
Southeast Alaska Geographic Response Strategies

Section G of the Southeast Alaska Subarea Contingency Plan

APRIL 2013

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**Southeast Alaska SUBAREA CONTINGENCY PLAN
GEOGRAPHIC RESPONSE STRATEGIES**

TABLE OF CONTENTS

PART ONE	Introduction G-1-1		
	A. Southeast Alaska Geographic Response Zone 1 G-1-2		
	B. Southeast Alaska Geographic Response Zone 2 G-1-4		
	C. Southeast Alaska Geographic Response Zone 3 G-1-6		
	D. Southeast Alaska Geographic Response Zone 4 G-1-8		
	E. Southeast Alaska Geographic Response Zone 5 G-1-10		
	F. Southeast Alaska Geographic Response Zone 6 G-1-12		
	G. Southeast Alaska Geographic Response Zone 7 G-1-14		
	H. Southeast Alaska Geographic Response Zone 8 G-1-16		
	I. Southeast Alaska Geographic Response Zone 9 G-1-18		
PART TWO	General Protection/Recovery Tactics G-2-1		
	A. Deflection Booming G-2-2		
	B. Diversion Booming G-2-4		
	C. Exclusion Booming G-2-6		
	D. Shoreside Recovery G-2-8		
	E. Marine Recovery G-2-10		
	F. Nearshore Free-oil Strike Team G-2-12		
	G. Passive Recovery and Debris Removal G-2-14		
	H. Cold Water Deluge G-2-16		
	I. Underflow Damming G-2-18		
PART THREE	Site-Specific Geographic Response Strategies G-3-1		
	A. Southeast Alaska Response Zone 1 G-3-1		
	Bostwick Estuary SE01-01		
	Foggy Bay SE01-02		
	Rudyerd Bay SE01-03		
	Chikamin River Estuary SE01-04		
	Thorne Bay SE01-05		
	Dog Island SE01-06		
	Grindall Island SE01-07		
	Karta Bay SE01-08		
	Lincoln Channel SE01-09		
	B. Southeast Alaska Response Zone 2 (no GRS sites at this time) G-3-3		
	C. Southeast Alaska Response Zone 3 G-3-5		
	Blind Slough North SE03-01		
	Kah Sheets Bay SE03-02		
	Petersburg Creek SE03-03		
	Blind Slough South SE03-04		
	Exchange Cove SE03-05		
	Windham Bay SE03-06		
	Hobart Bay SE03-07		
	Salmon Bay SE03-08		
	Steamer Bay SE03-09		
	Stikine River Delta SE03-10		
	Tracy Arm – Head SE03-11		
	D. Southeast Alaska Response Zone 4 G-3-7		
	Big John Bay SE04-01		
	Keku Islands SE04-02		
	Gambier Bay–NW Arm SE04-03		
	The Brothers SE04-04		
	Cannery Cove/Donkey Bay SE04-05		
	Pybus Bay–NW Arm SE04-06		
	Eliza Harbor SE04-07		
	E. Southeast Alaska Response Zone 5 G-3-9		
	Mitchell Bay/Angoon SE05-01		
	Sandy Cove SE05-02		
	Pirate Cove SE05-03		
	Cosmos Cove SE05-04		
	Indian River SE05-05		
	Kadashan Bay SE05-06		
	Kelp Bay SE05-07		
	Baby Bear Marine Park SE05-08		
	Chaik Bay SE05-09		
	Crab Bay SE05-10		
	Middle Island (SW Cove) SE05-11		
	Basket Bay SE05-12		

F.	Southeast Alaska Response Zone 6.....	G-3-11
	Pt. Carolus	SE06-01
	Bartlett Cove	SE06-02
	Neka Bay	SE06-03
	Berg Bay	SE06-04
	Hugh Miller Inlet	SE06-05
	North Beardslee Islands	SE06-06
	Dundas Bay	SE06-07
	South Marble Island.....	SE06-08
	Spokane/Sandy Cove	SE06-09
G.	Southeast Alaska Response Zone 7.....	G-3-13
	Mendenhall River Mouth.....	SE07-01
	Auke Bay West.....	SE07-02
	Pt. Couverden	SE07-03
	Point Bridget/Echo Cove	SE07-04
	St. James Bay	SE07-05
	Berner's Bay	SE07-06
H.	Southeast Alaska Response Zone 8.....	G-3-15
	Chilkat River.....	SE08-01
	Taiya River	SE08-02
	Lutak/Chilkoot River	SE08-03
I.	Southeast Alaska Response Zone 9.....	G-3-17
	Ankau Lagoon	SE09-01
	Blizhni Point	SE09-02
	Situk River	SE09-03

PART FOUR	References	G-4-1
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GEOGRAPHIC RESPONSE STRATEGIES: PART ONE – INTRODUCTION

Purpose and Scope

These Geographic Response Strategies (GRS) are designed to be a supplement to the Southeast Alaska Subarea Contingency Plan for Oil and Hazardous Substances Spills and Releases, commonly referred to as the Southeast Alaska Subarea Contingency Plan (SCP). GRS provide unified (public, responders, and agencies) priorities and strategies for the protection of selected sensitive areas to aid first responders to an oil spill. The GRS list the sensitive resources of an area and the response strategies, equipment, personnel and logistical information necessary to protect the sensitive areas. Because the U.S. Coast Guard Marine Safety Office, Environmental Protection Agency and the Alaska Department of Environmental Conservation have already approved them, the GRS serve as pre-approved strategies of the Unified Command during the emergency phase of an oil spill response.

Implementation of these Geographic Response Strategies is the third phase of an oil spill response. The first and primary phase of the response is to contain and remove the oil at the scene of the spill or while it is still on the open water, thereby reducing or eliminating impact on shorelines or sensitive habitats. If some of the spilled oil escapes this tactic, the second phase, which is no less important, is to intercept, contain and remove the oil in the nearshore area. The intent of phase two is the same as phase one: remove the spilled oil before it impacts sensitive environments. If phases one and two are not fully successful, phase three is to protect sensitive areas in the path of the oil. The purpose of phase three is to protect the selected sensitive areas from the impacts of a spill or to minimize that impact to the maximum extent practical.

The sites selected for development of Geographic Response Strategies are not meant to be exclusive; other sensitive sites may require protection during any given spill. The fact that a GRS may not have been developed for a certain sensitive site does not mean that site should not be protected if it is threatened by an oil spill.

These strategies are intended to be flexible to allow the spill responders to modify them, as necessary, to fit the prevailing conditions at the time of a spill. Seasonal constraints, such as ice or weather, may preclude implementation of some of the strategies in the winter months. It is not intended that all the sites be automatically protected at the beginning of a spill, only those that are in the projected path of the spill. The strategies developed for the selected sites were completed with a focus on minimizing environmental damage, utilizing as small a footprint as needed to support the response operations and selecting sites for equipment deployment that will not cause more damage than the spilled oil. To test these GRS, each site may be visited and equipment deployed according to the strategy, to ensure that the strategy is the most effective in protecting the resources at risk at the site. Revisions will be made to the strategies, and this document, if changes are indicated by site visits, drills or actual use during spills.

The Southeast Alaska Subarea has been divided into nine geographic response zones (Figure G-1-1). The zones boundaries were chosen to reflect the geography and population centers in Southeast Alaska.

How to Use These Geographic Response Strategies

The information provided here supplements information provided in the Southeast Alaska 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. This document is intended for use by response professionals already familiar with spill response techniques.

Part 2 contains a general description of the protection/recovery tactics utilized throughout the GRS. Each general description contains the strategy objective, deployment depictions, resource sets required to implement the strategy, and deployment considerations and limitations. These general strategies may be adapted to produce a protection scheme for any site in Southeast Alaska.

Part 3 contains site-specific response strategies. An index at the beginning of each sub-section shows the location of the selected sites. Each GRS consists of two parts: 1) a graphic showing a map, deployment diagram, picture and implementation notes; and 2) a table giving the location description, response strategy, response resources, staging area, site access, natural resources being protected and special considerations.

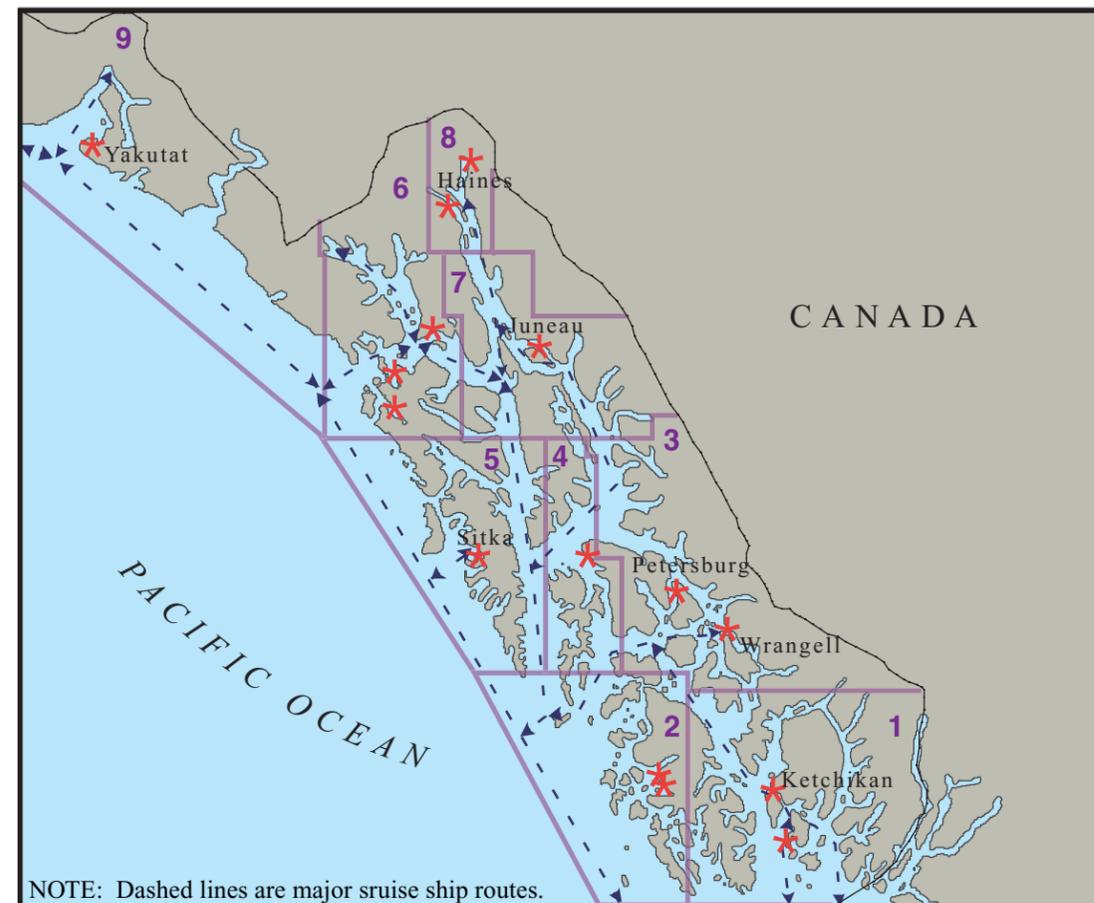


Figure G-1-1. Southeast Alaska Geographic Response Zones

Who to Contact for Input

Comments and recommendations on these GRS 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, Southeast Alaska
2760 Sherwood Lane, Suite 2A
Juneau, AK 99801

How the Document Was Developed

These GRS were developed through a cooperative, work group process involving federal, state, and local spill response experts working with representatives from the oil transportation industry, natural resource management agencies, and tribal organizations. The Southeast Alaska GRS work group developed the GRS for each of the nine response zones. The work group consisted of representatives from the following organizations:

- Alaska Department of Environmental Conservation
- National Park Service
- Southeast Alaska Petroleum Resource Organization
- United States Coast Guard
- United States Department of Interior
- United States Fish and Wildlife Service

The first step of the GRS process was to identify all sensitive areas that have potential to be classified as “Areas of Major Concern” under the criteria established in the Southeast Alaska SCP. Members of the Southeast Sensitive Areas Work Group (SAWG), participated in this process along with the GRS work group. The SAWG developed site selection matrices (Tables G-1-1 through G-1-10) to aid in the selection of sites in each of the nine response zones.

These potential sites were evaluated by the additional criteria of 1) risk of being impacted from a water borne spill; and 2) feasibility of successfully protecting the site with existing technology. Using this process, the SAWG selected a preliminary list of sites that were released for public input. Public hearings were advertised and held in Juneau, Petersburg, Sitka, and Ketchikan to solicit feedback from tribal representatives, user groups, environmental organizations and the general public. Based on the feedback received, the SAWG made the final site selections for each zone. Additional sites may be selected in the future.

The GRS work group then developed draft strategies for each selected site. The draft strategies were reviewed by the SAWG and the final draft was forwarded to the Southeast Alaska Subarea Committee with the recommendation that it be adopted as part of the Southeast Alaska SCP.

Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
H = Harbor Seal rookeries and haulouts	H = Herring spawning areas	S = Colony of over 500 seabirds	M = Marsh or estuary	R = Report any cultural resources found during operations to the FOSC Historic Properties Specialist	F = High use salmon harvest areas	H = High use commercial wildlife viewing	S = Intensive commercial salmon fishing	H = State critical habitat, refuge, sanctuary	B = Buildings on pilings
S = Steller Sea Lion rookeries and haulouts	E = Eulachon spawning concentration	C = Waterfowl & shorebird migratory, molting, and winter concentration	T = Sheltered tidal flat	I = FOSC Historic Properties Specialist should Inspect site prior to operations	I = High use marine invertebrate area		H = Salmon hatchery or ocean pen	P = State Park	M = Marinas and harbors
O = Sea otter concentration >100 otters	R = Juvenile fish rearing in kelp and reefs	M = Marbled murrelet nearshore feeding concentration	R = Sheltered rocky shore	M = FOSC Historic Properties Specialist should Monitor onsite operations			P = Shorebased fish processor	N = National Park and Preserve	F = Floating camps
W = Humpback whale summer, fall, winter concentration	S = More than 10,000 salmon spawners	K = Kittlitz murrelet (proposed endangered species) habitat	K = Kelp or eelgrass beds				N = Set-net fishery	L = National Landmark	I = Intertidal area of high diversity
			I = Intertidal area of high diversity					R = National Wildlife Refuge	
								I = International Reserve	
								W = Wild & Scenic River	
Source									
Primary sources: SE SCP, NOAA ESI maps, NMFS, ADFG, FWS, NPS data	Primary sources: ADFG, FWS, NMFS data	Primary sources: SE SCP, NOAA ESI maps, FWS Seabird Colony Catalog, ADFG, FWS data	Primary sources: NOAA ESI maps, FWS data	Primary sources: ADNR, USFS	Primary sources: ADFG, USFS data	Primary sources: ADNR, USFS, NPS data	Primary sources: ADFG data	Primary sources: ADNR, NPS, ADFG, FWS, USFS data	Primary sources: USFS, USCG, ADNR data

Table G-1-1. Key to Tables G-1-2 through G-1-10 Southeast Alaska Zone Geographic Response Strategies.

A. SOUTHEAST ALASKA ZONE 1

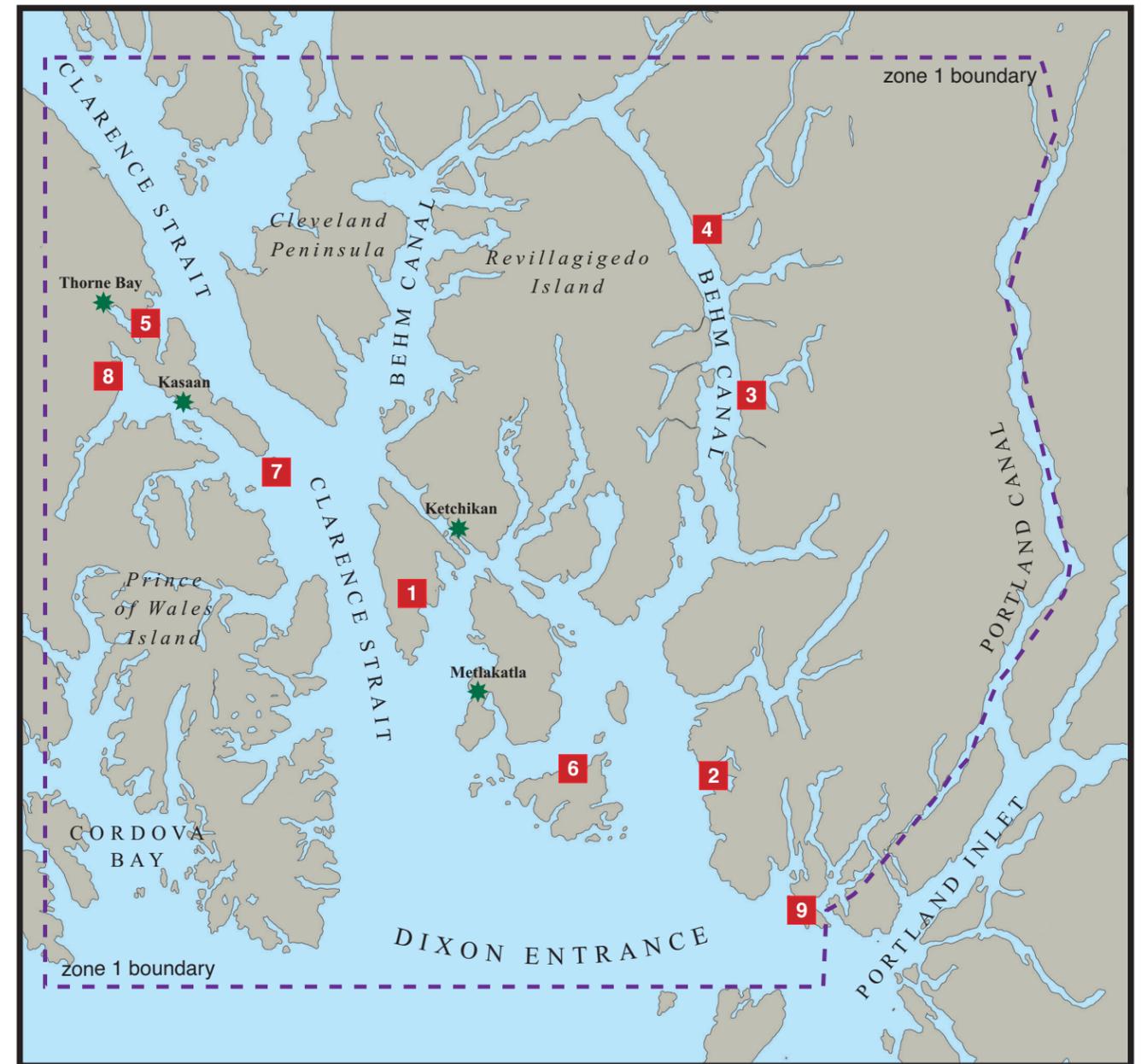
The Work Group developed Table G-1-2 to aid in the selection of sites from within Southeast Alaska Zone 1. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-2 shows the location of GRS sites in Zone 1.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.



SOUTHEAST ALASKA - ZONE 1			May 2003
SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES			
SE01-01 – Bostwick Estuary	SE01-04 – Chickamin River Estuary	SE01-07 – Grindall Island	
SE01-02 – Foggy Bay	SE01-05 – Thorne Bay	SE01-08 – Karta Bay	
SE01-03 – Rudyerd Bay	SE01-06 – Dog Island	SE01-09 – Lincoln Channel	

Figure G-1-2. Southeast Alaska GRS Index Map Zone 1.

Table G-1-2. **Zone 1** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Bostwick Estuary	1	SE01-01	Ketch B-6	55° 14'	131° 44'		R,S	C	T,M,K	M	I				
Foggy Bay	1	SE01-02	Prince Rupert D-3*	54° 57'	130° 58'	S,H	S,H	C		M					
Rudyerd Bay	1	SE01-03	Ketch C-3	55° 33'	130° 49'	S,H	S	C	T,M	M					
Chikamin River Estuary	1	SE01-04	Ketch D-3	55° 48'	130° 57'		S	C	M,T	M					
Thorne Bay	1	SE01-05	Craig C-2	55° 40'	132° 30'		S			M	F,I				M
Dog Is., N end of Duke Is.	1	SE01-06	Prince Rupert D-4	54° 59'	131° 19'	S,H,O	S,H	C	T	I			Herring		
Grindall Is.–haulout	1	SE01-07	Craig B-1	55° 26'	132° 07'	S,H		C		I		H		P	
Karta Bay	1	SE01-08	Craig C-2	55° 34'	132° 33'	S,H	S	C	T,R	M	F				
Lincoln Channel	1	SE01-09	Prince Rupert C-3	54° 43'	130° 40'	H			T	I					
Tamgas Harbor	2		Ketch A-5	55° 05'	131° 46'		S		K, M		I	H			M
Burroughs Bay	2		Ketch D-4	55° 59'	131° 14'		E,S	C				H			
Carroll Cr. Estuary	3		Ketch C-5	55° 39'	131° 21'			C							
George Inlet Salt Chuck	3		Ketch B-5	55° 20'	131° 30'			C							
Helm Bay Estuary	3		Ketch C-6	55° 40'	132° 01'			C							
Moser Bay Estuary	3		Ketch C-5	55° 34'	131° 41'			C							
Port Stewart Estuary	3		Ketch C-6	55° 44'	131° 52'			C							
Roosevelt Lagoon/Naha Bay	3		Ketch C-5	55° 35'	131° 36'			C							
Settlers Cove	3		Ketch C-6	55° 30'	131° 14'				R,I					P	
Traitors Cove Salt Chuck	3		Ketch C-5	55° 42'	131° 39'			C							
Vallenar Bay Estuary	3		Ketch C-6	55° 22'	131° 50'			C							
Yes Bay/Wolverine Cr. Estuary	3		Ketch C-6	55° 54'	131° 47'			C							
Boca de Quadra			Ketch A-3	54° 57'	129° 59'	H		C							
Dall Bay			Ketch A-6	55° 09'	131° 44'									P	
Hydaburg			Craig A-3	55° 12'	132° 48'										
Joe Mace Island			Peters B-5	56° 20'	133° 37'				R,K,I					P	
Manzanita Bay			Ketch C-3	55° 27'	129° 02'	H	E	C							
Naha Bay			Ketch C-5	55° 35'	131° 42'										
Percy Is.–haulout			Ketch C-5	54° 56'	131° 35'										
Portage Cove			Ketch C-5	55° 38'	129° 07'	H		C						P	
Refuge Cove			Ketch C-5	55° 24'	131° 45'									P	
Smeaton Bay			Ketch C-5	55° 16'	128° 58'	H		C							
Thom's Place			Ketch C-5	56° 10'	132° 07'									P	
Totem Bight			Ketch C-5	55° 25'	131° 46'									P	
Walker Cove			Ketch C-5	55° 34'	128° 58'	H		C							

* ESI information not available

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

B. SOUTHEAST ALASKA ZONE 2

The Work Group developed Table G-1-3 to aid in the selection of sites from within Southeast Alaska Zone 2. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-3 shows the location of GRS sites in Zone 2. No sites were selected for Zone 2 because the sensitive areas identified were along exposed areas of the Gulf of Alaska where response equipment is not effective or dangerous to deploy.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.

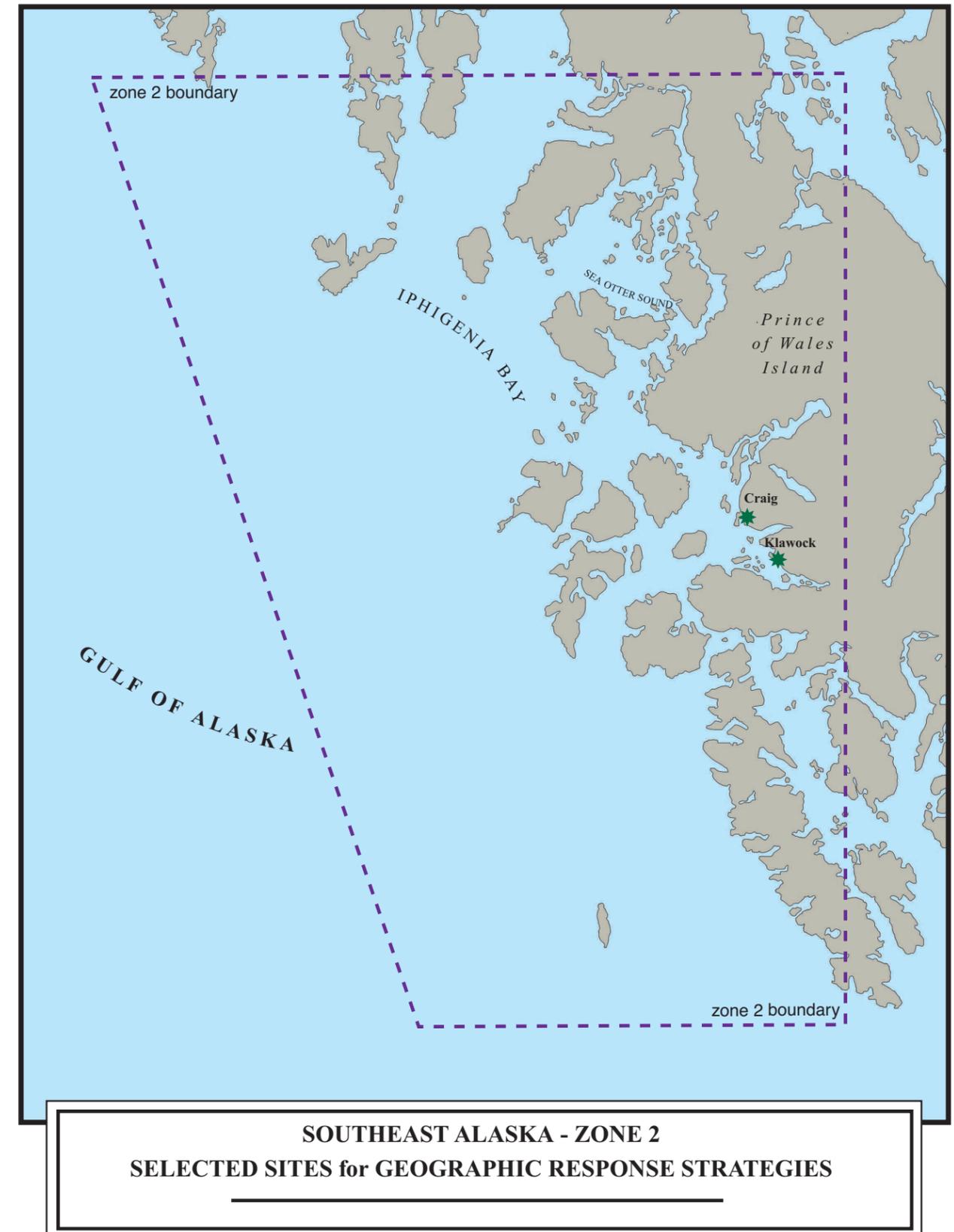


Figure G-1-3. Southeast Alaska GRS Index Map Zone 2.

