 4-6, 1987 T/V Stuyvesant
Location: Approximately 200 miles west of Prince of Wales Island
Product: 600,000 gallons of Alaska North Slope crude oil
The oil tanker departed Valdez October 2 with 1.5 million gallons of ANS crude onboard. The ship encountered severe storms October 3-5 while offshore of Prince of Wales Island and the Canadian Charlotte Islands. A leak was detected and reported to US Coast Guard in Juneau on October 4 and believed to have stopped on October 6. Coast Guard overflights identified oil slicks off Dixon/Entrance and later off the Washington/Oregon coasts. Estimates place the total loss of oil at 600,000 gallons between October 4 and 6. Apparently the oil slicks remained offshore at all times. Due to strong winds, high sea states, and other natural processes, the oil dissipated naturally; no response effort was undertaken.

C. SOUTHEAST SUBAREA 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 Southeast Subarea presented some discernible trends:

- With the exception of FY96, there is no apparent trend in the average number of spills and the annual average spill volume. The significant spills in FY96 included the acid spill at the Ketchikan Pulp Company Bleach Plant on April 9, 1996 (125,000 gallons of an acid substance) and the spill from the Tug Boat Tongass (December 1, 1995; 15,000 gallons of diesel).
- A seasonal trend seems to apply for the Southeast Alaska Subarea, as it does to other subareas. The number of spills decline from October thru March, which roughly correlates to the fishing off-season in Southeast Alaska.
- Spills from Other facility types accounted for 34% of the total number of spills, followed by Storage (25%), and Vessels (21%).
- The majority of the total volume spilled can be attributed to Storage facilities (68%), followed by Other (14%).
- Structural/Mechanical (35%), Other (33%), and Human Factors (28%) accounted for 96% of the total number of spills. In terms of total volume, incidents due to Structural/Mechanical causes resulted in 50% of the total volume released, followed by Other (29%)
- The vast majority (90%) of the spill count involved noncrude oil. Noncrude oil spills also accounted for 45% of the total volume released, while spills of hazardous substances contributed 36% of the total volume.

TOTALS FOR 1995-2005

Total Spills: 3,889

Total Volume: 400,517

Average Spill Size: 103

Average Spills/Year: 389

Average Volume/Year: 40,052

Top 5 Causes

Cause	*Spills*	*Gallons*
Line Failure	350	136,781
External Factors	28	76,290
Sinking	155	35,546
Leak	585	23,834
Unknown	854	20,231

Top 5 Products

Product	*Spills*	*Gallons*
Diesel	1,824	141,502
Acid, Other	6	125,107
Process Water	2	74,400
Other	163	14,790
Hydraulic Oil	471	6,616

Top 5 Facility Types

Facility Type	*Spills*	*Gallons*
Log Processing	81	134,901
Mining Operation	177	77,611
Vessel	810	52,193
Other	703	44,980
Residence	304	30,368

NOTE: The data summary above excludes spills reported in pounds and potential spills.

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Presented on the following five pages are selected tables, pie charts, and graphs from the Southeast Subarea section of the above-referenced report.
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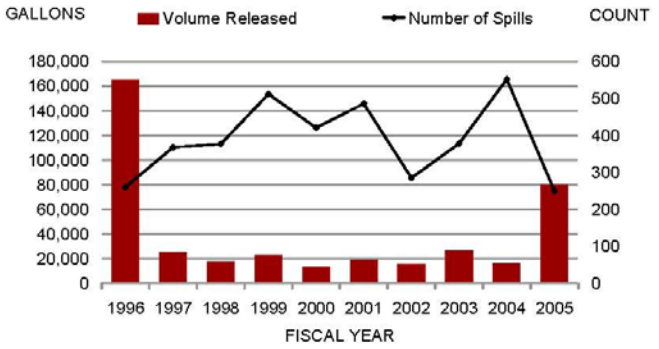
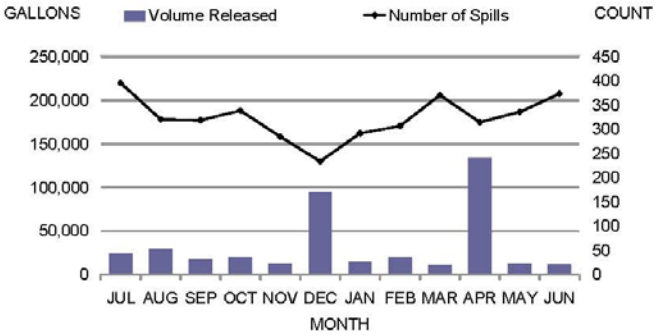
Summary Oil and Hazardous Substance Spills by Subarea, July 1, 1995-June 30, 2005

