

POTENTIAL PLACES OF REFUGE:

PART ONE – INTRODUCTION

Purpose and Scope

This Potential Places of Refuge (PPOR) section is designed to be a supplement to the Prince William Sound Subarea Contingency Plan for Oil and Hazardous Substances Spills and Releases, commonly referred to as the Prince William Sound Subarea Contingency Plan (SCP). Places of Refuge are pre-identified sites that provide a sheltered location with adequate water depth to lighter or repair a leaking or disabled vessel in order to limit the amount of product spilled. If leaking vessels are not repaired, oil or other hazardous substances released from the vessel can impact downstream environmental resources and shoreline. Vessels should be anchored or moored in protected waters to safely undergo repairs and minimize polluting the environment. This section identifies potential safe anchoring or mooring locations in the Prince William Sound area. Actual designation of a Place of Refuge will always be an incident specific decision made by the Captain of the Port for Prince William Sound.

Prince William Sound (PWS) has many miles of environmentally sensitive coastline. In addition to sensitive shoreline habitats such as marshes, sheltered tidal flats, and exposed tidal flats, PWS supports a number of sensitive biological resources including birds, fish and shellfish, and marine mammals. The area contains national forests, state critical habitat areas, state parks, native and other private lands, and is managed for a variety of uses including oil transportation, commercial fishing and recreation.

PWS is also widely used for marine commerce. Oil tanker vessels, log transport ships, fuel barges, freighters, oil industry work boats, ferries, and cruise ships make routine stops at PWS ports. Also, commercial fishing boats, sport fishing charter boats, and privately-owned vessels regularly use local harbors and docks.

There is no perfect mooring or anchoring site for all vessels and all situations. Larger vessels, such as oil tankers and freighters, cannot be taken to certain locations. Some ports may have shallow approaches or small-sized bays, and large ships cannot enter these locations. But smaller vessels, such as fishing vessels and charter vessels, may be able to utilize these smaller ports.

This document provides critical information to facilitate the selection of a Place of Refuge for a vessel that has suffered an incident. The information in this PPOR document is intended to help decision-makers to address both environmental and operational issues when deciding where to take a stricken vessel in order to safely lighter its cargo and bunkers and repair the damage, while preventing or minimizing environmental damage or pollution.

The PWS Subarea has been divided into five zones, which correspond to the response zones used to develop Geographic Response Strategies (GRS), as shown in Figure H-1.

How to Use these Places of Refuge

The U.S. Coast Guard Captain of the Port (COTP) Prince William Sound has jurisdiction over movement, temporary mooring or anchoring locations for leaking or damaged vessels within the PWS subarea. The COTP may confer with state and local officials when deciding where and when to move a stricken vessel. These PPOR pre-identify potential places of safe refuge in order to enhance the decision-making process and facilitate the overall response operation.

The information provided here supplements information provided in the Prince William Sound SCP and the Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous

Substances Discharge/Releases (commonly referred to as the Unified Plan). Information provided in either of those plans is not duplicated herein.

Part 2 of this document contains site-specific information for the pre-identified potential places of refuge in the Prince William Sound subarea. An index at the beginning of this section shows the location of the selected sites. Each PPOR consists of two parts: 1) a graphic showing a locator map, picture, and detailed nautical charts showing the location of anchorages, moorings, and other information critical to the selection of a place of refuge; and 2) a series of tables providing site information regarding safety of life, local services and contacts, local site conditions, and other considerations.

Each vessel incident presents unique circumstances that must be addressed. The goal is to safely repair or salvage a damaged vessel while avoiding or minimizing impacts to local resources. Prior to bringing a vessel into a PPOR, the following factors will need to be considered:

- Status of the vessel;
- Public safety;
- Environmental resources at risk;
- Strategies to protect sensitive areas;
- Prevailing winds;
- Navigational approach to the mooring site;
- Anchoring ground;
- Vessel traffic;
- Available dock and support facilities;
- Available skilled and spill response labor; and
- Economic concerns and potential impacts.

The information provided in these PPOR should facilitate decision-making by providing data on many of the items listed above. In the event a vessel needs assistance, officials may refer to the pre-identified PPOR sites to aid them in responding to the incident.

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, Prince William Sound
MSO Valdez
PO Box 486
Valdez Ak 99686

How the Document Was Developed

These PPOR were developed through a cooperative work group process involving federal and state agencies working with representatives from the maritime industry, marine pilots, local tribal and city governments and interest groups. The Prince William Sound PPOR Work Group developed the PPOR documents in Part 2 for the five zones in the PWS Subarea (see Figure H-1).

The primary project participants were:

Alaska Department of Environmental Conservation
Alyeska Pipeline Service Company/Ship Escort and Response Vessel Service
Prince William Sound Regional Citizens' Advisory Council
Prince William Sound Response Planning Group
Southwest Pilots Association
U.S. Coast Guard, Valdez Marine Safety Office

The first step of the PPOR process was to identify candidate sites within the PWS Subarea. The Work Group began by researching available information to determine major vessel traffic routes in the PWS Subarea. A risk map (Figure H-2) was developed, depicting the following information:

- Locations of communities and commercial tank farms that receive bulk fuel deliveries;
- Primary traffic routes for vessels with persistent oil that travel through the PWS subarea (non-tank vessels, etc.);
- Locations of frequent fishing vessel/tramper offload activities;
- State ferry and cruise ship traffic routes in the PWS subarea and their “ports of call”;
- Locations of spill response hubs/equipment depots;
- Locations of previous major marine spill events in the PWS subarea and their causes;
- Any pre-identified ports of safe refuge designated by other maritime safety agencies or organizations;
- Key nearshore fishing grounds; and
- Hatcheries and remote release sites.

