POTENTIAL PLACES OF REFUGE: PART ONE – INTRODUCTION

Purpose and Scope

This Potential Places of Refuge (PPOR) section supplements information found elsewhere in the Kodiak Subarea Contingency Plan for Oil and Hazardous Substances Spills and Releases, commonly referred to as the Kodiak Subarea Contingency Plan (SCP). Information about sensitive areas associated with PPOR may be found in the Sensitive Areas - Section D of the SCP. Information about response strategies to protect sensitive areas and areas of public concern associated with PPOR may be found in the Geographic Response Strategies – Section E of the SCP.

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 Kodiak Subarea. Actual designation of a Place of Refuge will always be an incident-specific decision made by the U.S. Coast Guard Captain of the Port for Western Alaska.

The Kodiak Subarea has many miles of environmentally sensitive coastline. In addition to sensitive shoreline habitats such as marshes, sheltered tidal flats, and exposed tidal flats, Kodiak supports a number of sensitive biological resources including birds, fish and shellfish, and marine mammals. Additional information about identification of senvistive areas and resources may be found in Section D of the SCP. Additional information about protection of sensitive areas may be found in Section G of the SCP.

The Kodiak Subarea lands are managed under a varity of land use management plans including;

- Revised Comprehensive Conservation Plan and Environmental Impact Statement, Kodiak National Wildlife Refuge, October, 2004.
- Land Protection Plan, Option for the Protection of Fish and wildlife Habitats, Alaska Peninsula and Becherof National Wildlife Refuges, December 2002.
- Kodiak Island Borough Coastal Management Plan, March, 2006.
- Kodiak Area Plan, Alaska Department of Natural Resources, January, 2005

The Kodiak Area is also widely used for marine commerce. Oil tanker vessels, log transport ships, fuel barges, freighters, container ships, ferries, and cruise ships make routine stops at Kodiak 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 cruiseships, 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. Cruiseships and container ships and tank vessels are the predominant deep draft vessels operating aound Kodiak.

Light Draft Vessels are vessels of 300 to 19,999 Gross Tons. These vessels have drafts of up to 25 feet and range in size from 200 to 450 feet in length. Freighters, catcher processors, and ferries are the most common light draft vessels operating in Prince William Sound.

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

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 Kodiak.

How the Document Was Developed

This section was developed in 2006 by a Work Group of interested and knowledgeable stakeholders in keeping with the Alaska Regional Response Team's "Guidelines for Places of Refuge Decision-Making," (Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases, Annex O). The Work Group arrived at a consensus on the potential places of refuge and submitted this document to the Subarea Committee for approval and inclusion in the Kodiak Subarea Contingency Plan. The Work Group participants represented the following organizations:

Alaska Department of Environmental Conservation
Alaska Department of Natural Resources
Alaska Department of Fish and Game
City of Kodiak
Cook Inlet Regional Citizens' Advisory Council
Kodiak Area Native Association
Kodiak Island Borough
Native Village of Ouzinkie
Prince William Sound Regional Citizens' Advisory Council
Prince William Sound Response Planning Group
Southwest Alaska Pilots Association
U.S. Coast Guard, Kodiak Marine Safety Division
U.S. Department of the Interior – Offices of Environmental Policy and Compliance, Fish and Wildlife Service, and National Park Service

The first step of the PPOR process was to identify candidate sites (anchorages, moorings, docks/piers, and potential grounding sites) within the Kodiak Subarea. The Workgroup began by researching available information to determine major risk factors in the Kodiak Subarea. Maps were developed, depicting the following risk and logistical information:

Locations of bulk fuel facilities (Figure H-1);
Primary traffic routes for State ferries and cruise ships (Figure H-2);
Primary traffic routes for commercial vessels (Figure H-3);
Locations of frequent fishing vessel/tramper offload activities (Figure H-4);
Locations of key nearshore fishing grounds, hatcheries and remote release sites (Figure H-5);
Locations of previous major marine spill events (Figure H-6); and

Locations of spill response hubs and equipment depots (Figure H-7); and
Locations of sites with developed GRS (Figure H-8).

The second step was to identify a total of 97 PPOR within the Kodiak Subarea. A site assessment matrix (Table H-2) and key (Table H-1) was developed. This 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; and
Distance to alternate PPOR.

PPOR identification method consists of a number which 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. “D” will coorespond to deep draft vessels, “L” is light draft and “S” is shallow draft vessels.

The locations of potential places of refuge (anchorages, moorings, docks/piers, and potential grounding sites) are shown on Figure H-9.

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 Kodiak for the shallow draft vessel category (less than 300 gross tons).

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.

Figure H-10 is a composite map of all PPOR and risk factors combined.

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 Kodiak 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 Kodiak 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 contains site-specific information for some of the PPOR in the Kodiak Subarea. An index map (Figure H-11) at the beginning of this section 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.