Table G-1-3. **Zone 2** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Barrier Island in Cordova Bay	1		Ketch B-6	54° 48'	132° 26'	O		S							
Spanish Island	2		Prince Rupert D-3*	55° 58'	134° 07'	S, O									
Warren Island	2		Ketch_ C-3	55° 53'	133° 53'			S,M							
Forrester Island	3		Ketch D-3	54° 50'	133° 31'	S		S							
Maurelle Island	3		Craig C-2	55° 38'	133° 37'	O									
Big Salt Lake			Prince Rupert D-4	55° 37'	133° 00'			S							
Craig			Craig B-1	55° 28'	133° 08'										
Hazy Island–outer coast			Craig C-2	55° 52'	134° 35'	S		C,S				H			
Heceta Island–westside			Prince Rupert C-3	55° 47'	133° 33'			S							
Klawock			Craig C-4	55° 33'	133° 05'										
Lowrie Island–outer coast			Dixon Entrance D-5	54° 51'	133° 32'			S							
Craig D-4			Craig D-4	55° 52'	133° 09'			S							
Noyes Island–W. coast			Craig B-6	55° 30'	133° 45'										
Sea Otter Sound			Craig D-5	55° 50'	133° 27'										
Windy Bay (N. Coronation Is.)			Craig D-7	55° 54'	134° 13'	S,O	S	S							

* ESI information not available

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

C. SOUTHEAST ALASKA ZONE 3

The Work Group developed Table G-1-4 to aid in the selection of sites from within Southeast Alaska Zone 3. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-4 shows the location of GRS sites in Zone 3.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.

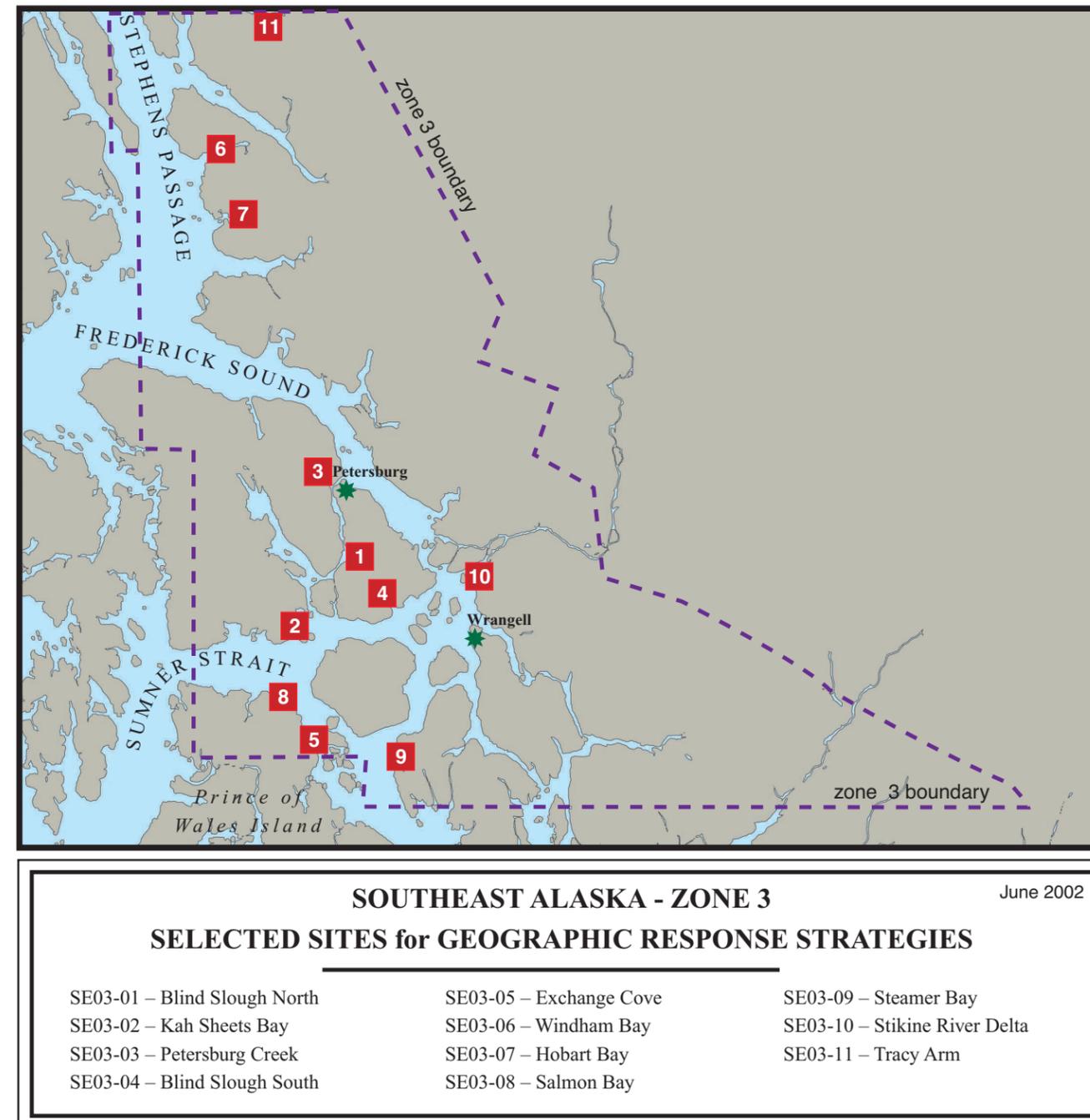


Figure G-1-4. Southeast Alaska GRS Index Map Zone 3.

Table G-1-4. **Zone 3** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Blind Slough North	1	SE03-01	Petersburg C-3	56° 31'	132° 42'		S	C	T,M	M		H			
Kah Sheets Bay	1	SE03-02	Petersburg C-4	56° 30'	133° 06'		S,H	C	T,K	R		H	Herring		
Petersburg Creek	1	SE03-03	Petersburg D-3	56° 49'	132° 59'		S	C	M,I	I					
Blind Slough South	1	SE03-04	Petersburg C-3	56° 32'	132° 44'		S	C	T,M,R	I		H			
Exchange Cove	1	SE03-05	Petersburg A-4	55° 12'	133° 04'	H	S	C	T,K,M	M					
Windham Bay	1	SE03-06	Sumdum C-5*	57° 34'	133° 24'	H	S	C	M, T	M					
Hobart Bay	1	SE03-07	Sumdum B-5*	57° 25'	133° 24'	H	S	C	R	I	I				
Salmon Bay	1	SE03-08	Sumdum B-5*	56° 18'	133° 09'	H	S		M	M					
Steamer Bay	1	SE03-09	Petersburg A-3	56° 09'	132° 41'		S		K	M		H			
Stikine River Delta	1	SE03-10	Petersburg C-2	56° 35'	132° 23'	H	S	C	T,M	M	F	H		I	
Tracy Arm-head	1	SE03-11	Sumdum D-5	57° 51'	133° 35'	H	M,S	K,M,S	T	M		H			
Duncan Canal-N head	2		Petersburg D-4	56° 46'	133° 15'	H		C	T,K			H			
Farragut Bay	2		Sumdum A-4	57° 06'	133° 13'			C							
Muddy River	2		Petersburg D-3	56° 54'	132° 49'			C							
Port Snettishan	2		Sumdum D-6	57° 58'	133° 50'			M							
Endicott Arm	3		Sumdum C-4	57° 42'	133° 30'		M								
LeConte Bay	3		Sumdum C-4	56° 44'	132° 31'		M								
Beecher Pass			Petersburg C-4	56° 35'	133° 01'			C	T,R,K,I		I			P	
Castle River			Petersburg C-4	56° 66'	135° 20'			C							
Petroglyph Beach			Petersburg B-5	56° 28'	132° 22'					M				P	
Port Houghton			Sumdum B-4	57° 19'	133° 17'										
St. John Harbor			Petersburg B-3	56° 26'	132° 57'										

* ESI information not available

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

D. SOUTHEAST ALASKA ZONE 4

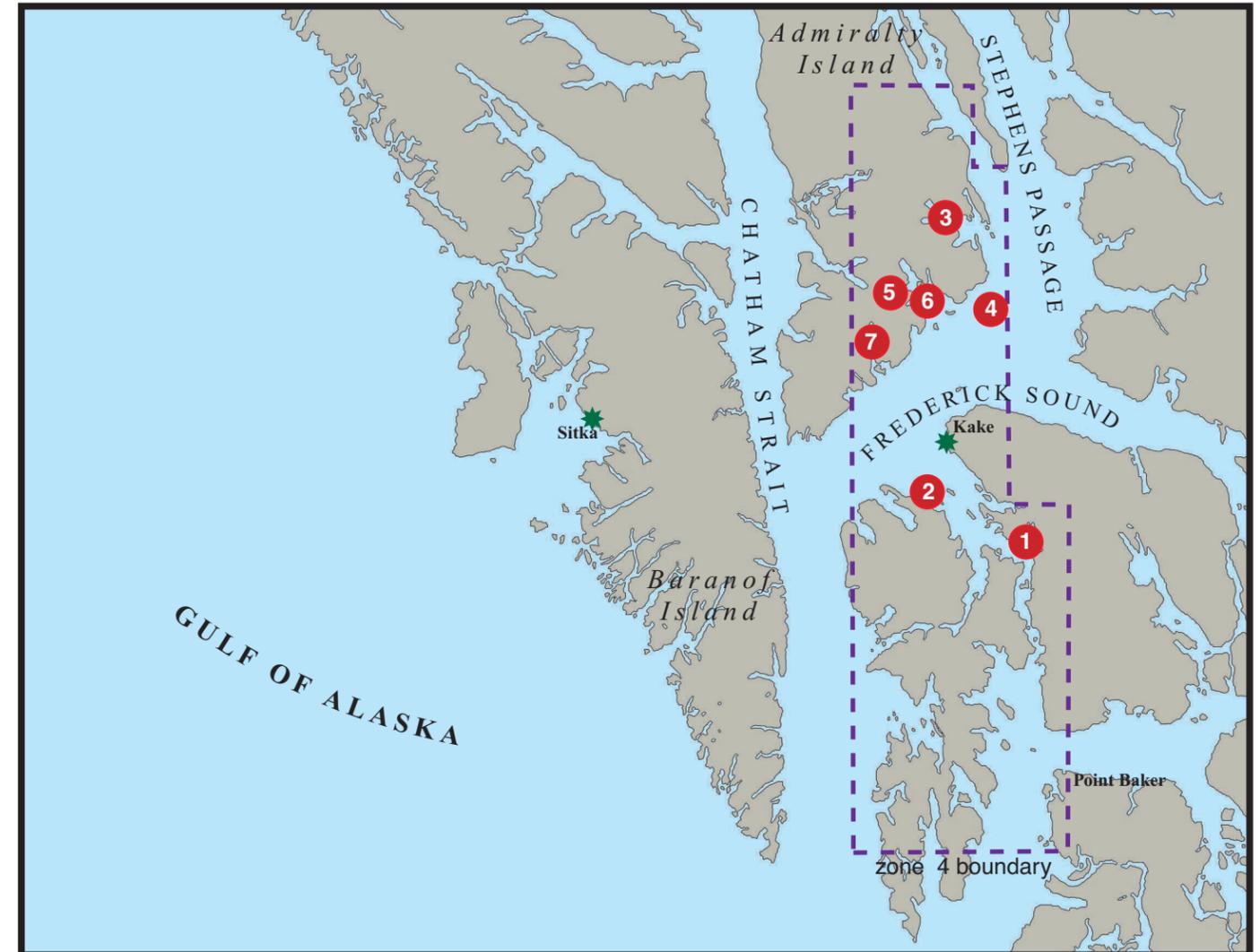
The Work Group developed Table G-1-5 to aid in the selection of sites from within Southeast Alaska Zone 4. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-5 shows the location of GRS sites in Zone 4.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.



SOUTHEAST ALASKA - ZONE 4	
SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES	
SE04-01 – Big John Bay	SE04-05 – Cannery Cove/Donkey Bay
SE04-02 – Keku Islands	SE04-06 – Pybus Bay
SE04-03 – Gambier Bay	SE04-07 – Eliza Harbor
SE04-04 – The Brothers	

Figure G-1-5. Southeast Alaska GRS Index Map Zone 4.

Table G-1-5. **Zone 4** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Big John Bay	1	SE04-01	Petersburg D-6	56° 81'	133° 70'		S	C	T	I	F				
Keku Islands	1	SE04-02	Petersburg D-6	56° 55'	134° 05'	W,O	H	C	M,I,K	M	F	H			
Gambier Bay–NW arm	1	SE04-03	Sitka B-1*	57° 49'	134° 05'	H	S	C	M,T	M		H			
Brothers, The	1	SE04-04	Sumdum B-6*	57° 17'	133° 50'	S,H		C		I		H			
Cannery Cove/Donkey Bay	1	SE04-05	Sitka B-1*	57° 19'	134° 09'	H	S	C	K	I		H	S		
Pybus Bay–NW arm	1	SE04-06	Sitka B-1*	57° 22'	134° 10'	H	S	C	K	M		H	S		
Eliza Harbor	1	SE04-07	Sitka A-1*	57° 12'	134° 17'		S	C	M	I					
Castle River	2		Petersburg C-4	56° 66'	135° 20'										
Hamilton Bay	2		Petersburg D-6	56° 53'	133° 51'			C							
Kadake Bay	2		Petersburg D-6	56° 48'	133° 58'			C							
Kuiu Island–S. end	2		Port Alexander C-1	56° 06'	134° 04'	O									
Rocky Pass	2		Petersburg C-6	56° 70'	133° 43'	W						H			
Security Bay	2		Port Alexander D-1	56° 50'	134° 19'			C	M,T,I						
Kake			Petersburg D-6	56° 58'	133° 56'										
Tebenkof Bay			Port Alexander C-1	56° 30'	134° 12'										

* ESI information not available

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

E. SOUTHEAST ALASKA ZONE 5

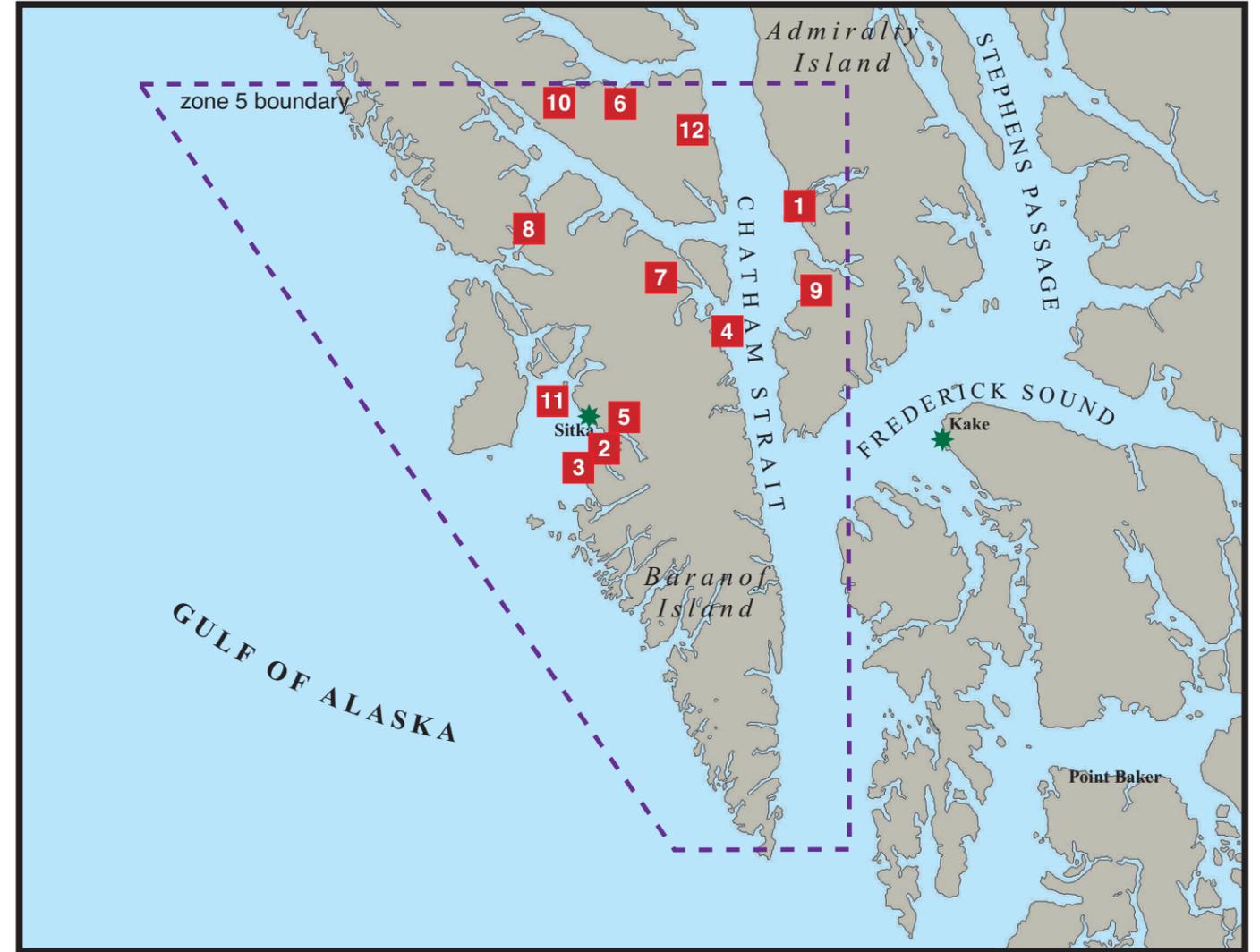
The Work Group developed Table G-1-6 to aid in the selection of sites from within Southeast Alaska Zone 5. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-6 shows the location of GRS sites in Zone 5.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.



SOUTHEAST ALASKA - ZONE 5		
SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES		
SE05-01 – Angoon/Mitchell Bay	SE05-05 – Indian River	SE05-09 – Chaik Bay
SE05-02 – Sandy Cove	SE05-06 – Kadashan Bay	SE05-10 – Crab Bay
SE05-03 – Pirate Cove	SE05-07 – Kelp Bay Middle Arm	SE05-11 – Middle Island (SW Cove)
SE05-04 – Cosmos Cove	SE05-08 – Baby Bear	SE05-12 – Basket Bay

Figure G-1-6. Southeast Alaska GRS Index Map Zone 5.

Table G-1-6. **Zone 5** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Mitchell Bay/Angoon	1	SE05-01	Sitka C-2*	57° 54'	134° 40'	W,H	S	C	I	M	F	H	S,P		
Sandy Cove	1	SE05-02	Port Alexander D-4	56° 59'	135° 19'		S		M,T,R,K	I		H			
Pirate Cove	1	SE05-03	Port Alexander D-5	56° 59'	135° 22'		H		I,T,R,K	R		H			
Cosmos Cove	1	SE05-04	Sitka A-3	57° 14'	134° 52'		S	C	K	M		H			
Indian River	1	SE05-05	Sitka A-4&5	57° 02'	135° 18'		S,H,R	C	M,R,I,K	M		H	H	N	
Kadashan Bay	1	SE05-06	Sitka C-4	57° 43'	135° 13'		S	C	M,T	M					
Kelp Bay	1	SE05-07	Sitka B-4	57° 21'	135° 01'		S		K,M,R,T	R		H			
Baby Bear Marine Park	1	SE05-08	Sitka B-5	57° 26'	135° 34'	H,S	R	C	T,R,K,I	M		H		P	
Chaik Bay	1	SE05-09	Sitka B-2*	57° 19'	134° 33'		S	C	T,M	M	F				
Crab Bay	1	SE05-10	Sitka C-4&5	59° 11'	135° 18'	H	S	C	T,R,K,I	M	F,I	H			
Middle Island (SW cove)	1	SE05-11	Sitka A-5	57° 06'	135° 27'	W,H	H		K,M,T,R,I	R	F,I	H			
Basket Bay	1	SE05-12	Sitka D-3*	57° 39'	134° 54'	H	S		T,M	I					
Sitkoh Bay	1		Sitka C-3	57° 29'	134° 54'				K						
St. Lazeria Island	2		Port Alexander D-4	56° 59'	135° 43'			S	I			H			
Big Bear/Baby Bear			Sitka B-5	57° 25'	135° 34'										
Biorka Island			Port Alexander D-5	56° 51'	135° 32'										
Deep Inlet			Port Alexander D-4	56° 58'	135° 25'		S		K			H	S		
Halibut Pt.			Sitka A-5	57° 06'	135° 24'										
Kasnyku Bay, E. Baranof Island			Sitka A-3	57° 13'	134° 50'										
Little Port Walter-NOAA			Sitka A-3	56° 23'	134° 38'										
Magoun Island			Sitka A-5	57° 10'	135° 33'				R,K,I					P	
Old Sitka			Sitka A-5	57° 07'	135° 22'				M,T,K,I	M	F			P	
Patterson Bay (Deer Lake)			Port Alexander C-3	56° 31'	131° 44'		S								
Paulou Bay															
Redfish Bay			Port Alexander B-3	56° 19'	131° 45'		S								
Redoubt Bay			Port Alexander D-5	56° 54'	131° 52'		S								
Salisbury Sound			Sitka B-6	57° 21'	131° 54'										
Sea Lion Cove			Sitka B-6	57° 18'	135° 50'										

* ESI information not available

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

F. SOUTHEAST ALASKA ZONE 6

The Work Group developed Table G-1-7 to aid in the selection of sites from within Southeast Alaska Zone 6. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-7 shows the location of GRS sites in Zone 6.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.

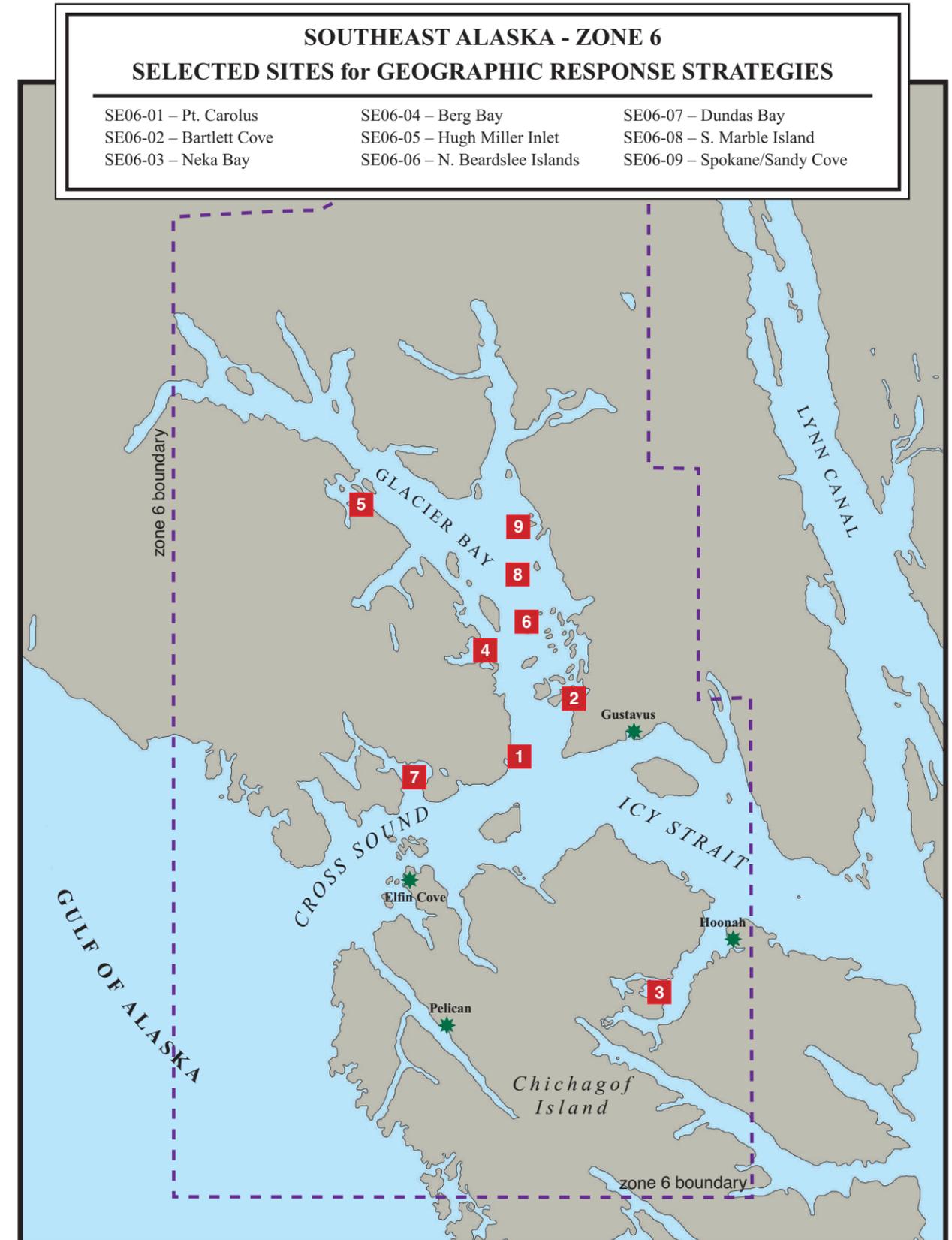


Figure G-1-7. Southeast Alaska GRS Index Map Zone 6.

