

Prince William Sound
Marine Firefighting and Prevention
Plan

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Prince William Sound Marine Prince William Sound Firefighting and Prevention Plan

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100 Introduction

This plan is based on the assumption that a major marine fire, particularly a vessel fire, may require resources beyond those locally available. Previous marine related incidents demonstrate this and the necessity for contingency planning. The explosion and fire on a gasoline tank barge in New York Harbor is an example of such an incident, and associated problems (difficulty in getting proper equipment on-scene, weather complications, etc.). Contingency planning identifies the means and methods necessary to make resources available from federal, state, and local agencies.

Planning is particularly important to the Prince William Sound Area for several reasons:

- The large geographic area of the Sound.
- Lack of accessible resources.
- Lack of clearly defined firefighting jurisdictions for many areas within Prince William Sound.
- The wide variety of marine activities that take place at all times of the day and night.

101 Purpose and Objective

This document provides for a coordinated response by the U.S. Coast Guard and other federal, state, local and civilian resources to fires on board vessels or at waterfront facilities. It provides policies, responsibilities, and procedures for coordination of on-scene assets. Response resources for the purposes of this plan include but are limited to:

- Public Safety Agencies
- Waterfront Facility Owners and Operators
- Vessel Owners and Operators
- United States Coast Guard
- Other Military Branches or Federal Agencies
- Private Companies and Individuals

102 Scope

This plan is effective within the designated area of area of responsibility assigned Marine Safety Office Valdez in accordance with 33 CFR 3.85-20 (Prince William Sound Captain of the Port Zone). Within this zone, this plan principally applies to the navigable waters and adjacent waterfront facilities of Port Valdez and Prince William Sound. This excludes Whittier, Alaska which is in the Captain of the

Port Western Alaska Zone.

103 Acronyms

- ADEC Alaska Department of Environmental Conservation
- AIS Automated Information System
- AST Alaska State Troopers
- CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
- CFR Code of Federal Regulations
- COTP Captain of the Port (USCG)
- CP Command Post
- CWA Clean Water Act
- DCM Dangerous Cargo Manifest
- DHS U.S Department of Homeland Security
- DOT Department of Transportation
- FOSC Federal On-Scene Coordinator
- IC Incident Commander
- IMDGC International Maritime Dangerous Goods Code
- MSO Marine Safety Office
- NFPA National Fire Protection Association
- NRC National Response Center
- NTSB National Transportation Safety Board
- OSC On-Scene Coordinator
- OCMI Officer-In-Charge, Marine Inspection
- OPA 90 Oil Pollution Act of 1990
- OSLTF Oil Spill Liability Trust Fund
- PWSA Ports and Waterways Safety Act
- SAR Search and Rescue
- SERVS Ship Escort Response Vessel System
- SOSC State On Scene Coordinator (for marine fires)
- TAPS Trans Alaska Pipeline System
- USCG United States Coast Guard
- VEOC Valdez Emergency Operations Center “SERVS”
- VMT Valdez Marine Terminal
- VPSO Village Public Safety Officer
- VTS Vessel Traffic System

104 Definitions

- 104.1 Captain of the Port (COTP) U.S. Coast Guard Captain of the Port. The Coast Officer designated by the Commandant, U.S. Coast Guard, to exercise federal responsibility for the safety and security of ports and waterways in a specified geographic area. For purposes of this plan, COTP means COTP Prince William Sound as specified in 33 CFR 3.85-20.

- 104.2 Cargo Information Card Refer to Section 305.3.
- 104.3 Command Post (CP) The single location from which incident operations are directed.
- 104.4 Dangerous Cargo Manifest (DCM) Refer to Section 303.4.
- 104.5 Hazardous Materials These are materials which, when commercially transported, are designated by the U.S. Department of Transportation as presenting a risk to health, safety and property. When these materials are transported by vessel they are required to be carried in accordance with DOT and USCG regulations. Regulations applicable to the transportation of hazardous materials by vessel include:
- Title 49, Code of Federal Regulations, Subchapter C (Packaged Hazardous Materials)
 - Title 46, Code of Federal Regulations, Subchapter D (Tank Vessels).
 - Title 46, Code of Federal Regulations, Subchapter O (Certain Bulk Dangerous Cargoes).
- 104.7 Incident Commander (IC) Under the Incident Command System, this person is responsible for overall coordination and management of incident activities. This includes but is not limited to the development and implementation of strategies designed to mitigate the incident. The IC may be a senior officer of the agency, organization, or company having jurisdiction or responsibility for the incident.
- Depending on the incident location and other logistical considerations, the IC must establish a Command Post upon arrival so that representatives from other cooperating agencies may report to this location to provide a representative for the incident.
 - The IC must establish the functional organization with personnel designated to assist in accomplishing the goals of the Incident Action Plan (IAP).
- 104.8 Incident Command System (ICS) ICS is a command and control system for managing a single or multi-agency response to an emergency. It consists of procedures for managing personnel, facilities, equipment and communications.
- 104.9 Marine Safety Office (MSO) U.S. Coast Guard field level organization responsible for carrying out the Coast Guard's marine safety missions in a specified geographic area (COTP zone). The MSO is headed by a Commanding Officer who is also designated COTP, OCMI and OSC. For the purposes of this plan, MSO means MSO Valdez.
- 104.10 Officer in Charge, Marine Inspections (OCMI) U.S. Coast Guard Officer In Charge, Marine Inspection. That Coast Guard officer designated by the Commandant, U.S. Coast Guard to exercise responsibility for commercial vessel

inspection, marine casualty and personnel investigations, vessel and seaman certification, and vessel documentation. For purposes of this plan, the OCMI will be the Commanding Officer, Marine Safety Office Valdez.

104.11 Federal On Scene Coordinator (FOSC) The federal official pre-designated to coordinate and direct federal, public and private response efforts. For the purposes of this plan, the FOSC will be the Commanding Officer, Marine Safety Office Valdez.

104.12 State On Scene Coordinator (SOSC) For fires aboard marine vessels, the state official pre-designated by the governor to coordinate a state emergency response is the State Fire Marshal's Office. For the purposes of this plan, the State Fire Marshal's Office will be the SOSC. Refer to section 203.

200 – Policy and Responsibility

201 Federal Policy

The Coast Guard exercises primary federal responsibility for the safety and security of the ports and waterways of the United States. The role of the COTP in a marine fire event is to ensure firefighting efforts are carried out in a manner which does not threaten the safety of life, the environment, or property.

The Coast Guard will render assistance as available, commensurate with each unit's level of training and the adequacy of equipment. The Commandant intends to maintain this traditional "assistance as available" posture **without conveying the impression that the Coast Guard is prepared to relieve local fire departments of their responsibilities.** Paramount in preparing for vessel or waterfront facility fires is the need to integrate Coast Guard planning and training efforts with those of other responsible agencies, particularly local fire departments and port authorities.

- 201.1 Request for Federal Resources All requests for federal resources or equipment should be made to the Coast Guard Captain of the Port (COTP) Prince William Sound. Refer to the **Resource Guide (Section 700)** for the telephone number. Significant federal resources include U.S. Navy salvage teams, foam, and Coast Guard stability experts.

202 COTP Responsibility

The COTP exercises primary federal responsibility for the safety and security of the port. This responsibility is exercised by enforcing dangerous cargo regulations, marine terminal safety regulations, pollution prevention regulations, and administering the Vessel Traffic Service (VTS). In emergencies, the COTP may control the movement of ships and boats, establish safety zones and provide on scene personnel for situation assessment. Responsibilities of the COTP in a major fire aboard a vessel or waterfront facility may include:

- Conduct notifications as described in section 502.2.
- Assume IC for burning vessel underway or at anchor when:
 - The fire department with jurisdiction is unable to respond.
 - No fire department has jurisdiction.
 - The responsible party does not take appropriate action.
- Participate in the Unified Command.
- Assume operational control of all Coast Guard resources on-scene.
- Establish safety or security zones, as necessary.
- Provide information on involved waterfront facilities.
- Provide information on the location of hazardous materials on the vessel, or at the facility, if available.

- Provide technical data on a ship's construction, stability and marine firefighting techniques.
- Respond to oil or hazardous materials discharges. Actual removal may be delayed until the firefighting operations are terminated.
- Obtain tugs to assist in relocating underway, moored or anchored vessels.
- Alert owners/operators of terminal or vessel at risk.

203 State Policy

If state assistance is required, the State Fire Marshall's Office (Department of Public Safety) will coordinate the firefighting response on the behalf of the state as the (SOSC). The response by State agencies to a marine vessel fire could involve several phases depending on the overall situation. With regard to potential situations associated with marine fires, there are four general criteria which will dictate a response by the State. These are listed below in priority order from a response standpoint:

- Search and Rescue, Evacuation (AST)
- Firefighting Operations (Local Fire Departments)
- Local Emergency Declaration (DES)
- Oil or Hazardous Substance Release (ADEC)

In situations where there may be concurrent emergency issues, (e.g., a cruise ship requires firefighting assistance, SAR support, as well as spill response coordination) lifesaving efforts will take precedence over all other emergency operations. In this situation, the Department of Public Safety, (through the Fire Marshal's Office for marine firefighting and the Alaska State Troopers for SAR operations) will serve as SOSC.

203.1 Request for State Resources State Resources can be requested from the Alaska Department of Public Safety through the Alaska Sate Trooper's 24 hour dispatcher at 907-429-7200.

- **Marine Firefighting Operations** are coordinated by the Department of Public Safety, Fire Marshall's Office. When notified, the Fire Marshal's Office will provide a qualified marine shipboard firefighting individual to coordinate State firefighting response operations. Lifesaving and search and rescue efforts on board the ship during and immediately after the fire shall be considered as part of the fire operation and thus under direction of the State Fire Marshal. These activities shall continue to be under the direction of the Fire Marshal as long as the atmosphere on board the vessel is unsafe and requires entry by trained personnel in full protective clothing. If the atmosphere is unsafe due to any reason other than fire, the Fire Marshal shall also be the lead State agency for lifesaving and search and rescue efforts on board the ship.

- **Search and Rescue** is the responsibility of the Department of Public Safety, State Trooper Post when State resources are involved.
- **Local Emergency/Disaster Support** is provided by the Department of Military and Veterans Affairs, Division of Emergency Services (DES). DES will coordinate support to local communities in the event of an emergency or disaster declaration (e.g., as a result of the marine fire, local resources are overwhelmed).
- **Oil or Hazardous Substance Release** is the responsibility of the Alaska Department of Environmental Conservation (ADEC). The Coast Guard will notify ADEC whenever a vessel is in distress and a threat of oil or hazardous materials exists.