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
510 L Street, #100
Anchorage, Alaska, 99501

Marine Safety Detachment (MSD) Kodiak
PO Box 190055
Kodiak, AK 99619-0055

POTENTIAL PLACES OF REFUGE: PART TWO – PPOR MAPS

Index of PPOR Maps

The Workgroup developed 11 PPOR Maps within the Kodiak 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. 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.

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, 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.

POTENTIAL PLACES OF REFUGE: PART THREE – REFERENCES

Alaska Dept. of Natural Resources and Alaska Dept. of Fish and Game. December 2004. Kodiak 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, (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 Kodiak June, 2005. Kodiak Marine Firefighting and Prevention Plan.

Useful Websites

Alaska Dept. of Environmental Conservation, Kodiak Island GRS Information
http://www.state.ak.us/dec/spar/perp/grs/ki/home.htm.

Alaska Dept. of Natural Resources. Kodiak Island Public Access Atlas.
http://www.dnr.state.ak.us/mlw/planning/easmatlas/kodiak/indexmap.htm.

Alaska Dept. of Natural Resources, Kodiak 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#kodiak

Alaska Regional Response Team, Kodiak Island Subarea Contingency Plan,
http://www.akrrt.org/kodiakplan/kodiakplantoc.shtml.

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

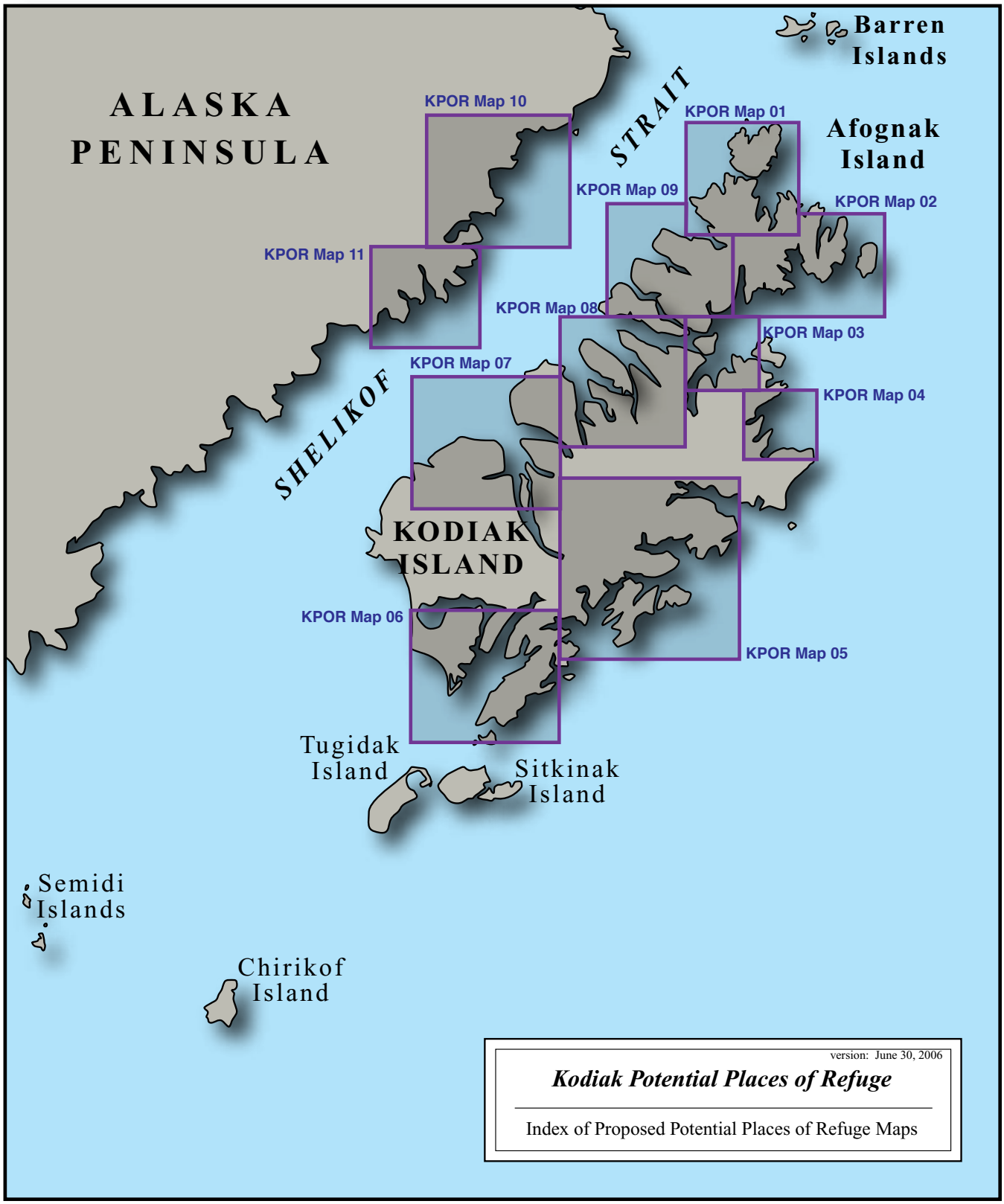

Figure H-11. Index of Kodiak Subarea Potential Places of Refuge Maps 1 through 11.