Table G-1-7. **Zone 6** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Pt. Carolus	1	SE06-01	Mt. Fairweather B-1	58° 22'	136° 03'	H,S,W	R,S	C,M	M,R	M		H		N	
Bartlett Cove	1	SE06-02	Juneau B-6	58° 27'	135° 53'	W	R,S	C,M	M,R	M		H		N	M
Neka Bay	1	SE06-03	Juneau A-5	58° 02'	135° 39'	H,W	S	C,S	T,M,K	M	I	H			
Berg Bay	1	SE06-04	Mt. Fairweather C-1	58° 30'	136° 12'	W	S	C,M	M,R,I	M		H		N	
Hugh Miller Inlet	1	SE06-05	Mt. Fairweather D-2	58° 44'	136° 28'	W		C,M,K	M,R,I			H		N	
North Beardslee Islands	1	SE06-06	Juneau C-6	58° 35'	135° 59'	H,W	R	C,M	M,R,K,I			H		N	
Dundas Bay	1	SE06-07	Mt. Fairweather B-2	58° 27'	136° 31'	H	S	C,M	M,R,T			H		N	
S. Marble Island	1	SE06-08	Mt. Fairweather C-1	58° 38'	136° 02'	W,S,H		S,M	R			H		N	
Spokane/Sandy Cove	1	SE06-09	Juneau C-6	58° 42'	135° 58'	H,W	S	C,M	R			H		N	
Graves Rocks	1		Mt. Fairweather A-3	58° 14'	136° 45'	S	R							N	
Johns Hopkins Inlet	1		Mt. Fairweather A-4	58° 50'	137° 06'	H		C	R			H		N	
Adams Inlet	2		Juneau D-6	58° 51'	135° 59'	H	S	C,M	M,R			H		N	
Murphy Cove	2		Mt. Fairweather B-4	58° 16'	136° 43'		R	C	M,R,K,I	M		H		N	
Salt Chuck River (Icy Straight)	2		Juneau B-3	58° 20'	136° 11'		R,S	C,M	M,R,I	M				N	
Fern Harbor	3		Mt. Fairweather B-2	58° 18'	136° 29'		R	C,M	M,R	M		H		N	
Gull Lake Stream	3		Mt. Fairweather D-1	58° 56'	136° 17'			C	R			H		N	
McBride Inlet	3		Skagway A-3	59° 01'	136° 08'	H		C	R			H		N	
Muir Inlet	3		Mt. Fairweather D-1	58° 54'	136° 05'	H,W		C,M	R	M		H		N	
Pt. Gustavus	3		Juneau B-6	58° 22'	135° 54'	O,W		C	R,K,I	M		H		N	
Reid Inlet	3		Mt. Fairweather D-3	58° 52'	136° 48'			C	R			H		N	
Blue Mouse Cove			Mt. Fairweather D-2	58° 46'	136° 29'										
Cape Spencer			Mt. Fairweather A-2	58° 12'	136° 39'										
Elfin Cove			Mt. Fairweather A-2	58° 11'	136° 20'										B
Fingers Bay			Mt. Fairweather C-1	58° 35'	136° 12'										
Hoonah			Juneau A-5	58° 06'	135° 26'										
Pelican			Sitka D-7	57° 57'	136° 13'										B
Sitakaday Narrows			Mt. Fairweather C-1	58° 28'	136° 02'										
Wolf Point Creek			Skagway A-4	58° 59'	136° 09'										
Wolf Point Creek			Skagway A-4	58 59	136 09										

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

G. SOUTHEAST ALASKA ZONE 7

The Work Group developed Table G-1-8 to aid in the selection of sites from within Southeast Alaska Zone 7. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-8 shows the location of GRS sites in Zone 7.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.

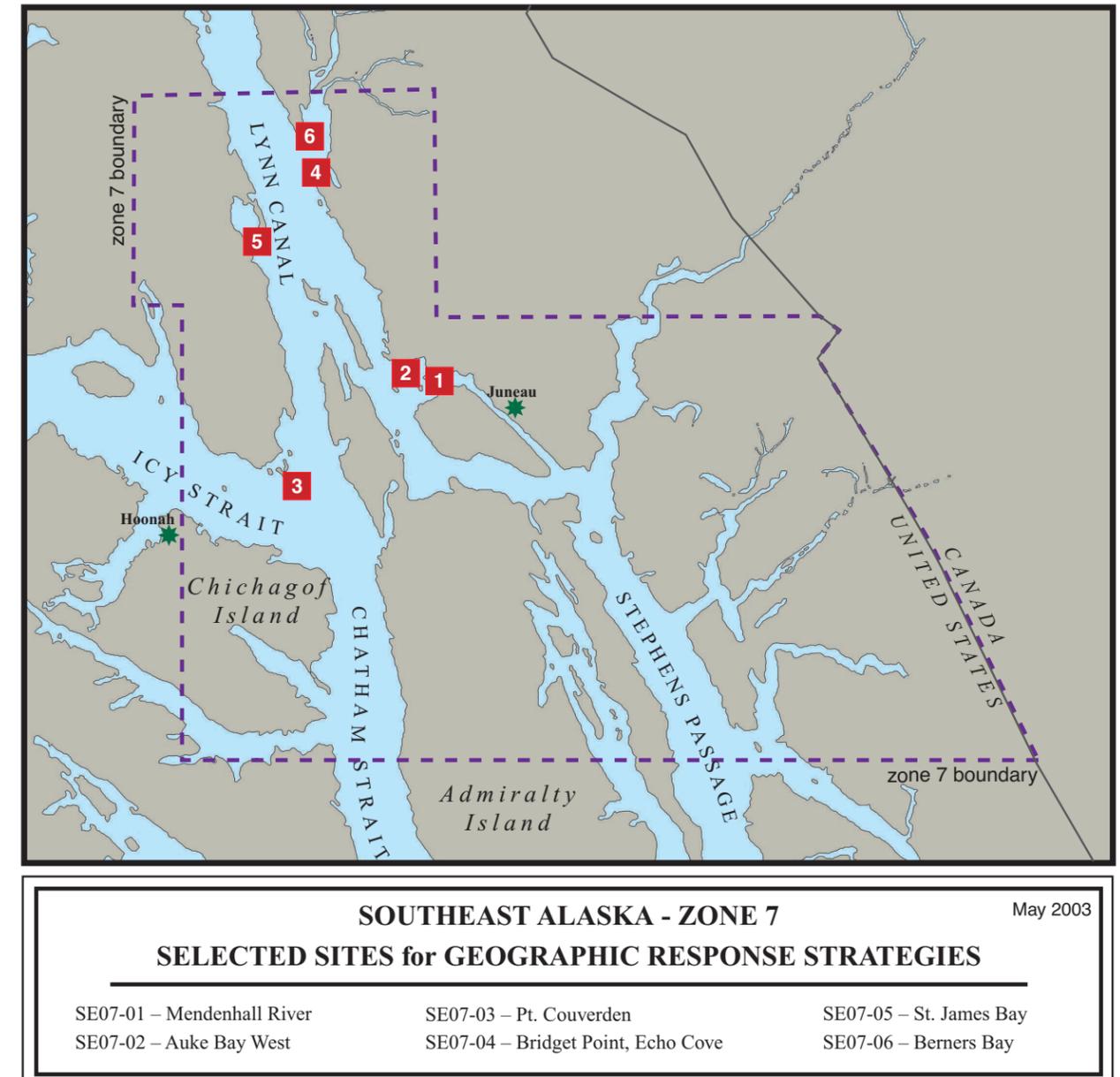


Figure G-1-8. Southeast Alaska GRS Index Map Zone 7.

Table G-1-8. **Zone 7** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Mendenhall River	1	SE07-01	Juneau B-2*	58° 21'	134° 35'	W	S	C	T,M	R		H		H	
Auke Bay West	1	SE07-02	Juneau B-2*	58° 22'	134° 41'			C	K,M	M		H			M
Pt. Couverden-NE & NW	1	SE07-03	Juneau A-4*	58° 11'	135° 03'		S	C	T,I,M	I		H			
Bridget Point, Echo Cove	1	SE07-04	Juneau C-3*	58° 40'	134° 57'		R,E,Hooligan	C	M,T,K,R,I	I		H	S	P	
St. James Bay	1	SE07-05	Juneau C-4*	58° 35'	135° 10'	H	S	C	T,M,K	I		H		P	
Berners Bay	1	SE07-06	Juneau D-3&C-3*	58° 44'	134° 59'	S,H	S,E,H	C	M,T	I		H			
North Gastineau Channel	1		Juneau B-2	58° 19'	134° 28'		S	C	T, M			H		H	
Admiralty Cove	2		Juneau A-2	58° 10'	134° 34'				M,K,I						
Amalga Harbor	2		Juneau A-2	58° 29'	134° 47'	H	R,S		M,K,I		F,I		H	P	M
Douglas Island	2		Juneau B-2	58° 16'	134° 30'			M							
Eagle Beach	2		Juneau C-4	58° 32'	135° 20'		I	C	M,T			H		P	
Taku Inlet	2		Juneau A-1	58° 12'	134° 06'		S				F	H	S		
Oliver Inlet	3		Juneau A-1	58° 08'	134° 20'			C							
Pack Creek	3		Sitka D-1	57° 54'	134° 17'		H,S					H		P	
Shelter Island	3		Juneau B-3	58° 27'	134° 53'				T,R,I			H	S	P	
Angoon			Sitka C-2	57° 30'	134° 35'										
Auke Bay Island			Juneau B-3	58° 22'	134° 39'										
Ernest Gruening			Juneau C-2	58° 28'	134° 47'									P	
Funter Bay			Juneau A-3	58° 14'	134° 54'				K			H		P	
Gilbert Bay			Sumdum D-6	57° 58'	133° 43'			C							
Johnson Creek			Juneau B-2	58° 20'	134° 32'				M					P	
King Salmon Bay			Juneau A-1	58° 01'	134° 18'		S		M						
Seymour Canal			Sitka D-1	57° 39'	133° 56'										
Taku Harbor			Juneau A-1	58° 03'	134° 01'									P	
Wheeler Creek			Juneau A-3	58° 03'	134° 47'		S		T						

* ESI information not available

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

H. SOUTHEAST ALASKA ZONE 8

The Work Group developed Table G-1-9 to aid in the selection of sites from within Southeast Alaska Zone 8. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-9 shows the location of GRS sites in Zone 8.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.

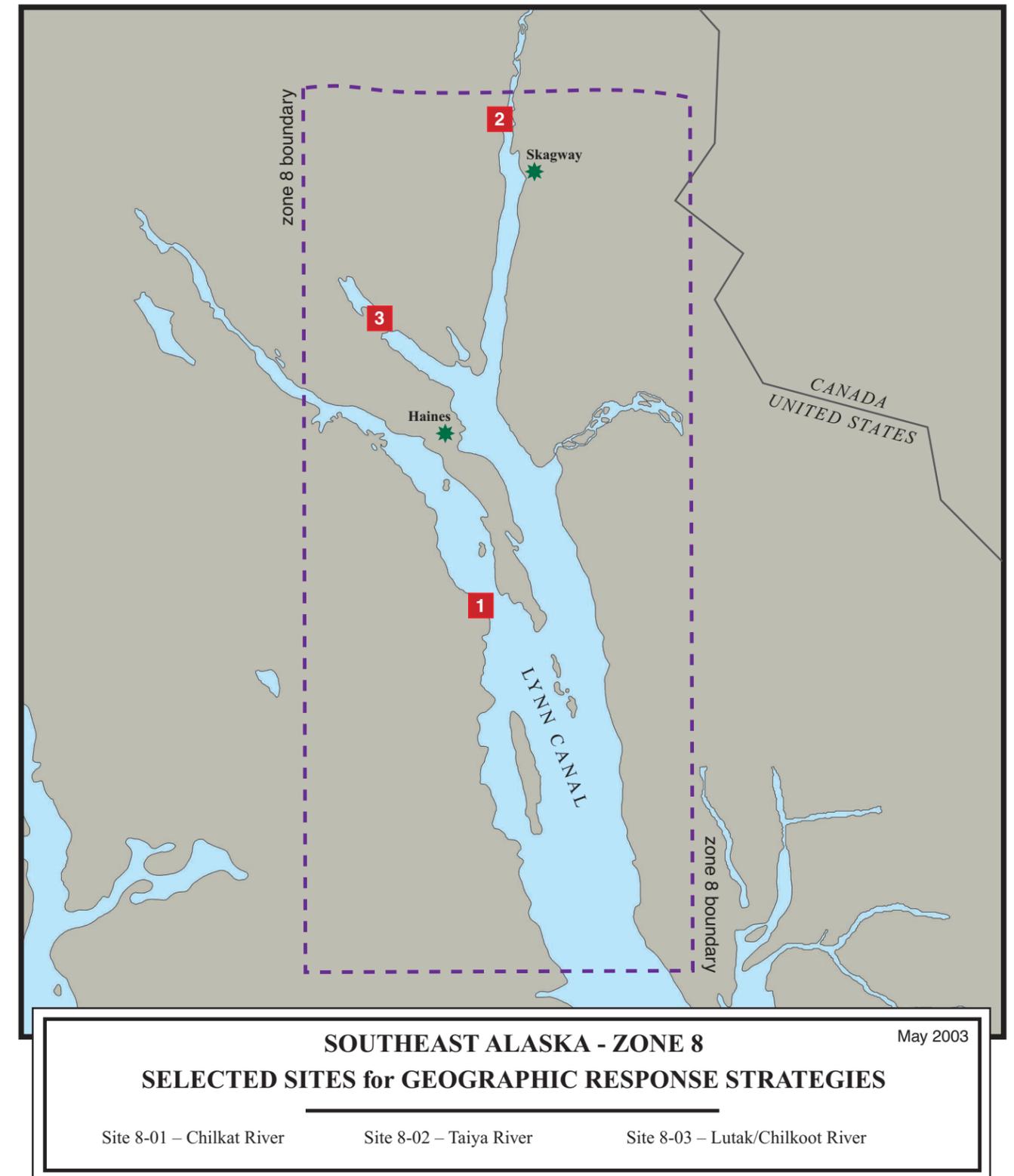


Figure G-1-9. Southeast Alaska GRS Index Map Zone 8.

Table G-1-9. **Zone 8** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Chilkat River	1	SE08-01	Skagway A-2*	59° 14'	135° 33'		E,S,H	C		M	F	H	S		
Taiya River	1	SE08-02	Skagway B-1*	59° 29'	135° 21'	S,H	E,S	C	M,T,R	M		H		N	
Lutak/Chilkoot River	1	SE08-03	Skagway B-2*	59° 19'	135° 33'		E,S	C	T	M	F, I	H	S		
Chilkat	2		Skagway B-3	59° 09'	135° 21'	S,H	R	C	T,R,K		F,I	H	S	P	
Katzehin River	2		Skagway A-1	59° 12'	135° 18'		S		T, M		F				
Chilkat Island			Skagway A-1	59° 01'	135° 15'	S,H		C	T,R,K	M	I		S	P	
Portage Cove			Skagway A-2	59° 14'	135° 20'									P	
Seduction Point			Skagway A-1	59° 04'	135° 18'									P	
Sullivan Island			Juneau D-4	58° 55'	135° 18'									P	

* ESI information not available

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

I. SOUTHEAST ALASKA ZONE 9

The Work Group developed Table G-1-10 to aid in the selection of sites from within Southeast Alaska Zone 9. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern in the columns. Shaded rows in the table represent the sites in the zone (priority 1 sites) selected for initial GRS development.

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

Figure G-1-10 shows the location of GRS sites in Zone 9.

Sites that were not selected for initial GRS development may still require protection during an oil spill, and they may be selected for future GRS development. Spill responders should consider the identification and location of these sites when committing spill equipment and personnel during large oil spills.

A note of caution: As of June 2003, only 33 of the 60 GRS sites have been surveyed and/or tested. Until each GRS has been verified and refined through site surveys and tests, they should be considered as preliminary tactics subject to modification, if necessary.



Figure G-1-10. Southeast Alaska GRS Index Map Zone 9.

Table G-1-10. **Zone 9** site selection table for Geographic Response Strategies.

Locations	Priority	GRS #	ESI Map #	lat (N)	lon (W)	Marine Mammals	Fish	Birds	Coastal Habitat	Cultural Resources	Subsistence Use	Recreational Use	Commercial Fishing	Land Management	Waterfront Activity
Ankau Lagoon	1	SE09-01	Yakutat C-5	59° 33'	137° 47'	H	H, S	C,M	K,R,M	I	F, I	H	S		
Blizhni Pt.–Disenchantment Bay	1	SE09-02	Yakutat D-5&6	59° 50'	139° 49'	H		M,K	M	R			N	N	
Situk River	1	SE09-03	Yakutat B-5	59° 26'	139° 32'	H	E,S	C,S	T,M	R	F	H			
Disenchantment Bay–N.	2		Yakutat D-5	59° 59'	139° 32'	H	R	M,C,K	R,K		I	H		N	
Lituya Bay	2		Mt. Fairweather C-5	58° 38'	137° 34'		R	C	M,R,I	M		H		N	
Yakutat Bay	2		Yakutat C-5	59° 35'	139° 52'	O,W	H,R	M,C,K	R,K		F,I		S,P,N		M
Arrowhead–N. Tsaa Fjord	3		Icy Bay D-2	60° 11'	141° 41'	H		C	M,R			H		N	
Kageet Pt.–Icy Bay	3		Bering Glacier A-1	60° 03'	141° 11'			C	R					N	
Dry Bay			Yakutat A-2	59° 07'	138° 37'	O,H	E,S	C			F	H	N		
E. Shore of Icy Bay			Icy Bay D-2	59° 56'	141° 22'										
Pt. Manby			Yakutat C-7	59° 41'	140° 19'	H	S						S		
Sitkagi Bluffs			Yakutat C-8	59° 42'	140° 41'	S		C							
Yakutat Foreland rivers			Yakutat B-4	59° 15'	139° 52'	S,H	E,S	C	M,T				S		

NOTE: Resource codes key can be found in Table G-1-1 on page G-1-2.

PART TWO – GENERAL PROTECTION/RECOVERY TACTICS

This section contains generalized oil spill response tactics that were used to develop the specific strategies contained in Section 3. Each general tactic description contains objectives, implementation instructions, response resources required, and deployment considerations and limitations. These general tactics are shown as symbols on the GRS maps and the required resources have been adapted to the specific site and listed in the GRS tables in Section 3. Equipment classifications are taken from the [World Catalog of Oil Spill Response Products](#).

VESSEL CLASSIFICATION

The following table contains vessel classifications used in this document.

1	Class 1 vessels are large, deep draft, steel hull vessels generally longer than 150 ft. and over 1,500 HP. These vessels are capable of providing all offshore services required during a response, i.e.: major skimming systems, berthing, command vessel hauling cargo, etc. They generally have large open rear decks, elevated wheelhouses and are USCG inspected. They can be used in any offshore region of Alaska. These vessels may be able to provide limited support services to other vessels in the fleet, i.e.: berthing, meals, fuel, water, repair, etc. They are not restricted by seasonal or most sea ice constraints.
2	Class 2 vessels are slightly smaller than Class 1 vessels, typically less than 150 ft. in length. All are steel hulled with drafts generally less than 12 ft. They have forward or aft houses, (can include larger LCMs), and have adequate deck space for deployment/operation of VOSS systems, boom deployment/towing, and barge assist. They may have limited accommodation space. These vessels may be able to provide limited support services to other vessels in the fleet, i.e.: fuel, water, repair, etc. They are not restricted by seasonal or most sea ice constraints.
3	Class 3 vessels are the largest of the fishing fleet, including large seiners, longliners, gillnet boats and tenders. They may have steel, aluminum or fiberglass hulls. Deck space is adequate for small skimming system deployment/operation. HP is generally over 400, allowing them to tow boom up to ocean size. These vessels have accommodations, but are usually limited to the vessel crew plus 1 or 2. They are not restricted by seasonal use, but will be restricted in sea ice concentration over 70% ice cover.
4	Class 4 vessels are smaller fishing vessels, including seiners, longliners and gillnet boats. They have limited deck space and accommodations. They can be used for towing ocean boom in areas of lower current speed, but are well-suited for towing protected-water or calm-water boom. These vessels work best in nearshore areas with support from Class 1, 2 or 3 vessels. They are perfect for bays and protected waters. They are shallow draft vessels, made of aluminum or fiberglass and usually have no additional accommodations space. They may be limited by seasonal constraints and are not expected to work in sea ice concentrations over 50% ice cover.
5	Class 5 vessels are small, generally less than 30 ft., with no accommodations. These day-use vessels are used for placing and towing protected-water or calm-water boom in nearshore areas or river mouths. They may be used for scouting, wildlife hazing/capture, and miscellaneous assignments within various on-water task forces. These vessels may be limited by seasonal constraints.
6	Class 6 vessels are work boats or skiffs, open small boat type vessels, generally with outboard motors and no accommodations. They may be used to handle protected-water or calm-water boom in nearshore areas or river mouths and other miscellaneous assignments within on-water task forces. Class 6 vessels are generally not suited for transport/towing/working in exposed waters or handling long arrays of boom.
7	Class 7 vessels are passenger charter vessels designed and licensed to carry passengers such as supervisors, media, or regulatory agency representatives. They are generally for day use and can also be used to support safety staff, wildlife hazing/capture, and logistics support.
8	Class 8 vessels are inspected or uninspected towing vessels, designed and equipped for towing large or small vessels.
9	Class 9 vessels are dive vessels, designed or equipped to support diving operations.
10	Class 10 vessels are salvage vessels, designed or equipped to support marine salvage operations.
11	Class 11 vessels are tank barges or tank vessels designed and equipped to carry liquid cargoes.

SYMBOLS

The following are the symbols used in the GRS maps to depict a general strategy:

Tactical Information	
A. Deflection Booming	
 Deflection Booming	
 Deflection Booming, River Mouth	
 Deflection Booming, Live	
B. Diversion Booming	
 Diversion Booming, Fixed	
C. Exclusion Booming	
 Exclusion Booming	
D. Shoreside Recovery	
 Shoreside Recovery, Marine Access	
 Shoreside Recovery, Land Access	
E. Marine Recovery	
 Marine Recovery	
F. Free-oil Recovery	
 Free-oil Recovery, Shallow Water	
 Free-oil Recovery, Open Water	
G. Passive Recovery and Debris Removal	
 Passive Recovery and Debris Removal, Marine Access	
 Passive Recovery and Debris Removal, Shoreside Access	
 Passive Recovery, Marine Mammal Haulout	
H. Cold Water Deluge	
 Cold Water Deluge, Marine Access	
 Cold Water Deluge, Shoreside Access	
I. Dam	
 Dam	
 Underflow Dam	

A. DEFLECTION BOOMING

Objective & Strategy

The objective of deflection booming is to direct spilled oil away from one location to another or to simply change the course of the slick. The two alternatives for this technique are Fixed Deflection and Live Deflection.

In fixed deflection, boom is anchored to the shoreline or bottom. This technique consists of oil spill boom placed at an angle to the current and uses the movement of the current to assist in response operations. One basic deployment technique for fixed deflection is to secure/anchor one end of the boom up-current from the selected deflection site. Then place additional anchor systems to the boom to achieve the desired deflection angle with the least amount of entrainment or escapement. Boom arrays may have to be cascaded in short sections to prevent entrainment.

In live deflection, the boom is attached to vessels and held in position by the power of the vessels or one end of the boom is anchored and the other end held in position with a vessel. Live deflection is a very difficult tactic to execute. It should only be utilized where fixed deflection can not be achieved, usually because deep water precludes anchoring.

Deflection Boom (single boom): Boom is deployed from a site at an optimum angle to the current and anchored to deflect the oil away from a location.

Deflection Boom (cascade): Several booms are deployed in a cascade configuration when a single boom cannot be used because of fast current or because it is necessary to leave openings in the boom for vessel traffic, etc. This configuration can be used in strong currents where it may be impossible to effectively deploy one continuous section of boom. Shorter sections of boom used in a cascade deployment are easier to handle in faster water, thereby increasing efficiency. Additional equipment may be required to set and maintain this system as compared to the single boom configuration.

Resources for this module have been defined as an increment of 200 ft. of boom with associated support equipment. Quantity of units required will be determined by site, and resource sets may need to be refined as site specific requirements dictate.

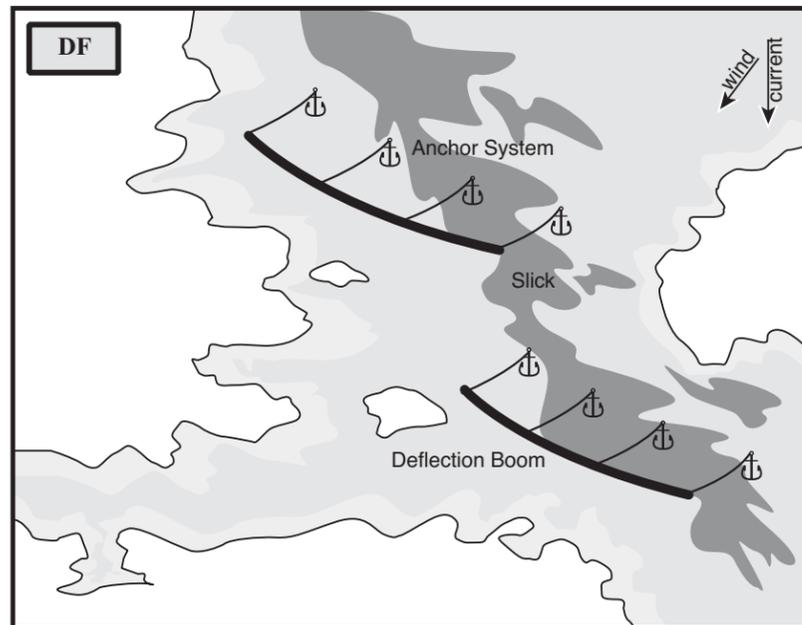


Figure G-2-1. Deflection booming, fixed cascaded array.



Figure G-2-2. Deflection booming, live.

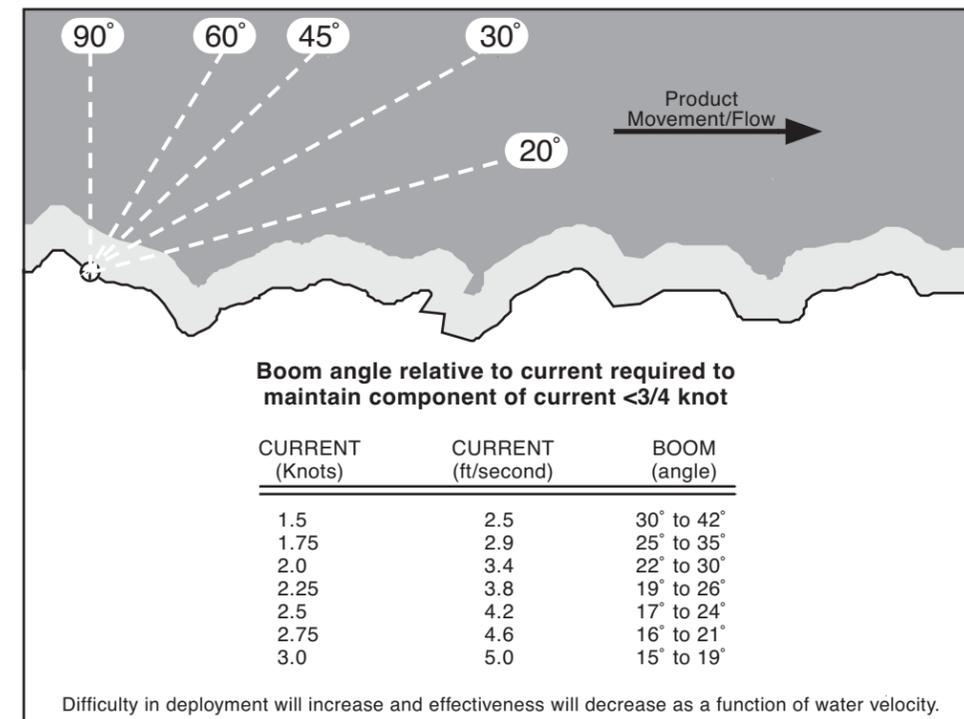


Figure G-2-3. Deflection booming deployment configurations.

Note: Some of the figures in this section were taken from the Alaska Clean Seas Technical Manual with Alaska Clean Seas' permission.