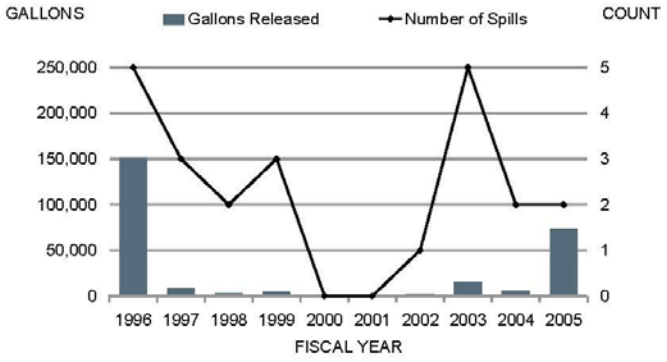
All Spills by Fiscal Year



All Spills by Month



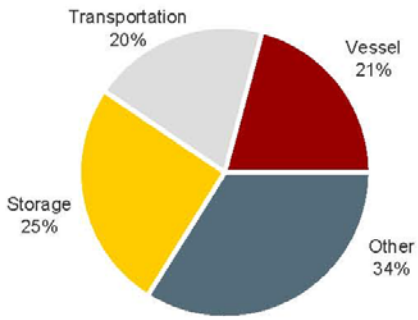
Spills >1,000 gallons



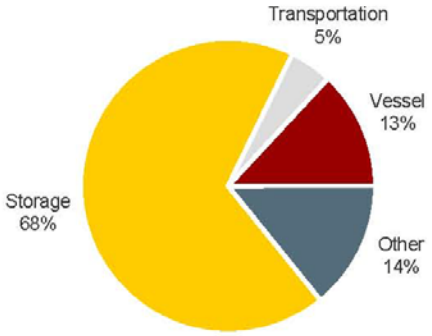
NOTE: Graphs do not include spills reported in pounds or potential spills.