Kodiak Subarea

Potential Places of Refuge
Key to Table

Vessel Size	Swing Room	Bottom Type	Exposure	Conflicting Uses	Ability to Boom/ GRS	Sensitive Resources	Distance via Water to Population Center
D = A deep draft vessel that exceed 20,000 Gross Tons, has drafts of 25-60 ft. and range from 450 ft.- 1000 ft. LOA, typical of Tankers/Cruiseships	Distance measured to nearest shoal waters or hazard	M= Mud	Exposed to winds/seas from the direction noted	CF=Commercial Fishing	WD=Weather Dependent	E= Threatened or Endangered Species present	K=Kodiak
L = A light draft vessels of 300 to 19,999 Gross Tons, has drafts up to 25 ft., LOA of up to 450 ft., typical of Ferrys/Trampers		Rky= Rocky		SF=Sport fishing	Y= Yes	H=Highly Sensitive as designated by the Kodiak Subarea GRS Workgroup	PL=Port Lions
S = A shallow draft vessel less than 300 Gross Tons, has a draft less than 15 ft., LOA less than 200 ft., typical of Excursion/Fishing vessels		G= Gravel		AQ= Aquaculture	N=No		L=Larsen Bay
		Cl= Clay		R=Recreational			A=Akhiok
		S= Sand		C/I=Commercial/Industrial			O=Old Harbor
		H= Hard		A= Anchorage			OZ=Ouzinke
		SH=Shells		S=Subsistence Activities			KK=Karluk
		Vol ash= Volcanic Ash		WV=Wildlife Viewing			H=Homer
		stk=Sticky		H=Hunting			
		sft=Soft					

Table H-1. Key to codes used in Table H-2.