204 State Responsibility

- Participate in the Unified Command.
- Provide a qualified marine shipboard firefighting individual to coordinate State firefighting response operations.
- Provide portable communications equipment to State response personnel, as needed.
- Assume operational control of all State resources on-scene.
- Respond to oil or hazardous materials discharges. Actual removal may be delayed until the firefighting operations are terminated.

205 City Responsibility

Valdez and Cordova City fire departments are responsible for fire protection within their respective jurisdictions. In Valdez, this jurisdiction extends to the Valdez narrows. For Cordova this jurisdiction encompasses the area inland of a straight line drawn from Shepard Point to Bluff Point. See Figure 4-2 in appendix 4. Typical responsibilities of the city fire departments may include:

- Assume position of Incident Commander (IC) (may be VPSO in smaller communities or villages).
- Participate in the Unified Command.
- Establish and staff a Command Post when acting as IC.
- Request necessary personnel and equipment, including boats, and appropriate medical aid from the Unified Command members.
- Determine the need for, and request mutual aid.
- Make all requests for Coast Guard/Federal personnel, equipment, and waterside security through the COTP.
- Establish liaison with police department for land-side traffic and crowd control, scene security, and evacuation.

206 Responsible Party

206.1 Vessel

The vessel master is responsible for planning and directing firefighting efforts aboard the vessel as well as for the safety of the vessel and crew. **The presence of local firefighters and/or the Coast Guard does not relieve the master of his or her command responsibilities.** The master should work closely with the on-scene commander to coordinate firefighting efforts. This includes providing information regarding actions taken by the crew, the vessel's layout, firefighting capabilities and the location and types of cargo aboard.

If it has been determined the fire cannot be controlled by the crew, the fire chief or designee, should take tactical control of the firefighting operations. The master should assist the fire chief in the performance of firefighting operations. Any action taken or planned which threatens the safety of the vessel, or crew, should immediately be brought to the attention of the Fire Chief and the UC by the Master.

206.2 Owners/Operators of Waterfront Facilities

Most waterfront facilities within the Prince William Sound COTP Zone have limited firefighting resources and rely on local fire departments for fire protection. Therefore in the event of a marine fire, facility operators are responsible for ensuring the safety of facility personnel as well as for providing the IC with information regarding the facility's layout and the location of dangerous materials. In the event of a fire onboard a vessel moored to the facility, the facility operator shall provide assistance to the vessel's master the Incident Commander (IC), and the COTP to the maximum extent possible.

207 **Other Potential Participants**

For vessel or facility fires within the Prince William Sound Captain of the Port Zone, the following organizations have firefighting resources which may be available to respond with equipment (see resource guide) and personnel.

- VMT Fire Brigade
- Petro Star Fire Brigade
- Alyeska/SERVS
- Crowley Marine Services
- Alaska Department of Natural Resources Forestry Division
- Private Contractors from outside the area (See Resource Guide)
- Village Public Safety Officer (VPSO) – Tatitlek, Chengea

300 – Planning

301 Local Geography

Prince William Sound is an extensive body of water covering about 2500 square miles. Its perimeter is very irregular with many fjords, inlets, and bays. The Sound was glacier cut resulting in very deep waters with a mostly rocky bottom. The entrance, from Cape Hinchinbrook on the east to Cape Puget on the west, is 58 miles across, but is dotted with islands. The Sound is divided into five main areas:

- Hinchinbrook Entrance: is the main entrance to Prince William Sound. It is about six miles wide and is a clear passage with exception of Seal Rocks. (Appendix 3, fig. 3-4)
- Central Prince William Sound: includes the open waters of the Sound from Montague Island to just south of Bligh Reef. (Appendix 3, fig. 3-2)
- Valdez Arm: is the main northern arm of Prince William Sound and extends about 13 miles northeast from Busby Island and Point Freemantle to the northern end of the Valdez Narrows where it turns east for 11 miles to the head of Port Valdez. The water is very deep and the only outlying danger is Middle Rock near the northern end of the Narrows and two shoals near the western edge of the arm. (Appendix 3, fig. 3-1)
- Valdez Narrows: is about eight tenths of a mile with deep water and bold shores. Middle Rock, near the middle of the northern end of the narrows, is a pinnacle barely covered at extreme high tides. It is marked with a night. (Appendix 3, fig. 3-1)
- Port Valdez: extends from the Valdez Narrows to the head of the bay. (Appendix 3, fig. 3-1)

302 Hydrological and Climatic Considerations

Prince William Sound has a typical maritime climate with moderate air temperatures for the sub-arctic. The Sound also receives a high amount of precipitation; annual precipitation amounts (liquid) in excess of 315 inches have been recorded, with annual snowfall nearing 600 inches some years. In the summer the temperatures range in the 50's and 60's with an occasional high of 70 degrees. During the winter months, the temperatures drop down to the 20's and 30's with an occasional low of zero. Strong winds associated with the storms that migrate onshore from the Aleutian low to the west are frequent. The winds during the winter months frequently range from 25-40 knots, but during the summer rarely exceed 30 knots.

Tides in Prince William Sound are of the mixed, semi-diurnal type, with a maximum range of 17 feet. The diurnal range of the tide within Prince William Sound is between 10 and 13 feet. The replenishment of water in the port is accomplished by means of daily tidal exchange, seasonal or annual exchange Prince William Sound, and the frequent but randomly occurring passage of storms. More detailed tide and tidal current information concerning the Sound and Port Valdez is provided in the Tide Tables, the Tidal Current Tables and the U.S. Coast Pilot.

303 Waterfront Facilities

Waterfront facilities supporting the local marine operators exist throughout Prince William Sound. Information on the marine oil transfer facilities can be found in the facility files maintained at Coast Guard Marine Safety Office, Valdez. Fixed facilities within Prince William Sound include the Valdez Marine Terminal and in Cordova, Orca Oil.

304 Transportation Patterns

Prince William Sound hosts a wide variety of vessels and cargoes. Cruise ships and crude oil carriers are of particular interest to this plan because of the significant threat to life and/or environment posed by a fire aboard. The balance of shipping traffic usually includes refined product barges, fishing vessels, fishing tenders, a small amount of containerized freight barges, wood chip carries, tugs, escort vessels, oil spill response barges, and passenger/car ferries.

The following sections describe in greater detail the patterns of waterborne trade, and possible associated hazards, which occur in Prince William Sound.

304.1 Cruise Ships: Historically, cruise ships made an average of 90 port calls in Valdez between May and September. Now most larger cruise ships transit the Sound, en-route College Fjord, without making a port call in Valdez. These ships routinely carry between 400 and 1400 passengers per vessel with a crew complement averaging 400. Possible Hazards associated with cruise ships may include refrigerants, bunker fuel, false ceilings, cable ways in the overheads, blind alleys, large number of small compartments, large number of people who will need assistance, non-fire resistant materials, firefighting equipment not compatible with shore connections and language barriers. Refer to **Resource Guide** for Foreign Language translators.

304.2 Crude Oil Tankers: An average of 45 crude oil tankers per month, ranging in size from 50,000 to 211,000 DWT, arrive at the VMT. These ships transit, laden, from the terminal through the Valdez Narrows to the Hinchinbrook entrance and then out into the Gulf of Alaska. Hazards associated with the crude oil tankers include flammable cargo which is unrefined therefore the

volatile light ends are still present, small crew to fight the fire, and limited resources on board.

304.3 Refined Product Carriers: Refined product carriers transit from areas outside and throughout Prince William Sound to the Ports of Whittier, Cordova, and Valdez. There are several commercial landing craft which ship refined petroleum tank trucks to remote villages and communities within Prince William Sound. There are also a large number of commercial fishing tenders which ship refined petroleum products in support of the commercial fishing industry and conduct ship to ship fuel transfers throughout Prince William Sound. Hazards associated with these carriers may include few personnel with minimal training to fight the fire, limited resources on board, tanks with explosive atmospheres, and multiple cargoes which may be incompatible when mixed.

304.4 General Freight Carriers:

- Various types of hazardous materials are transported through Prince William Sound bound for local and other destinations. A large amount of this cargo is shipped by rail cars which are offloaded from a barge to the railway facility in Whittier.

- Military explosives transit through the Sound two or three times per year. Explosives are loaded and off loaded at the Valdez Container Terminal.

- Commercial explosives are also shipped through the Ports of Whittier, Cordova, and Valdez and remote sites within Prince William Sound on regularly scheduled freight carriers.

- Foreign bulk freighters carry wood chips from the Port of Valdez to destinations overseas. The hazards associated with this cargo include large fire load, toxic fumigants, and depleted oxygen levels from decaying organic materials.

The hazards associated with the general freight carriers may include few personnel with minimal training to fight the fire, limited resources on board, and multiple cargoes which may be hazardous materials.

304.5 Fishing Vessels: There are approximately 500 commercial fishing vessels located in Cordova, Whittier and Valdez. There are also several commercial fishing vessels located in the villages of Tatitlek and Chenega. These vessels are often made from wood and may carry ammonia or drums of fuel on board.

304.6 Alaska Marine Highway Vessels: The Alaska Marine Highway System is a state-operated ferry system which transports passengers, motorized vehicles, and general freight containers on a scheduled route between Whittier,

Cordova, Valdez and other ports throughout Alaska. The hazards associated with the ferries may include small crew to fight the fire, limited resources on board, and up to 50 vehicles with full fuel tanks, possibly propane tanks, hazardous material as part of the cargo, and many passengers who will need assistance.

- 304.7 Charter/Tour Vessels: These include chartered vessels with less than 6 passengers and tour vessels with up to 250 passengers. These vessels carry very small crews and have very limited resources on board for firefighting.
- 304.8 Recreational Vessels: These are found throughout Prince William Sound, with increased numbers during the summer months. Firefighting equipment on these vessels is usually limited to portable fire extinguishers.

305 Hazardous Materials

Various DOT and USCG regulations require that hazardous materials information be placed at waterfront transportation facilities, or on board vessels, to improve the safe handling and identification of hazardous materials involved in transportation. This information takes several forms and includes shipping papers, dangerous cargo manifests and cargo information cards. Containers carrying hazardous cargo are required by federal regulation to be placarded.

- 305.1 Shipping Papers: Shipping papers are required for packaged hazardous material cargoes, liquid bulk hazardous material cargoes, and flammable or combustible bulk liquid cargoes. The shipping papers for packaged hazardous material (49 CFR 172) is not required aboard the vessel but must be maintained by the water carrier. This is usually at its U.S. port facility where the cargo is loaded or discharged. The shipping paper must, at a minimum, contain the following:

- Hazardous material description including proper shipping name, hazard class or division, identification number, packing group and total quantity.
- Shipper name.
- 24 hour emergency response telephone number.