Southeast Alaska Subarea Spills by Facility Type

Number of Spills

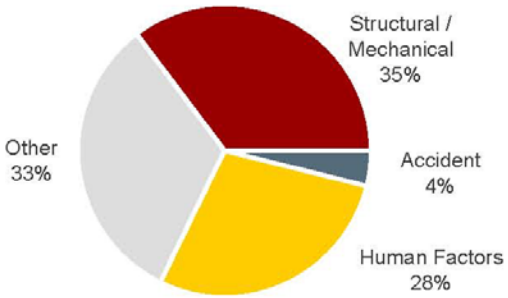


Gallons Released

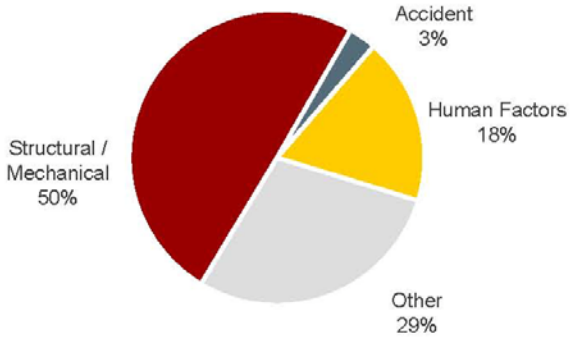


Southeast Alaska Subarea Spills by Cause

Number of Spills

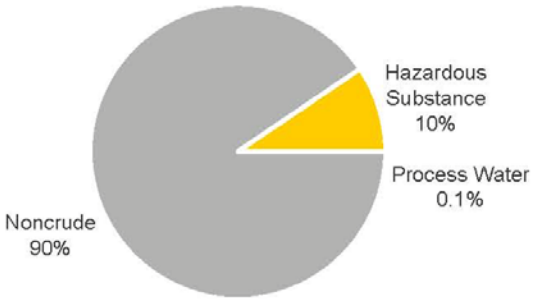


Gallons Released

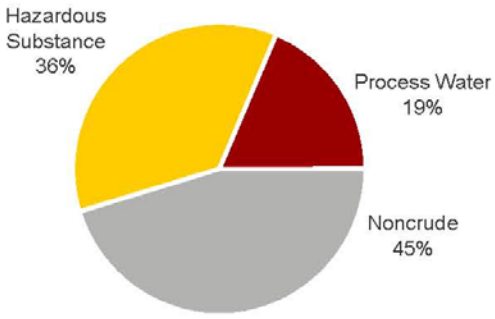


Southeast Alaska Subarea Spills by Product

Number of Spills



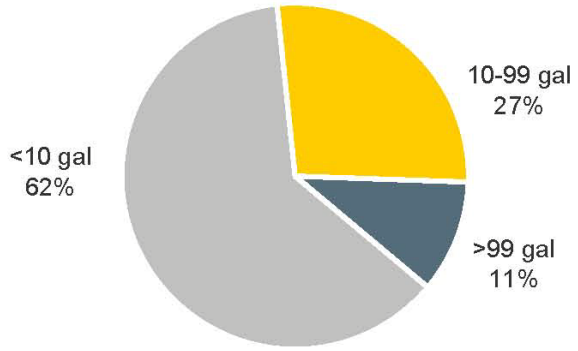
Gallons Released



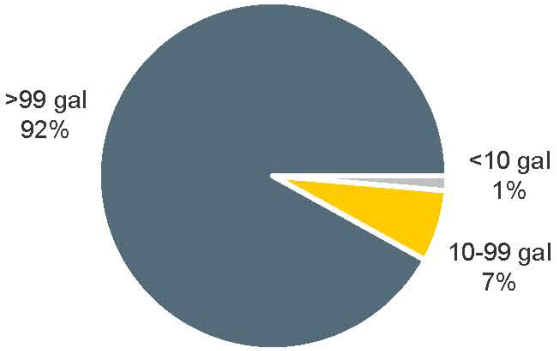
Southeast Alaska Subarea Spills by Size Class

- More than 60% of the spills during the 10-year period were less than 10 gallons.
- More than 90% of the total volume released resulted from spills larger than 99 gallons.

Number of Spills



Gallons Released



Southeast Alaska 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.

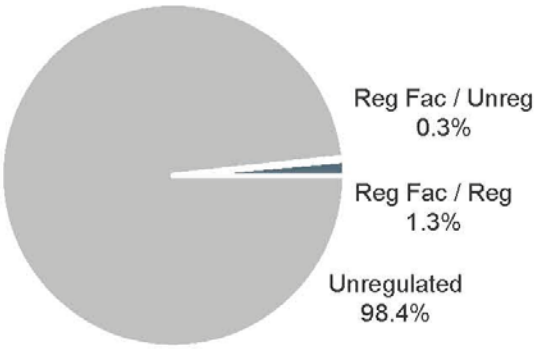
Spills from underground storage tanks are not included in this analysis.