Potential Places of Refuge

PPOR ID# (number-size)	Type of berthing	Overview Map #	Location Name	Latitude	Longitude	Available Swing Room (ft.)/Dock Face	Dock Face	Depth MLLW	Bottom Type	Exposure to	Conflicting uses	Ability to Boom	GRS#	Sensitive Resources	Dist. to Population Center (nm)	Distance to Alternative PPOR
Potential Places of Refuge for DEEP DRAFT large vessel exceeding 20,000 Gross Tons																
01-D	A	Kodiak-01	Shangin Bay	58°38.13'N	152°24.33'W	2000		12	Sh	NE,N,NW,W	CF,SF	WD	K47	H	63-K,70-H,51-OZ	PPOR 01-02-D Grassy Island: 19 nm.
02-D	A	Kodiak-01	Grassy Island	58°26.49'N	152°47.91'W	2400		10	Sh	NE,N,NW,W,SW	CF	N			75-K, 84-H,63-OZ	PPOR 01-03-D Black Cape: 5.5 nm.
03-D	A	Kodiak-01	Black Cape	58°23.68'N	152°54.01'W	5600		13	Sh	N,NE,W,SW	CF	N	K39		70-K,89-H,58-OZ	PPOR 01-02-D Grassy Island: 5.5 nm.
04-D	A	Kodiak-03	Wooded Island Anchorage	57°57.17'N	152°31.31'W	2700		17	M	SE,S	CF	WD	K1,K2,K3		3.5OZ, 12-PL 15-K	PPOR 03-05-D Sharitin Bay: 9.5nm
05-D	A	Kodiak-03	Sharitin Bay	57°51.49'N	152°45.36'W	3100		12	M, Sft	N,NE	CF	WD			4-PL,10-OZ,22-K	PPOR 03-06-D Peregrebni Pt.: 3nm.
06-D	A	Kodiak-03	Peregrebni Point-Kizhuyak Bay	57°51.85'N	152°49.25'W	3600		13	M	N,NE,E	CF	WD	K15		2-PL,11-OZ,23-K	PPOR 03-05-D Sharitin Bay: 3 nm
07-D	A	Kodiak-04	St. Paul Harbor-Anchorage	57°45.92'N	152°26.33'W	2500		7.5	M,Sh	SE,S	C/I	WD	K1,K2,K3	H	1.5-K	PPOR 04-08-D Chiniak Anchorage-3nm
08-D	A	Kodiak-04	Chiniak Bay Anchorage	57°44.81'N	152°22.81'W	3000		13	Rky	W,SW	CF	N	K1,K2,K3		4-K	PPOR 04-09-D Chiniak Bay-Naval Anchorage: 2.5nm
09-D	A	Kodiak-04	Chiniak Bay-Naval Anchorage	57°43.33'N	152°23.84'W	4000		9.5	Rky	E,SE,S	C/I	N	K1,K2,K3		4.5-K	PPOR 04-08-D **Chiniak Bay Anchorage:** 2.5nm
10-D	A	Kodiak-04	Frye Point-Naval Anchorage	57°42.78'N	152°32.48'W	1100		5.5	M	None	C/I	Y	K1,K2,K3	H	6-K	PPOR 04-12-D Womens Bay-USGC Moorage: 0.2nm
11-D	A	Kodiak-04	Womens Bay	57°42.43'N	152°31.50'W	1300		5.5	M S	None	SF	Y	K1,K2,K3	H	5.5-K	PPOR 04-10-D Frye Point-Naval Anchorage: 0.8nm
12-D	M	Kodiak-04	Womens Bay-USGC Moorage	57°43.05'N	152°32.77'W	800		5.5	N/A	None	SF	Y	K1,K2,K3	H	6-K	PPOR 04-10-D Frye Point-Naval Anchorage: 0.2nm
13-D	M	Kodiak-04	Womens Bay-USGC Moorage	57°42.98'N	152°32.69'W	800		5.5	N/A	None	SF	Y	K1,K2,K3	H	6-K	PPOR 04-10-D Frye Point-Naval Anchorage: 0.2nm
14-D	M	Kodiak-04	Womens Bay-USGC Moorage	57°42.92'N	152°32.57'W	800		5.5	N/A	None	SF	Y	K1,K2,K3	H	6-K	PPOR 04-10-D Frye Point-Naval Anchorage: 0.2nm
15-D	A	Kodiak-05	Ugak Bay	57°28.84'N	152°45.35'W	3600		11	Vol Ash	SW	CF	WD			38-O,43-K	PPOR 05-17-D Santa Flavia Bay:24.5nm
16-D	A	Kodiak-05	Kiliuda Bay	57°19.13'N	152°59.99'W	3000		14	M	SE	CF	Y			21-O,58-K	PPOR 05-17-D Santa Flavia Bay: 5nm
17-D	A	Kodiak-05	Santa Flavia Bay	57°17.06'N	152°52.07'W	2400		14	S	SW	CF	Y			17-O,55-K	PPOR 05-16-D Kiliuda Bay: 5nm
18-D	A	Kodiak-05	Tanginak Anchorage	57°11.15'N	153°02.05'W	2400		18	Stk	E	CF,S	Y			10-O, 56-K	PPOR 05-17-D Santa Flavia Bay: 8.25nm
19-D	A	Kodiak-05	Old Harbor	57°10.90'N	153°18.85'W	3000		17	M	SW	CF,S	Y	K4,K5	H	.5-O, 63-A,95-K	PPOR 05-20-D Barling Bay: 1nm
20-D	A	Kodiak-05	Barling Bay	57°11.12'N	153°21.14'W	2400		12	M, G	S	CF,S	Y	K4,K5	H	2-O,62-A,95-K	PPOR 05-19-D Old Harbor: 1nm
21-D	A	Kodiak-05	Rolling Bay	57°01.95'N	153°21.57'W	3000		12	Rky	S,SE,E	CF,S	Y			13-O, 54-A,77-K	PPOR 05-20-D Barling Bay: 11nm
22-D	A	Kodiak-06	Kaguyak Bay	56°54.16'N	153°39.54'W	6000		18	S	S, NE	CF,S	Y			42-A, 22-O, 90-K	PPOR 05-21-D Rolling Bay: 12.5nm
23-D	A	Kodiak-06	Cape Ahtak	56°52.49'N	154°21.18'W	5000		21	S G	E,S,W	CF	N	K6,K7,K8		9-A,56-O,59-KK,84-LB120-K	PPOR 06-24-D Tanner Head: 4.5nm
24-D	A	Kodiak-06	Tanner Head-Alitak Bay	56°50.20'N	154°13.86'W	5500		14	M	NE,S,SW	CF	N	K6,K7,K8		5-A,57-O,120-K	PPOR 06-23-D Cape Ahtak: 4.5nm
25-D	A	Kodiak-07	Spiridon Bay	57°41.13'N	153°49.82'W	2100		14	S	W,SW	CF,S	WD	K26	H	11-LB, 22-KK,68-PL,93-K	PPOR 07-26-D Uyak Anchorage: 5.5 nm
26-D	A	Kodiak-07	Uyak Anchorage	57°38.05'N	153°58.33'W	2200		17	S	S,NE	CF,S	WD	K23	H	6-LB, 22-KK,57-PL,82-K	PPOR 07-27-D Uyak Bay: 5 nm

Table H-2. Site assessment matrix for Potential Places of Refuge in the Kodiak Subarea (page 1 of 4).