Resources

Deflection Booming, River Mouth DF-R

Direct Resources

Description	Type	Function	Quantity
Boom	Calm/Protected water	Deflection booming	200'
Anchor systems	40 lbs.	Securing boom	2
Rigging/Tackle	Misc.		

Support Resources*

Description	Type	Function	Quantity
Vessels	Vessel Class 5/6	Booming support	2
Personnel***	Crew & Tech./Shift		3 to 10

Deflection Booming, Exposed Shoreline DF

Direct Resources

Description	Type	Function	Quantity
Boom**	Protected water	Deflection booming	200'
Anchor systems	≥ 60 lbs.	Securing boom	2
Rigging/Tackle	Misc.		

Support Resources*

Description	Type	Function	Quantity
Vessels	Vessel Class 3/4/6	Booming support	2
Personnel***	Crew & Tech./Shift		3 to 10

Deflection Booming, Live DF-L

Direct Resources

Description	Type	Function	Quantity
Boom	Protected water	Deflection booming	200'
Anchor Systems	-	-	-
Rigging/Tackle	Misc.		

Support Resources*

Description	Type	Function	Quantity
Vessels	Vessel Class 3/4	Booming support	2
Personnel***	Vessel Crew/Shift		4 to 6

Deployment Considerations and Limitations

- Calm/Protected water boom (6" x 24" / 18" x 42") are most commonly used for this tactic.
- Do not assume 100% efficiency with one boom system.
- Readjust angles and widths between boom sections as necessary to meet changing conditions (tides, currents, and winds).
- Constant monitoring of system efficiency is required.
- Deployment planning should be based on average high tidal conditions.

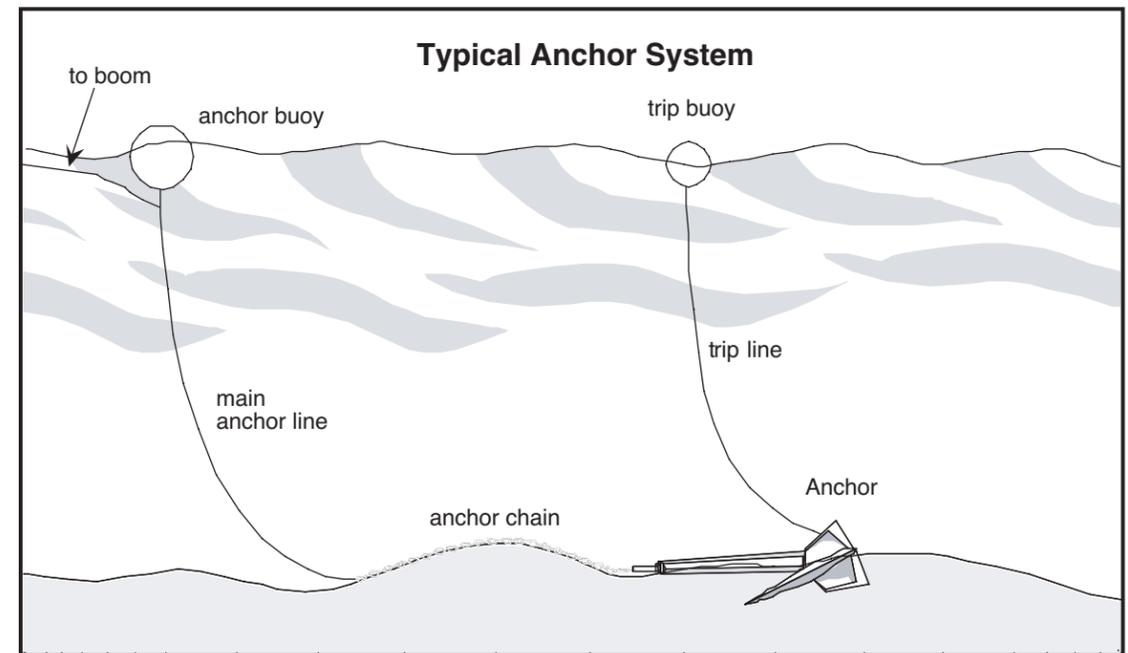


Figure G-2-4. Boom angle relative to current.

* Support resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending the systems after deployment.

** Boom types are defined in the World Oil Catalog.

*** Personnel includes vessel crew.

B. DIVERSION BOOMING

Objective & Strategy

The objective of diversion booming is to divert the spilled oil from one location or direction of travel to a specific site for recovery.

This technique consists of boom and anchor systems placed at an optimum angle to the current, using the movement of the current to assist in response operations. One basic deployment technique is to secure/anchor one end of the boom up-current from the selected recovery site, then secure additional anchor systems to the boom to achieve the desired diversion with the least amount of entrainment or escapement.

Diversion Boom (single boom): Boom is deployed from one bank at an optimum angle to the current and secured/anchored to divert the oil to an eddy, quiet water, or collection beach for recovery.

Diversion Boom (cascade): Several booms are deployed in a cascade configuration when a single boom cannot be used because of fast current or because it is necessary to leave openings in the boom for vessel traffic, etc. This configuration can be used in strong currents where it may be impossible to effectively deploy one continuous section of boom. Shorter sections of boom used in a cascade deployment are easier to handle in faster water, thereby increasing efficiency of oil control. Additional equipment may be required to set and maintain this system as compared to the single boom configuration.

Chevron boom configurations may be used in fast water. Two booms are deployed from an anchor in the middle of the stream/river and then attached to each bank. A closed chevron configuration is used to divide a slick for diversion to two or more recovery areas. An open chevron can be used where boat traffic must be able to pass. In the open chevron configuration the two booms are anchored separately midstream, with one anchor point up-stream or downstream of the other. An inverted chevron can also be used to funnel the oil slick to a marine recovery unit anchored mid-channel.

Resources for this module have been defined as an increment of 200 ft. of boom with associated support equipment. Quantity of units required will be determined by site and resource sets may need to be refined as site specific requirements dictate.

Diversion Booming Deployment Configurations

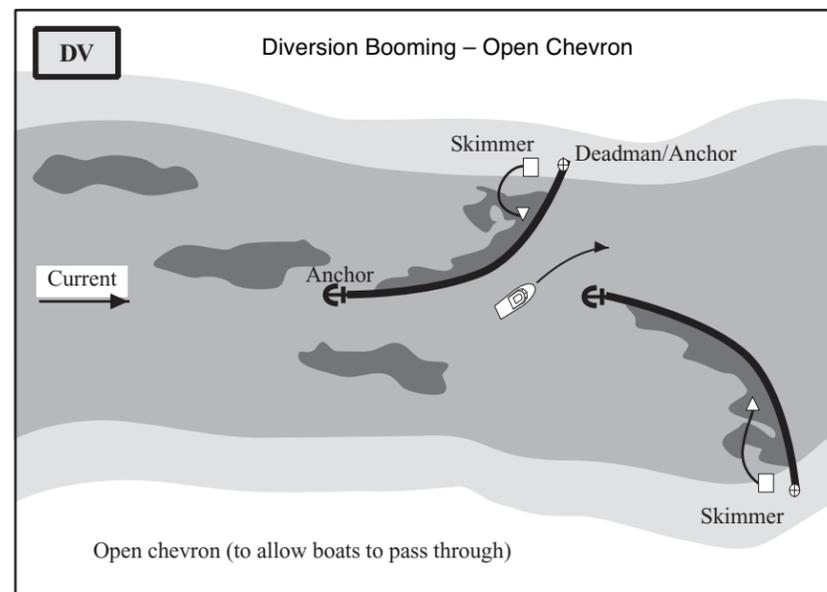


Figure G-2-5. Diversion booming, open chevron.

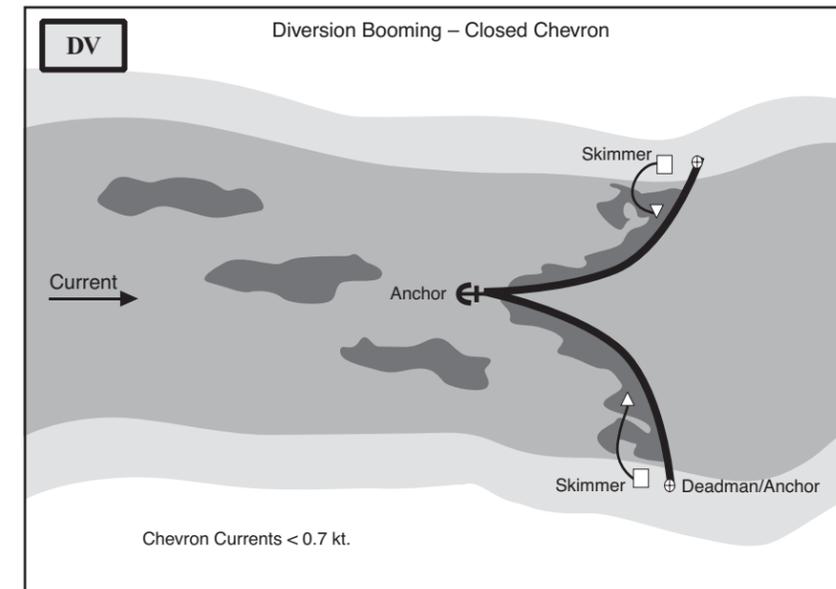


Figure G-2-6. Diversion booming, closed chevron, on-shore skimming.

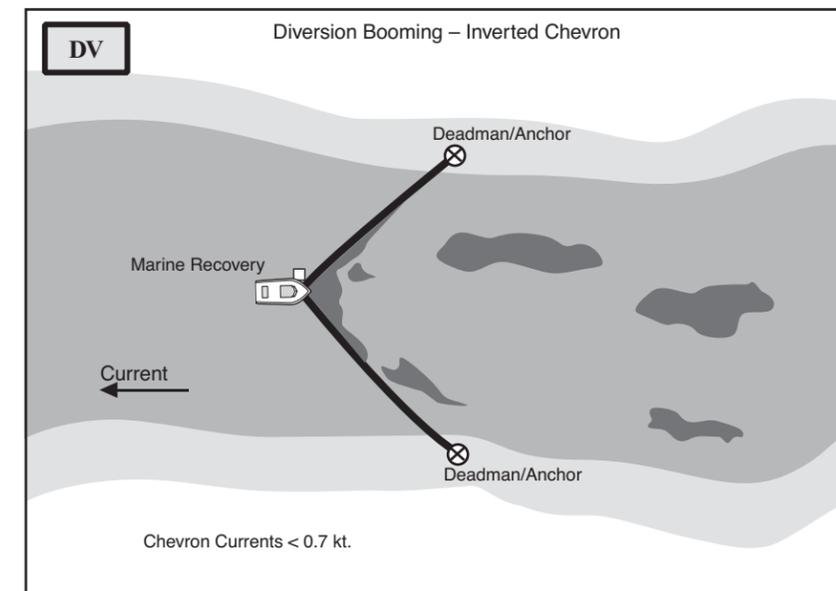


Figure G-2-7. Diversion booming, inverted chevron, marine skimming.

Resources

Diversion Booming, Fixed DV

Direct Resources

Description	Type	Function	Quantity
Boom	Calm/Protected water	Diversion booming	200'
Anchor systems	40 lbs.	Securing boom	2
Rigging/Tackle	Misc.		

Support Resources*

Description	Type	Function	Quantity
Vessels	Vessel Class 3/4/5/6	Booming support	2
Personnel**	Crew & Tech./Shift		3 to 10

* Support Resources may need to be re-evaluated and in most cases decreased when deploying multiple units or tending the system after deployment.

** Personnel includes vessel crew.

Deployment Considerations and Limitations

- Calm/Protected water boom are most commonly used for this tactic.
- Do not assume 100% efficiency with one boom system.
- Readjust angles and widths between boom sections as necessary to meet changing conditions.
- Constant monitoring of system efficiency is required.
- Deployment planning should be based on average high tidal conditions.
- See Figure G-2-8 for anchor system components.
- Title 16 permit required to work inside an anadromous stream. Due to the possibility of contaminating spawning habitat, avoid diverting and/or collecting oil inside a stream mouth if possible.
- See Figure G-2-15 for methods to keep oil from contaminating beaches at collection points.

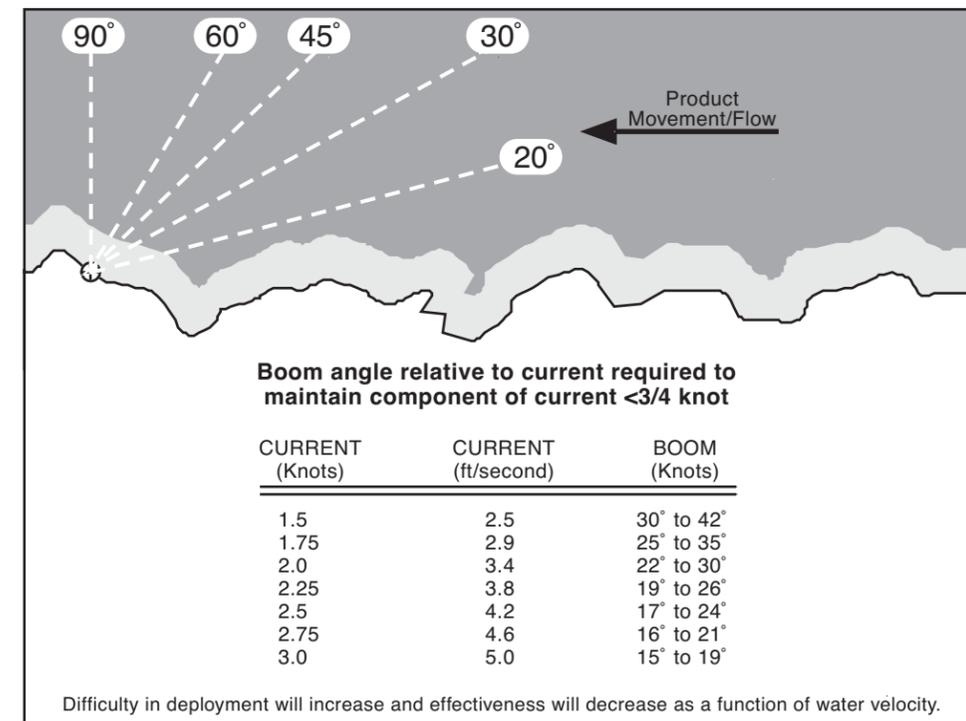


Figure G-2-8. Boom angle relative to current.

C. EXCLUSION BOOMING

Objective & Strategy

The objective of exclusion booming is to exclude any oil slick from entering a sensitive area.

This technique requires the area to be completely boomed off, essentially forming a barrier to protect the location. Conventional containment boom, tidal-seal boom, or a combination of each can be used to exclude spilled oil from a sensitive area. Typically, tidal-seal boom is deployed at the shoreline/water interface on both shores and is secured/anchored into position. Conventional containment boom is then connected to the tidal-seal boom and is secured with additional anchor systems to form a barrier and to maintain shape.

This technique is most efficient in low current areas. Freshwater outflow may assist in maintaining boom configuration and pushing oil away from the area inside the boom.

Resources for this module have been defined as an increment of 200 ft. of containment boom with at least 50 ft. of tidal-seal boom on each shoreward end along with associated support equipment. Quantity of units required will be determined by site, and resource sets may need to be refined as site specific requirements dictate.

Exclusion Booming Deployment Configurations

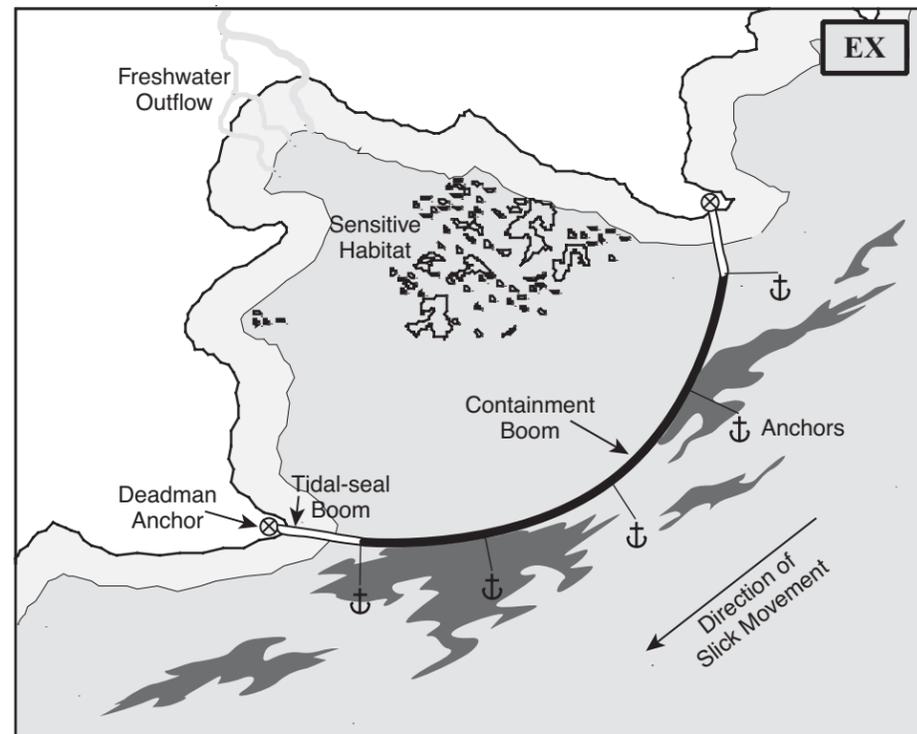


Figure G-2-9. Exclusion booming.

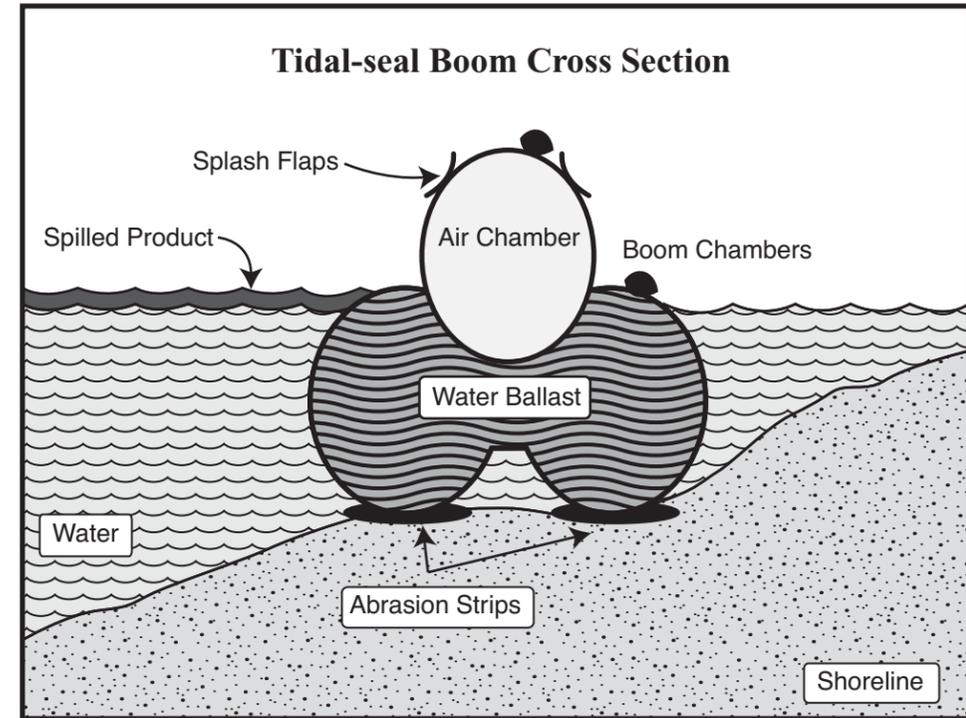


Figure G-2-10. Tidal-seal boom cross section.

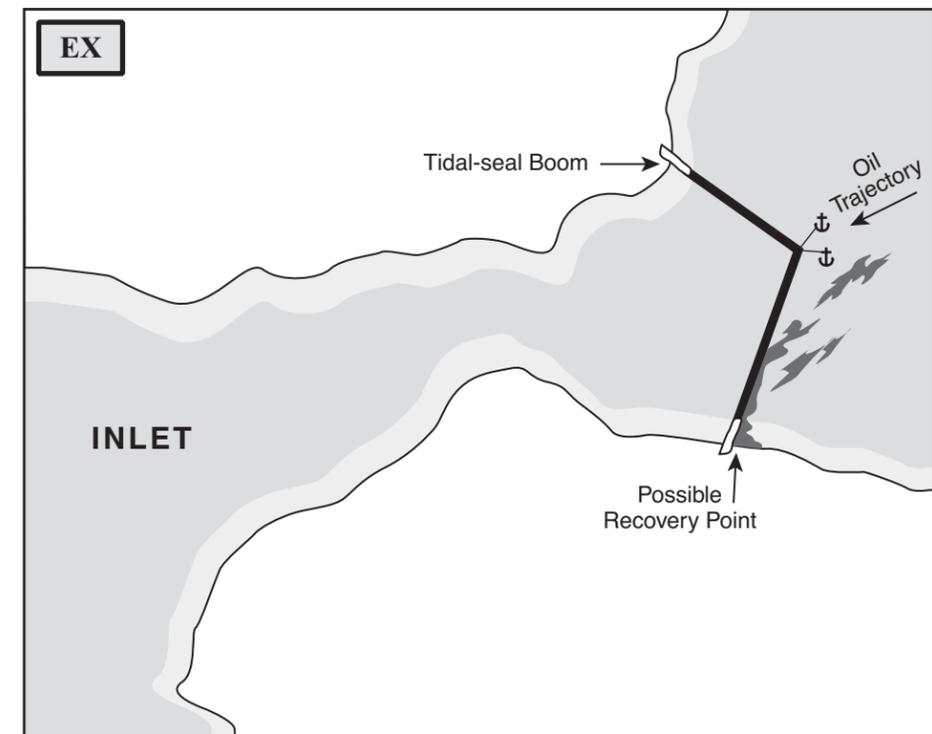


Figure G-2-11. Exclusion booming with apex for exposed shores or currents.

Resources

Exclusion Booming

EX

Direct Resources

Description	Type	Function	Quantity
Boom	Calm or Protected water	Exclusion booming	200'
Boom	Tidal-seal	Exclusion booming	100'
Anchor systems	40 lbs. or 60 lbs.	Securing boom	4
Inflator & Pump	Leaf blower & 2" pump with jumpers	Filling tidal-seal boom	
Rigging/Tackle	Misc.		

Support Resources*

Description	Type	Function	Quantity
Vessels	Vessel Class 3/4/5/6	Booming support	2
Personnel**	Crew & Tech./Shift		3 to 10

* Support Resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending the system after deployment.

** Personnel includes vessel crew.

Deployment Considerations and Limitations

- Calm/Protected water boom, and tidal-seal boom are most commonly used for this tactic.
- Do not assume 100% efficiency with one boom system.
- Readjust anchors to maintain shape through tide cycles.
- Constant monitoring of system efficiency is required.
- Deployment planning should be based on average high tidal conditions.
- Technique may be ineffective in currents over 3/4 of a knot.
- See Figure G-2-3 for boom angle relative to current.
- See Figure G-2-4 for anchor system components.
- A gate may be installed to allow vessels to pass inside the boom.

D. SHORESIDE RECOVERY

Objective & Strategy

The objective of the shoreside recovery unit is to recover spilled oil that has been diverted to a designated recovery site accessible from the shore.

Numerous types of recovery systems (skimmers) are available to recover many types of oil. Recovery systems vary in size and support requirements. There is also a wide range of options for temporary oil storage. Access to the recovery site and the oil type may influence/dictate the options of equipment to be used. If access is restricted to four wheel ATVs, then the systems chosen need to be light enough to be transported by ATV and capable of being setup/deployed by a minimal number of personnel. If access is not restricted, larger systems can be used and deployed by heavy lifting equipment. If the site is accessible by road, vacuum trucks may be used for oil recovery, storage and transport. In all cases, every effort should be made to protect the collection beach. See Figure G-2-13.

The general strategy is to:

- Identify the primary recovery site and access capabilities.
- Determine the appropriate recovery and storage systems based on oil, access, and deployment restrictions.
- Mobilize and deploy equipment to recover and temporarily store the oil from the recovery site.

Resources for this module vary and have been divided into two categories: Restricted Access and No Restrictions. Each unit is defined to contain a recovery device, a storage device and the associated direct and support equipment and materials. Quantity of units required will be determined by site, and resource sets may need to be refined as site specific requirements dictate.

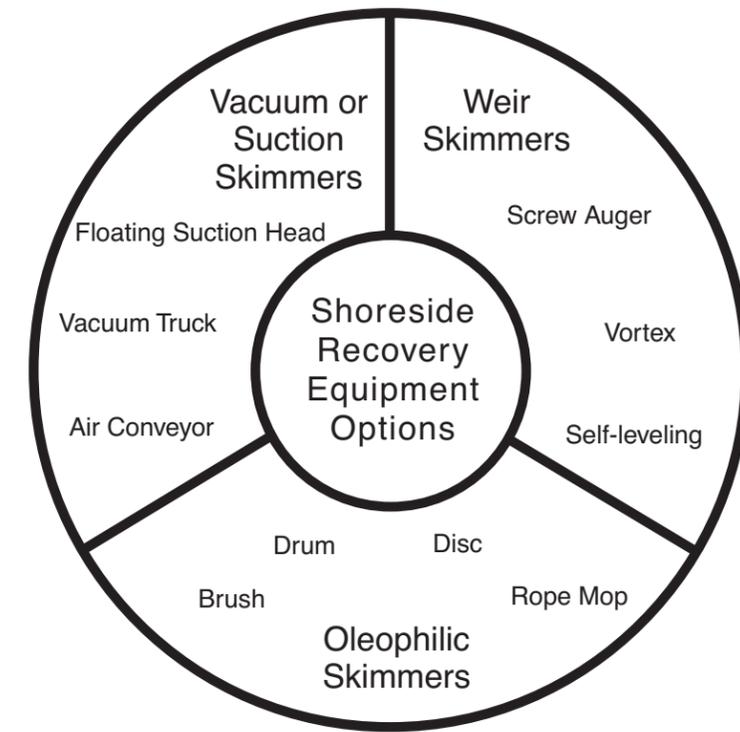


Figure G-2-13. Shoreside recovery unit equipment options.

