

SOUTHEAST SUBAREA CONTINGENCY PLAN

POTENTIAL PLACES OF REFUGE SECTION

PART ONE	INTRODUCTION.....	H-1
	A. Purpose and Scope	H-1
	B. How the Documents Were Developed	H-2
	C. How to Use the Potential Places of Refuge Section.....	H-4
	D. Who to Contact for Input	H-5
	Tables and Figures (<i>not included in this draft; to review, please visit:</i>	
	Risk Assessment Maps	H-4
	http://www.dec.state.ak.us/spar/perp/seekpor/101228SEAKpporriskmapsHR.pdf	
	Table H-1: Site Assessment Matrix Key.....	H-4
	http://www.dec.state.ak.us/spar/perp/seekpor/101221_SEPPOR_SAM_KEY.pdf	
	Table H-2: Site Assessment Matrix	H-4
	http://www.dec.state.ak.us/spar/perp/seekpor/101221_SEPPOR_SAM.pdf	
PART TWO	INDEX & MAPS	H-6
	<i>Figures:</i> H-11: Zone Map for Potential Places of Refuge.....	H-6
	PPOR Maps Web-Links.....	H-7
	PPOR Map 1	
	PPOR Map 2	
	PPOR Map 3	
	PPOR Map 4	
	PPOR Map 5	
	PPOR Map 6	
	PPOR Map 7	
	PPOR Map 8	
	PPOR Map 9	
PART THREE	REFERENCES.....	H-8

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POTENTIAL PLACES OF REFUGE: PART ONE – INTRODUCTION

A. PURPOSE AND SCOPE

This *Potential Places of Refuge (PPOR) Section* provides a decision-making tool for lead responders to employ during an unplanned or emergency event involving a vessel. A “place of refuge” is defined as a location where a vessel needing assistance can be temporarily moved to, and where actions can then be taken to stabilize the vessel, protect human life, reduce a hazard to navigation, and/or protect sensitive natural resources and other uses of the area (e.g., subsistence collection of mussels, commercial fishing, recreational boating).

A place of refuge may include constructed harbors, ports, natural embayments, potential grounding sites, or offshore waters. This section identifies potential docking, anchoring, mooring, and grounding locations that may be selected as places of refuge in the Southeast Subarea. Actual designation of a place of refuge will always be an incident-specific decision, one made through consultation but ultimately by the U.S. Coast Guard, Captain of the Port for Juneau Alaska.

The Southeast Subarea has many miles of environmentally sensitive coastline. In addition to sensitive shoreline habitats such as marshes, sheltered tidal flats, and exposed tidal flats, Southeast Alaska supports a number of sensitive biological resources, including birds, fish and shellfish, and marine mammals. Information about sensitive areas associated with PPOR may be found in the *Sensitive Areas Section* of the Southeast Subarea Contingency Plan (SCP). Response strategies to protect sensitive areas and identified locations of public concern associated with a place of refuge may be found in the *Geographic Response Strategies Section* of the SCP.

The Southeast Subarea lands are managed under a variety of land use management plans including the following:

- Northern Southeast Area Plan, October, 2002
- Revised Land Resource Management Plan for the Tongass National Forest, 1997
- City and Borough of Juneau Coastal Management Plan, 2008
- City of Craig Coastal Management Plan, 2007
- Skagway Municipality Coastal Management Plan, 2007
- City of Hoonah Coastal Management Plan, 2007
- City of Thorne Bay Coastal Management Plan, 2007
- City and Borough of Yakutat Coastal Management Plan, 2008
- City of Pelican Coastal Management Plan, 2007
- Haines Borough Coastal Management Plan, 2007
- City and Borough of Sitka Coastal Management Plan, April 8, 2007
- Ketchikan Gateway Borough, Coastal Management Plan, 2008
- Yakataga Area Plan, April 1995
- Juneau State Land Plan, December 1993
- Central/Southern Southeast Area Plan, November 2000
- Prince of Wales Area Plan, October 1998, Amended May 2008
- General Management Plan, Glacier Bay, National Park, 1984

The Southeast region of Alaska is widely used for marine commerce. Log transport ships, fuel barges, freighters, container ships, ferries, and cruise ships make routine stops at Southeast Alaska ports. Also, commercial fishing boats, sport fishing charter boats, and privately-owned vessels regularly use local harbors and docks.