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:

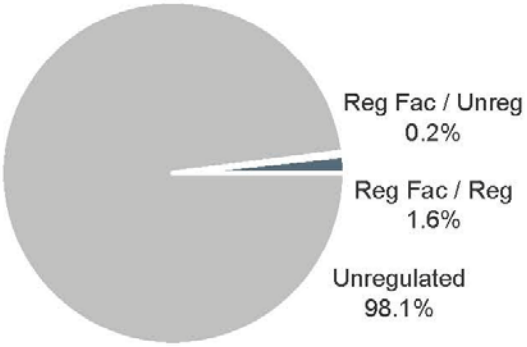
- a spill from a vehicle at a regulated facility;
- a spill from a fuel tank (below the regulatory threshold of 10,000 barrels) at a regulated facility

- More than 98% the spills during the 10-year period were from unregulated facilities, primarily vessels.
- Log Processing facilities were responsible for the greatest volume released during the period.

Number of Spills

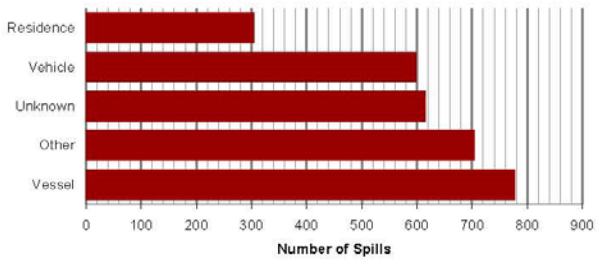


Gallons Released

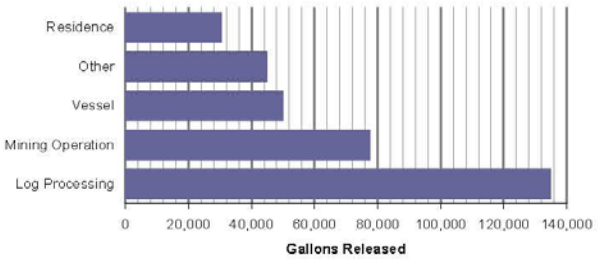


Top Unregulated Facilities

Number of Spills



Gallons Released



D. OIL FATE AND GENERAL RISK ASSESSMENT

1. 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. Chocolate mousse emulsions may linger in the environment for months or even years. Oil and water emulsions cause oil to sink and disappear from the surface, which give the false impression that it is gone and the threat to the environment has ended.

2. General Risk Assessment for Southeast Alaska

Each of the shoreside communities and remote settlements in the Southeast 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 Inside Passage, ranging from small fishing and recreational vessels to large fuel barges and freight vessels.

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

The summer months expose many more species, both in diversity and numbers, to the negative effects of petroleum spills. Whereas in winter, most species have left the regions and the snow and ice conditions may buffer the soil from the affect 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.

In July 1991, a private report conducted by Arthur D. Little, Inc. assessed the threat of non-crude oil spills from tank vessels in Alaska. The study was commissioned by the State of Alaska Department of Environmental Conservation (funding for subsequent reports has not been available).

Key findings from that report concerning Southeast Alaska include the following:

- Southeast Alaska is the most spill-prone region in Alaska, but the average spill size is less than 15 gallons.
- Wrangell Narrows is the single area in all of Alaska that has had the most incidents and stands out as a high risk area. Except for Wrangell Narrows, all other spills are widely distributed without correlation to specific routes.
- The Southeast region received the highest hazard ranking in the state due to the highest number of spills, the relatively large volume of non-crude oils transported, physical hazards (narrow channels, high currents, bedrock-dominated waters), and the proximity of numerous sensitive resources to the main transport routes.
- Of all the regions in the state, non-crude oil transport in Southeast Alaska poses the greatest threat. Because of the nearness of the shipping lanes to coastal areas, spills can be expected to impact the coastal area, particularly the wetlands and sheltered coves, with great rapidity. Spilled products are also extremely difficult to control due to strong currents and the rapid natural dispersion of the oil.