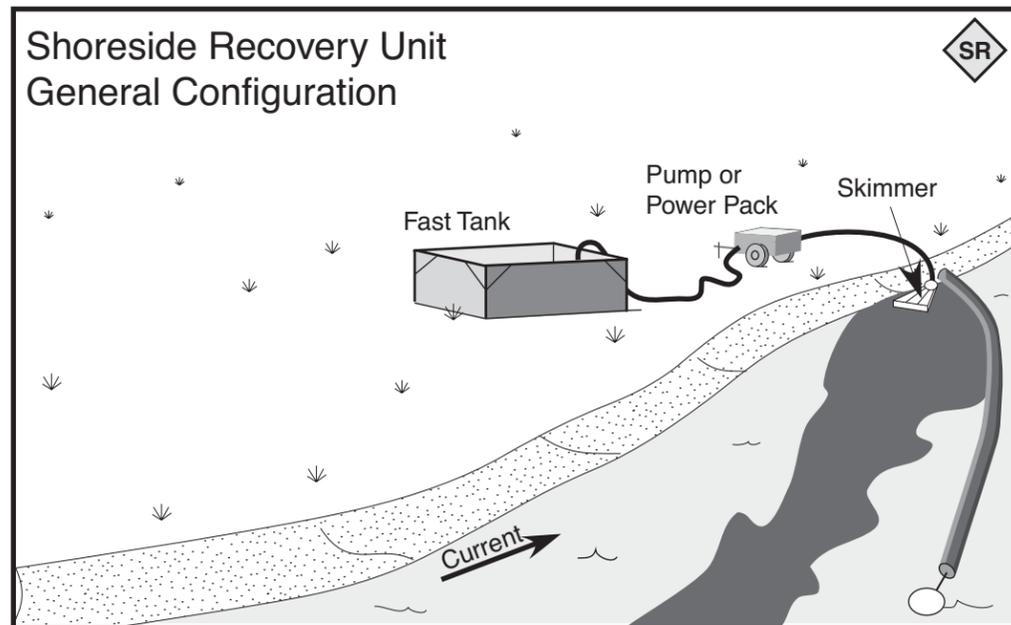


Figure G-2-12. Shoreside recovery unit general configuration.

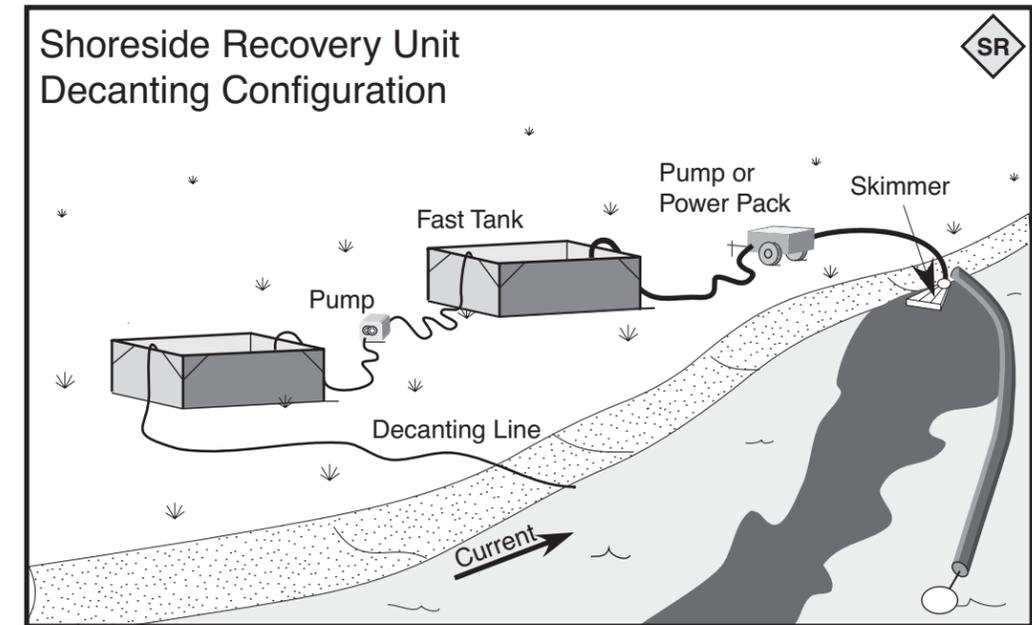


Figure G-2-14. Shoreside recovery unit decant illustration.

Resources

Shoreside Recovery, Marine Access 

Direct Resources

Description	Type	Function	Quantity
Collection System	Calm/Protected water skimmer	Oil recovery	1
Storage Device	Portable/Easy Setup	Oil storage	1
Hoses & Fittings	Misc.	System support	
Rigging/Tackle	Misc.	System support	

Support Resources*

Description	Type	Function	Quantity
Vessels	Vessel Class 3/4/5/6	Booming support	2
Personnel**	Response Tech./Shift		3

Shoreside Recovery, Land Access 

Direct Resources

Description	Type	Function	Quantity
Collection System	Calm/Protected water skimmer	Oil recovery	1
Storage Device	Collapsible Tank	Intermediate storage	1
Storage Device	Vacuum Truck	Storage/Transport	1
Hoses & Fittings	Misc.	System support	
Rigging/Tackle	Misc.	System support	

Support Resources*

Description	Type	Function	Quantity
Vessels	Vessel Class 3/4/5/6	Booming support	2
Personnel**	Response Tech./Shift		3
Trucks & Trailers		Equipment & personnel transport	2

* Support Resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending systems after deployment.

** Personnel does not include vessel crews.

Deployment Considerations and Limitations

- Access and oil type may influence equipment options.
- Recovery vessel needs to coordinate closely with diversion booming units.
- Monitor and reposition as necessary through tide cycles.
- Constant monitoring of system efficiency is required.
- Where access is restricted, system efficiency should be increased to minimize excess waste/water, and decant options should be reviewed.
- Deployment planning should be based on average high tidal conditions.
- A pump may be required to move oil from storage to vacuum truck or other mobile storage.
- May need to request a permit from ADEC to decant free water from storage back into recovery area.
- Use one of the methods shown in Figure G-2-15 to protect the collection site from contamination.

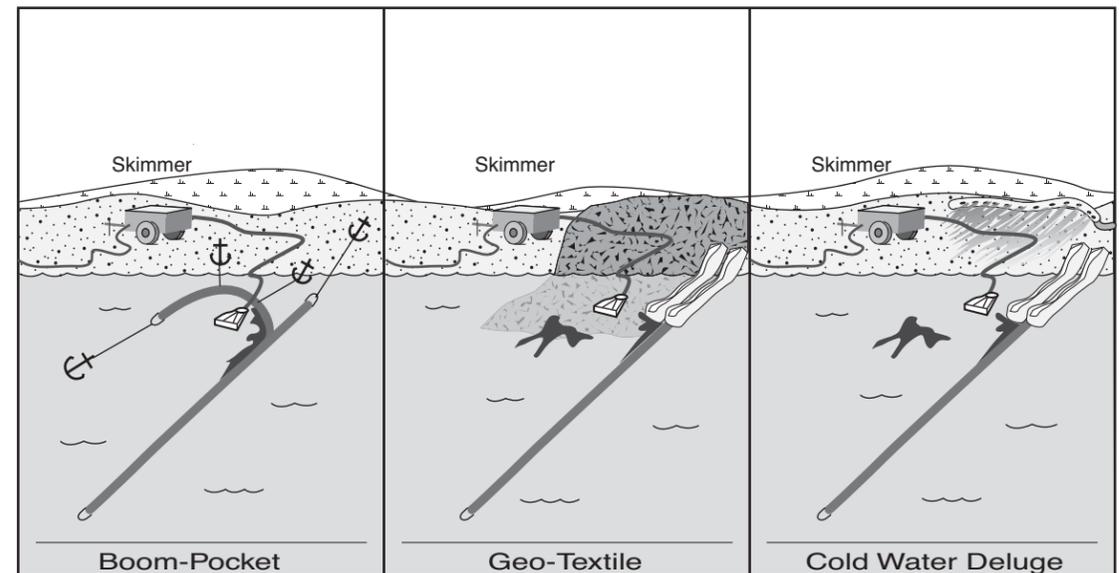


Figure G-2-15. Methods to keep oil from contaminating collection beaches.

E. MARINE RECOVERY

Objective & Strategy

The objective of the marine recovery unit is to recover spilled oil that has been diverted to a designated recovery site accessible only from the water.

Numerous types of recovery systems and temporary oil storage devices are available to recover a variety of oil types. Oil type, local conditions and available vessels will influence or dictate the recovery system. Access to recovery sites is typically restricted to shallow draft vessels due to proximity of the shore and water depths at low tide. The water depth, including area of maneuverability, should be considered in selection of vessels and storage systems. The size of recovery and storage system devices varies and needs to be considered when matching with the deployment vessel. Capability of the vessel to lift and deploy the recovery devices and to handle the storage devices in shallow water and possible fast current should be considered. Recovery system efficiency varies depending on oil type and encounter rates. To minimize excess waste/water content of recovery fluids, oleophilic skimming systems and decanting procedures are recommended.

The general strategy is to:

- Identify the primary recovery site and assess the site conditions.
- Determine the appropriate recovery and storage systems based on oil type, site conditions and deployment vessel capabilities.
- Mobilize and deploy equipment to recover and store the oil from the designated recovery site.

Resources for this module have been defined as a recovery system, a storage device, a deployment vessel along with the associated support equipment and materials. Quantity of units required will be determined by site and resource sets may need to be refined as site specific requirements dictate.

Marine Recovery Unit General Configuration

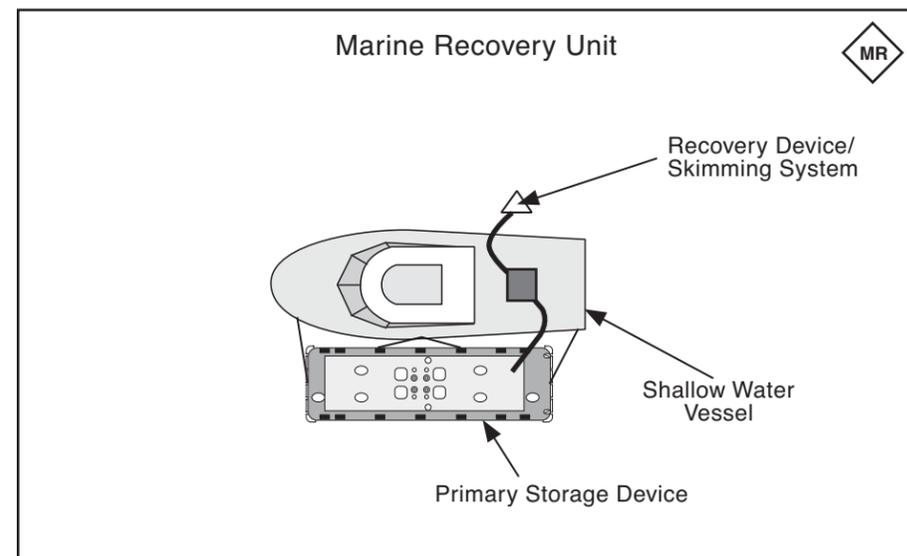


Figure G-2-16. Marine recovery unit.

Marine Recovery Unit Equipment Options

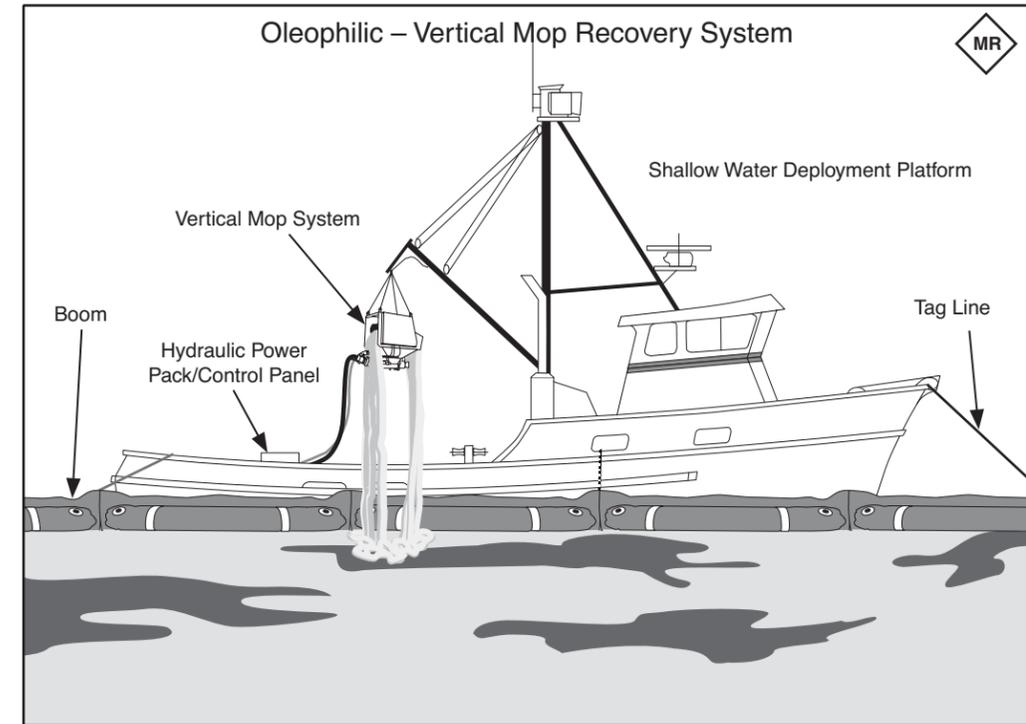


Figure G-2-17. Vertical mop recovery system.

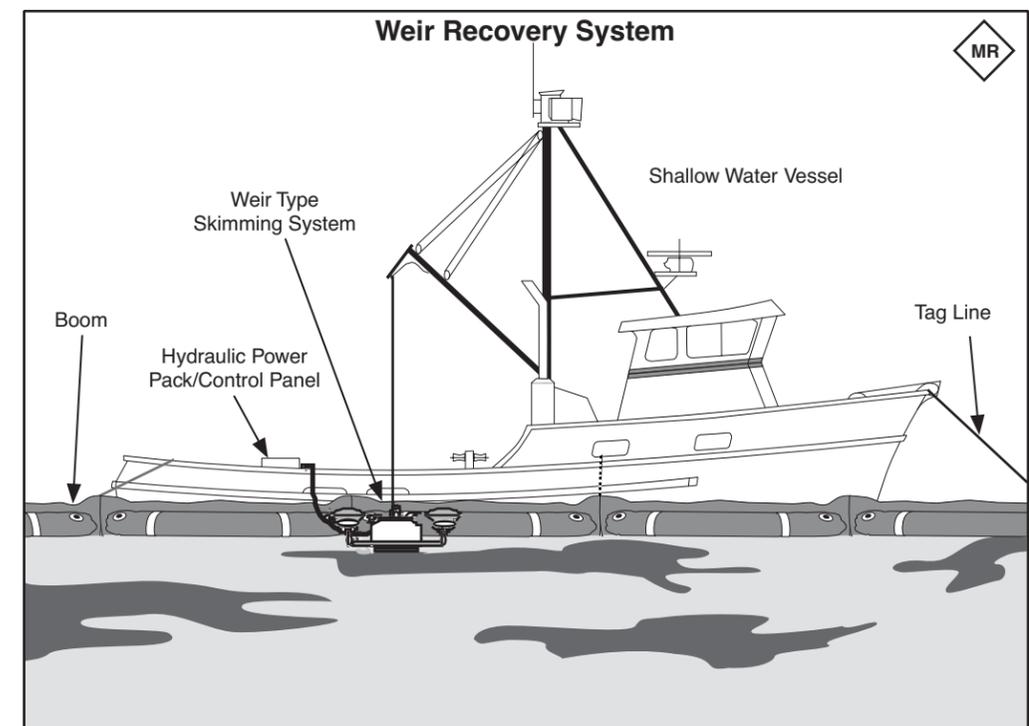


Figure G-2-18. Weir recovery system.

Resources

Marine Recovery, Exposed Shoreline



Direct Resources

Description	Type	Function	Quantity
Collection System	Situation dependent	Oil recovery	1
Storage Device	Situation dependent	Oil storage	1
Hoses & Fittings	Misc.	System support	
Rigging/Tackle	Misc.	System support	
Deployment Platform	Mini-Barge or Vessel Class 3/4/5/6	System deployment	1

Support Resources*

Description	Type	Function	Quantity
Personnel**	Crew & Tech./Shift		3 to 5

* Support Resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending systems after deployment.

** Personnel includes vessel crew.

Deployment Considerations and Limitations

- Water depth and oil type may influence equipment options.
- Recovery vessel needs to coordinate closely with diversion booming units.
- Monitor and reposition as necessary through tide cycles.
- Constant monitoring of system efficiency is required.
- Procedure to decant should be considered.
- Deployment planning should be based on average high tidal conditions and take into account low tide water depths.
- Vessel master should use extreme caution when maneuvering primary storage devices around submerged rocks.

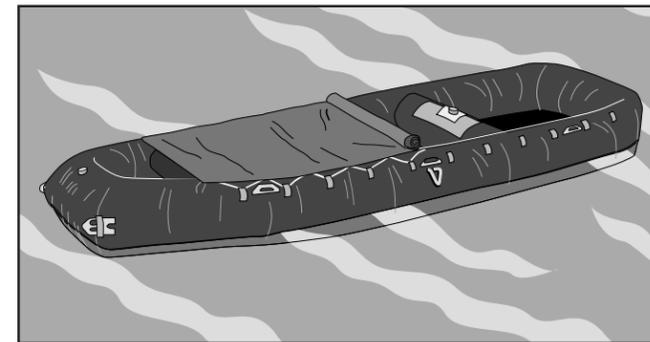


Figure G-2-19. Towable open primary storage device.

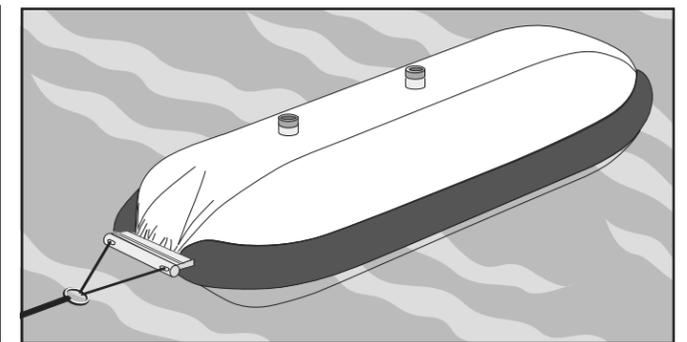


Figure G-2-20. Towable, flexible primary storage device.

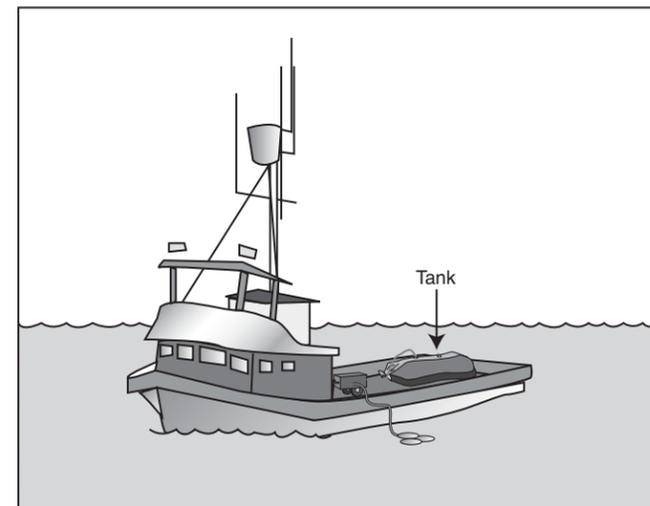


Figure G-2-21. Deck tank primary storage device.

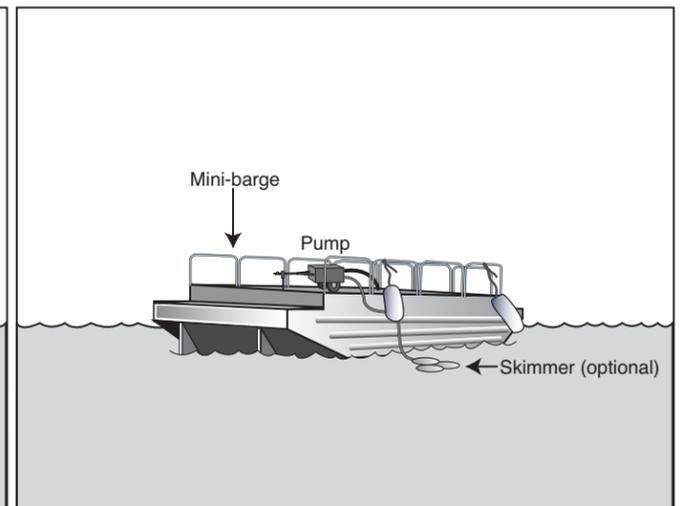


Figure G-2-22. Towable Mini-barge primary storage device.

F. FREE-OIL RECOVERY

Objective & Strategy

The objective of the free-oil recovery is to maximize the containment and recovery of spilled oil on the water in the nearshore environment, thus minimizing impact to sensitive areas. Shallow-water Free-oil recovery strike teams are typically designed to address the fragmented rafts, windrows, slicks and sheens that have escaped the high volume containment and recovery efforts, or are in areas where the high volume containment and recovery systems are unable to operate.

Free-Oil strike teams are comprised of vessels with containment boom for oil containment and concentration, skimming systems for recovery, and primary storage devices for temporary storage before transfer to secondary storage.

There are typically three primary deployment configurations for Nearshore Free-Oil strike teams.

- U - Boom System
- V - Boom System
- J - Boom System

The U-Boom System consists of vessels towing boom in a “U” configuration concentrating spilled oil into the back of the pocket formed by the boom. This technique can also be used solely for oil concentration by leaving an opening secured by chain in the apex of the boom (see figure G-2-27). This is often referred to as a “gated U – Boom”. Typically, combinations of these configurations are used to enhance concentration and containment effectiveness. The spilled oil is then collected with a recovery device (skimmer), typically deployed by an additional vessel, and stored in a storage device.

The V-Boom System consists of vessels towing boom and a recovery device (skimmer) in a “V” configuration. The spilled oil is concentrated with the boom toward the back apex where a skimmer is located for oil recovery. Typically, these recovery systems are designed with a limited amount of storage built in and are either offloaded frequently or are augmented with additional storage devices and transfer systems.

The J-Boom System consists of vessels towing boom in a “J” configuration, concentrating the spilled oil for recovery into the back of the pocket formed by the boom. The rear towing vessel is outfitted with a recovery device (skimmer) for deployment along the vessel side where the apex of the boom is formed. The oil is then collected with the skimmer and stored in a primary storage device, such as a mini barge. This system is often utilized in place of the U-Boom system, when the response is limited by the amount of vessels available and when maneuverability is not as critical.

The general strategy is to:

- Identify the trajectory and location of the spilled oil by performing overflight surveillance and vector evaluations.
- Select a deployment configuration that best supports the site conditions and available resources.
- Mobilize and deploy Free-Oil Recovery teams as determined by overflight information and response priority.

Resources for this module have been defined as vessels, boom, skimmers, primary storage devices, and personnel. Configuration type and quantity of strike teams required will be determined by site conditions, spilled oil type and volume, area of coverage, as well as resource availability. Resource sets may need to be refined as site specific requirements dictate. Combinations of free-oil recovery and diversion are often a consideration.

General Configuration

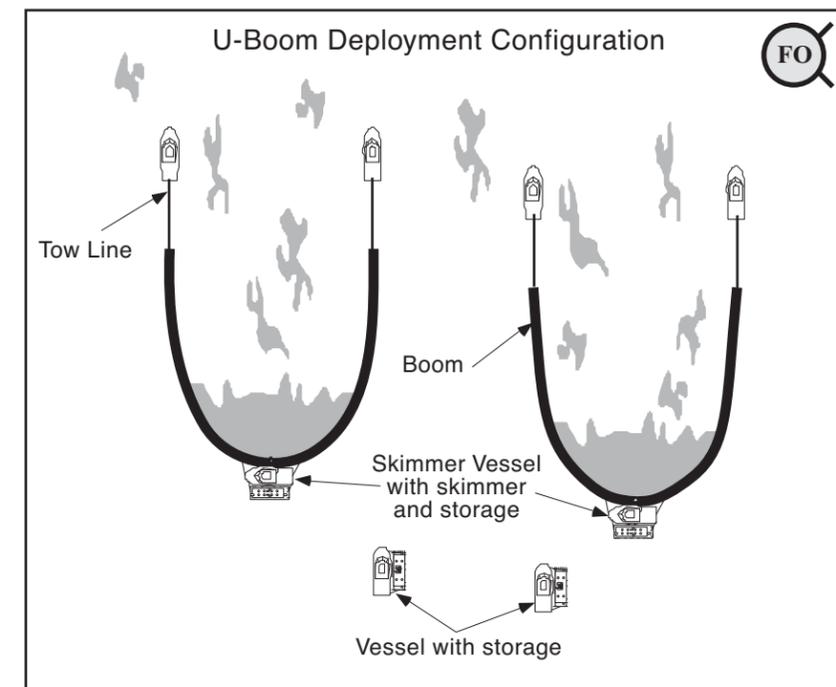


Figure G-2-23. U-boom configuration.

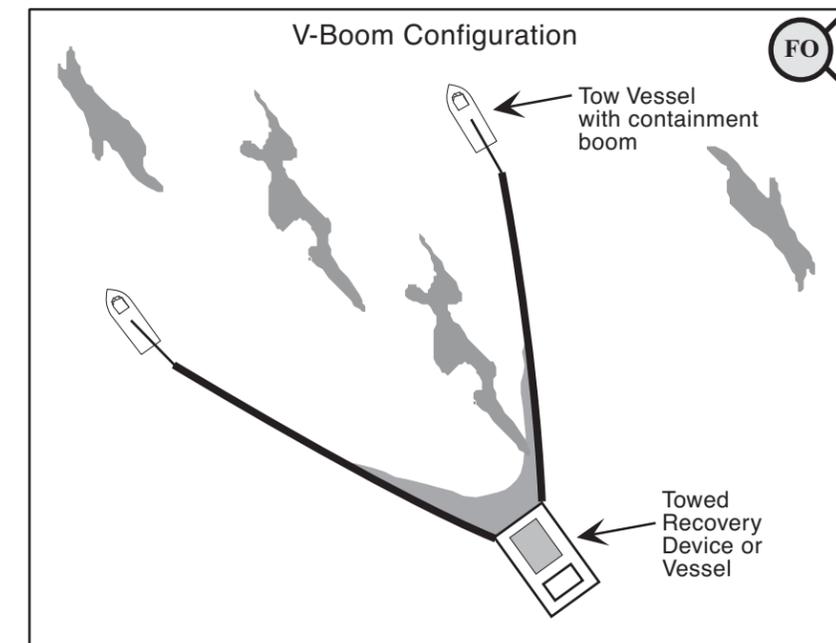


Figure G-2-24. V-boom Configuration.