Shipping papers for bulk liquid cargoes must be carried on board the vessel.

Required information includes:

- Name of consignee.
- Location of delivery point.
- Kind, grades, and approximate quantity of each cargo.

- 305.2 Dangerous Cargo Manifest: A listing of all hazardous material cargo on a vessel and contains a great deal of information necessary to emergency

response teams. Vessel information includes name, call sign, flag, port of loading and discharge and date. Cargo information includes proper shipping name gross weight of cargo, hazard class, type of package, storage locations and emergency response telephone number. Only hazardous materials subject to 49 CFR or the International Maritime Dangerous Goods (IMDG) code must be listed on the manifest.

- Holders and Location: Copies of dangerous cargo manifests are held on vessel and generally by the shipping company and terminal operator. The vessel's DCM is required to be held in a designated holder on the bridge. The shipping company or terminal operator should also hold a copy of the manifest in the local office.

- Accuracy during loading: During loading or unloading operations, the manifest will not indicate whether the cargo is on the vessel or on the dock.

305.3 Cargo Information Card: This, or its equivalent, must be available at the bridge or pilot house of any vessel or towing vessel transporting flammable or combustible bulk liquid cargoes, barges loaded with bulk liquid hazardous material cargoes. Cargo information for bulk, liquefied gas or compressed hazardous gas cargoes carried on board tank vessels requires

- Cargo identification and characteristics.
- Emergency procedures.
- Firefighting procedures.

306 **Coast Guard Permits**

A COTP approved "Application and Permit to Handle Hazardous Materials", Form CG-4260, is required by 49 CFR 176.100 to load a vessel with Division 1.1 or 1.2 explosives (Classes A and B Explosives) at a waterfront facility.

- *Permit Information*: Information concerning Coast Guard issued permits can be obtained by calling the Port Operations Department at MSO Valdez. See the **Resource Guide** section for the telephone number. Local fire departments may request permit information for a vessel or facility.

307 **Firefighting Areas**

A ship on fire may present immediate risks to adjacent life or property, and/or substantial logistical firefighting problems. The Unified Command will review the facts of each event and determine if a ship should be moved, and if so, where the ship should be best situated, either to fight the fire or minimize associated impacts. Ships may be moved to or from piers, to anchor, or possibly in extreme cases to grounding or sinking sites. Possible sites have been identified for consideration by the Unified Command. Those sites are described in greater detail, and are plotted on charts in **appendix 3**. Details to be considered by the Unified Command are discussed below.

307.1 Piers: Although piers are not the only sites that can, or should be considered for positioning a burning vessel, they offer the greatest potential to maximize the use of shore-based firefighting resources. The following factors should be considered when selecting a pier:

- The severity of the fire.
- The proximity of the pier to populated areas.
- Environmentally sensitive areas.
- Availability of the pier for an extended period.
- Availability of water and electricity.
- Construction of the pier.
- Prevailing winds.
- Availability of firefighting staging area.
- Presence of hazardous materials at the pier and on the vessel.
- Availability of special equipment.

307.2 Firefighting Piers: The listing of a pier or facility in the plan does not mean that the Coast Guard or any other agency will unilaterally direct a burning vessel to that facility. At a minimum, a decision of this nature must be discussed with representatives of:

- The vessel
- The facility
- The appropriate Port Authority
- The appropriate Fire Department
- The Coast Guard
- The South West Pilots Association
- Other agencies, depending on the particular situation.

307.3 Anchorages: If a fire is deemed to pose a significant threat to a facility, pier, or the port, or the smoke poses a threat to nearby communities, a decision may be made to move the vessel to a temporary anchorage.

307.4 Firefighting Anchorages: For planning purposes the following criteria were considered when selecting potential anchorages within Prince William Sound and Port Valdez:

- Shelter from wind
- Type of bottom
- Depth of water at mean low tide
- Adequate swing room for the largest vessels
- Facilities for passengers and crew
- Proximity to staging areas
- Can the site be boomed off to limit environmental impact in the event of a spill?

307.5 Grounding Sites: At some point it may become necessary to ground a vessel. Grounding should only be considered if it is determined the vessel may sink, or in other ways become derelict. Such events could become greater hazards to the marine ecological system through resultant pollution than the total loss of a single ship in a pre-designated area.

In choosing grounding sites, several factors must be considered:

- Bottom material: Soft enough that the ship's hull will not rupture.
- Water depth: Shallow enough that the vessel will not sink below the main deck, yet deep enough that fire boats, salvage barges and tugs can approach.
- Weather: Areas not known to have strong winds or currents which could hamper firefighting or salvage efforts.

307.6 Firefighting Grounding Sites: For planning purposes the following criteria were considered when selecting potential grounding sites within Prince William Sound and Port Valdez:

- Shelter from wind
- Type of bottom
- Depth of water
- Proximity to staging areas
- Can the site be boomed off to limit environmental impact in the event of a spill?

The Unified Command will have to consider seasonal sensitivities per site prior to making their decision.

307.7 Offshore Locations for Intentionally Sinking Vessels: When a vessel and cargo are deemed a total constructive loss it may be best to sink it in an area where environmental damage is minimized. These areas will be considered by the Regional Response Team (RRT comprised of State and Federal representatives.) The COTP will request this team be convened when intentional sinking of a vessel is considered.

308 Control over Waterfront Areas

The COTP may find it helpful to control or restrict traffic in an affected area to provide safety for the waterfront facilities or vessels. **33 CFR 165** sets forth a procedure for establishing safety zones for the protection of vessels and shore areas. The COTP has sole authority to establish a safety zone. Implementation and enforcement of the safety zone is a joint effort of MSO Valdez, Vessel Traffic Service, and any Coast Guard asset involved in the enforcement of the zone.

400 – Response

401 Pre-designation of Responsibilities for Various Scenarios

Pre-designated organizational responsibilities may vary for various scenarios depending upon the jurisdictional boundary, facility or vessel location and severity of the incident. The **PWS Fire Decision Matrix (Appendix 4, figure 4-1)** should be used to assist in determining the pre-designated organizational response which could be expected within specific locations and various scenarios throughout Prince William Sound. The **PWS Boundaries (Appendix 4, figure 4-2)** identifies specific jurisdictional boundaries throughout Prince William Sound.

402 Response Resources

Equipment and resources necessary to respond to a major marine fire can vary widely in type and quantity depending on circumstances. A list of resources is included in the **Resource Guide** section.

- 402.1 Captain of the Port (COTP): The COTP will supply personnel for site assessment. These personnel may be part of the AWAY team (Refer to 403.1). Other Coast Guard resources such as cutters, aircraft and small boats for SAR, medical evacuations, and on-site assessment can be requested by the COTP from the appropriate operational commander through the Seventeenth Coast Guard District. The Coast Guard can also request other Federal Resources such as rescue helicopters and medical assistance from the U.S. Air Force, Alaska Command through the Seventeenth Coast Guard District.
- 402.2 Coast Guard Cutters: Coast Guard cutters may be utilized by the COTP if they are available. These cutters have **limited** firefighting capability and are primarily assigned law enforcement or search and rescue missions. Coast Guard cutters are not normally employed in firefighting. The District Commander will consult with the COTP prior to releasing any cutters to assist in marine firefighting response. Examples of services the cutters may perform are:
- Enforcing safety zones established by the COTP
 - Serving as a floating Command Post
 - Serving as on-scene communications center
 - Transporting response personnel; 378' cutters have a helo pad on board
- 402.3 Vessel Traffic Service: The purpose of VTS is enhancement of safe navigation by reducing the potential for vessel collisions and groundings. This is accomplished by monitoring movements through AIS, by radar, and position reports. Collected information is then relayed to vessel masters to allow them to operate their vessels most effectively and safely. During a major fire, VTS (under direction of the COTP) may:

- Direct the movement of recreational boats and commercial shipping in the area of firefighting operations.
- Provide the COTP with up-to-date information on vessel movements/plans in the area surrounding the response.
- Act as alternate communications relay.
- Issue security broadcasts as directed by the COTP.

402.4 Commander, Seventeenth Coast Guard District: The Seventeenth District Commander is responsible for the operations conducted by the MSO and Cutters throughout the District. The search and rescue aspect of any response will be coordinated by the Command Center at the District Offices in Juneau. The Seventeenth District includes all of Alaska. District assets also include helicopters and fixed wing aircraft operating from Air Stations.

402.5 Commander, Coast Guard Pacific Area (PACAREA): The Pacific Area Commander is responsible for the proper coordination and execution of all Coast Guard missions on the West Coast of the United States and Pacific. This coordination is primarily exercised through extensive command, control and communications facilities to him at Point Reyes, California.

Aircraft assets directly controlled by PACAREA include all Coast Guard fixed wing aircraft stationed at: Sacramento, California; Barbers Point, Hawaii, and Kodiak, Alaska.

Vessel assets directly controlled include four 378 foot cutters based at Alameda, California. These vessels may be assessed by the COTP's request through the 17th District to the PACAREA Command Center. The 378 foot cutters have limited firefighting equipment and can muster damage control teams trained in shipboard firefighting. They also have a helo pad onboard, and sometimes carry a CG helicopter with crew. As with other Coast Guard afloat assets, these vessels are primarily tasked with law enforcement or search and rescue.

402.6 Coast Guard Pacific Strike Team: The team, located at Hamilton Field in Novato, CA, has personnel trained in oil/hazardous chemical response and maintains an extensive inventory of protective equipment designed for chemical incidents. The COTP may request this team to assist in hazard evaluation, containment and cleanup when commercial or state resources are inadequate or unavailable. Requests should be made through the 17th District and the National Strike Force Coordination Center, NSFCC.

402.7 Alaska Division of Emergency Services (ADES) must be kept informed of the magnitude and nature of the incident and problems encountered. Incident liaison should be accomplished and maintained by the local jurisdiction representative involved. ADES will also notify other agencies within the state.

