

# COOK INLETSUBAREA CONTINGENCY PLAN

## POTENTIAL PLACES OF REFUGE

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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 Cook Inlet 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 Western Alaska.

The Cook Inlet Subarea has many miles of environmentally sensitive coastline. In addition to sensitive shoreline habitats such as marshes, sheltered tidal flats, and exposed tidal flats, Cook Inlet 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 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 Cook Inlet Subarea lands are managed under a variety of land use management plans, including:

- Revised Land Resource Management Plan for the Chugach National Forest, November 2002
- Kenai Peninsula Borough Coastal Management Plan, March, 2006
- Matanuska-Susitna Borough Coastal Management Plan, March, 2006
- Kenai Area Plan, Alaska Department of Natural Resources, August, 2001
- Susitna Area Plan, Alaska Department of Natural Resources, August, 2001
- General Management Plan, Kenai Fjords National Park, July 1984

The Cook Inlet region is widely used for marine commerce. Oil tanker vessels, log transport ships, fuel barges, freighters, container ships, ferries, and cruise ships make routine stops at Cook Inlet 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 oil tankers and cruise ships, cannot be taken to certain locations. 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. For the purposes of this section, vessels have been divided into three categories: deep draft, light draft, and shallow 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 Cook Inlet 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 Cook Inlet.

**Shallow Draft Vessels** are less than 300 Gross Tons, generally draw less than 15 feet and are less than 200 feet in length. Fishing vessels, fishing tenders, tour boats, and pleasure craft make up the majority of the shallow draft vessels operating in Cook Inlet.

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 Cook Inlet.

## **B. HOW THE PPOR DOCUMENTS WERE DEVELOPED**

A workgroup of interested and knowledgeable stakeholders developed this section over the course of several years, 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 Cook Inlet Subarea Contingency Plan. The workgroup participants represented the following organizations:

- Alaska Department of Environmental Conservation
- Alaska Department of Natural Resources
- Alaska Department of Fish and Game
- City of Homer
- Cook Inlet Regional Citizens' Advisory Council
- Kenai Peninsula Borough
- Matanuska-Susitna Borough
- Prince William Sound Regional Citizens' Advisory Council
- Prince William Sound Response Planning Group
- Seldovia Village Tribe
- Southwest Alaska Pilots Association
- Coast Guard, Sector Anchorage
- 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 Cook Inlet Subarea. [Maps](#) were developed, depicting the following risk and logistical information:

- Locations of bulk fuel facilities
- Primary traffic routes for State ferries and cruise ships
- Locations of nearshore fishing grounds and set-net sites
- Locations of hatcheries, remote release sites and mariculture sites
- Locations of spill response hubs and equipment depots

- Locations of marine casualty events

### **Second Step: Feasibility**

The second step, identifying all of the feasible places of refuge within the Cook Inlet 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 51 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](#) and [key](#). 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:

- PPOR identification
- Name
- Location;
- Maximum vessel size
- Swing room or dock face length
- Bottom type
- Exposure/protection;
- Conflicting uses
- Sensitive resources
- Response options
- Distance to population centers
- Distance to alternate PPOR

The PPOR identification method consists of a number that is a unique site identifier with no importance attached to the magnitude of the number. The letter which follows indicates the appropriate size vessel for the site. For example, “D” will correspond to deep draft vessels, “L” for light draft, and “S” for shallow draft vessels.

The site assessment matrix contains potentially suitable emergency anchorage, docking, moorage, and potential grounding locations based on operational factors such as water depth, swing room, exposure/protection, and navigational approach. Sites are grouped by the maximum vessel size category suitable for the site. The PPOR sites identified for shallow draft vessels should only be considered a partial list as there are many suitable sites available in Cook Inlet for the shallow draft vessel category (less than 300 gross tons).

### **Third Step: Feasibility**

Step 3 was to identify specific factors that should be considered as part of the site assessment process. These factors include:

- Distance from population and logistics centers;
- Proximity to environmentally sensitive areas, wildlife resources, threatened or endangered species or habitats, and/or historic properties;
- 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 (GRS) sites; and
- The distance from the closest alternative PPOR.