Resources

Free-oil Recovery, Shallow Water 

Direct Resources

Description	Type	Function	Quantity
Containment Boom	Protected water	Containment	up to 600'
Skimming System	Situation dependent	Oil Recovery	1
Primary Storage Device	Situation dependent	Oil Storage	2
Misc. Tow Bridles, Line & Buoys	Situation dependent	System Support	

Support Resources*

Description	Type	Function	Quantity
Personnel	Staff & Tech./Shift	Vessel Crew	10 to 12
Vessel	Class 4/5/6	Boom Operations	2
Vessel	Class 3/4	Recovery	1
Vessel	Class 3/4	Storage/Transport	1

Free-oil Recovery, Open Water 

Direct Resources

Description	Type	Function	Quantity
Containment Boom	Open water	Containment	up to 1800'
Skimming System	Situation dependent	Oil Recovery	1
Primary Storage Device	Situation dependent	Oil Storage	2
Misc. Tow Bridles, Line & Buoys	Situation dependent	System Support	

Support Resources*

Description	Type	Function	Quantity
Personnel	Staff & Tech./Shift	Vessel Crew	7 to 9
Vessel	Class 2/3/4	Boom/Recovery	2
Vessel	Class 3/4	Storage/Transport	1

* Support Resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending systems after deployment.

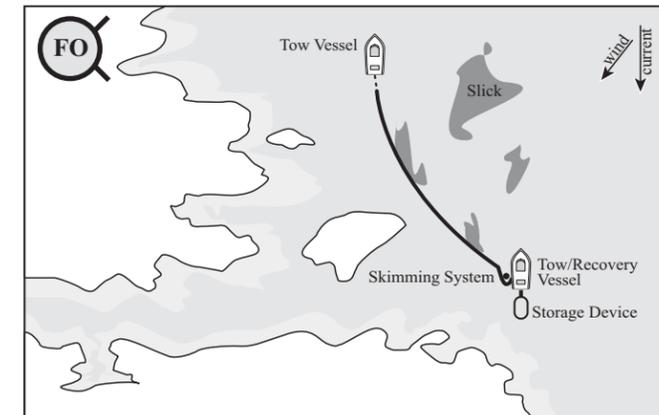


Figure G-2-25. J-boom configuration.

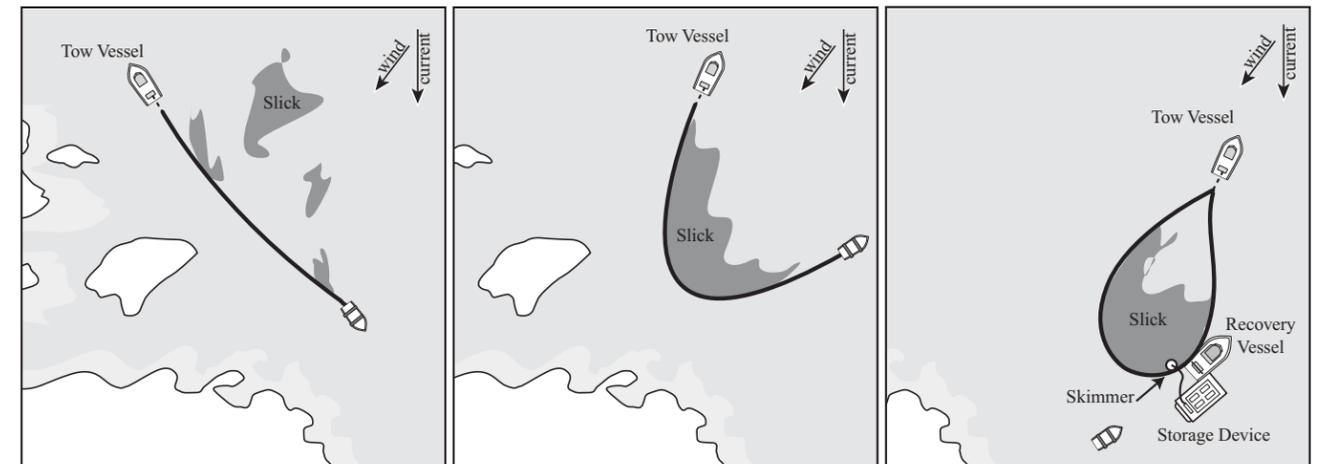


Figure G-2-26. Nearshore trapping, boom towing boats collect oil in boom then tow the trapped oil to deeper water for recovery.

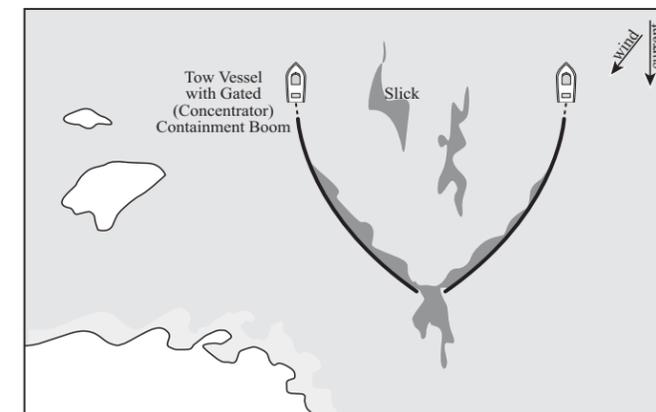


Figure G-2-27. Gated U-boom concentrator boom, towed in front of free-oil recovery.

Deployment Considerations and Limitations

- Site conditions may influence deployment configuration options.
- Combinations of configurations may optimize recovery.
- Procedures for decant and logistics for oil transport and disposal should be considered.
- Daily fair and foul weather evaluations are recommended, and should include distance to safe harbor, transit times and exposure of vessels.

G. PASSIVE RECOVERY AND DEBRIS REMOVAL

Objective & Strategy

The objective of the passive recovery and debris removal unit is to minimize the impact to designated shoreline by reducing the potential oil volume through passive recovery as well as by removing driftwood and other debris that spilled oil may contaminate.

Passive recovery is performed by placing sorbent materials at or near sensitive areas to collect oil and thus minimize impacts. This is usually accomplished by anchoring rows of sorbent boom or snare line¹ (oleophilic pom poms attached to a rope) between the high and low tide zones on the shoreline. Passive recovery for marine mammal haul-outs is accomplished by broadcasting natural sorbent material, such as peat moss or sphagnum moss, on the haulout.

Passive recovery can be deployed along selected shorelines prior to impact to reduce the quantity of oil that might otherwise adhere to the beach. This technique can also be applied to shoreline that has already been oiled to help keep the mobile oil from refloating and migrating to other non-impacted shorelines. In either case, the recovery must be monitored after each tide and recovery materials must be replaced as necessary.

The debris removal component of this tactic is to remove or re-locate excessive concentrations of driftwood and other debris from areas of the shoreline likely to be oiled. The impact area is typically defined as the low to mean high tide zone of the shoreline. The debris removal tactic is normally considered to be an independent unit but, in this case, has been combined with the passive recovery unit to optimize resource utilization.

Although this tactic can produce a significant solid waste stream requiring logistical support, it can be very effective due to the ability to rapidly deploy. Once deployed, the snare line needs to be monitored and periodically replaced to avoid diminished effectiveness due to saturation.

Access to selected shoreline may be accomplished from the water using shallow water platforms such as landing craft, or from on-land, using ATV's or other four-wheel drive vehicles.

The general strategy is to:

- Identify the trajectory of the spilled oil and select shoreline to be protected, as well as identify natural recovery sites where debris may concentrate.
- Evaluate access restrictions and select appropriate marine deployment platforms or on-land vehicles.
- Mobilize and deploy personnel with tools and materials to selected shorelines.

Resources for this module have been defined as personnel with tools and sorbent materials. Quantity of units required will be determined by site and resource sets may need to be refined as site-specific requirements dictate.

Passive Recovery Unit General Configuration

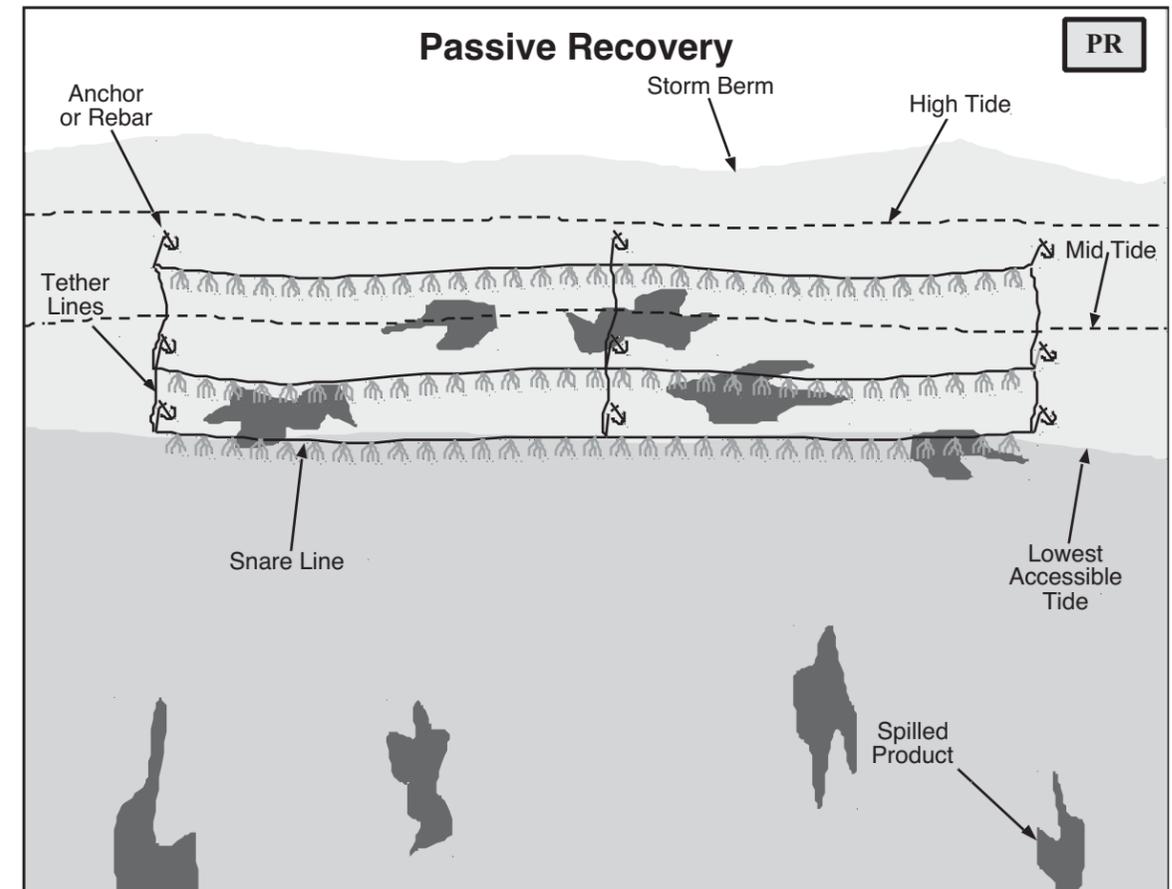


Figure G-2-28. Aerial view of a passive recovery configuration.

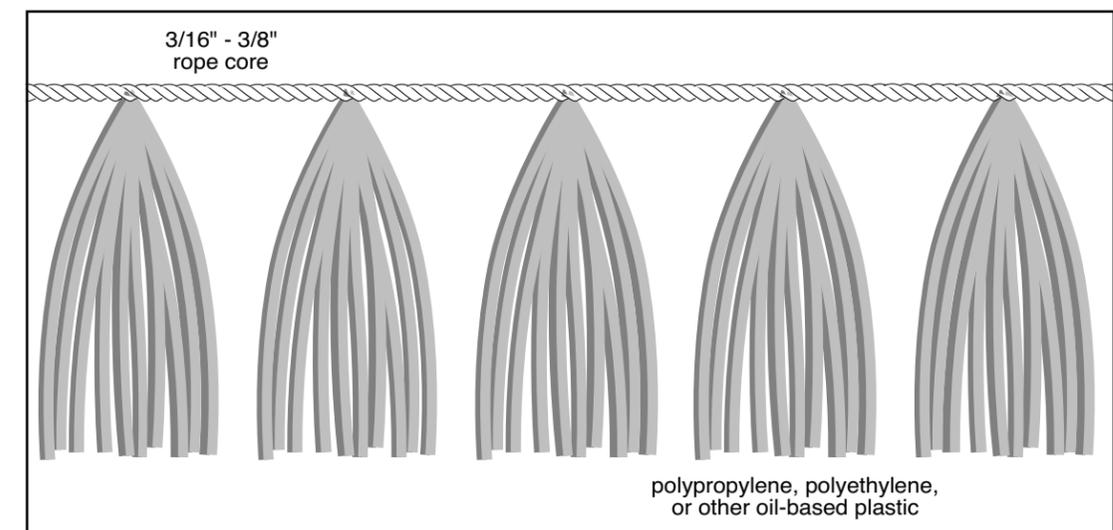


Figure G-2-29. Snare line.

¹ Snare line is also sold as Viscous Sweep and Snare-On-A-Rope. The primary difference is the distance between the pom-poms.

Resources

Passive Recovery and Debris Removal, Marine Access PR

Direct Resources

Description	Type	Function	Quantity
Snare Boom	Optional	Oil recovery	3,600'
Rebar Stakes/Small Anchor Materials	Optional	Snare Boom Placement	
Hand Tools and Line	Misc.	System support	
Chainsaw	Optional	Debris Removal	2
Bags/Super Sacks	Optional	Solid Waste Collection	

Support Resources*

Description	Type	Function	Quantity
Personnel**	Crew & Tech./Shift		8
ATV's		Material Transport	2
Landing Craft	Shallow Draft	Access/Deployment	1

Passive Recovery and Debris Removal, Shoreside Access PR-S

Direct Resources

Description	Type	Function	Quantity
Snare Boom	Optional	Oil recovery	3,600'
Rebar Stakes/Small Anchor Materials	Optional	Snare Boom Placement	
Hand Tools and Line	Misc.	System support	
Chainsaw	Optional	Debris Removal	2
Bags/Super Sacks	Optional	Solid Waste Collection	

Support Resources*

Description	Type	Function	Quantity
Personnel	Crew & Tech./Shift		6
ATV's		Material Transport	2
Trucks with ATV Trailers	Shallow Draft	Mobilization Support	2

Passive Recovery – Marine Mammal Haulout*** PR-MM

Direct Resources

Description	Type	Function	Quantity
Natural Sorbent	Peat Moss Sphagnum Moss	Oil recovery	1/2 #/sq. ft.
Broadcast System	Blower Hydro-seeder	Deploy Sorbent	1

Support Resources*

Description	Type	Function	Quantity
Personnel	Crew & Tech./Shift	Vessel Crew	4 to 6
Vessel	Class 2/3/4	Transport & Broadcast	1
Vessel	Class 5	Hand Broadcast	1

* Support resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending systems after deployment.

** Personnel does not include Landing Craft crew.

*** Passive recovery for marine mammal haulouts should only be attempted after consultation with the National Marine Fisheries Service.

Deployment Considerations and Limitations

- Shoreline access may influence deployment platform options.
- Passive recovery materials need tending and periodic replacement.
- Logistics for solid waste transport and disposal need to be considered.
- Contact NMFS before disturbance of marine mammals.

H. COLD WATER DELUGE

Objective & Strategy

Cold water deluge is typically a protective counter measure with the objective of minimizing the impact to designated shoreline areas. This is achieved by creating a flood of water that forms a hydraulic head in the beach substrate above the sea water level. The flood raises the normal water table, producing free flowing water down the beach surface which prevents the oil from adhering to the shoreline and penetrating the substrate. This strategy can also be used to enhance shoreside recovery.

Deluge is performed by placing perforated hose along the high tide area of the shoreline, connecting it to a high volume (typically six inch) pump. Suction hose is connected to the pump from the source of water, and when started, the water is pumped through the perforated hose to create a flood. This technique can be deployed along selected shoreline prior to impact to reduce the quantity of oil that might otherwise adhere to the beach. This technique can also be applied to assist in treating shoreline that has already been impacted. One of the most common applications is deployment of this technique in unison with Diversion and Marine Recovery units where spilled oil is entrapped or intentionally grounded. Access to selected shoreline may be accomplished from the water using shallow water platforms such as landing craft or, from on-land using ATVs or other four-wheel drive vehicles.

The general strategy is to:

- Identify the trajectory of the spilled oil and select shoreline to be protected, as well as identify natural recovery sites that may be intentionally used for entrapment.
- Evaluate access restrictions and select appropriate marine deployment platform, or on-land vehicles.
- Mobilize and deploy personnel and equipment to selected shoreline sites.

Resources for this module have been defined as personnel with pumps and hoses. Quantity of units required will be determined by site, and resource sets may need to be refined as site specific requirements dictate.

Deluge Unit General Configuration

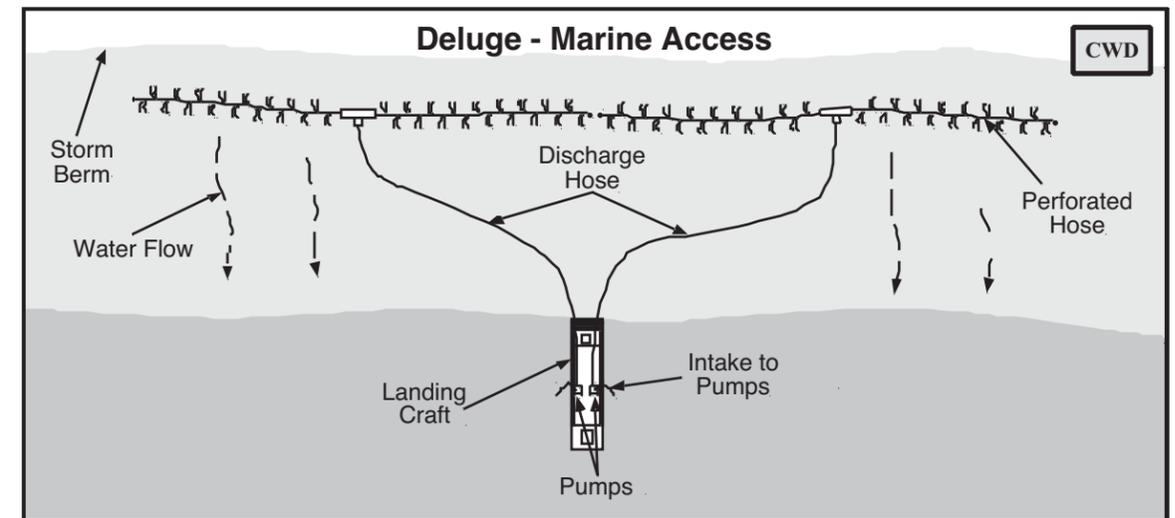


Figure G-2-30. Aerial view of a deluge configuration marine access.

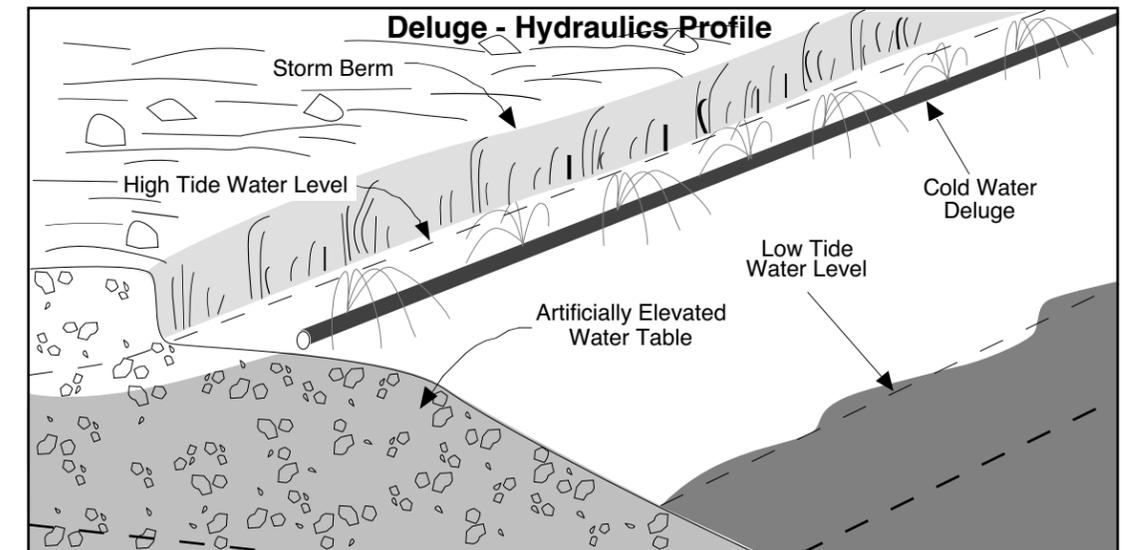


Figure G-2-31. Deluge hydraulic shoreline cross-section profile.

Resources

Cold Water Deluge, Marine Access CWD

Direct Resources

Description	Type	Function	Quantity
Pump	6" Diesel - Trash	Water Flood	2
Perforated Hose	6" Lay Flat – Discharge w/Holes	Deluge Header	400'
Discharge Hose	6" Lay Flat	Header Supply	400'
Suction Hose	6" Suction	Pump Supply	2 x 20'
Kamlock Fittings, Pipe Fittings & Basket Strainers	6" Assorted	Hose Connections	

Support Resources*

Description	Type	Function	Quantity
Personnel**	Crew & Tech./Shift		8
Landing Craft	Shallow Draft	Access/Deployment	1

Cold Water Deluge, Shoreside Access CWD-S

Direct Resources

Description	Type	Function	Quantity
Pump	6" Diesel - Trash	Water Flood	2
Perforated Hose	6" Lay Flat – Discharge w/Holes	Deluge Header	400'
Discharge Hose	6" Lay Flat	Header Supply	400'
Suction Hose	6" Suction	Pump Supply	2 x 20'
Kamlock Fittings, Pipe Fittings & Basket Strainers	6" Assorted	Hose Connections	

Support Resources*

Description	Type	Function	Quantity
Personnel	Crew & Tech./Shift		6
ATV's		Material Transport	2
Trucks with ATV Trailers		Mobilization Support	2

* Support Resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending systems after deployment.

** Personnel does not include Landing Craft crew.

Deployment Considerations and Limitations

- Shoreline access may influence deployment platform options.
- Deluge pressure needs to be regulated to avoid beach erosion.
- Kamlock fittings should be secured with wire or wire ties after lockdown.
- The marine access unit does not specify an ATV. If available, an ATV could support hose & fittings transport from the vessel up the beach.

I. UNDERFLOW DAM, MARINE SPILL

Objective & Strategy

The objective of the underflow dam is to temporarily block the mouth of a stream, slough, or inlet to prevent oil from entering during a flood tide. The underflow is used to allow outflowing fresh water to escape the dam or incoming unpolluted ocean water to enter the estuary. This is accomplished by building a dam using local earth and gravel. If the local material is porous or insufficient, sandbags and polyethylene liners (Visqueen) should be used on the face of the dam to stop leakage.

Underflow dams use inclined culverts to allow water moving downstream to escape while keeping the spill contained on the marine side of the dam. The capacity of the culvert(s) should exceed the stream flow rate. A less preferred alternative is to use pumps to remove water from the inside of the dam. Underflow culverts should be placed through the dam at an incline, with the lower end of the pipe on the marine side of the dam.

The general strategy is to:

- Identify the trajectory of the spilled oil and only install a dam if the inlet is threatened.
- Evaluate access restrictions and select appropriate marine deployment platforms or on-land vehicles.
- Construct the dam with as little damage to the beach and storm-berm as possible.
- Mobilize and deploy personnel with tools and materials to selected shorelines.
- Remove the dam as soon as the site is no longer threatened by a spill.

Underflow Dam General Configuration



Figure G-2-33. Aerial view of an underflow dam marine oil spill.

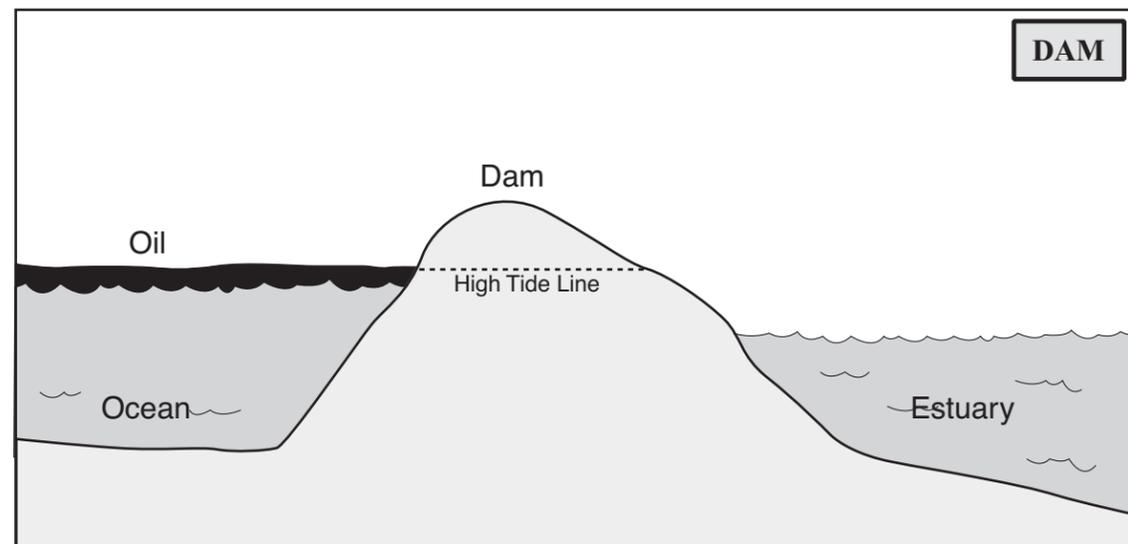


Figure G-2-32. Dam cross-section profile.

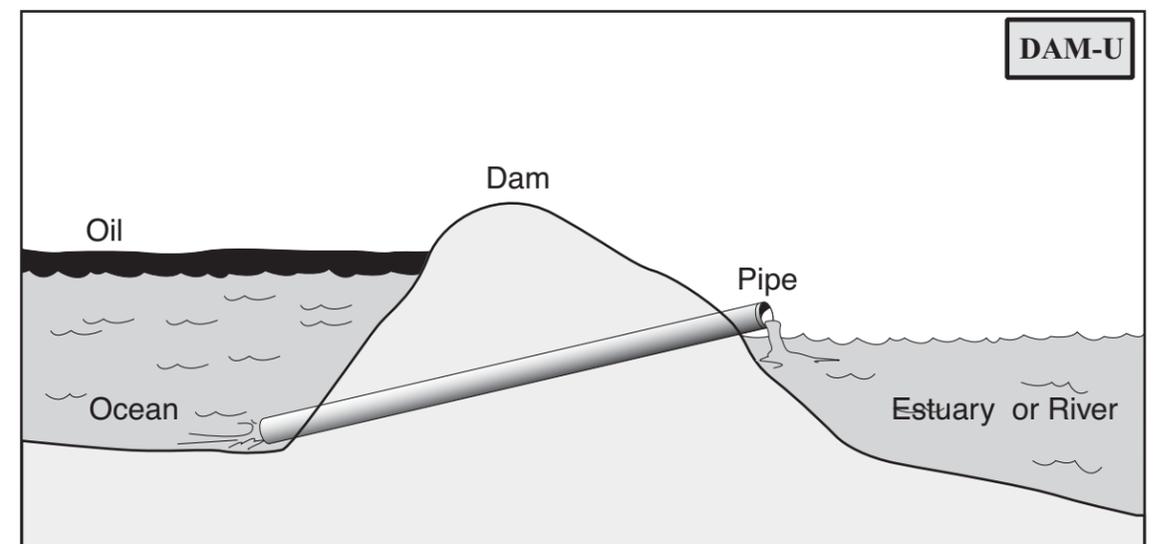


Figure G-2-34. Underflow dam cross-section profile.