- 402.8 Vessel Crew are a valuable resource for assisting with a firefighting effort by participating in the response both as first responders, on scene technical advisors and by supplying information to shore-side firefighting and the IC during prolonged fire response. Vessel personnel will generally be knowledgeable about status of electrical systems, ventilation, fire boundaries, location of personnel, hazardous materials, vessel stability, damage assessment, and other safety concerns.
- 402.9 Vessels Fire Control Plan is stored in a weather tight container near the gangway or the entrance to the house on USCG inspected vessels. For TAPS trade vessels, the plans are also held on file at the VMT. This plan is available for use by shore-side firefighting personnel. The plan shows the layout of each deck and the fire protection systems and equipment aboard the vessel.
- 402.10 Vessel Owner/Operator Representative must be contacted as soon as possible and, if feasible, be present at the Command Post during the mitigation of the incident. The owner's representative can provide technical data concerning the vessel, cargo and crew capabilities. Additionally, the owner's/operators representative can also identify other resources which might assist. Finally, the owner/operator's representative should have the authority to obligate the owner's financial resources. The owner's/operator's representative must be kept advised of all actions taken.
- 402.11 Marine Chemist The on-scene assistance of a marine chemist may be vital to assure the safety of response personnel. A marine chemist should be immediately identified and be available to conduct on board testing of spaces or tanks as may be necessary. Marine chemists are listed in the **Resource Guide** section.
- 402.12 Outside Contractors could include firefighting and marine salvage experts. If it appears the firefighting response will be shifted to a salvage company, it is essential that this be coordinated through the ICS. The vessel owner will normally be the party that hires outside contractors. A list of possible contractors can be found in the **Resource Guide**.
- 402.13 National Transportation Safety Board (NTSB) investigators may arrive on scene during or immediately after firefighting operations. The NTSB investigators may be tasked with determining the cause of the casualty, how effective the response was and what actions can be taken in the future to either prevent such an incident or improve the response.
- 402.14 Facility Managers can provide data, equipment, and maps concerning the facility to the IC. This information will assist during firefighting and cleanup operations. Refer to the **Resource Guide** section for phone numbers of facility managers.

403 Response Action

403.1 AWAY Team During the initial response, the COTP may initiate an AWAY team. The Away Team is a pre-designated group of agency representative assembled and activated by the COTP. The members of the Away Team are as follows:

- Team Leader – U.S. Coast Guard
- Marine Firefighting Advisor – Local Firefighter
- Pollution Abatement Advisor – ADEC
- State SAR Coordinator – AST
- Emergency Medical Services (EMS) Advisor – TBD

This team serves as a vital link between the vessel, the on-scene commander and the land based response agencies. The team works for the COTP and if possible, all communications from the team should be through the Team Leader to the COTP.

403.2 Command Post: In situations which require response from personnel outside the vessel or facility, an on-scene command post (CP) must be established as soon as possible.

403.3 Emergency Operation Center (EOC): For larger scale incidents, an emergency operations center may be required to accommodate all evolutions associated with the response. The Primary EOC for Prince William Sound is the Valdez Emergency Operations Center (VEOC). Other potential EOC's in Valdez are the City Council Chambers, Civic Center, USCG Marine Safety Office, or for Tankers at the VMT, the Valdez Marine Terminal's EOC (TEOC) may be used.

500 – Operational Response Actions

501 Command and Control

A major waterfront or shipboard fire in Prince William Sound will involve response teams from Federal, State, and Local agencies. The nature and location of the fire will be the deciding element in determining which agency assumes overall command or lead agency in a unified command, see figure 4-1. Overall command or lead agency must be determined early in the incident to ensure the effective use of personnel and equipment.

501.1 Overall Command and Control: Under the Incident Command System, the Incident Commander (IC) assumes overall command and control of the incident response. Other responding agencies may, within limits of operational capabilities and internal policy, provide support to the IC by providing personnel and/or equipment. If the fire department assumes command, a COTP liaison officer will be assigned to the fire department's CP. If the COTP assumes overall command and control and fire department resources are used to assist the Coast Guard, the COTP will request that, at a minimum, a fire department liaison officer be assigned to the COTP's CP.

501.2 Transfer of Command: As circumstances of an incident become clear, it may be appropriate to shift command from one agency to another.

501.3 Unified Command: In instances when several jurisdictions are involved or several agencies have a significant management interest or responsibility, a unified command (UC) with a lead agency designation may be more appropriate for an incident than a single command response organization. Generally, a unified command structure is called for when:

- The incident occurs within one jurisdiction but involves several agencies due to nature of the incident or the resources needed to respond. Such circumstances would pertain to almost any fire at a facility or a vessel at the pier or anchorage located in Prince William Sound.

- The incident is multi-jurisdictional in nature because it affects, or has the potential to affect several jurisdictions. This circumstance could occur in Prince William Sound if a burning vessel was moved from one jurisdiction to another to better effect response operations. Towing a burning vessel from anywhere in the COTP Prince William Sound zone to Whittier which is in the COTP, Western Alaska zone is an example of this circumstance.

502 Communications (Prince William Sound)

An effective, well coordinated communications plan must cover the areas of designated frequency, usage, responder compatibilities, outside communications support and logistics. When dealing with multiple agencies at a marine incident, such factors must be addressed.

- 502.1 Response Communications: **It is vital that all responders be able to communicate directly.** Communications via a compatible network is the single most important factor in establishing a well organized operational response. The Incident Commander will be responsible for establishing a communications plan early in the incident. There are several methods currently available for direct communications between the responders: (1) use of VHF-radio, (2) landline/cellular communications, and (3) SSB/Satellite communication. A considerable communications capability is available through various State agencies. The Department of Natural Resources (DNR) and DES are both equipped with communications assets. DEC also maintains communications equipment. A detailed description is located in *appendix 5* along with a chart indicating coverage provided by the State equipment. If there is a need for additional communications support, an exchange of radio equipment may be necessary. Refer to the **Resource Guide (700): Emergency Communications Equipment**. The State of Alaska has a large number of VHF radios which can be provided to responders. A footprint of radio coverage can be found in *appendix 5*.
- 502.2 Primary Emergency Radio Frequency: VHF channels 16 or 13 are usually the initial contact frequency. Callers will then be directed to switch to a specific working channel. The master of the stricken vessel may notify the Coast Guard VTS and request the Coast Guard initiate the remaining notifications to fire departments, and the State. Notifications required by the individual companies will not be made by the Coast Guard as the VTS will be working the fire incident.
- 502.3 Landline and Cellular Communications: Cellular communications may be a means of communication between Coast Guard and fire department personnel on-scene. In most areas, the number of available lines is limited and may not be available. If a cell site is in range and is overloaded, contact the servicing cellular company to have special channels restricted for the exclusive use of response personnel.
- 502.4 SSB/Satellite: Use of Single Side Band radios and the global satellite network are available for short and long range communications. “Iridium” Satellite telephones have been purchased by the Coast Guard, SERVS, and many state agencies and can provide communications in areas that are not served by VHF/UHF repeaters or cellular.

502.5 Circuit Discipline: The following guidelines must be adhered to during a major crisis in keeping communications problems to a minimum.

- Do not deviate from assigned working frequencies unless it is for the purpose of re-establishing communications.
- Limit radio traffic to essential communications only.
- Limit length of transmissions in keeping the frequency clear for emergency traffic only. Information containing lengthy operational details should be passed by alternate means whenever possible.

502.6 Communications Security: Secure communications systems available to Marine Safety Office Valdez and other Coast Guard units include STU III (Secure Telephone Unit), and data encrypted security (DES) VHF-FM radios. Use of these systems to communicate information will be at the discretion of the COTP.

503 Initial Response Actions

503.1 Priorities: It is difficult to anticipate every task or activity required to effectively respond when dealing with a major marine fire. There are, however, several basic priorities which must be addressed, particularly in the case of a vessel/facility fire.

- Initial notification must include as much information as is available for responders to accurately assess the severity of the incident, including information regarding injuries, missing persons etc. **See section 502.2 for additional information.**
- Mobilization of resources is essential in the initial stages of the response.
- Complete required notifications.

600 – Exercises and Training

601 Responsibility

The Coast Guard Captain of the Port (COTP) is responsible for this plan and will keep it current by consecutively numbering amendments or by issuing a revised plan. The plan is scheduled to be updated on annual basis until further notice. Any errors, suggested improvements, or changes in equipment or facilities should be communicated to:

Commanding Officer
Marine Safety Office Valdez
P.O. Box 486
Valdez, AK 99686

602 Exercises and Training

Joint exercises and training which include local fire departments, vessels, facilities and other agencies will enhance working relationships and contribute to a more effective response as well as demonstrate the capabilities of the various organizations involved. These exercises also point out possible conflicts or weaknesses in the plan.

- 602.1 Exercises: Periodic exercises with selected fire departments, port facilities and government agencies will be conducted. The COTP recommends each fire department or response organization coordinate with port facilities and marine uses in their respective jurisdictions to establish a training and exercise schedule. The COTP will assist in coordinating with other organizations if a larger exercise is required. For assistance in arranging an exercise, contact the COTP.
- 602.2 Training: Training is the cornerstone of effective response. Local fire departments, port facilities, and government agencies will establish their own training programs. The contents of this plan, the resources available to PWS, the firefighting systems installed on the various vessels, and basic vessel construction should be incorporated into training programs.

700 Resource Guide

1 LOCAL FIRE DEPARTMENTS

Valdez	911 Available	Valdez	AK (907) 835-4500
Cordova	911 Available	Cordova	AK (907) 424-6100
Chenega Corporation		Chenega	AK (907) 277-5706
Tatitlek Council Office		Tatitlek	AK (907) 325-2311
Whittier		Whittier	AK (907) 472-2340
Glennallen	911 Available	Glenallen	AK Call Local Troopers
Anchorage	911 Available	Anchorage	AK (907) 267-4945
Kenai	911 Available	Kenai	AK (907) 283-7666

2 FEDERAL AGENCIES

USCG MSO Valdez		Valdez	AK (907) 835-7205
USCG 17th District		Juneau	AK (907) 463-2000
USCG MSO Juneau		Juneau	AK (907) 463-2465
USCG MSO Anchorage		Anchorage	AK (907) 271-6700
USCG MSD Kenai		Kenai	AK (907) 283-3292
USCG MSD Ketchikan		Ketchikan	AK (907) 225-4496
USCG MSD Kodiak		Kodiak	AK (907) 487-5750
USCG MSD Sitka		Sitka	AK (907) 966-5454
USCG Pacific Strike Team		Novato	CA (415) 883-3311
US EPA (Anchorage)		Anchorage	AK (907) 271-5083
USAF Rescue Coord. Center		Elmendorf	AK (907) 552-5375
NOAA (Anchorage)		Anchorage	AK (907) 271-3593
US Fish & Wildlife Service		Anchorage	AK (907) 786-3517
US Forest Service		Anchorage	AK (907) 743-9500
US Bureau of Land Management		Anchorage	AK (907) 267-1246
US Dept. of Interior		Anchorage	AK (907) 271-5011
US Army Corps of Engineers		Anchorage	AK (907) 753-2513
US Federal Aviation Adm (FAA)		Anchorage	AK (907) 271-5936
US Bureau of Indian Affairs		Anchorage	AK (907) 271-4084
US Minerals Mngmnt Services		Anchorage	AK (907) 261-6000
NOAA (Juneau)		Juneau	AK (907) 586-7221
US EPA (Juneau)		Juneau	AK (907) 586-7619
National Weather Service		Valdez	AK (907) 835-4505
USCG Toll Free		Washington	DC (800) 478-5555
USCG Nat'l Response Center		Washington	DC (202) 267-2675
			(800) 424-8802
Military Sealift Command		Anchorage	AK (907) 283-7666