There is no perfect docking, mooring, anchoring, or grounding site for all vessels in all situations. Deep draft vessels, such as freighters and cruise ships, cannot be taken to certain locations. Some areas will have depths too deep for setting a secure anchorage. Some ports may have shallow approaches or small bays, and deep draft ships cannot enter these locations. However, shallow draft vessels, such as fishing vessels and charter vessels, may be able to utilize these shallower ports. The multitude of possible sites of refuge for these shallow draft vessels in Southeast Alaska precluded listing them all. Therefore, this class of vessel has not been addressed in these documents. For the purposes of this section, vessels have been divided into two categories: deep draft and light draft.

Deep Draft Vessels are vessels that exceed 20,000 Gross Tons. These vessels have drafts of 25 to 60 feet and range in size from 450 to 1,000 feet long. Cruise ships, container ships, and tank vessels are the predominant deep draft vessels operating in the Southeast Subarea.

Light Draft Vessels are vessels of 300 to 20,000 Gross Tons. These vessels have drafts of up to 25 feet and range in size from 200 to 450 feet in length. Small freighters, catcher-processors, and ferries are the most common light draft vessels operating in Southeast Alaska.

The information in this section may be used for a vessel of any size that has suffered an incident that creates need for a temporary place of safe refuge, but it is focused on deep draft and light draft size vessels, since there are more potential places of refuge for shallow draft vessels. Some potential places of refuge appropriate only for shallow draft vessels are designated, however many more potential places of refuge for shallow draft vessels exist in Southeast Alaska.

B. HOW THE PPOR DOCUMENTS WERE DEVELOPED

A workgroup of interested and knowledgeable stakeholders developed this section over the course 2009, guided by the Alaska Regional Response Team's "*Guidelines for Places of Refuge Decision-Making*," (available along with additional information in the **Unified Plan, Annex O**). The workgroup arrived at a consensus on the potential places of refuge and submitted this document to the Subarea Committee for approval and inclusion in the Southeast Subarea Contingency Plan. The workgroup participants represented the following organizations:

- Alaska Department of Environmental Conservation
- Alaska Department of Fish and Game
- Alaska Department of Natural Resources
- Central Council Tlingit & Haida Indian Tribes of Alaska
- City & Borough of Juneau
- City & Borough of Sitka
- City of Skagway
- Cruise Line Agencies of Alaska
- Ketchikan Gateway Borough
- National Oceanic and Atmospheric Administration (NOAA)
- Royal Caribbean Cruise Line
- Southeast Alaska Conference
- Southeast Alaska Pilots Association (SEAPA)
- Southeast Alaska Petroleum Resource Organization (SEAPRO)
- Southeast Stevedoring
- U.S. Coast Guard (Sector Juneau and District 17)
- U.S. Environmental Protection Agency (EPA)
- U. S. Department of the Interior – Offices of Environmental Policy and Compliance,
 - US Fish and Wildlife Service,
 - US National Park Service

First Step: Risk Identification

The first step of the PPOR process began with identifying vessel traffic patterns and determining where possible vessel distress incidents might arise. The workgroup and the ADEC contractor researched available information to determine vessel routes and destinations, along with major risk factors in the Southeast Subarea. Maps were developed, depicting the following risk and logistical information:

- *Locations of bulk fuel facilities* (Figure H-1);
- *Location of noncrude carrier routes* (Figure H-2);
- *Locations of cruise ship and ferry traffic* (Figure H-3);
- *Locations of hatcheries* (Figure H-4);
- *Locations of aquatic farms and mariculture sites* (Figure H-5);
- *Locations of spill response equipment depots, nearshore equipment packages, and communities with spill response agreements* (Figure H-6);
- *Locations of geographic response strategies* (Figure H-7);
- *Locations of major airports* (Figure H-8);
- *Locations of major oil spill events* (Figure H-9).