Resources

Underflow Dam DAM-U

Direct Resources

Description	Type	Function	Quantity
Loader, Bulldozer, or Backhoe	Various	Dam Construction	1
Visqueen	6 mil.	Optional Dam Liner	1 roll
Culvert	Sized to exceed stream outflow	Dam	1

Support Resources*

Description	Type	Function	Quantity
Personnel	Crew & Tech./Shift		2

Dam, Shoreside Access DAM

Direct Resources

Description	Type	Function	Quantity
Loader, Bulldozer, or Backhoe	Various	Dam Construction	1
Visqueen	6 mil.	Optional Dam Liner	1 roll

Support Resources*

Description	Type	Function	Quantity
Personnel	Crew & Tech./Shift		2

* Support Resources may need to be re-evaluated, and in most cases decreased, when deploying multiple units or tending systems after deployment.

Deployment Considerations and Limitations

- Army Corps of Engineer permit is necessary to utilize this strategy.
- If shoreside access is not available, equipment will have to be transported by landing craft.
- Dams must be checked periodically for leakage and integrity, to replace eroded materials, and to continually monitor the water/oil interface. Valved pipes, pumps, or number of siphons may require periodic adjustment to compensate for minor changes in stream flow.
- Damming of a stream mouth may block fish passage. The dam must be removed immediately when it is no longer needed.

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PART THREE – SITE SPECIFIC GEOGRAPHIC RESPONSE STRATEGIES

A. SOUTHEAST ALASKA RESPONSE ZONE 1

Figure G-3-1 provides an overview of the Southeast Alaska response zone 1, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE01-01. Figure G-3-2 shows the location of oil spill response equipment throughout zone 1.

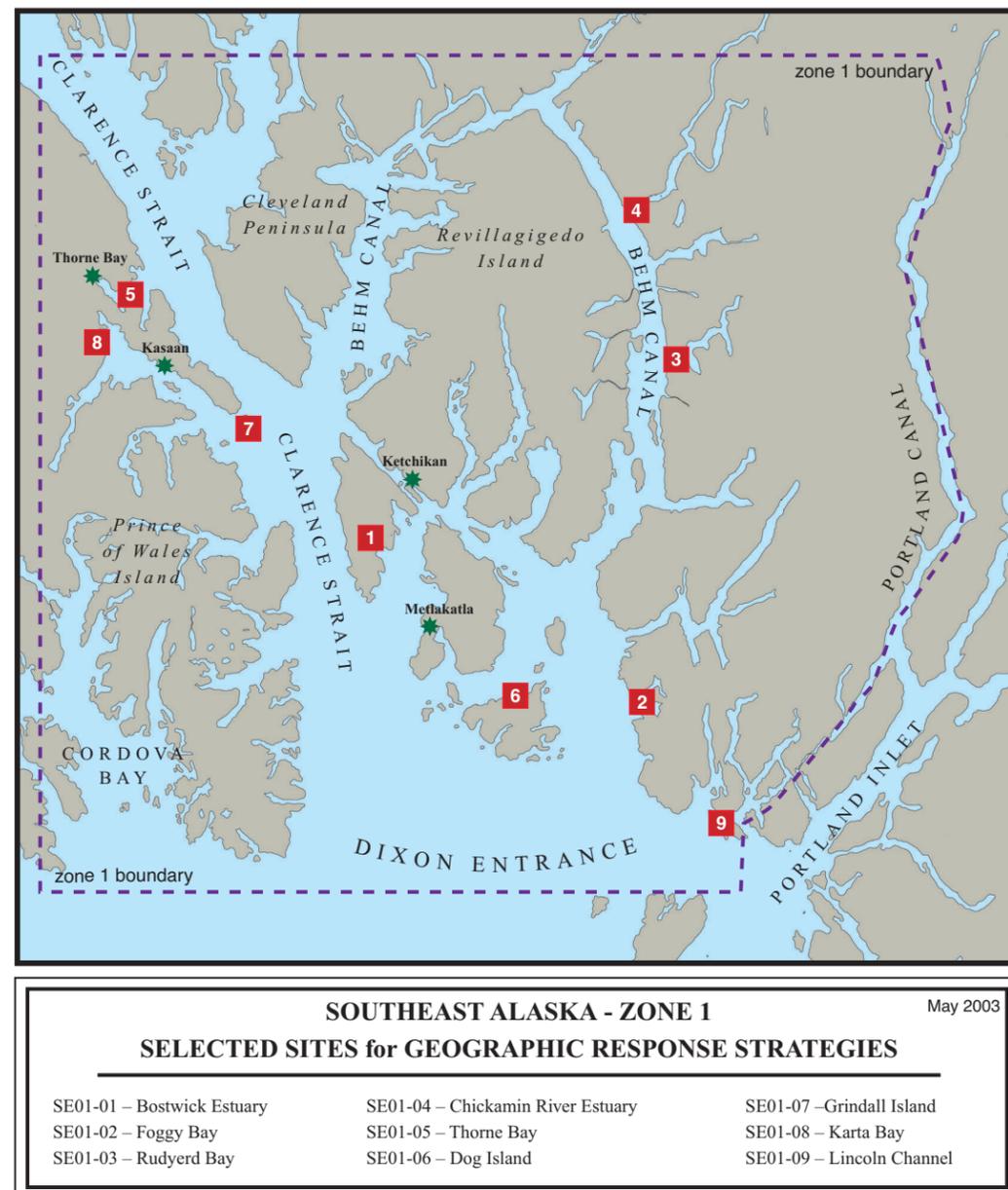


Figure G-3-1. Southeast Alaska Response Zone 1.

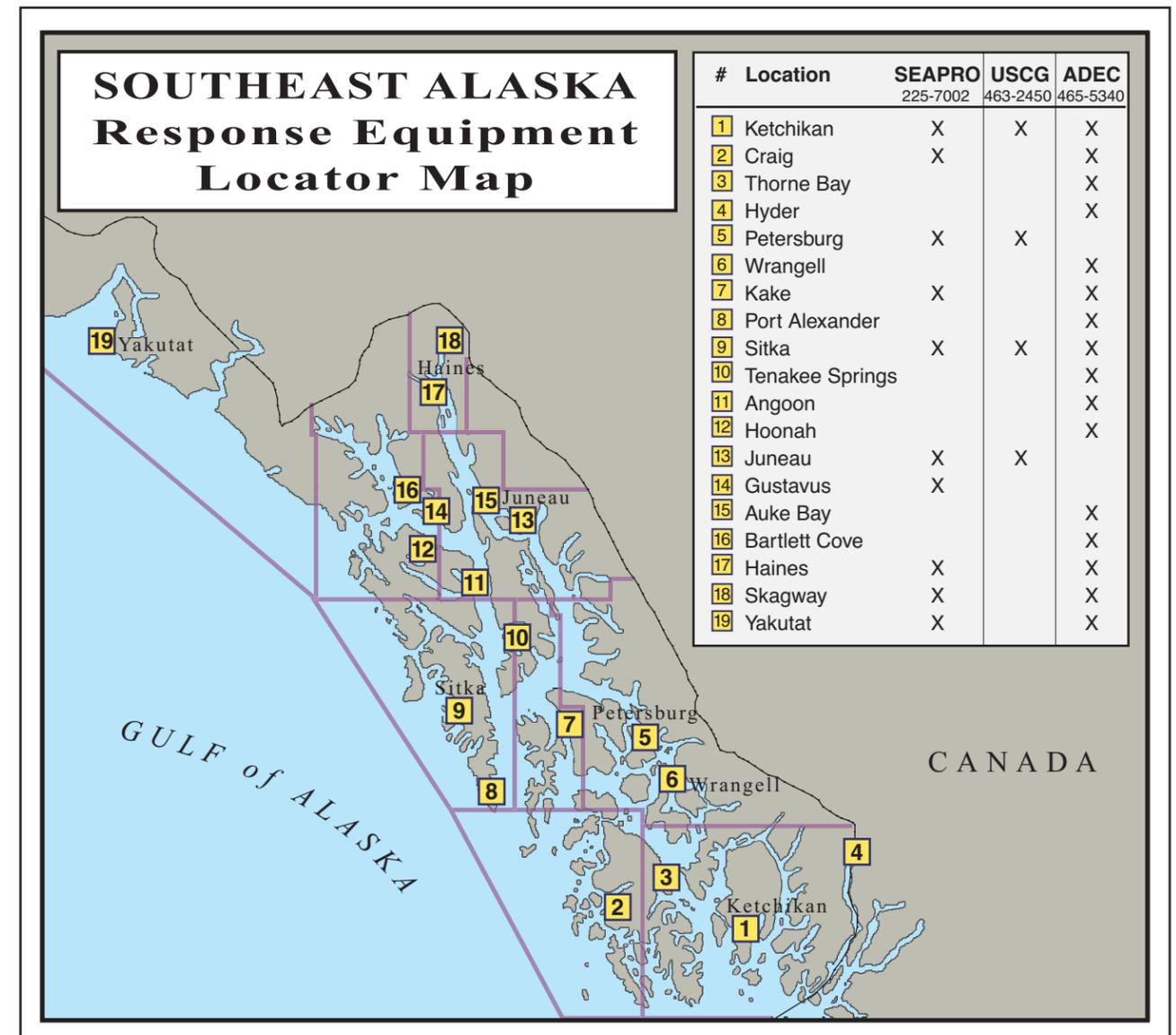


Figure G-3-2. Southeast Alaska Response Equipment Locator Map.

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Map & Photo Legend



SE01-01 Bostwick Estuary looking towards the northwest.

- | | | | |
|--|--|--|------------------------|
| | Free-oil Containment and Recovery, Shallow Water | | Tidal-seal Boom |
| | Exclusion Booming | | Protected-water Boom |
| | Passive Recovery and Debris Removal | | Snare Line |
| | Diversion Booming | | Marine Recovery |
| | | | Salmon Spawning Stream |



SE01-01-04 Bostwick Estuary looking towards the northwest.

Geographic Response Strategies for Southeast Alaska Subarea

Bostwick Estuary, SE01-01

Center of map at 55° 13.8' N Lat., 131° 43.9' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-01-01	Bostwick Inlet Nearshore waters in the general area of: Lat. 55°12.9 N Lon. 131° 42.4 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment in the entrance to Bostwick Inlet.	Deploy free-oil recovery strike teams upwind and up current of Bostwick Inlet. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Vessel Platform	Via marine waters Chart 17434	Same as SE01-01-02	Vessel masters should have local knowledge.
SE01-01-02	Bostwick Inlet Southwest Boom Arrays a. Lat. 55° 12.3 N Lon. 131° 43.3 W b. Lat. 55° 13.45 N Lon. 131° 41.98 W	Deflection Deflect oil away from the entrance to Bostwick Inlet and out the Free Oil strike teams for recovery.	Use vessels with deck space to transport equipment to the site (class 2/3/4). Deploy boom and set anchors with fishing vessels and skiffs (class 3/4/6). Place protected-water boom off the headlands to deflect oil to free-oil recovery. Tend throughout tide. <u>Boom Lengths</u> a. 1500 ft. b. 500 ft.	Deployment Equipment 2000 ft. protected-water boom 20 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 14 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 7 ea. vessel crew	Vessel Platform	Via marine waters Chart 17434	Fish- salmon concentrations – 10 streams (pink, chum, coho), steelhead Birds-waterfowl concentrations Habitat-marsh, eel grass, sheltered tidal flats Human use-high recreational use Invertebrates	Vessel masters should have local knowledge. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-2 for equipment locations. Area is exposed to prevailing SE winds. Tested: not yet Surveyed: 5/05/03 TLR
SE01-01-03	Bostwick Inlet North Boom Arrays shoreside locations West Lat. 55° 13.88 N Lon. 131° 44.64 W East Lat. 55° 14.07 N Lon. 131° 43.79 W	Divert and Recover Divert oil entering Bostwick Inlet along the north and south shore to marine recovery.	Place six cascaded boom arrays inside of Bostwick Inlet to divert oil to marine recovery vessel anchored in the channel. <u>Boom Array</u> 6- 900 ft. booms	Deployment Equipment 5400 ft. protected-water boom 42 ea. anchor systems (~40 lbs.) 1 ea. marine recovery unit Vessels, Personnel, Tending Same as SE01-01-02	Vessel Platform	Via marine waters Chart 17434	Same as SE01-01-02	Vessel masters should have local knowledge. Tested: not yet Surveyed: 5/05/03 TLR
SE01-01-04	Head of Bostwick Inlet Lat. 55° 14.9 N Lon. 131° 45.1 W	Exclusion Exclude oil from the head of Bostwick Inlet.	Place 4000 ft. of protected-water boom with tidal-seal on both ends, across head of Bostwick Inlet, outside the tidal flats.	Deployment Equipment 4000 ft. protected-water boom 2 ea. 50 ft. tidal-seal 42 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes Vessels, Personnel, Tending Same as SE01-01-02	Vessel Platform	Via marine waters Chart 17434	Same as SE01-01-02	Vessel masters should have local knowledge. Tested: not yet Surveyed: 5/05/03 TLR
SE01-01-05	Bostwick Inlet Cove Lat. 55° 13.2 N Lon. 131° 44.9 W	Passive Recovery Minimize impact through passive recovery.	Place 3000 ft. of snare line or sorbent boom, across tide flats, in cove on west side of Bostwick Inlet. Use snare line for persistent oil or sorbent boom for diesel.	Deployment Equipment 3000 ft. snare line or sorbent boom 30 ea. anchor stakes Vessels, Personnel, Tending Same as SE01-01-02	Vessel Platform	Via marine waters Chart 17434	Same as SE01-01-02	Vessel masters should have local knowledge. Surveyed: 5/05/03 TLR

Map & Photo Legend



▲ SE01-02-02a,b,c looking east at the entrance to Very Inlet.



SE01-02-02a & 04 looking northwest at the entrance to Very Inlet.



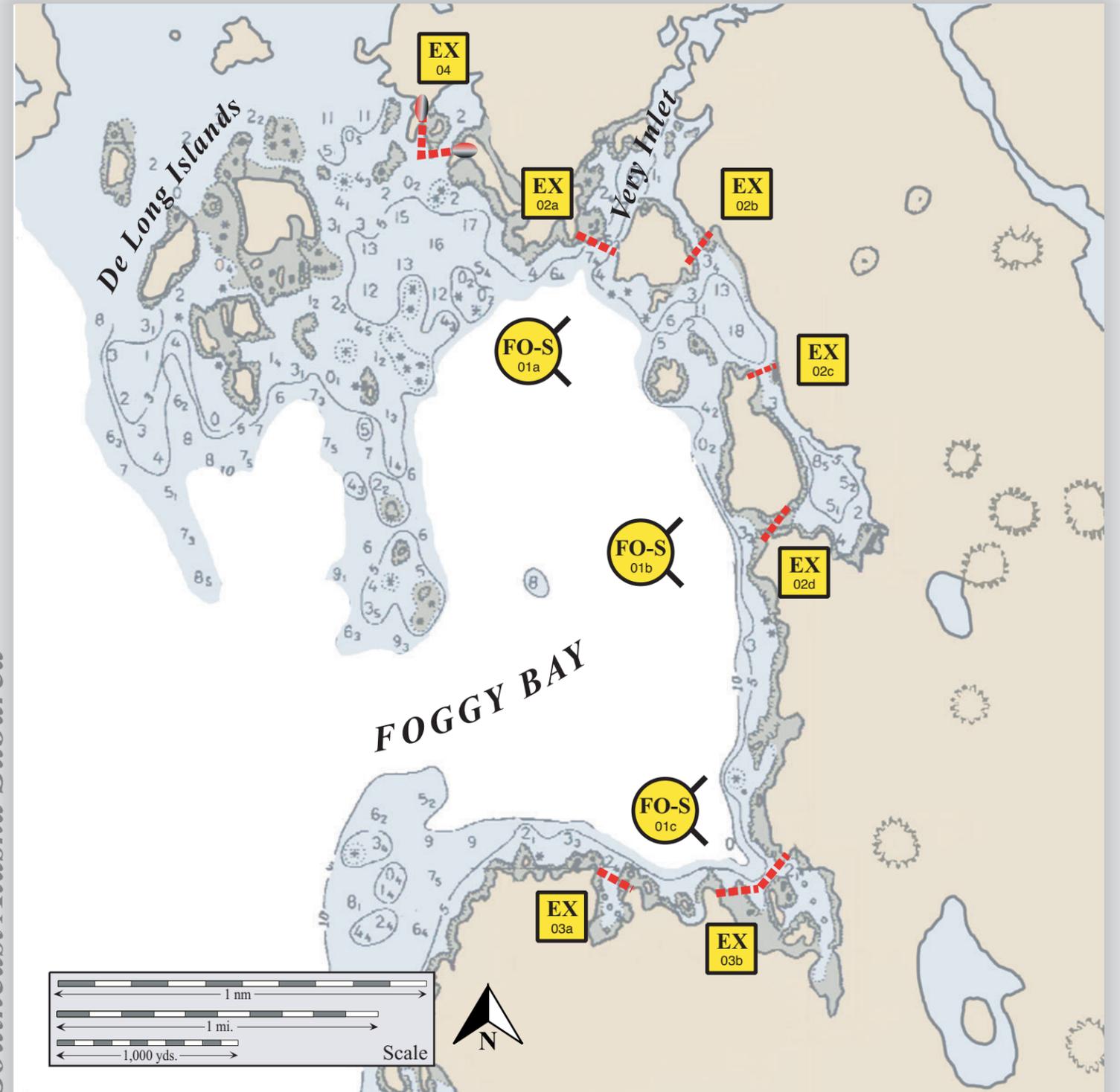
◀ SE01-02-03 Foggy Bay south shore looking towards the east.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Protected-water Boom
-  Tidal-seal Boom

Foggy Bay, SE01-02

Center of map at 54° 57.0' N Lat., 130° 57.8' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

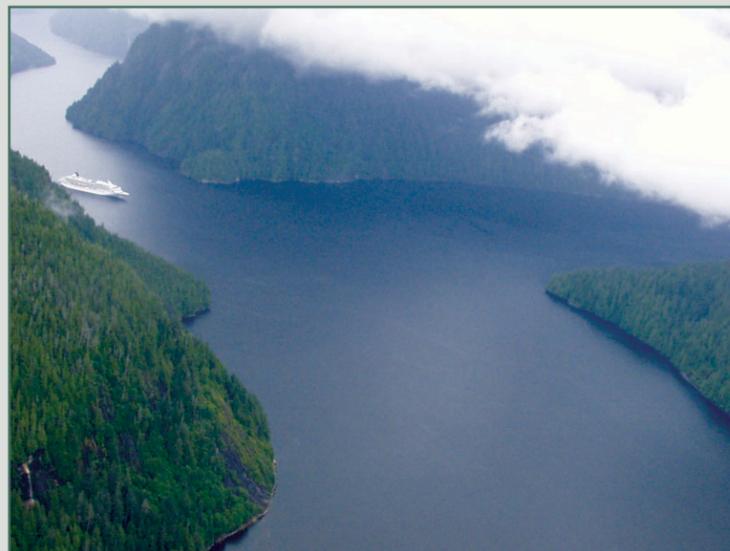
Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-02-01	Foggy Bay Nearshore waters in the general area of: a. Lat. 54°57.5 N Lon. 130°57.9 W b. Lat. 54° 56.9 N Lon. 130° 57.2 W c. Lat. 54° 56.1 N Lon. 130° 57.3 W	Nearshore Free-oil Recovery Maximize free-oil recovery inside of Foggy Bay.	Deploy free-oil recovery strike teams upwind and up current of oil coming into Foggy Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Ketchikan/marine vessel	Via marine waters	Same as SE01-02-02	Vessel masters should have local knowledge.
SE01-02-02	Entrance to Very Inlet a. Lat. 54° 57.5 N Lon. 130° 57.8 W b. Lat. 54° 57.6 N Lon. 130° 57.3 W c. Lat. 54° 57.4 N Lon. 130° 57.2 W d. Lat. 54° 56.9 N Lon. 130° 56.9 W	Exclusion Exclude oil from entering Very Inlet and intertidal area south of Very Inlet.	Use class 2 and class 3/4 vessels with deck space to transport equipment class 6 setnet or seine skiffs to deploy boom and set anchors. Place boom at the entrances to Very Inlet and across the entrances to the small cove behind the island to the southeast of the Inlet. <u>Boom Arrays</u> a. 700 ft. b. 500 ft. c. 400 ft. d. 500 ft.	Deployment Equipment 2100 ft. protected-water boom 20 ea. anchor systems (~40 lbs.) 16 ea. anchor stakes Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / shift 15 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / shift 5 ea. vessel crew	Ketchikan/marine vessel	Via marine waters	Marine mammals-Steller sea lion haulouts and rookeries (500 yd. exclusion zone), harbor seal haulouts and rookeries Fish-herring spawning, intertidal salmon spawning (pink, chum, coho, steelhead) Birds-waterfowl concentrations >150 (winter) Human use-commercial herring fishery	FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-2 for equipment locations. Tested: not yet Surveyed: 4/15/03 ADEC, SEAPRO
SE01-02-03	South Foggy Bay a. Lat. 54° 56.0 N Lon. 130° 57.5 W b. Lat. 54° 56.0 N Lon. 130° 56.9 W	Exclusion Exclude oil from entering small coves at south end of Foggy Bay.	Place 1500 ft. of protected-water boom in a chevron pattern, with a anchor stake on the island in the middle of the cove at the apex, across eastern cove, and 600 ft. across western cove. <u>Boom Arrays</u> a. 600 ft. b. 1500 ft.	Deployment Equipment 2100 ft. protected-water boom 22 ea. anchor systems (~40 lbs.) 10 ea. anchor stakes Vessels /Personnel/Tending Same as SE01-02-02	Ketchikan/marine vessel	Via marine waters	Same as SE01-02-02	Tested: not yet Surveyed: 4/15/03 ADEC, SEAPRO
SE01-02-04	Small island North of Very Inlet Lat. 54° 58.1 N Lon. 130°58.4 W	Exclusion Exclude oil from small island north of Very Inlet	Place 1000 ft. of protected-water boom, in a chevron pattern, with a 60+ anchor at the apex and tidal-seal on both ends around small island and extending to headlands.	Deployment Equipment 1000 ft. protected-water boom 12 ea. anchor systems (~40 lbs.) 1 ea. anchor system (≥60 lbs.) 100 ft. tidal-seal boom 4 ea. anchor stakes Vessels /Personnel/Tending Same as SE01-02-02	Ketchikan/marine vessel	Via marine waters	Same as SE01-02-02	Tested: not yet Surveyed: 4/15/03 ADEC, SEAPRO

Map & Photo Legend



▲ SE01-03-02d Southeast arm Rudyerd Bay looking towards the south.



◀ SE01-03-01b Rudyerd Bay at Punchbowl Cove looking towards the east.