3 STATE AGENCIES

Alaska State Fire Marshal			(800) 478-9300
Alaska Div. Of Emergency Svcs	Ft. Richardson	AK	(907) 428-7000
Alaska State Troopers	Valdez	AK	(907) 835-4307
Alaska State Troopers	Glenallen	AK	(907) 822-3263
Alaska State Troopers (S&R)	Ft. Richardson	AK	(907) 428-7200
Alaska Dept. of Environmental Conservation (ADEC) - Valdez	Valdez	AK	(907) 835-4698
ADEC - Anchorage	Anchorage	AK	(907) 269-7500
ADEC - Juneau	Juneau	AK	(907) 465-5250
Alaska Dept. of Transportation	Anchorage	AK	(907) 243-1111
Alaska Oil & Gas Conservation Committee	Anchorage	AK	(907) 279-1433
Alaska Dept. of Fish & Game	Palmer	AK	(907) 235-8191
AK Dept. of F&G - Soldotna	Soldotna	AK	(907) 262-9368
AK Dept. of F&G - Valdez	Valdez	AK	(907) 835-4307
AK Dept. of Natural Resources	Fairbanks	AK	(907) 451-2768

4 LOCAL CITIES AND COMMUNITIES

City of Valdez	Valdez	AK	(907) 835-4313
City of Cordova	Cordova	AK	(907) 424-6200
City of Whittier	Whittier	AK	(907) 472-2327
Chenega	Chenega	AK	(907) 573-5118
Tatitlek	Tatitlek	AK	(907) 325-2311
City of Anchorage	Anchorage	AK	(907) 343-4311
Glennallen	Glenallen	AK	(907) 822-5885

5 LOCAL FACILITY OPERATORS

Alyeska Marine Terminal	Valdez	AK	(907) 834-6620
Valdez Fuel	Valdez	AK	(907) 835-4558
Petro Star Refinery	Valdez	AK	(907) 835-5063
Orca Oil	Cordova	AK	(907) 424-3264
Valdez Petroleum	Valdez	AK	(907) 835-4207

6 TANKER OPERATORS

Alaska Tanker Company	Benicia	CA	(707) 747-3232
	Valdez	AK	(907) 835-4583
Polar Tankers	Valdez	AK	(907) 835-5862

Seabulk	FT. Lauderdale	FL	(954) 523-2200
Sea River Maritime	Valdez	AK	(907) 835-4583

7 CRUISE LINE OWNERS & AGENTS

Cruise Line Agencies of Alaska	Valdez	AK	(907) 835-2800
Carnival Cruise Lines	Miami	FL	(305) 599-2600
Celebrity Cruises (Horizon & Galaxy)	Miami	FL	(305) 262-6677

8 FISH HATCHERIES

Solomon Gulch	Valdez	AK	(907) 835-4874
Prince William Sound Aqua Culture	Cordova	AK	(907) 424-7511

9 LOCAL HARBOR MASTERS

Valdez Harbor Master	Valdez	AK	(907) 835-4981
Cordova Harbor Master	Cordova	AK	(907) 424-6400
Whittier Harbor Master	Whittier	AK	(907) 472-2330
Chenega	Chenega	AK	(907) 277-5706
Tatitlek	Tatitlek	AK	(907) 325-2311
Alaska Marine Hwy System	Valdez	AK	(907) 835-4436
Port of Anchorage	Anchorage	AK	(907) 343-6201
Homer Harbor Master	Homer	AK	(907) 235-3160
Port of Kenai	Kenai	AK	(907) 283-7535
Kodiak Harbor Master	Kodiak	AK	(907) 486-8080
Seward Harbor Master	Seward	AK	(907) 224-3138

10 REGIONAL CITIZENS ADVISORY COUNCIL (RCAC)

PWSRCAC Valdez	Valdez	AK	(907) 835-5957
PWSRCAC Anchorage	Anchorage	AK	(907) 277-7222

11 MARINE CHEMISTS

Martin Finkel, 640	Anchorage	AK	(907) 333-0012
Leslie Blaize, 586	Portland	OR	(503) 286-2206
Bradford Holman, 682	Portland	OR	(503) 528-2908
John Flynn, 623	Beaverton	OR	(503) 939-6116
Carlton Bruce, 629	Beaverton	OR	(503) 641-5761
Troy Corbin, 644	Beaverton	OR	(503) 282-6920
Scott Hernandez, 648	Beaverton	OR	(503) 244-6770

George Blair, 637	Seattle	WA	(253) 752-0149
Philip Dovingh, 667	Seattle	WA	(206) 932-0206
Thomas Govey, 677	Seattle	WA	(206) 932-0206
Joseph Graham, 695	Seattle	WA	(206) 790-0048
Tagay Kang, 562	Seattle	WA	(206) 715-4932
Frank Roberts, 523	Seattle	WA	(360) 222-3050
Donald Sly, 598	Seattle	WA	(206) 932-0206
Craig Trettevik, 688	Seattle	WA	(206) 932-0206

12SOUTHWEST ALASKA PILOTS ASSOCIATION

Valdez	AK	(907) 835-2134
Homer	AK	(800) 478-8783

13FIRE FIGHTING & SALVAGE

Marine Response Alliance	Detroit	MI	(313) 849-2333
Marine Pollution Control			(800) 521-8232
Williams Fire Hazard Control	Vidor	TX	(800) 231-4613
Global Industries	Houston	TX	(504) 876-7592
			(713) 999-0276
TX A&M Fire School	College Station	TX	(979) 845-7641
3M Company (Fire Fighting Foam)	Los Angeles	CA	(888) 364-3577

14MARINE SURVEYORS

Alaska Maritime Surveyors	Valdez	AK	(907) 835-2494
Rising Winds Ltd.	Anchorage	AK	(907) 344-8580
Rocky Point Enterprizes, Inc.	Homer	AK	(907) 235-8967

15BIRD, MARINE, WILDLIFE CARE/EQUIPMENT

Alyeska Service Co. (SERVS)	Valdez	AK	(907) 834-6620
International Bird Rescue Center	Fairfield	CA	(707) 207-0380
	San Pedro	CA	(310) 514-2573
Tri-State Bird Rescue & Research, Inc.	Newark	DE	(302) 737-9543

16BOATS, LAUNCH

Crowley Marine Services	Anchorage	AK	(907) 278-4978
Cook Inlet Spill Prevention & Response, Inc.	Nikiski	AK	(907) 776-5129
Alyeska Service Co. (SERVS)	Valdez	AK	(907) 835-6620

17BOATS, SUPPORT

Crowley Marine Services	Anchorage	AK	(907) 278-4978
Alaska Marine Highway System	Valdez	AK	(907) 835-4436
Unitech of Alaska, Inc.	Anchorage	AK	(907) 349-5142
Cook Inlet Spill Prevention & Response, Inc.	Nikiski	AK	(907) 776-5129
Tamico, Inc.	Petersburg	AK	(907) 772-4585
Alyeska Service Co. (SERVS)	Valdez	AK	(907) 835-6620
USN SUPSALV	Anchorage	AK	(907) 384-2968

18BOATS, TUG

Alyeska Service Co. (SERVS)	Valdez	AK	(907) 835-6620
Cook Inlet Tug & Barge	Anchorage	AK	(907) 277-7611
Crowley Marine Services	Anchorage	AK	(907) 278-4978
Crowley Marine Services	Bethel	AK	(907) 543-2421
Yutana Barge Lines	Nenana	AK	(907) 832-5505
Samson Tug & Barge	Sitka	AK	(907) 747-8559
Tamico, Inc.	Petersburg	AK	(907) 772-4585
Olympic Tug & Barge	Seattle	WA	(206) 628-0051

19TANK BARGES

Crowley Marine Services	Anchorage	AK	(907) 278-4978
Delta Western	Anchorage	AK	(907) 563-7672
Forty Niner Tug & Transportation	Anchorage	AK	(907) 562-5900
Kirby Marine Transport	Houston	TX	(713) 802-9180
Olympic Tug & Barge	Seattle	WA	(206) 628-0051
Yutana Barge Lines	Nenana	AK	(907) 832-5505
Cook Inlet Spill Prevention & Response, Inc.	Nikiski	AK	(907) 776-5129
Arctic Slope Regional Corporation (Natchiq)	Anchorage	AK	(907) 332-6200
Samson Tug & Barge	Sitka	AK	(907) 747-8559

20AIRCRAFT, OBSERVATION

Alpine Aviation Adventures	Valdez	AK	(907) 835-4304
Alyeska (SERVS)	Valdez	AK	(907) 835-6620
ERA Aviation	Valdez	AK	(907) 835-2595
Civil Air Patrol	Valdez	AK	(907) 835-5007
Aero Tech Flight Service, Inc.	Anchorage	AK	(907) 279-6558
Aeromap	Anchorage	AK	(907) 272-4495
ERA - Anchorage	Anchorage	AK	(907) 248-4422
Evergreen Helicopters of AK, Inc.	Anchorage	AK	(907) 257-1500
ERA - Deadhorse	Deadhorse	AK	(907) 659-2465
South Central Air	Kenai	AK	(800) 478-2550
Ketchikan Air Service, Inc.	Ketchikan	AK	(907) 225-6608

Evergreen Helicopters - Nome	Nome	AK	(907) 443-5334
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20 AIRCRAFT, OBSERVATION

Alaska Airlines	Anchorage	AK	(907) 243-3322
ERA - Anchorage	Anchorage	AK	(907) 248-4422
Northern Air Cargo	Anchorage	AK	(907) 243-3331
Lynden Air Transport (2 C-130's via SERVS)	Anchorage	AK	(907) 456-7882
Alaska Airlines	Deadhorse	AK	(907) 659-2465
ERA - Deadhorse	Deadhorse	AK	(907) 659-2465
Alaska Airlines	Fairbanks	AK	(907) 456-4848
South Central Air	Kenai	AK	(800) 478-2550
Ketchikan Air Service, Inc.	Ketchikan	AK	(907) 225-6608
ERA Aviation	Valdez	AK	(907) 835-2595