The compilation of all of the above logistical maps can be seen in Figure H-10: *Location of all Risk Factors Combined*.

Second Step: Feasibility

The second step, identifying all of the feasible places of refuge within the Southeast Subarea, began with an appraisal of all possible candidate locations: natural embayments, anchorages, moorings, docks, and piers, as well as potential grounding sites. From this effort, the workgroup determined that 88 locations could serve as potential places of refuge, dependent upon a variety of factors, including vessel type and wind direction.

The ADEC contractor created a site assessment matrix (Table H-2) and key (Table H-1). The matrix consists of identified sites in each row, with information about risk factors and site selection criteria in the columns. The information presented for each site includes the following:

- PPOR identification
- Name
- Location
- Maximum vessel size
- Anchorage swing room & depth or dock face length & depth
- Bottom type of refuge site
- Exposure/protection at refuge site
- Conflicting uses
- Sensitive resources in area
- Response options
- Distance to population centers
- Distance to alternate PPOR

The PPOR identification method begins with either a “D” or “L” which indicates the appropriate size vessel for the site: “D” corresponds to deep draft vessels; “L” equates to light draft vessels. Following the letter is a number which indicates the response zone in which the site is located. This is then followed by

a number which is a unique site identifier with no importance attached to the magnitude of the number.

The site assessment matrix contains potentially suitable emergency anchorage, docking, and moorage based on operational factors such as water depth, swing room, exposure/protection, and navigational approach. Sites are grouped by the individual response zones and then by the maximum vessel size category suitable for the site.

Third Step: Specific Decision-making Factors

In Step 3 consisted of identifying specific factors that should be considered as part of the site assessment process. These factors, identified in the matrix, include the following:

- ❖ Distance from population and logistics centers;
- ❖ Proximity to environmentally sensitive areas, wildlife resources, threatened or endangered species or habitats, and/or historic properties;
- ❖ Location-specific uses, such as fisheries, mariculture sites, tourism and recreational use, subsistence use, and the location of public or private facilities;
- ❖ Response factors, such as booming feasibility and the proximity to existing Geographic Response Strategy sites; and
- ❖ Distance to the closest alternative PPOR.

Figures H-1 to H10:

<http://www.dec.state.ak.us/spar/perp/seakpor/101228SEAKpporriskmapsHR.pdf>

Table H-1: Site Assessment Matrix Key

http://www.dec.state.ak.us/spar/perp/seakpor/101221_SEPPOR_SAM_KEY.pdf

Table H-2: Site Assessment Matrix,

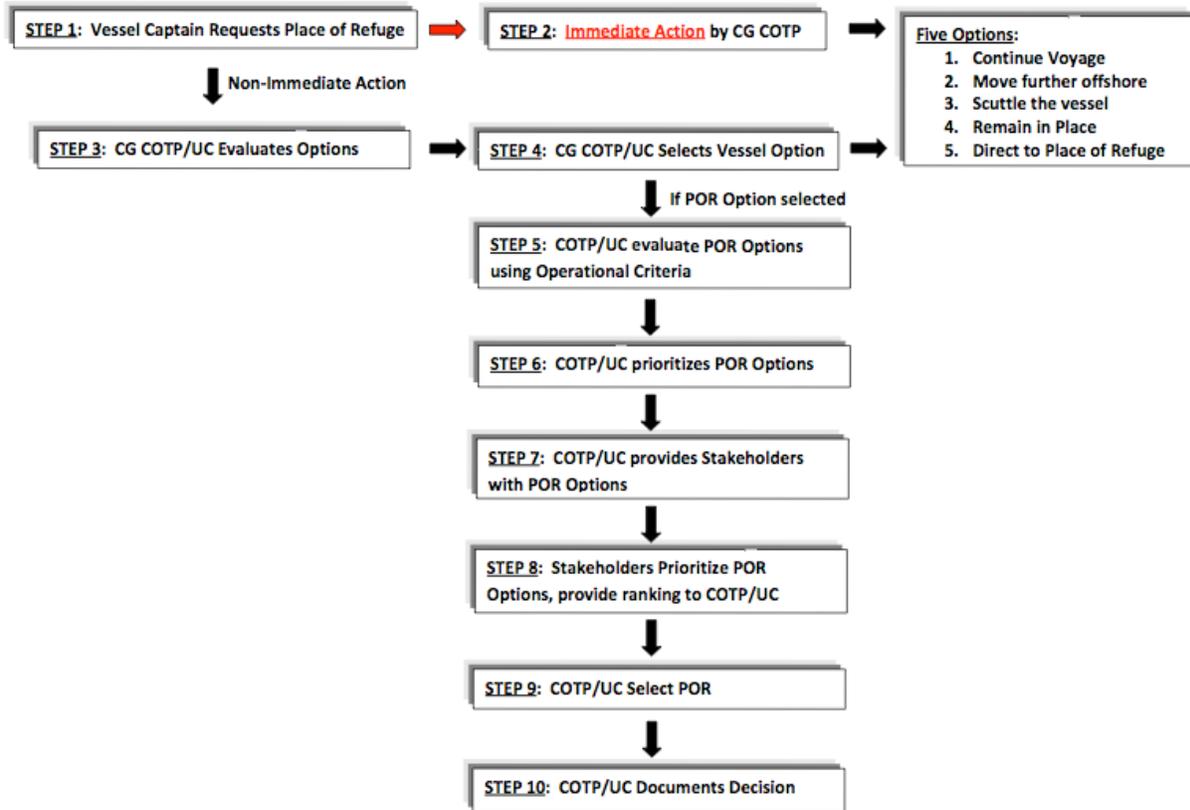
http://www.dec.state.ak.us/spar/perp/seakpor/101221_SEPPOR_SAM.pdf

C. HOW TO USE THE POTENTIAL PLACES OF REFUGE SECTION

The extensive regional and location-specific information provided in the Potential Place of Refuge documents is intended to help assist the COTP and/or Unified Command in the often challenging decision-making process.

The "Guidelines for Places of Refuge Decision-Making" (**Annex O of the Unified Plan**) will be used for places of refuge decision-making in the Southeast Subarea. As outlined in the guidelines, when the U.S. Captain of the Port (COTP) receives a request from a vessel master or his/her representative to move a vessel to a place of refuge – or in the event there are no individuals on board the vessel authorized to make the request, or the vessel has been abandoned and the COTP needs to consider moving the vessel to a place of refuge – the COTP will initiate the decision-making process in Appendix 1 of Annex O. As outlined in Steps 2 and 3 in Appendix 1, if the COTP/Unified Command (UC) determines that places of refuge should be considered for an incident-specific response, the information in the Southeast PPOR document may be used to provide background information to help expedite the incident-specific place of refuge decision. The steps of the decision-making process are summarized as follows:

Decision-Making Process – Places of Refuge



Part Two of this section contains the site-specific information for the PPOR in the Southeast Subarea. An index map (Figure H-11) at the beginning of Part Two shows the map locations of the PPOR. Each PPOR map consists of two parts: 1) a map page showing a locator map, picture, and detailed nautical charts; and 2) a table page providing site information and local site conditions. All geographic data was collected using Mercator Projection, North American Datum 1983.

D. WHO TO CONTACT FOR INPUT

Comments and recommendations on these PPOR are welcomed, and please send them to either of the following agencies:

Alaska Department of Environmental Conservation
Prevention and Emergency Response Program
555 Cordova Street
Anchorage, AK 99501

United States Coast Guard
Captain of the Port, Southeast Alaska
2760 Sherwood Lane Suite 2A
Juneau, AK 99801-8545

POTENTIAL PLACES OF REFUGE: PART TWO – INDEX & MAPS

Index of PPOR Maps

The Workgroup developed nine PPOR Maps within the Southeast Subarea to correspond with the response zones established by oil spill responders in the area. These maps aid in the site assessment process. These maps are larger in scale, showing a small portion of the subarea in more detail than the maps in Part One. Figure H-11 provides an overview of the subarea, identifying the location of each PPOR Map. Each PPOR Map has been assigned an identifying number, which has no relevance other than as a map identifier.