Site selection matrices (Tables H-2 through H-6) were also developed, listing the following information for each candidate site:

- Location;
- Available space (swing room);
- Available anchoring/mooring/docking/repair facilities;
- Exposure/protection;
- Conflicting uses; and
- Geographic Response Strategies.

Suitable emergency mooring and anchoring locations were reviewed based on a number of factors, such as water depth and the local availability of labor and necessary equipment to make repairs or to lighter fuel/oil cargo. The Work Group consulted with primary stakeholders to discuss, pre-identify, and reach consensus on sites selected as PPOR for PWS. Specific considerations that factored into site selection included the following:

- Distance from population centers;
- Presence of cultural resources or historic properties;
- Proximity to environmentally sensitive areas, wildlife resources, and threatened or endangered species or habitats;
- Economic factors, such as fisheries, mariculture sites, tourism and recreational use, and the location of public or private facilities;
- Response factors such as booming feasibility and the proximity to existing GRS sites;
- and
- The distance from the closest alternative place of refuge.

A total of ??? PPOR sites were identified for the PWS Subarea.

A. NORTHWEST PWS PPOR ZONE

The work group developed Table H-2 to aid in the selection of Places of Refuge sites in the Northwest PWS PPOR zone. This table consists of identified sites in each row with information about risk factors and site selection criteria in the columns. Shaded rows represent the sites in the zone selected for PPOR development.

Table H-1 contains the key to the codes used in the site selection table.

Figure H-? shows the location of PPOR sites in the Northwest PWS zone.

B. NORTHEAST PWS PPOR ZONE

The work group developed Table H-3 to aid in the selection of Places of Refuge sites in the Northeast PWS PPOR zone. This table consists of identified sites in each row with information about risk factors and site selection criteria in the columns. Shaded rows represent the sites in the zone selected for PPOR development.

Table H-1 contains the key to the codes used in the site selection table.

Figure H-? shows the location of PPOR sites in the Northeast PWS zone.

C. SOUTHEAST PWS PPOR ZONE

The work group developed Table H-4 to aid in the selection of Places of Refuge sites in the Southeast PWS PPOR zone. This table consists of identified sites in each row with information about risk factors and site selection criteria in the columns. Shaded rows represent the sites in the zone selected for PPOR development.

Table H-1 contains the key to the codes used in the site selection table.

Figure H-? shows the location of PPOR sites in the Southeast PWS zone.

D. SOUTHWEST PWS PPOR ZONE

The work group developed Table H-5 to aid in the selection of Places of Refuge sites in the Southwest PWS PPOR zone. This table consists of identified sites in each row with information about risk factors and site selection criteria in the columns. Shaded rows represent the sites in the zone selected for PPOR development.

Table H-1 contains the key to the codes used in the site selection table.

Figure H-? shows the location of PPOR sites in the Southwest PWS zone.

E. COPPER RIVER DELTA PPOR ZONE

The work group developed Table H-6 to aid in the selection of Places of Refuge sites in the Copper River Delta PPOR zone. This table consists of identified sites in each row with information about risk factors and site selection criteria in the columns. Shaded rows represent the sites in the zone selected for PPOR development.

Table H-1 contains the key to the codes used in the site selection table.

Figure H-? shows the location of PPOR sites in the Copper River Delta zone.

POTENTIAL PLACES OF REFUGE: PART TWO – PPOR SITES

A. NORTHWEST PWS PPOR ZONE

Figure H-? provides an overview of the Northwest PWS response zone, identifying the location of each PPOR site. Each PPOR site has been assigned an identifying number, which has no relevance other than as a site identifier. This section contains site information for each selected site, in numerical order, beginning with PWSPOR-NW01.

B. NORTHEAST PWS PPOR ZONE

Figure H-? provides an overview of the Northeast PWS response zone, identifying the location of each PPOR site. Each PPOR site has been assigned an identifying number, which has no relevance other than as a site identifier. This section contains Places of Refuge site information for each numbered site, in numerical order, beginning with PWSPOR-NE01.

C. SOUTHEAST PWS PPOR ZONE

Figure H-? provides an overview of the Southeast PWS response zone, identifying the location of each PPOR site. Each PPOR site has been assigned an identifying number, which has no relevance other than as a site identifier. This section contains Places of Refuge site information for each numbered site, in numerical order, beginning with PWSPOR-SE01.

D. SOUTHWEST PWS PPOR ZONE

Figure H-? provides an overview of the Southwest PWS response zone, identifying the location of each PPOR site. Each PPOR site has been assigned an identifying number, which has no relevance other than as a site identifier. This section contains Places of Refuge site information for each numbered site, in numerical order, beginning with PWSPOR-SW01.

E. COPPER RIVER DELTA PPOR ZONE

Figure H-? provides an overview of the Copper River Delta response zone, identifying the location of each PPOR site. Each PPOR site has been assigned an identifying number, which has no relevance other than as a site identifier. This section contains Places of Refuge site information for each numbered site, in numerical order, beginning with PWSPOR-CR01.

POTENTIAL PLACES OF REFUGE:
PART THREE – REFERENCES

International Maritime Organization, Draft Assembly Resolutions Finalized by Nav 49,
17 Jul 2003 IMO
Prince William Sound Marine Firefighting and Prevention Plan, 1999USCG MSO Valdez