21 AIRCRAFT, FREIGHT

Alaska Airlines	Anchorage	AK	(907) 243-3322
ERA - Anchorage	Anchorage	AK	(907) 248-4422
Northern Air Cargo	Anchorage	AK	(907) 243-3331
Lynden Air Transport (2 C-130's via SERVS)	Anchorage	AK	(907) 456-7882
Alaska Airlines	Deadhorse	AK	(907) 659-2465
South Central Air	Kenai	AK	(800) 478-2550
Ketchikan Air Service, Inc.	Ketchikan	AK	(907) 225-6608
Alaska Airlines	Kotzebue	AK	(907) 442-3477
ERA Aviation	Valdez	AK	(907) 835-2595

22 COMMAND VANS/EQUIPMENT TRAILERS

Alaska Pollution Control	Anchorage	AK	(907) 344-5036
USCG MSO Anchorage	Anchorage	AK	(907) 271-6700
Northern Communications Company	Juneau	AK	(907) 789-0008
Cook Inlet Spill Prevention & Response, Inc.	Nikiski	AK	(907) 776-5129
Alyeska (SERVS)	Valdez	AK	(907) 835-6620
USCG Pacific Strike Team	Novato	CA	(415) 883-3311
USN SUPSALV	Anchorage	AK	(907) 384-2968

23 EMERGENCY COMMUNICATIONS EQUIPMENT

Alaska DEC	Anchorage	AK	(907) 269-7500 (907) 428-7000
Alaska DNR			
Alaska DOI			
Alaska Pollution Control	Anchorage	AK	(907) 344-5036
Northern Communications Company	Juneau	AK	(907) 789-008
Cook Inlet Spill Prevention & Response, Inc.	Nikiski	AK	(907) 776-5129

USN SUPSALV	Anchorage	AK	(907) 384-2968
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24 COMPRESSORS

Construction Machinery, Inc.	Anchorage	AK	(907) 563-3822
Don Abel Building Supply	Juneau	AK	(907) 789-2155
Ron's Rent-It Center	Kenai	AK	(907) 283-4232

25 GENERATORS

Alaska Pollution Control	Anchorage	AK	(907) 344-5036
Construction Machinery, Inc.	Anchorage	AK	(907) 563-3822
Unitech of Alaska	Anchorage		(907) 349-5142
Don Abel Building Supply	Juneau	AK	(907) 789-2155
Ron's Rent-It Center	Kenai	AK	(907) 283-4232

26 TRANSFER/LIGHTERING EQUIPMENT

USN SUPSALV	Anchorage	AK	(907) 384-2968
Crowley Maritime	Seattle	WA	(206) 443-8100
Foss Maritime	Seattle	WA	(206) 281-3800
Global Diving & Salvage	Seattle	WA	(206) 623-0621
Fred Devine Diving & Salvage	Portland	OR	(503) 283-5285
J.H. Leitz & Associates	Portland	OR	(503) 249-5062
Clean Bay, Inc.	Concord	CA	(925) 685-2800
USCG Pacific Strike Team	Novato	CA	(415) 883-3311
Muldoon Marine Services	Terminal Island	CA	(562) 432-5670
Marine Pollution Control	Detroit	MI	(810) 742-2599
McAllister Towing	Jacksonville	FL	(904) 751-6228
Smit American Salvage	Houston	TX	(281) 372-3500

27 HOSES

Alyeska (SERVS)	Valdez	AK	(907) 835-6620
Alaska Pollution Control	Anchorage	AK	(907) 344-5036
Construction Machinery, Inc.	Anchorage	AK	(907) 563-3822
Unitech of Alaska	Anchorage	AK	(907) 349-5142
Alaska Chadux Corp.	Anchorage	AK	(907) 278-3365

28 FUEL SERVICE

Valdez Fuel	Valdez	AK	(907) 835-4558
Valdez Petroleum Terminal	Valdez	AK	(907) 835-4207
North Pacific Fuel	Valdez	AK	(907) 835-8850
Delta Western Fuels	Anchorage	AK	(907) 276-2688

Taku Oil Sales	Juneau	AK (907) 586-1276
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29 EARTH MOVING EQUIPMENT

Haltness Equipment	Valdez	AK (907) 835-5418
AK DOT	Valdez	AK (907) 834-1099
Harris Sand & Gravel	Valdez	AK (907) 835-4756
Wel-Aska	Valdez	AK (907) 835-2424
USCG MSO Valdez	Valdez	AK (907) 835-7205
Alaska Pollution Control	Anchorage	AK (907) 344-5036
Construction Machinery, Inc.	Anchorage	AK (907) 563-3822
Copper Valley Construction	Glenallen	AK (907) 822-3252
Don Abel Building Supply	Juneau	AK (907) 789-2155
Ron's Rent-It Center	Kenai	AK (907) 283-4232
AK DOT	Skagway	AK (907) 983-3194

30 HEAVY EQUIPMENT HANDLING

Alaska Pollution Control	Anchorage	AK (907) 344-5036
Arctic Slope Regional Corporation (Natchiq)	Anchorage	AK (907) 332-6200
Peeke Oilfield Haulers & Service Co.	Anchorage	AK (907) 263-7000
Copper Valley Construction	Glenallen	AK (907) 822-3252
Ron's Rent-It Center	Kenai	AK (907) 283-4232
Haltness Equipment	Valdez	AK (907) 835-5418
Harris Sand & Gravel	Valdez	AK (907) 835-4756

31 RADIO REPAIR/SUPPLY

Anchorage Commercial Electronics	Anchorage	AK (907) 276-8244
TSE Communications	Anchorage	AK (907) 561-6501
Northern Communications Company	Juneau	AK (907) 789-0008

32 UTILITIES, TELEPHONE

Copper Valley Telephone	Valdez	AK (907) 835-8000
GCI	Valdez	AK (907) 835-4930
Alascom, Inc.	Anchorage	AK (907) 264-7000
GCI	Anchorage	AK (800) 770-7886

33 ELECTRICAL CONTRACTORS

Northern Communications Company	Juneau	AK (907) 789-0008
Island Electric	Ketchikan	AK (907) 225-5800
McDermott Electric	Valdez	AK (907) 835-4361

Coastline Electric	Valdez	AK	(907) 835-5750
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34HYDRAULIC CONTRACTORS

Alaska Hydraulics, Inc.	Anchorage	AK	(907) 562-2217
Harbor Hydraulics	Cordova	AK	(907) 424-3472

35LABOR

Alaska Pollution Control	Anchorage	AK	(907) 344-5036
VECO, Inc.	Anchorage	AK	(907) 267-2635
TCC	Valdez	AK	(907) 835-2563

36MARINE SUPPLIES

Longs Marine Supply	Valdez	AK	(907) 835-3920
Murray Pacific Supply Corporation of AK	Ketchikan	AK	(907) 225-3135

37SPILL CLEAN-UP CONTRACTOR/COOP

Alaska Pollution Control	Anchorage	AK	(907) 344-5036
VECO, Inc.	Anchorage	AK	(907) 267-2635
Cook Inlet Spill Prevention & Response, Inc.	Nikiski	AK	(907) 776-5129
SEAPRO	Ketchikan	AK	(907) 225-7002
Clean Seas	Carpinteria	CA	(805) 684-3838
Clean Coastal Waters (CCW)	Long Beach	CA	(562) 432-1415
Alaska Chadux Corp.	Anchorage	AK	(907) 278-3365

38DISPERSANTS

Cook Inlet Spill Prevention & Response, Inc.	Nikiski	AK	(907) 776-5129
Ashland Chemical, Drew Ameroid Marine Div.	Boonton	NJ	(973) 263-7600
Exxon Chemical	Houston	TX	(713) 460-6800
Alyeska (SERVS)	Valdez	AK	(907) 835-6620

39FOOD/CATERING SERVICES

Pipeline Club	Valdez	AK	(907) 835-2750
Totem Inn	Valdez	AK	(907) 835-4443
Mike's Palace	Valdez	AK	(907) 835-2365

40PORTABLE TOILETS

Garness Industrial, Inc.
Alascans
Rent-A-Can
Alaska Portable Toilet Company
Ron's Rent-It Center

Anchorage	AK	(907) 562-2933
Anchorage	AK	(907) 562-1554
Anchorage	AK	(907) 258-2267
Anchorage	AK	(907) 696-7500
Kenai	AK	(907) 283-4232

41 DISPOSAL SERVICES

Alaska Waste Transfer
Commercial Refuse
Waste Management

Anchorage	AK	(907) 344-9490
Anchorage	AK	(907) 562-3700
Anchorage	AK	(907) 563-3717

42 Language Translators

Prince William Sound Comm. College

Valdez	AK	(907) 834-1600
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Appendix 1; Authority

The Ports and Waterways Safety Act of 1972 (PWSA) (33 USC 1221 et seq.) mandates an increased supervision of port operations is necessary to prevent damages to structures in, on, or adjacent to the navigable waters of the United States, and to reduce the possibility of vessel or cargo loss, damage to life, property, and the marine environment. This statute , along with the traditional functions and powers of the Coast Guard to render aid and save property (14 USC 88(b)), form the basis for Coast Guard firefighting activities.

42 USC 1856-1856(d) allows an agency charge with providing fire protection for any property of the United States to enter into reciprocal agreements with state and local firefighting organizations to provide for mutual aid. This statute further provides that emergency assistance may be rendered in the absence of a reciprocal agreement, when it is determined by the head of an agency to be in the best interest of the United States.

The Commandant (G-M), and the Commander, Seventeenth Coast Guard District, require the Captain of the Port Prince William Sound to maintain a vessel and waterfront fire contingency plan. The purpose of the plan is to minimize the effects of damage to life and property in Prince William Sound and waterfront areas resulting from a major marine fire and/or explosion.

Appendix 2; Jurisdiction Zones

Appendix 3-a; Firefighting sites; Anchorages

Refer to the United States Coast Pilot, Vol. 9 for more detailed information.

Port Valdez: (See fig. 3-1)

A1. West Side of Sawmill Spit: Offers mixed sand and gravel beaches adjoining sheltered rocky shoreline. Depths range from 660 feet at its deepest point and then rise rapidly to a 100 ft. plateau followed by a gradual rise to a mean low water of 10 ft. around the spit. This site also offers shelter from southerly and easterly winds.