Potential Places of Refuge

PPOR ID# (number-size)	Type of berthing	Overview Map #	Location Name	Latitude	Longitude	Available Swing Room (ft.)/Dock Face	Dock Face	Depth MLLW	Bottom Type	Exposure to	Conflicting uses	Ability to Boom	GRS#	Sensitive Resources	Dist. to Population Center (nm)	Distance to Alternative PPOR
27-D	A	Kodiak-07	Uyak Bay	57°32.92'N	153°57.48'W	2400		14	M	N,NE	CF	WD	K12,K24		1-LB,23-KK,61-PL,86-K	PPOR 07-26-D Uyak Anchorage: 5 nm
28-D	A	Kodiak-07	Karluk Anchorage	57°35.15'N	154°27.99'W	3000		11	Rky, G	N,NE,W	CF,S,SF	WD	K11,K10	H	1-KK, 22-LB,68-PL,93-K	PPOR 07-26-D Uyak Anchorage:19 nm
29-D	A	Kodiak-08	Uganik Bay	57°43.76'N	153°31.06'W	3000		17	Vol Ash, Sh	N	CF,S,SF	WD	K29	H	40-LB,46-PL, 46-KK 71-K	PPOR 07-26-D Uyak Anchorage-32nm
30-D	A	Kodiak-08	Bare Island-Kupreanof Strait	57°58.11'N	153°07.20'W	3600		21	Cl, Rky	E,W	CF,S,SF	N	K35	H	15-PL, 40-K	PPOR 03-06-D Peregrebni Point-Kizhuyak Bay-15nm
31-D	A	Kodiak-09	Raspberry Island Anchorage	58°09.20'N	153°18.96'W	3600		14	Stk	N,NE,SW,W	CF	WD			35-PL, 60-K	PPOR 09-31-D Malina Bay: 13nm
32-D	A	Kodiak-09	Raspberry Strait	58°02.47'N	153°02.17'W	1500		17	Stk, Vol Ash	NW	CF,S,SF	Y	K36	H	47-PL, 72-K	PPOR 09-32-D Raspberry Island Anchorage: 14nm
33-D	A	Kodiak-09	Malina Bay	58°12.70'N	153°01.78'W	2400		13	M	W	CF,S,SF	WD			49-PL, 74-K	PPOR 09-32-D Raspberry Island Anchorage:13nm
34-D	A	Kodiak-10	Swikshak Bay	58°32.74'N	153°48.02'W	5000		11	M	S,E,NE	CF,SF	WD	K48,49	H,E	63-PL, 88-K	PPOR 10-35-D HalloBay/Cape Nukshak-10nm
35-D	A	Kodiak-10	Hallo Bay/Cape Nukshak	58°24.29'N	153°58.39'W	3000		19	M	SE,E,NE	CF,SF,WV	WD	K50,51	H	56-PL, 81-K	PPOR 10-36-D Kukak Point-9nm
36-D	A	Kodiak-10	Kukak Point	58°20.00'N	154°07.44'W	2400		13	Vol Ash, Sh	E,SE	CF, WV	WD	K52,53		53-PL, 78-K	PPOR 10-35-D HalloBay/Cape Nukshak-9nm
37-D	A	Kodiak-11	Kuliak Bay	58°10.37'N	154°12.17'W	3000		13	M S h	S,E,NE	CF	WD	K55	H	52-PL, 77-K	PPOR 11-38-D Missak Bay-7nm
38-D	A	Kodiak-11	Missak Bay	58°06.59'N	154°16.88'W	3000		12	M	S,E,NE	CF	WD	K55,56,57	H,E	34-KK, 37-LB, 79-K	PPOR10-37-D Kuliak Bay-5.2nm