### **C. HOW TO USE THE POTENTIAL PLACES OF REFUGE SECTION**

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 Cook Inlet 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 determines that places of refuge should be considered for an incident-specific response, the information in the Cook Inlet 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:

1. Place of refuge assistance requested,
2. Immediate action required by COTP,
3. COTP/Unified Command evaluates vessel options,
4. COTP/Unified Command selects vessel option,
5. COTP/Unified Command evaluates potential places of refuge based on operational criteria,
6. COTP/Unified Command selects potential places of refuge based on operational criteria,
7. Stakeholders provided with places of refuge options,
8. Stakeholders provide ranking of places of refuge options,
9. COTP/Unified Command selects places of refuge, and
10. COTP/Unified Command prepares documentation of decision.

The information provided in this document should help decision-making by providing site-specific information to the COTP/Unified Command.

Part Two of this document links to site-specific information the identified PPOR in the Cook Inlet Subarea. An index map (Figure H-1) shows the location of the PPOR maps. 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. Please send your comments 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, Western Alaska  
Sector Anchorage  
PO Box 5800  
JBER, AK 99505

# POTENTIAL PLACES OF REFUGE: PART TWO – PPOR MAPS

## A. INDEX OF PPOR MAPS

The Workgroup developed 6 PPOR Maps within the Cook Inlet Subarea to 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. The Index map 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.

Please visit the Cook Inlet PPOR website for copies of the PPOR Map Index.

<http://dec.alaska.gov/spar/PPR/cookinletpor/index.htm>



H-1 Cook Inlet PPOR Index Map

## **B. PPOR MAPS**

Each PPOR Map consists of two parts: 1) a graphic showing a locator map, picture, and detailed nautical charts showing the location of anchorages, docks, moorings, potential grounding sites 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.

Consult the Cook Inlet PPOR website for more information

<http://dec.alaska.gov/spar/PPR/cookinletpor/index.htm>

Individual PPOR Maps and Tables

Cook Inlet PPOR Map 01- <http://dec.alaska.gov/spar/PPR/cookinletpor/cipporMap01.pdf>

Cook Inlet PPOR Map 02- <http://dec.alaska.gov/spar/PPR/cookinletpor/cippormap02.pdf>

Cook Inlet PPOR Map 03- <http://dec.alaska.gov/spar/PPR/cookinletpor/cippormap03.pdf>

Cook Inlet PPOR Map 04- <http://dec.alaska.gov/spar/PPR/cookinletpor/cippormap04.pdf>

Cook Inlet PPOR Map 05- <http://dec.alaska.gov/spar/PPR/cookinletpor/cippormap05.pdf>

Cook Inlet PPOR Map 06- <http://dec.alaska.gov/spar/PPR/cookinletpor/cipporMap06.pdf>

*Guidelines for Places of Refuge Decision-Making*

<https://dec.alaska.gov/spar/ppr/pwspor/040927arrtplacesofrefuge.pdf>

Site Assessment Matrix and Key

<http://dec.alaska.gov/spar/PPR/cookinletpor/cipporsam.pdf>

<http://dec.alaska.gov/spar/PPR/cookinletpor/cipporsamkey.pdf>

Cook Inlet Subarea Risk and Logistical Maps

<http://dec.alaska.gov/spar/PPR/cookinletpor/documents/070210cipporrisklayers.pdf>

Cook Inlet Subarea Index Map

<http://dec.alaska.gov/spar/PPR/cookinletpor/cipporzonemap.pdf>



## POTENTIAL PLACES OF REFUGE: PART THREE – REFERENCES

Alaska Dept. of Natural Resources and Alaska Dept. of Fish and Game. December 2004. Cook Inlet Area Plan for State Lands.

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](mailto: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 Cook Inlet June, 2005. Cook Inlet Marine Firefighting and Prevention Plan.

### Useful Websites

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

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

Alaska Dept. of Natural Resources, Cook Inlet 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#cook>

Alaska Regional Response Team, Cook Inlet Subarea Contingency Plan,  
<http://www.akrrt.org/CIplan/CookInletSCP.shtml>

U.S Bureau of Land Management. Spatial Data Management System.  
<http://sdms.ak.blm.gov/isdms/imf.jsp?site=sdms>