A2. Anderson Bay: Offers a sheltered rocky shoreline and has a rocky gravel bottom with average mean low water of 80-100 feet. This site offers protection from southerly, westerly, and easterly winds.

A3. Mineral Creek: Is bordered to the north by coarse grain sand beaches and surrounding exposed rocky shoreline. Average depths at mean low water is 80 feet. This site may offer shelter from northerly winds.

A4. Gold Creek: Is bordered to the north by coarse grain sand beaches and surrounding exposed rocky shoreline. Average depths at mean low water is 80 feet. This site may offer shelter from northerly winds.

A5. SERVS buoys:

Port Buoy #1: White, unlighted buoy at Lat 61-06-52, Long 146-17-32, rated max capacity 50,000 lbs. Depth at mean low water is 419 feet. This site does not offer any shelter from the wind.

Port Buoy #2: White, unlighted buoy at Lat 61-06-41, Long 146-16-42, Rated max capacity is 142,000 lbs. Depth at mean low water is 370 feet.

Valdez Arm: (See fig. 3-1)

A6. Jack Bay, North (Vlaskoff Creek Delta): Is a sheltered cove bordered by exposed rocky shores to the South and mixed sand and gravel beaches to the north. Water depth at mean low water ranges from 30-40 feet.

A7. Heather Bay: Is a sheltered bay with mixed sand and gravel beaches, and a sheltered rocky shoreline with a gravel bottom. The average depth at mean low water ranges from 25-90 feet. The bay offers protection from winds out of the east and west.

A8. Tatitlek Narrows: Are bordered by mixed sand and gravel beaches and adjoining exposed rocky shorelines with a gravel bottom. Average depths at mean low water ranges from 6-30 feet. Due to its proximity to the village of Tatitlek, this site is beneficial if passengers and/or crew need to be evacuated.

A9. South of Bligh Island: Is bordered by exposed wave cut platforms and gravel beaches with a gravel bottom. Average depth at mean low water is 30-100 feet. The site will offer shelter from northerly winds.

A10. Sac. Bay (60-50-44/146-40-13): Is a sheltered bay with mixed sand and gravel beaches, and a sheltered rocky shoreline with a gravel bottom. The average depth at mean low water ranges from 25-90 feet. The bay offers protection from winds out of the east and south.

Central Prince William Sound: (See fig. 3-2)

A11. Snug Harbor: Is surrounded by mixed sand and gravel beaches with sheltered rocky shores to the north, south, and east. The bottom is mud and gravel, prevailing depths range from 20-60 feet at mean low water. The site provides protection from northerly, easterly, and southerly winds.

A12. MacCleod Harbor Is a sheltered harbor with coarse grain sand beaches to the north and south, and sheltered tidal flats to the west. The bottom is gravel and mud with depths at 40-60 feet at mean low water. The site is sheltered from winds out of the north, south, and west.

A13. McPherson Passage: Is a sheltered bay surrounded by exposed rocky shores and coarse brained beaches with some exposed tidal flats. Average depth at mean low water is 30-100 feet. The site offers protection from winds out of the East, West, and South. This site contains a white, lighted mooring buoy at lat. 60-40-21.9, Long 147-21-01.3 with max load of 125,000 lbs. in 180 feet of water at mean low water.

A14. Between Smith and Little Smith Island: The area between Smith and Little Smith Islands is bordered by gravel beaches and exposed rocky shoreline with a mud bottom. The average depth at mean low water is 30-100 feet. It offers protection from northerly winds.

A15. Sheep Bay: Is bordered by mixed sand and gravel beaches along with exposed rocky shores. The bottom is gravel and mud with depths at mean low water ranging from 60-100 feet.

A16. Knowles Head: Is bordered to the North by exposed, wave cut platforms and rocky shores and to the east by exposed tidal flats. The bottom is mud and gravel with average depths at mean low water ranging from 60-120 feet. This site may offer protection from northerly winds.

A17. Shot Gun Cove: Is bordered on the east and west by mixed sand and gravel beaches and sheltered rocky shores. The bottom is gravel. Average depth at mean low water is 18-20 feet. The site will offer shelter from easterly, southerly, and westerly winds. Crowley Marine has mooring buoys in this location.

A18. Outside Bay: Is a sheltered bay surrounded by exposed rocky shores and coarse grained beaches with some exposed tidal flats with gravel and mud bottom. Average depth at mean low water is 30-100 feet. The site offers protection from winds out of the east, west, and north. SERVS maintains a white, lighted mooring buoy at lat. 60-38-37, long. 146-27-43 with max load of 125,000 lbs. which is in 186 feet of water at mean low water.

Hinchinbrook: (See fig. 3-2)

A19. Zaikof Bay: Is a sheltered bay surrounded by coarse grain sand beaches and exposed tidal flats with a muddy bottom. Average depth at mean low water is 12-20 feet. This site offers shelter from northerly and southerly winds.

A20. Port Etches: Is a sheltered bay bordered by mixed sand and gravel beaches. The average depth at mean low water is 12-20 feet. This site offers protection from northerly and southerly winds. SERVS maintains a white unlighted mooring buoy at lat. 60-20-39, long. 146-33-20 with max load of 125,000 lbs. It is situated in 83 feet of water at mean low water.

The primary site recommendations for the Unified Command to consider, denoted with a star on figures 3-1 and 3-2, in each area are:

Port Valdez: Site A1. West side of Saw Mill Spit
Site A4. Gold Creek

Valdez Arm: Site A6. Jack Bay

Central Prince William Sound: Site A18. Outside Bay

Hinchinbrook: Site A19. Zaikof Bay

Appendix 3-b: Firefighting sites; Grounding sites

Refer to the United States Coast Pilot, Vol. 9 for more detailed information.

Port Valdez: (See fig. 3-3)

G1. Lowe River mud flats: Are bordered by exposed tidal flats and marshes. The bottom is mud and gravel with depths, including the approaches, ranging from 0-100 feet at mean low water. This site does not offer wind shelter.

G2. Gold Creek (Bow first): Is bordered to the north by coarse grain sand beaches and surrounding exposed rocky shoreline. Average depths at mean low water is 80 feet. This site may offer shelter from northerly winds.

G3. Saw Mill Spit: Offers mixed sand and gravel beaches adjoining sheltered rocky shoreline. Depths range from 660 feet at its deepest and then rise rapidly to a 100 ft. plateau followed by a gradual rise to a mean low water of 10 feet around the spit. This site offers shelter from southerly and easterly winds.

G4. Weaver Dock: Is located in the Valdez Old Town site and is bordered by exposed tidal flats and marshes. The bottom is mud and gravel with depths, including the approaches, ranging from 0-100 feet at mean low water.

Valdez Arm: (See fig. 3-3)

G5. North side of Jack Bay: Is a sheltered cove bordered by exposed rocky shores to the south and mixed sand and gravel beaches to the north. Water depth at mean low water ranges from 30-40 feet.

G6. Sac Bay: Is a sheltered bay with mixed sand and gravel beaches, and a sheltered rocky shoreline with a gravel bottom. The average depth at mean low water ranges from 25-90 feet. The bay offers protection from winds out of the east and south.

Central Prince William Sound: (See fig. 3-4)

G7. Red Head north of Knowles Head: Is bordered to the north by exposed wave cut platforms and rocky shores and to the east by exposed tidal flats. The bottom is mud and gravel with average depths at mean low water ranging from 60-120 feet. This site may offer protection from northerly winds.

G8. Outside Bay: Is a sheltered bay surrounded by exposed rocky shores and coarse grained beaches with some exposed tidal flats with gravel and mud bottom. Average depth at mean low water is 30-100 feet. The site offers protection from winds out of the east, west and north.

Hinchinbrook: (See fig. 3-4)

G9. Port Etches and G10. Constantine Harbor: Sheltered bays bordered by mixed sand and gravel beaches. The average depth at mean low water is 12-20 feet. These sites offer protection from northerly and southerly winds.

Appendix 3-c; Firefighting sites; Piers

Refer to the United States Coast Pilot, Vol. 9 for more detailed information.

Port Valdez: (See fig. 3-5)

P1. Container Dock: The dock restrictions are 1200 feet of berthing space, with a depth of 50 ft at mean low water, and a max deck height of 14 feet. Firefighting equipment available includes a fixed fire main and portable fire extinguishers.

P2. VMT: Berth restrictions are as follows:

Berth #1: 16-120K, mean low water is 150 feet and the max deck height is 32 feet.

Berth #3: 16-120K, mean low water is 90 feet and max deck height is 38 feet.

Berth #4: 16-120K, mean low water is 90 feet and max deck height is 38 feet.

Berth #5: 16-120K, mean low water is 85 feet and max deck height is 38 feet.

Each dock is equipped with fire monitors and portable fire extinguishers.

P3. SERVS Dock: The dock restrictions are 560 feet of dock face, with a depth of 40 ft a mean low water, and a max deck height of 20 feet. The dock is equipped with a six inch portable/firemain. It also has portable fire extinguishers.

Prince William Sound: (See figures 3-5, 3-6 and 3-7)

P4. Tatitlek Ferry Dock: The dock restrictions are 513 feet of dock frontage, with a depth of 30 feet at mean low water, and a max deck height of 22 feet. In addition, this dock has two RoRo ramps. This dock does not contain any fire systems.

P5. Chenega Ferry Dock: The dock restrictions are 300 feet of dock frontage space, with a depth of 50 feet at mean low water, and a max deck height of 21 feet.

P6. Growler Island: The dock shaped like a “T” has restrictions of 100 feet of berthing space, with a depth of 18 ft at mean low water and an additional 60 feet of berthing space with a depth of 20 feet at mean low water. Firefighting equipment available at this dock include portable dry chemical extinguishers and a gasoline powered pump for dock side firefighting.

P7. Cordova City Dock: L shaped pier; 408 foot outer face with about 25 feet alongside; inner face, 325 feet long, 16 feet alongside; max deck height 20.5 feet.

Appendix 4; Incident Commander Designation Decision Matrix

Type – 1 Organization: Involves a response to a marine fire emergency within the jurisdictional boundaries of a city. Initially, the response is limited to resources originating from the local city emergency response organization. This response could involve mutual aid assistance from other available resources based upon the situation and the request of the Incident Commander.

Type 2 – Organization: Involves a response to a marine fire emergency located at the Valdez Marine Terminal, or aboard a vessel moored at the VMT which is within the city jurisdictional boundaries of the City of Valdez. This response may involve mutual aid assistance from other available resources.