39-D	A	Kodiak-11	Dakavak Bay	58°02.94'N	154°40.32'W	3000		8	M	SW,S,SE	CF	WD	K60	H	29-KK, , 39-LB, 91-K	PPOR11-38-D Missak Bay-17.5nm
Potential Places of Refuge for LIGHT DRAFT medium sized vessel 300 to 19,999 Gross Tons																
40-L	A	Kodiak-01	Discovery Bay	58°20.08'N	152°22.65'W	1200		12	M	None	CF,S,SF	Y	K46		58-K,80-H,46-OZ	PPOR 01-41-L Delphin Bay: 7 nm.
41-L	A	Kodiak-01	Delphin Bay	58°20.33'N	152°28.82'W	900		5.5	S	N	CF,S,SF	Y	K46		60-K,80-H,48-OZ	PPOR 01-40-L Dicovery Bay: 7nm.
42-L	A	Kodiak-02	King Cove	58°11.64'N	152°01.67'W	1500		12	Stk S	NE,SE,S	CF	N		E	27-K, 25-OZ	PPOR 02-47-L Kazakof Bay-4: 13.5nm
43-L	M	Kodiak-02	Kazakof Bay-Mooring-1	58°07.56'N	152°34.40'W	1300		18	N/A	S	CF,S	Y			25-K,14-OZ,19-PL	PPOR 03-48-L Low Island Anchorage: 13nm
44-L	M	Kodiak-02	Kazakof Bay-Mooring-2	58°07.82'N	152°34.35'W	1200		26	N/A	S	CF,S	Y			25-K,14-OZ,19-PL	PPOR 03-48-L Low Island Anchorage: 13nm
45-L	M	Kodiak-02	Kazakof Bay-Mooring-3	58°10.46'N	152°34.07'W	1000		13	N/A	S	CF,S	Y			28-K,17-OZ,22-PL	PPOR 03-48-L Low Island Anchorage: 13nm
46-L	M	Kodiak-02	Kazakof Bay-Mooring-4	58°10.19'N	152°34.11'W	1000		13	N/A	S	CF,S	Y			28-K,17-OZ,22-PL	PPOR 03-48-L Low Island Anchorage: 13nm
47-L	A	Kodiak-02	Izhut Bay	58°14.08'N	152°17.99'W	200		17	M	S,SE	CF,S	Y	K17,K18		29-K,27-OZ	PPOR 02-80-S Kitoi Bay Hathery: 7.5nm
48-L	A	Kodiak-03	Low Island Anchorage	57°55.22'N	152°34.33'W	2400		13	Rky, G	NE,N,NW	CF	Y	K19,K20	H	2-OZ,24-K,10-PL	PPOR 03-49-L Port Lions Ferry Dock: 10nm
49-L	P/D	Kodiak-03	Port Lions Ferry Dock	57°51.63'N	152°51.56'W	N/A		7	N/A	N	C/I	Y	K15		1-PL,13-OZ,25-K	PPOR 03-48-L Low Island: 10nm
50-L	P/D	Kodiak-04	Pier 1-Kodiak Harbor Ferry Dock	57°47.21'N	152°24.15'W	N/A	204	26.6	N/A	None	C/I	Y	K1,K2,K4	E	0-K	PPOR 04-51-L Pier 2-Kodiak Harbor City Dock: 0.8nm
51-L	P/D	Kodiak-04	Pier 2-Kodiak Harbor City Dock	57°47.02'N	152°25.61'W	N/A	1050	38	N/A	None	C/I	Y	K1,K2,K5	E	0-K	PPOR 04-51-L Pier 2-Kodiak Harbor City Dock: 0.8nm
52-L	P/D	Kodiak-04	Pier 3-Kodiak Harbor Cargo Terminal	57°46.87'N	152°26.15'W	N/A	880	38	N/A	None	C/I	Y	K1,K2,K6	E	0-K	PPOR 04-51-L Pier 2-Kodiak Harbor City Dock: 0.4nm