Figure H-11: *Southeast Alaska Zone Map for Potential Places of Refuge.*



PPOR Maps

Each PPOR Map consists of two parts: 1) a graphic showing a locator map, pictures, and detailed nautical charts showing the location of anchorages, docks, and moorings and other information critical to the selection of a place of refuge; and 2) a series of tables providing site information regarding local site conditions, environmental sensitivities and other considerations.

Southeast PPOR Map Zone 1

<http://www.dec.state.ak.us/spar/perp/seakpor/101221seppormap01LR.pdf>

Southeast PPOR Map Zone 2

<http://www.dec.state.ak.us/spar/perp/seakpor/101221seppormap02LR.pdf>

Southeast PPOR Map Zone 3

<http://www.dec.state.ak.us/spar/perp/seakpor/101221seppormap03LR.pdf>

Southeast PPOR Map Zone 4

<http://www.dec.state.ak.us/spar/perp/seakpor/101221seppormap04LR.pdf>

Southeast PPOR Map Zone 5

<http://www.dec.state.ak.us/spar/perp/seakpor/101221seppormap05LR.pdf>

Southeast PPOR Map Zone 6

<http://www.dec.state.ak.us/spar/perp/seakpor/101222seppormap06LR.pdf>

Southeast PPOR Map Zone 7

<http://www.dec.state.ak.us/spar/perp/seakpor/101222seppormap07LR.pdf>

Southeast PPOR Map Zone 8

<http://www.dec.state.ak.us/spar/perp/seakpor/101222seppormap08LR.pdf>

Southeast PPOR Map Zone 9

<http://www.dec.state.ak.us/spar/perp/seakpor/101222seppormap09LR.pdf>

POTENTIAL PLACES OF REFUGE: PART THREE – REFERENCES

Alaska Regional Response Team. October 2004. Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases, Annex O, Guidelines for Places of Refuge Decision-Making.

Dept of Commerce - National Oceanic & Atmospheric Administration (NOAA), National Ocean Survey can provide detailed hydrographic charts of PPOR locations upon request. Contact Dave Neander, Dave.Neander@noaa.gov, (206) 526-6949, NOAA/ORR, 7600 Sand Point Way, NE, Seattle, WA 98115.

International Maritime Organization (IMO). July 17, 2003. Draft Assembly Resolutions Finalized by Nav. 49, Annex 1 Guidelines On Places Of Refuge For Ships In Need of Assistance.

Pacific States/British Columbia Task Force. December 2004. Guidelines for Places of Refuge

U.S. Coast Guard, Marine Safety Office Southeast, 2007. Southeast Alaska Marine Firefighting Contingency Plan.

Useful Websites:

Alaska Dept. of Environmental Conservation, Southeast GRS Information
<http://www.dec.state.ak.us/spar/perp/grs/se/home.htm>

Alaska Dept. of Natural Resources. Southeast Public Access Atlas.
<http://www.dnr.state.ak.us/mlw/planning/easmtatlas/>

Alaska Dept. of Natural Resources, Southeast Subarea maps including, general maps, land use and management maps, biologically sensitive area maps, most environmentally sensitive area maps, environmentally sensitive index maps, and geographic response strategies.
<http://www.asgdc.state.ak.us/maps/cplans/subareas.html#southeast>

Alaska Regional Response Team, Southeast Subarea Contingency Plan,
<http://www.akrrt.org/SEAKplan/SEAKtoc.shtml>

U.S Bureau of Land Management. Alaska Land Information System.
<http://www.ak.blm.gov/alis/>

National Marine Fisheries Service, ShoreZone imagery and mapping data
<http://alaskafisheries.noaa.gov/shorezone/>