Type 3 – Organization: Involves a response to a marine fire emergency located outside the local city jurisdictional boundaries, yet is within the Captain of the Port Prince William Sound area of responsibility. This response may involve mutual aid and commercial aid response based upon the situation and the request of the Incident Commander.

Type 4 – Organization: Involves a response to a marine fire emergency located within or outside the local city jurisdictional boundaries and is located within the area of responsibility of the Captain of the Port Prince William Sound. This response involves the resources from the affected facility or vessel and usually will not require mutual aid assistance.

Appendix 5; State of Alaska (DEC) Communications Coverage Footprint

1. General: ADEC currently operates an assortment of communications equipment including a variety of hand held and base station radios and three portable satellite terminals. Additionally, there are sixteen wide area mountaintop repeater sites in Prince William Sound, the Kenai Peninsula, the Anchorage area, Fairbanks, and Kodiak which are available to enhance area communications.

2. Emergency Response Communications: The communications goal for emergency response within the geographic boundaries of the State, regardless of size, location, or nature of the emergency is to:

a. Provide *minimum initial off-site and on-site communications capability* that is reliable, secure, and adequate to protect the public health, welfare, and environment. This minimum capability includes:

- **Off-site communications:** The ability to contact a home office from a remote site using a portable two-radio, satellite phone system, existing landline, cellular phone, or other comparable and adequate means.

- **On-site communications:** The ability to communicate within the geographic area affected by the release of at least two hand held, line-of-sight, two-way radios or comparable and adequate equipment.

b. Provide for the safety of responding staff and ensure their ability to effectively and expeditiously execute the State's responsibilities.

c. Rapidly provide *additional off-site and on-site communications* needed to keep pace with the escalation of an incident. This includes:

-Additional off-site telecommunication capability as needed to allow operations to continue unimpeded using whatever array of equipment is appropriate for the incident,

- Additional on-site capability to allow effective communications across the geography of the affected area.

3. Off-site communications: Off-site communications are those communications from personnel working in the field or at temporary field office sites to home offices or other dispatch points such as State Troopers for emergency after hour's calls. Off-site communications play a critical role in initial emergency response activities, as the initial responder will be relying entirely on the off-site system to gather and disseminate information, to initiate additional emergency response activities, and to manage the response mobilization while on-site communications systems are acquired and installed.

Potential off-site communications systems include public utility phone lines, two-way radio links, cellular radio telephone links, and portable satellite telephone links. The best off-site communication link is based on the use of a dedicated two-way radio system because it allows maximum mobility for personnel, and can effectively function as the preliminary on-site system while the response is mobilizing.

If a spill occurs outside the coverage area of existing radio systems, some other form of communication must be used (i.e., cellular telephone, portable satellite telephone, or a local landline telephone).

Current DEC off-site communication capability:

The current DEC off-site communication system consists of three portable, briefcase-sized remote area satellite terminals, and wide area VHF mountaintop repeaters, through which a variety hand held and mobile radios communicate, and which are linked by a State-owned microwave system to dispatch centers. These systems are described below.

a. Remote Area Satellite Terminal: Three portable, briefcase-sized satellite terminals (INMARSAT-M) provides satellite linkage for telephone, telefax, and computer modem capabilities. This system provides the only method of conducting off-site communications from any location in the state (assuming line-of-sight access is available to the satellite).

b. Wide Area VHF Repeater: During the Exxon Valdez oil spill response, Exxon funded efforts by the State to construct seven VHF fixed repeater sites covering the spill area. At other sites, existing repeaters operated by State Parks and the Department of Fish and Game are jointly shared by DEC. Repeater located near population centers (Pillar Mountain near Kodiak for example) are in commercial sites shared by many users.

Repeaters located in unpopulated remote areas (e.g., Prince William Sound) consist of State-owned winterized shelters, each with a 20-foot tower, installed on concrete foundations set into mountaintop bedrock. Each shelter houses a VHF repeater battery plant that is recharged during the fall, spring, and summer seasons by an array of solar panels. The battery plant then operates the site through the winter months when there is very little sunlight to recharge the batteries. The repeater sites are located at:

Prince William Sound S. Kenai Peninsula Kodiak

Jack Peak	Gore Peak	Shuyak Island
Heney Ridge	Mount Bede	Pillar Mountain
Naked Island	Rugged Island	Kitoy Bay
La Touche Island	Pipeline Hills	
Ellamar	Ski Hill	

Fairbanks

Cook Inlet

Ester Dome

Hope

Mt. Susitna

These sites require periodic maintenance visits to repair winter storm damage, conduct Federal Communications Commission (FCC) required measurements on transmitters, and to fill the battery plants with water.

c. Hand Held Radios: DEC operates 33 Motorola Sabre II hand held radios which are programmable and capable of operating on any of 48 channels. One Motorola Sabre III hand held radio is also available (programmable with 108 channels). When DEC personnel respond to a reported spill in the area covered by the existing wide area repeater system, they can talk directly back to their own office. If the spill occurs in an area where another State agency has a repeater that is monitored by a dispatch center, and if that frequency is programmed into the responders' radios, they can relay message back to their office through the dispatch center.

4. On-site Communications: On-site communications are those communications between people working in the field, or between the field and temporary field office sites set up to manage the response. Contractors and other State or Federal agencies may also use the DEC on-site system. On-site communications are used primarily to coordinate and manage ongoing operations, as well as to provide a conduit for health and safety messages for all workers. Depending on the size of the spill response, more than one on-site communications system may be required.

On-site communications involve numerous personnel operating from unpredictable and constantly changing locations both on land and on the water. Communications systems based on the use of the public telephone network (phones, cellular or satellite phone links) have a valid on-site support role for only a few personnel. Phone lines do not allow for free movement of personnel throughout the spill area. Satellite phones are too expensive for general distribution to many people. Cellular phones support a limited number of simultaneous conversations, are available only in the most populated geographic areas, and have a limited operating range when compared to mountaintop repeaters. On-site communications can best be provided by a dedicated two-way radio system, where individual users are equipped with either hand held radios or base stations, and communicate with each other through a wide area repeater.

Three on-site communications functions must be supplied during operations, regardless of the size of the operation, or geographic extent of the operation. The following functions must be available during the mobilization phase as people begin working in the field.

- A command and control channel to allow the Operations Section of the Incident Command Post to give direction and receive status reports from supervisory personnel working in the field.

- A logistics channel to allow the Logistics Section of the Incident Command System (ICS) to coordinate material supply and distribution.
- A safety channel on which emergency calls for rescue or medical assistance can be relayed.

Current DEC On-site Communications Capability:

All the repeaters, hand held radios, and portable base stations (previously discussed under off-site communications) can also be used for on-site communications systems. The following equipment can only be used for on-site communications systems, either because it lacks communications links back to a central dispatch point, or because it does not have sufficient channel selection capability to be useful with the existing network of off-site repeaters.

a. Portable Repeaters: DEC operates six Motorola suitcase repeaters (4 VHF and 2 UHF systems). Compatibility must be addressed prior to deployment to ensure the proper repeaters and hand held radios are mobilized. These repeaters are deployed at temporary locations to improve communications between hand held radios operating in the area. Direct communications between hand held radios are limited to line-of-sight paths over distances of two to four miles. By installing a repeater on a tall structure or mountaintop, any two hand held radio users who can simultaneously see the repeater can then communicate with each other.

The DEC repeaters normally operate from 120 VAC. For short periods (several hours), they can be operated at a reduced power level from a built in battery pack, DEC maintains 6 field 12 volt Gel-cell battery packs with integral chargers which can power a repeater for about one week on a single charge (depending on usage). The repeaters are weather resistant, but are not designed to operate unattended for long periods of time exposed to heavy rain, high wind, or low temperatures. Unless there are existing mountaintop shelters in an area with existing AC or DC power that can be tapped, these repeaters generally cannot be used where they can be most effective, on high terrain overlooking the area. Instead, they must be used from vehicles, or from the top floors of existing buildings. This limits the effective range of any communication system built around their use.

b. Hand Held Radios: DEC operates five additional models of hand held radios in addition to those discussed in the off-site communication section. These handheld radios will most likely be used as scene of action (fly-away) support. Once a portable or other repeater is set up, these radios are equipped with sufficient channels to operate in a given area. They include:

- Eleven Motorola Sabre I Radios
(VHF programmable, 12 channels)
- Nineteen Motorola P-100 Radios

(VHF, 2 channels)

- Seven Motorola MX-360 Radios
(VHF, 6 channels)
- Seven Motorola HT-50 Radios
(UHF programmable, 6 channels)
- Twenty-nine Motorola MT-500
(UHF, 8 channels)

As noted, several of these radios can be field programmed to operate on user selectable frequencies if the proper programming equipment, test equipment, and an experienced technician are available. These radios are best used with the portable repeaters previously discussed. When an on-site radio system is required for a spill, one or more repeaters area selected, and the necessary number of compatible hand held radios are then programmed to operate with the selected repeater, as well as on any other channels that might be in use at a fire. the repeater and hand held radios are then shipped to the response and placed in operation.

c. Portable VHF Base Stations: DEC operates five Motorola Syntor X9000 base stations each fitted into a small shipping case. These are small vehicular radios that have been equipped with base station antennas, an AC power supply, and DC Gel-cell batteries with chargers. The base stations can be set up inside buildings at temporary command posts for on-site communications. In this setting, they are more convenient than hand held radios, have a greater range, and have better signal quality. These base stations will operate for several days on the internal DC Gel-cell batteries, depending on usage.

d. Base and Hand Held Ground –Air Radios: DEC has nine handheld and one base VHF ground-air radios to spread out over the State. Ground-to-air radios are used to communicate with local aircraft for the purposes of dispatching, flight following, weather advisories, and clearing landing pads at staging areas or other loading areas.

e. Hand Held VHF Marine Radios: DEC operates three hand held and two base VHF marine radios. Marine radios are used to coordinate activities between vessels and for marine logistics support. The Saber radios, MX360 radios, and the flyaway kits are preprogrammed with some of the marine channels, depending on the primary use location.

5. Auxiliary Power Supply: DEC maintains four lightweight Honda 1000 watt generators (one for each response team area) for the purpose of recharging or powering field communication.

6. Other State Assets: DMVA/DES has mobile emergency communications systems that could be used in an emergency. In the initial stages of a response, these systems might be available the Unified Command, but only until commercial services are

established/reestablished and are adequate to handle the communications requirements of the fire. Although the DMVA/DES systems are primarily intended for use by State agencies, all members of the Unified Command would have access to the communications systems when deployed.