Table H-2. Site assessment matrix for Potential Places of Refuge in the Kodiak Subarea (page 2 of 4).

Kodiak Subarea

Potential Places of Refuge

PPOR ID# (number-size)	Type of berthing	Overview Map #	Location Name	Latitude	Longitude	Available Swing Room (ft.)/Dock Face	Dock Face	Depth MLLW	Bottom Type	Exposure to	Conflicting uses	Ability to Boom	GRS#	Sensitive Resources	Dist. to Population Center (nm)	Distance to Alternative PPOR
53-L	P/D	Kodiak-04	Cargo Dock-USCG	57°43.84'N	152°30.84'W	N/A	1180	5.5	N/A	None	C/I	Y			5-K	PPOR 04-54-L Fuel Pier-USCG: 0.3nm
54-L	P/D	Kodiak-04	Fuel Pier-USCG	57°43.60'N	152°31.13'W	N/A	600	5.5	N/A	None	C/I	Y			5-K	PPOR 04-53-L Cargo Dock-USCG: 0.3nm
55-L	P/D	Kodiak-04	Lash Dock-USCG	57°43.95'N	152°31.34'W	N/A	1290	4	N/A	None	C/I	Y			5-K	PPOR 04-53-L Cargo Dock-USCG: 0.3nm
56-L	A	Kodiak-04	Kalsin Bay	57°36.52'N	152°26.36'W	N/A			N/A	NW	CF	WD			11-K	PPOR 04-52-L Pier 3-Kodiak Harbor Cargo Terminal: 11.5nm
57-L	A	Kodiak-05	Kaiugnak Bay	57°03.86'N	153°39.47'W	2400		13	M G	W	CF	Y			18-O, 85-K	PPOR 05-21-D Rolling Bay: 9nm
58-L	A	Kodiak-06	Jap Bay	56°55.95'N	153°41.33'W	1500		11	M	S	CF,S	Y			44-A,24-O	PPOR 06-59-L Kaguyak Bay: 4nm
59-L	A	Kodiak-06	Kaguyak Bay	56°52.73'N	153°44.29'W	1500		16	M	NE	CF	Y			43-A,22-O	PPOR 06-58-L Jap Bay: 4nm
60-L	A	Kodiak-06	Sulua Bay	57°00.46'N	153°51.15'W	1300		12	M	S	CF	Y			13-A,130-K	PPOR 06-61-L Kempff Bay: 13nm
61-L	A	Kodiak-06	Kempff Bay	56°55.08'N	154°12.85'W	1000		12	M	SE	CF,S	Y	K6,K7,K8	H	1-A,120-K	PPOR 06-62-L Lazy Bay: 4nm
62-L	A	Kodiak-06	Lazy Bay	56°53.59'N	154°14.93'W	1000		13	M	W	CF,S	Y	K6,K7,K8	H	4-A,120-K	PPOR 06-61-L Kempff Bay: 4nm
63-L	A	Kodiak-06	Moser Bay	56°59.46'N	154°09.04'W	2100		15	M G	None	CF	Y	K6,K7,K8		4-A,125-K	PPOR 06-61-L Kempff: 6.5
64-L	A	Kodiak-08	Noisy Island	57°56.05'N	153°32.78'W	1500		13	S	N,NW	CF,S	N	K30	H	31-PL,56-K	PPOR 08-65-L Dry Spruce Bay 1-19nm
65-L	A	Kodiak-08	Dry Spruce Bay 1	57°56.34'N	153°02.81'W	1800		14	M	None	CF,S,SF	Y	K35	H	15-PL, 40-K	PPOR 08-66-L Dry Spruce Bay 2-1nm
66-L	A	Kodiak-08	Dry Spruce Bay 2	57°55.86'N	153°00.96'W	1800		16	M	None	CF,S,SF	Y	K35	H	15-PL, 40-K	PPOR 08-65-L Dry Spruce Bay 1-1nm
67-L	A	Kodiak-09	Malina Bay	58°11.13'N	152°57.00'W	2400		13	M	None	CF,S,SF	WD			49-PL, 74-K	PPOR 09-67-L Paramonof Bay: 18nm
68-L	A	Kodiak-09	Paramonof Bay	58°17.18'N	152°54.30'W	1900		15	S	NW,W	CF,S,SF	WD	K38	H	68-K, 43-PL, 56-OZ	PPOR 09-68-L Malina Bay: 18nm
69-L	A	Kodiak-10	Kukak Bay	58°16.70'N	154°17.48'W	2400		15	M	None	CF, WV	Y	K52,53	H	63-PL, 88-K	PPOR 11-70-L Missak Bay-34nm
70-L	A	Kodiak-11	Missak Bay	58°07.71'N	154°19.21'W	2400		8.3	M	S,E	CF	WD	K55,56,57	H,E	34-KK, 37-LB, 79-K	PPOR11-71-L Amalik Bay-13.5nm
71-L	A	Kodiak-11	Amalik Bay	58°05.82'N	154°31.15'W	1000		5.2	S	None	CF	Y	K14,57,58,59	H,E	30-KK,38-LB ,78-K	PPOR11-70-L MissakBay-13.5nm
An incomplete list of Potential Places of Refuge for SHALLOW DRAFT small sized vessel less than 300 Gross Tons																
72-S	A	Kodiak-01	Discovery Bay-north	58°19.03'N	152°23.81'W	1000		4.5	M	None	CF,S,SF	Y	K46		61-K,88-H,49-OZ	PPOR 01-73-L Discovey Bay-South: 1 nm.
73-S	A	Kodiak-01	Discovery Bay-south	58°18.58'N	152°24.64'W	600		4.5	M	None	CF,S,SF	Y	K46		61-K,88-H,49-OZ	PPOR 01-72-L Discovey Bay-North: 1 nm.
74-S	A	Kodiak-01	Andreon Bay	58°29.96'N	152°25.79'W	1300		5.75	M	NE,E,SE,	CF,S	Y	K45	H	58-K,78-H, 46-OZ	PPOR 01-72-L Discovey Bay-South: 10 nm.
75-S	A	Kodiak-02	Marmot Strait	58°16.97'N	151°58.20'W	1000		5.5	S G	N,NE,E,S	CF	N		E	34-K, 33-OZ	PPOR 02-76-S Marmot Island: 4nm.
76-S	A	Kodiak-02	Marmot Island	58°13.80'N	151°53.00'W	1500		4.75	S G	N,SW	CF	WD		E	32-K, 32-OZ	PPOR 02-75-S Marmot Strait: 4nm.
77-S	A	Kodiak-02	Kazakof Bay-west	58°11.67'N	152°35.53'W	600		13	Rky	S	CF,S	Y			16-OZ, 28-K	PPOR 02-79-S Kazakof Bay-east: 0.5nm
78-S	A	Kodiak-02	Kazakof Bay-east	58°11.55'N	152°34.46'W	600		12	Rky	S	CF,S	Y			16-OZ, 28-K	PPOR 02-78-S Kazakof Bay-west: 0.5nm

Table H-2. Site assessment matrix for Potential Places of Refuge in the Kodiak Subarea (page 3 of 4).