BACKGROUND: PART FOUR – ABBREVIATIONS AND ACRONYMS

ACP	Area Contingency Plan
ACS	Alaska Clean Seas (North Slope industry spill response cooperative)
ADCCED	Alaska Department of Commerce, Community, and Economic Development
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game; also as ADFG
ADNR	Alaska Department of Natural Resources
ADOT&PF	Alaska Department of Transportation and Public Facilities; also as ADOTPF
AFB	Air Force Base
ANS	Alaska North Slope crude oil; also appears as ANSC
ARRT	Alaska Regional Response Team; also as AKRRT
BBLS	Barrels; also as bbl
BLM	Bureau of Land Management
BOA	Basic Ordering Agreement
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CART	Central Area Response Team (ADEC)
CCGD 17	Commander, Coast Guard District 17
CISPRI	Cook Inlet Spill Prevention and Response Inc. (industry spill cooperative)
COTP	Captain of the Port (USCG)
CTAG	Cultural Technical Advisory Group
DOA	US Department of Agriculture
DOC	US Department of Commerce
DOD	US Department of Defense
DOI	US Department of the Interior
DRAT	District Response Advisory Team
DRG	District Response Group
EOC	Emergency Operations Center
EPA	Environmental Protection Agency; also appears as USEPA
ESI	(Alaskan) Environmental Sensitivity Index
F/V	Fishing Vessel
FAA	Federal Aviation Administration
FOSC	Federal On-Scene Coordinator
GIS	Geographic Information System
GRS	Geographic Response Strategies
GSA	General Services Administration
HAZMAT	Hazardous Materials; also as hazmat
HAZWOPER	Hazardous Waste Operations and Emergency Response
ICS	Incident Command System
IDLH	Immediate Danger to Life and Health

INMARSAT	International Maritime Satellite Organization
JPO	Joint Pipeline Office (gov't agencies involved with managing/regulating TAPS)
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LNG	Liquefied Natural Gas
MAC	Multiagency Committee
M/V	Motor Vessel
MLT	Municipal Lands Trustee Program
MOA	Memoranda of Agreement
MOU	Memoranda of Understanding
MSO	Marine Safety Office (USCG)
MSRC	Marine Spill Response Corp. (national industry cooperative)
NART	Northern Area Response Team (ADEC)
NCP	National Contingency Plan
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOTAMS	Notice to All Mariners; also, Notice to Airmen
NPDES	National Pollution Discharge Elimination System
NPFC	National Pollution Fund Center
NRC	National Response Center
NRT	National Response Team
NRDA	(Federal/State) Natural Resource Damage Assessment
NSF	National Strike Force
NSFCC	National Strike Force Coordinating Center
NWR	NOAA Weather Radio
OHMSETT	Oil and Hazardous Material Simulated Environment Test Tank
OPA 90	Oil Pollution Act of 1990
OPCEN	Operations Center
OSC	On-Scene Coordinator
OSRO	Oil Spill Response Office
PIAT	Public Information Assist Team
PIO	Public Information Officer
POLREP	Pollution Report (USCG)
PPOR	Potential Places of Refuge
PWS	Prince William Sound
RCAC	Regional Citizens Advisory Council
RCRA	Resource Conservation and Recovery Act of 1978
RP	Responsible Party
RRT	Regional Response Team
SART	Southeast Area Response Team (ADEC)

SCBA	Self-Contained Breathing Apparatus
SCP	Subarea Contingency Plan
SEAPRO	Southeast Alaska Petroleum Resource Organization (industry spill cooperative)
SERVS	Ship Escort Response Vessel Service (for Alyeska terminal in Valdez)
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 Superintendent of Salvage; also appears as NAVSUPSALV
TAPS	Trans Alaska Pipeline System
T/V	Tank Vessel
USCG	United States Coast Guard
VIRS	Visual Information Response System
VTS	Vessel Traffic Separation System/Scheme