Kodiak Subarea

Potential Places of Refuge

PPOR ID# (number-size)	Type of berthing	Overview Map #	Location Name	Latitude	Longitude	Available Swing Room (ft.)/Dock Face	Dock Face	Depth MLLW	Bottom Type	Exposure to	Conflicting uses	Ability to Boom	GRS#	Sensitive Resources	Dist. to Population Center (nm)	Distance to Alternative PPOR
79-S	A	Kodiak-02	Izhut Bay	58°15.15'N	152°16.29'W	800		22	M	SE	CF,S	Y	K17, K18		29-K, 27-OZ	PPOR 02-80-S Kitoi Bay Hathery: 7.5nm
80-S	P/D	Kodiak-02	Kitoi Bay Hatchery Dock	58°11.44'N	152°22.17'W	N/A		3	N/A	None	CF,S	Y	K17, K18	H	24-OZ, 26-K	PPOR 02-77-S Izhut Bay: 6.5nm
81-S	A	Kodiak-03	Ouzinke Point Anchorage	57°54.81'N	152°30.82'W	600		7	Sh, P	None	CF	Y	K19,K20	H	.5-OZ, 12-K	PPOR 03-82-S Ouzinke Dock: 0.5nm
82-S	P/D	Kodiak-03	Ouzinke Dock	57°55.26'N	152°29.93'W	N/A	Float	4	N/A	None	C/I	Y	K19,K20	H	0-OZ, 12-K	PPOR 03-81-S Ouzinke Point: 0.5nm
83-S	A	Kodiak-05	Ugak Bay	57°28.33'N	152°50.10'W	1200		15	Rky	W	CF	Y			40-0,42-K	PPOR 05-84-S Port Hobron: 35nm
84-S	A	Kodiak-05	Port Hobron	57°10.08'N	153°09.60'W	1400		12	S G	N, NE	CF,S	Y	K4,K5		8-O,59-K	PPOR 06-61-L LazyBay: .25nm
85-S	P/D	Kodiak-06	Lazy Bay Cannery	56°53.85'N	154°14.91'W	N/A	150	24	N/A	E	CF	Y			5-A	PPOR 05-84-S Ugak Bay: 35nm
86-S	A	Kodiak-07	Harverster Island	57°38.73'N	154°00.20'W	1000		4.5	S	SW	CF,S,SF	Y	K23	H	6-LB,22-KK,82-K	PPOR 07-88-S Larsen Bay Cannery Dock: 7 nm
87-S	A	Kodiak-07	Karluk Anchorage	57°34.63'N	154°28.63'W	600		4	Rky, G	N,NE,W	CF,S,SF	WD	K10,K11	H	.5-KK, 22-LB,93-K	PPOR 07- 86-S Harverster Island:19 nm
88-S	P/D	Kodiak-07	Larsen Bay Cannery Dock	57°32.25'N	153°59.86'W	N/A		1.5	N/A	None	C/I,CF,S,SF	Y	K12,K24	H	0-LB	PPOR 07-86-S Harverster Island: 7 nm
89-S	A	Kodiak-08	Dry Spruce Island	57°56.94'N	153°02.72'W	600		4	M	None	CF,S,SF	Y	K35	H	15-PL, 40-K	PPOR 08-90-S Port Bailey Dock-1nm
90-S	P/D	Kodiak-08	Port Bailey Cannery Dock	57°55.86'N	153°02.41'W	N/A	750	1,5	N/A	None	CF,S,SF	Y	K35	H	15-PL, 40-K	PPOR 08-89-S Dry Spruce Island-1nm
91-S	A	Kodiak-09	Paramonof Bay-east	58°17.17'N	152°50.83'W	800		17	S	W	CF,S,SF	Y	K38	H	68-K,43-PL, 56-OZ,95-H	PPOR 09-92-S Paramonof Bay-west: 3nm
92-S	A	Kodiak-09	Paramonof Bay-west	58°16.07'N	152°46.03'W	800		5	M	None	CF,S,SF	Y	K38	H	68-K, 43-PL, 56-OZ	PPOR 09-91-S Paramonof Bay-east: 3nm
93-S	A	Kodiak-09	Malka Bay	58°11.12'N	153°00.23'W	500		6.75	M	N	CF,S	Y	K38		48-PL,73-K	PPOR 09-92-S Paramonof Bay-west: 16nm
94-S	A	Kodiak-09	Muskomee Bay	58°06.42'N	153°03.84'W	800		2.5	M	W	CF,S	Y	K37	H	43-PL, 68-K	PPOR 09-92-S Malka Bay: 17nm
95-S	A	Kodiak-10	Ninagiak Island	58°27.47'N	154°01.57'W	1200		5	M	SE,NE	CF, WV	WD	K50,51	H	56-PL, 81-K	PPOR 11-96-S Russian Anchorage-28nm
96-S	A	Kodiak-11	Russian Anchorage	58°05.32'N	154°21.50'W	1200		11	S, Sh	S,W	CF	WD	K14,57,58,59	H,E	30-KK,38-LB ,78-K	PPOR11-97-S Kinak Bay-5nm
97-S	A	Kodiak-11	Kinak Bay	58°09.67'N	154°26.56'W	600		9	S	S	CF	WD	K14,57,58,59	H,E	34--KK, 42-LB, 82-K	PPOR11-96-S Russian Anchorage-5nm

Table H-2. Site assessment matrix for Potential Places of Refuge in the Kodiak Subarea (page 4 of 4).