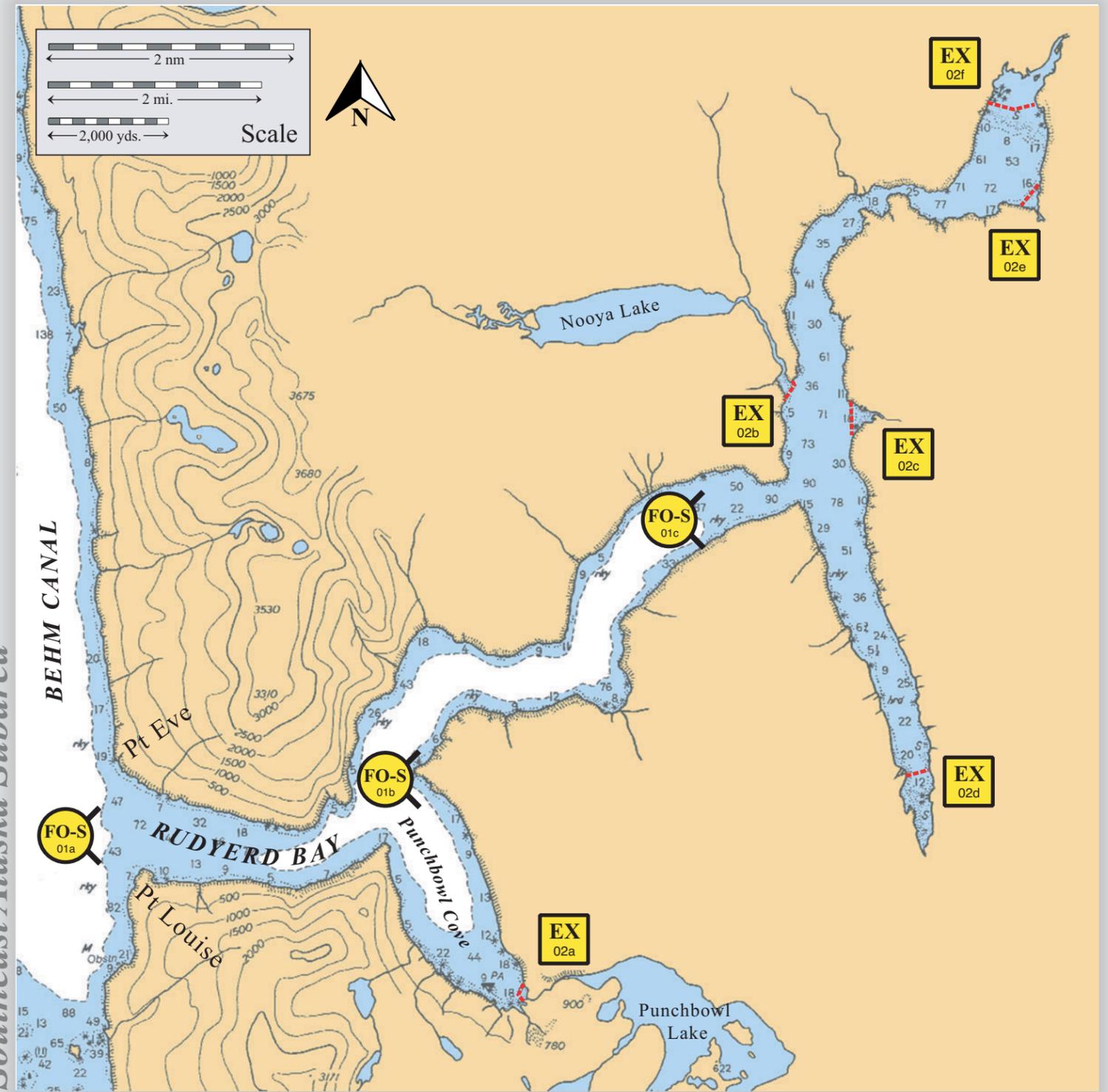
◀ SE01-03-02a Punchbowl Cove looking towards the south. Note spill response boom being deployed.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Protected-water Boom
-  Tidal-seal Boom

Geographic Response Strategies for Southeast Alaska Subarea

Rudyerd Bay, SE01-03

Center of map at 55° 33.3' N Lat., 130° 49.2' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-03-01	<p>Rudyerd Bay Nearshore waters in the general area of:</p> <ul style="list-style-type: none"> a. Lat. 55° 32.98 N Lon. 130°52.56 W b. Lat. 55° 33.78 N Lon. 130° 48.41W c. Lat. 55° 35.60 N Lon. 130° 43.90W 	<p>Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of Rudyerd Bay.</p>	<p>Deploy free-oil recovery strike teams in Rudyerd Bay and at the head of Punchbowl Cove.</p> <p>Use aerial surveillance to locate incoming slicks.</p>	<p>Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.</p>	<p>Vessel platform</p>	<p>Via marine waters Chart 17424</p>	<p>Marine mammals- Steller sea lion haulout and rookery (500 yd. exclusion zone), harbor seal haulouts and rookeries</p> <p>Fish-intertidal salmon spawning (pink, king, coho, chum)</p> <p>Birds-waterfowl concentrations ~300 (winter)</p>	<p>Vessel masters should have local knowledge.</p>
SE01-03-02	<p>Rudyerd Bay Punchbowl Lake Stream</p> <ul style="list-style-type: none"> a. Lat. 55° 31.50 N Lon. 130°46.57 W <p>Nooya Lake Stream</p> <ul style="list-style-type: none"> b. Lat. 55° 36.77 N Lon. 130° 42.63W c. Lat. 55° 36.46 N Lon. 130° 41.39W d. Lat. 55° 33.48 N Lon. 130° 40.62W e. Lat. 55° 38.24 N Lon. 130° 38.93W f. Lat. 55° 39.12N Lon. 130° 39.12W 	<p>Exclusion Exclude oil entering the identified intertidal areas and streams in Rudyerd Bay and Punchbowl Cove.</p>	<p>Use vessels with deck space (class 2/3/4) to transport equipment.</p> <p>Use skiffs (class 6) to deploy boom and set anchors.</p> <p>Place 2200 ft. of protected-water boom to deflect oil entering Rudyerd Bay to FO-S strike team. Monitor throughout tide.</p> <p><u>Boom lengths</u></p> <ul style="list-style-type: none"> a. 600 ft. b. 800 ft. c. 1600 ft. d. 1200 ft. e. 1000 ft. f. 2800 ft. 	<p>Deployment Equipment 8000 ft. protected-water boom 40 ea. anchor systems (~40 lbs.) 2 ea. 50 ft. section tidal seal boom 24 anchor stakes</p> <p>Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6</p> <p>Personnel/Shift 18 ea. vessel crew</p> <p>Tending Vessels 2 ea. class 3/4 2 ea. class 6</p> <p>Personnel/Shift 10 ea. vessel crew</p>	<p>Vessel platform</p>	<p>Via marine waters Chart 17424</p>	<p>Same as SE01-03-01</p>	<p>Vessel masters should have local knowledge.</p> <p>FOSC Historic Properties Specialist should MONITOR on-site operations.</p> <p>See Figure G-3-2 for equipment locations.</p> <p>Tested: 02a tested 8/29/02 SEAPRO, 02b-f not yet tested.</p> <p>Surveyed: 8/29/02 SEAPRO</p>



SE01-04-04 Chickamin River Estuary looking towards the northeast.

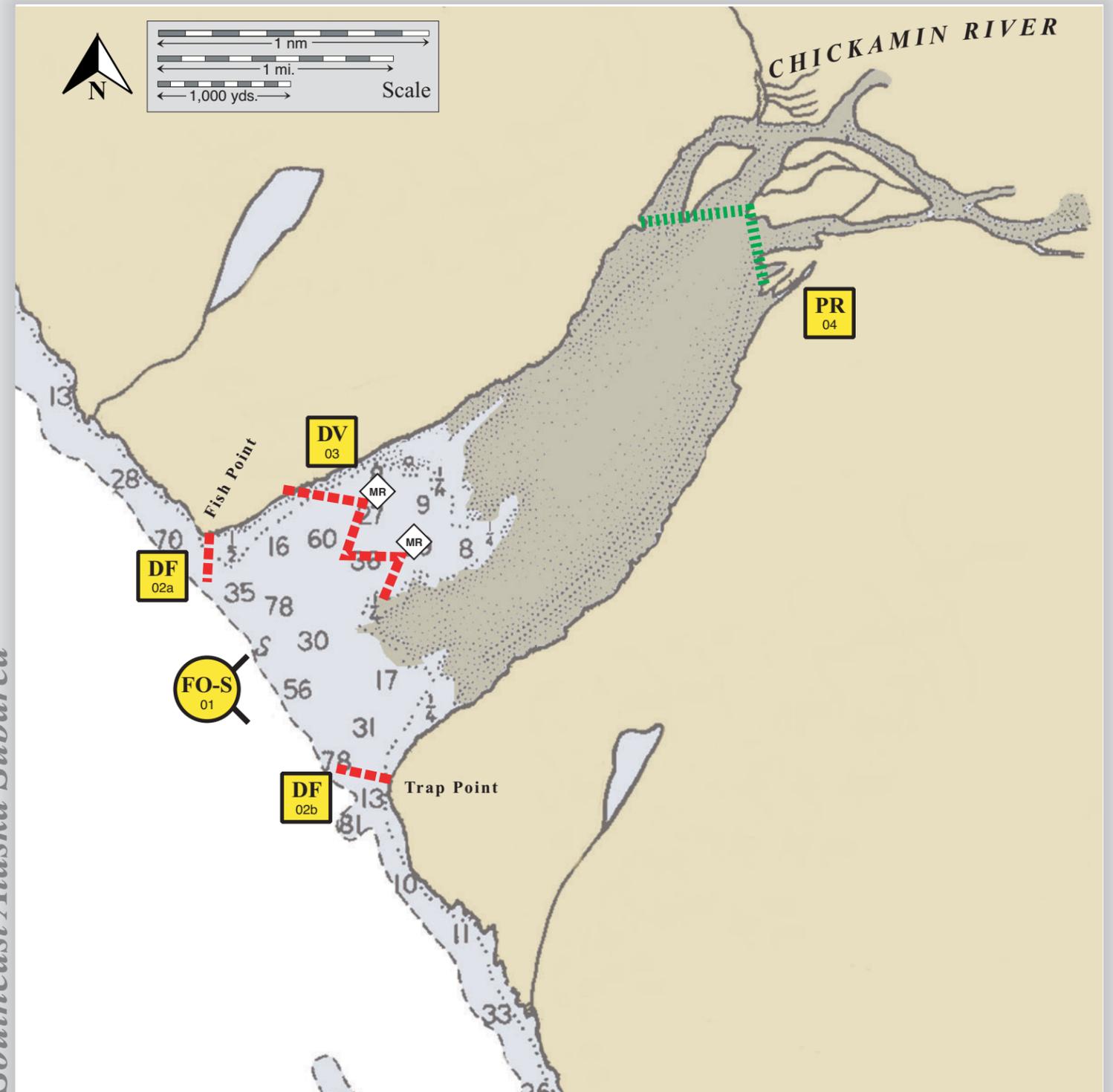
Map & Photo Legend

	Free-oil Containment and Recovery, Shallow Water
	Diversion Booming
	Deflection Booming, Fixed
	Passive Recovery and Debris Removal
	Protected-water Boom
	Snare Line
	Marine Recovery

Chickamin River Estuary, SE01-04

Center of map at 55° 48.1' N Lat., 130° 57.0' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-04-01	Chickamin River Estuary Nearshore waters in the general area of: Lat. 55° 47.5 N Lon. 130° 58.9 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment outside of the Chickamin River Estuary.	Deploy free-oil recovery strike teams upwind and up current of Chickamin River Estuary. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Ketchikan Harbor	Via marine waters Chart 17424	Same as SE01-04-02	Vessel master should have local knowledge.
SE01-04-02	Chickamin River Estuary <u>Boom Arrays:</u> a. Lat. 55° 47.8 N Lon. 130° 59.4 W b. Lat. 55° 47.0 N Lon. 130° 58.3 W	Deflection-Fixed Deflect oil entering Chickamin River Estuary away from mudflats for recovery.	Transport equipment to the site by vessel (class 2/3/4). Place cascaded booms arrays on the down stream side of the entrance to Chickamin River Estuary with fishing vessels and skiffs (class 3/4/6) at appropriate angle to deflect it to free-oil strike teams. Move to the other location at the change of the tide.	Deployment Equipment 1200 ft. protected-water boom 12 ea. anchor systems (~40 lbs.) 600 ft. extra anchor line 2 ea. anchor stakes Vessels 2 ea. class 2 4 ea. class 3/4 2 ea. class 6 Personnel / Shift 30 ea. vessel crew Tending Vessels 3 ea. class 3/4 2 ea. class 6 Personnel / shift 12 ea. vessel crew	Vessel platform	Via marine waters Chart 17424	Fish-intertidal salmon spawning (chum, pink, coho, king, steelhead) Birds-waterfowl and shorebirds migration, molting, and concentration >500 (winter) Habitat-marsh, sheltered tidal flat	Vessel master should have local knowledge. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-2 for equipment locations. Tested: not yet
SE01-04-03	Chickamin River Estuary <u>Anchor Locations</u> a. Lat. 55° 47.9 N Lon. 130° 58.5 W b. Lat. 55° 47.7 N Lon. 130° 58.4 W c. Lat. 55° 47.5 N Lon. 130° 58.1 W	Divert and Recover Divert oil entering Chickamin River Estuary to marine recovery.	Deploy anchor and booms with skiffs and fishing vessels (class 3/4/6). Place boom in 4 legs that connect in 2 chevron patterns that are anchored at the north and south beaches. Establish marine recovery units at the apex of each chevron. Tend throughout the flood tide. Allow the array to flag in the current during the ebb tide.	Deployment Equipment 6000 ft. protected-water boom 3 ea. lg. anchor systems (~1000 lbs.) 40 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes 2 ea. marine recovery units Vessels, Tending Same as SE01-04-02 Personnel/Shift 2 ea. marine recovery	Vessel platform	Via marine waters Chart 17424	Same as SE01-04-02	Vessel master should have local knowledge. Marine recovery units must be able to go dry on the tidal flat or be moved at high tide. Tested: not yet
SE01-04-04	Chickamin River Mudflats Lat. 55° 49.1 N Lon. 130° 55.9 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place and anchor 4300 ft. of snare line or sorbent boom across mudflats at the head of Chickamin River Estuary.	Deployment Equipment 4300 ft. snare line or sorbent boom 45 ea. anchor stakes Vessels, Personnel, Tending Same as SE01-04-02	Vessel platform	Via marine waters Chart 17424	Same as SE01-04-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Use caution to not drive oil into the substrate.

Map & Photo Legend



SE01-05-06a Head of Thorne Bay looking northwest.



SE01-05 Thorne Bay narrows looking southwest.



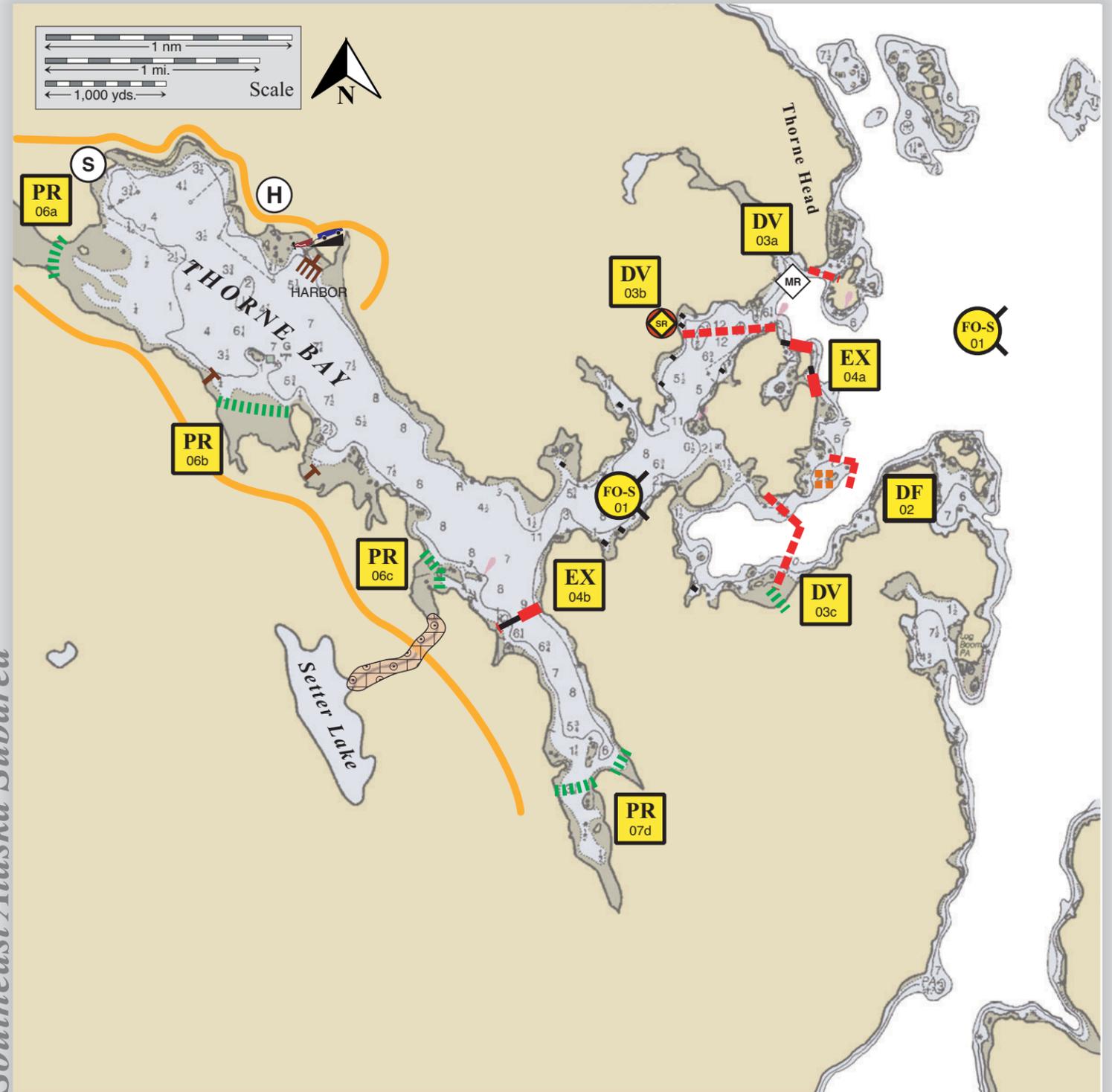
SE01-05-04b Thorne Bay narrows looking southeast.

- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Diversion Booming
- Deflection Booming
- Passive Recovery and Debris Removal
- Protected-water Boom
- Calm-water Boom
- Snare Line
- Marine Recovery
- Shoreside Recovery, Marine Access
- Staging Area
- Helicopter Landing Site
- Dock
- Boat Ramp
- Seal Haulout
- Salmon Stream
- Float Houses
- Gravel Road

Geographic Response Strategies for Southeast Alaska Subarea

Thorne Bay, SE01-05

Center of map at 55° 39.9' N Lat., 132° 29.7' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-05-01	Thorne Bay Nearshore waters in the general area of: a. Lat. 55° 41.0 N Lon. 132° 33.2 W b. Lat. 55° 41.0 N Lon. 132° 33.2 W	Free-oil Recovery-Shallow Water Maximize free-oil recovery in the offshore & nearshore environment near the mouth of Thorne Bay.	Deploy free-oil recovery strike teams upwind and up current of the entrance to Thorne Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Thorne Bay or Ketchikan	Via marine waters Chart 17423B	Same as SE01-05-02	Vessel master should have local knowledge.
SE01-05-02	Thorne Bay Lat. 58° 40.9 N Lon. 134° 58.7 W	Deflection-Fixed Deflect oil from the seal haul out in the southern entrance to the Thorne Bay.	Transport equipment to site by marine vessel (class 2/3/4). Place boom and anchors with fishing vessels and skiffs (class 3/4/6). Position boom in a chevron pattern at an appropriate angle to deflect oil from the seal haul out	Deployment Equipment 1000 ft. protected-water boom 12 ea. anchor systems (~40 lbs.) 1 ea. apex anchor system(~60 lbs.) Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel/Shift 15 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 7 ea. vessel crew	Thorne Bay or vessel platform	Via marine waters Chart 17423B	Fish-intertidal salmon/trout spawning (concentrations < 10,000)(pink, chum, coho, sockeye, steelhead, Dolly Varden, cutthroat) Human use-subsistence-high use marine invertebrate area Marine mammals- harbor seals	Vessel master should have local knowledge. Tested: not yet Surveyed: 5/5/03 TLR
SE01-05-03	Thorne Bay a. Lat. 55° 40.96 N Lon.132° 27.60 W b. Lat. 55° 40.68 N Lon.132° 28.65 W c. Lat. 55° 40.68 N Lon.132° 28.65 W	Divert Recover Divert oil entering Thorne Bay to shore-side recovery.	Transport equipment by vessel to the site (class 2/3/4). Deploy anchors and boom with skiffs and fishing vessels (class 3/4/6) Place boom (a) between Thorne Head and the island. Place (b) between the larger island and the mainland using the bight as a recovery area. Place (c) in the southern entrance in a chevron pattern with passive recovery established on the southern intertidal area. <u>Boom Array</u> a. 600 ft. b. 1500 ft. c. 3500 ft.	Deployment Equipment 5600 ft. protected-water boom 300 ft. snare or sorbent boom 58 ea. anchor systems (~40 lbs.) 16 ea. anchor stakes 1 ea. shoreside recovery unit 1 ea. marine recovery unit Vessels/Personnel/Shift Same as SE01-05-02	Thorne Bay or vessel platform	Via marine waters Chart 17423B	Same as SE01-05-02	Vessel master should have local knowledge. The head of Thorne Bay was a log transfer site. Bottom is covered with bark and debris. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-2 for equipment locations. Tested: not yet Surveyed: 5/5/03 TLR
SE01-05-04	Thorne Bay a. Lat. 55° 40.58 N Lon. 132° 27.8 W b. Lat. 55° 39.47 N Lon. 132° 29.8 W	Exclusion Exclude oil from entering the indicated coves in Thorne Bay.	Place booms (a) across the 2 entrances to the cove on the island at the entrance of Thorne Bay. Place (b) across the mouth of the southern arm of Thorne Bay. a. 2 ea. 300 ft. b. 1400 ft.	Deployment Equipment 2000 ft calm-water boom 20 ea. anchor systems (~40 lbs.) 12 ea. anchor stakes Vessels / Personnel / Tending Same as SE01-09-02	Thorne Bay or vessel platform	Via marine waters	Same as SE01-09-01	Tested: not yet Surveyed: 5/5/03 TLR
SE01-05-05	Thorne Bay a. Lat. 55° 41.0 N Lon. 132° 33.2 W b. Lat. 55° 40.4 N Lon. 132° 31.8 W c. Lat. 55° 39.68 N Lon. 132° 30.48W d. Lat. 55° 38.93 N Lon. 132° 29.29W	Passive Recovery Minimize impact to designated areas through passive recovery using snare line or sorbent boom.	Place 5200 ft. of snare line or sorbent boom across the small coves in Thorne Bay, inside the tidal flats. a. 1200 ft. b. 1800 ft. c. 1000 ft. d. 1200 ft.	Deployment Equipment 5200 ft. snare line or sorbent boom 54 ea. anchor stakes Vessels,Personnel,Tending Same as SE01-05-02	Thorne Bay or vessel platform	Via marine waters Chart 17423B	Same as SE01-05-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Surveyed: 5/5/03 TLR

Map & Photo Legend



SE01-06 Looking southwest over Cat and Dog Islands.



SE01-06-04a Looking east over Cat Island.



SE01-06-04b Looking south over Double Island.



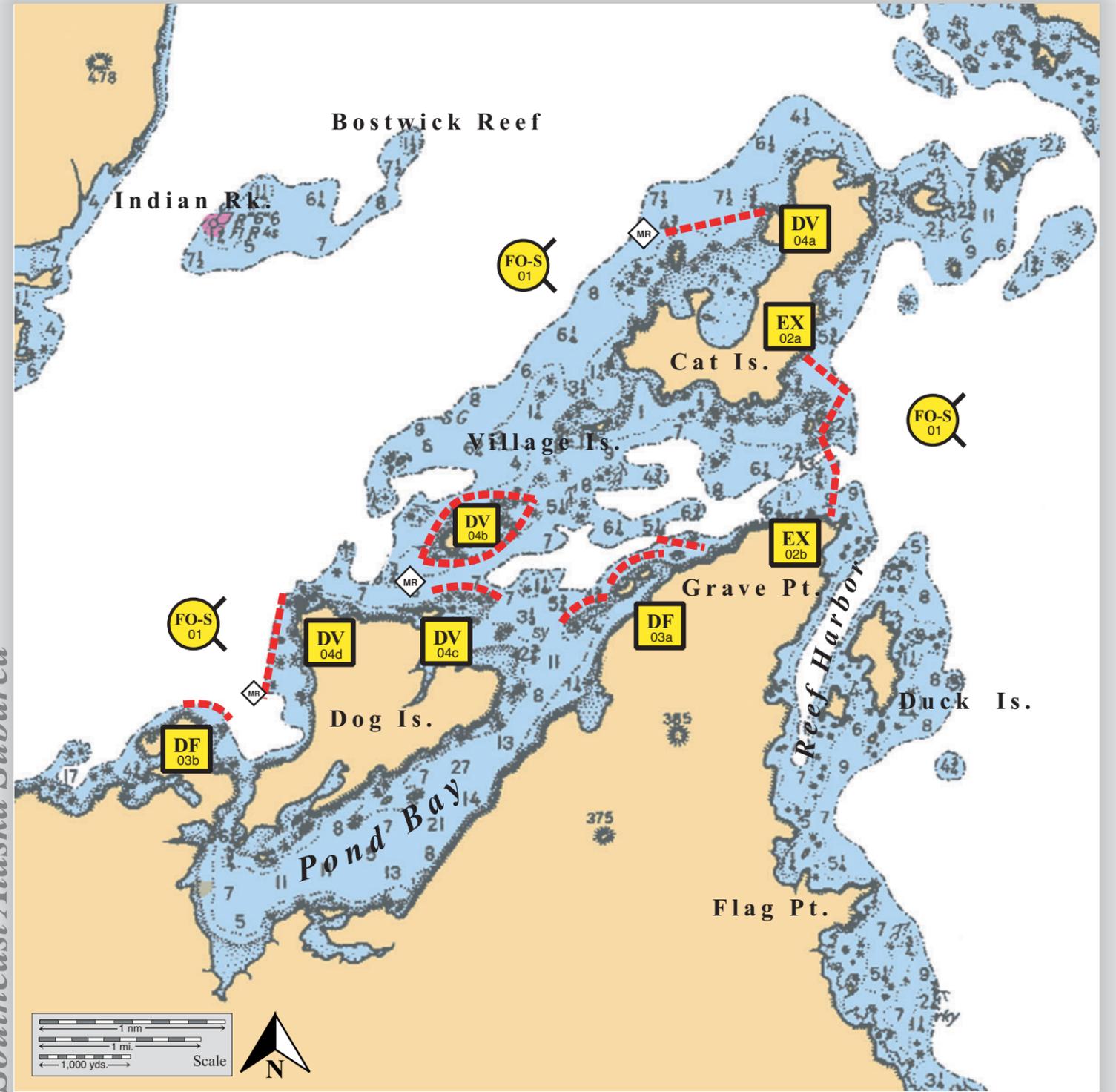
SE01-06-03b Looking south at Pond Bay.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Deflection Booming, Fixed
-  Diversion Booming
-  Protected-water Boom
-  Marine Recovery

Geographic Response Strategies for Southeast Alaska Subarea

Dog Island, SE01-06

Center of map at 54° 59' N Lat., 131° 19' W Lon.



This is not intended for navigational use.

Soundings in fathoms

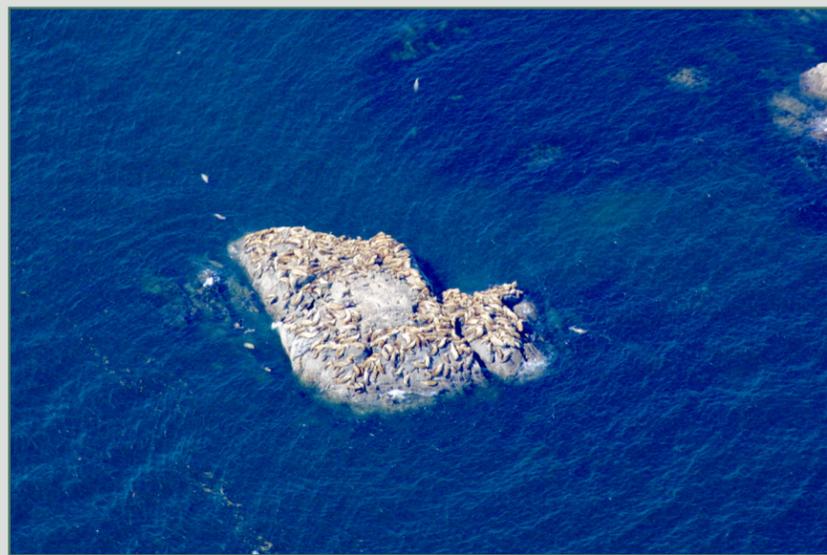
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-06-01 Note: Strategies are listed in priority of deployment	Dog Island	Free-oil Recovery Maximize free-oil recovery in nearshore waters around Dog Island and Cat Island; including, east end of Cat Passage, west side of Cat Island, mouth of Dog Bay.	Deploy free-oil recovery strike teams.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts herring fishery and other sensitive habitats around Dog and Cat Island.	Ketchikan; Marine vessel	Via marine waters	Fish-herring Marine mammals- Habitat-tidal mudflats	Site survey desired to: 1. Check direction and velocity of current.
SE01-06-02	Dog Island a. Lat. 55° 00.95 N Lon. 131° 14.75 W (chevron point) b. Lat. 55° 00.52 N Lon. 131° 14.44 W (chevron point)	Exclusion Protect waters around Dog Island by preventing oil in Revillagigedo Channel from entering Cat Passage.	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Place protected-water boom, with tidal-seal on each end using class 6 skiffs. Deploy free oil strike teams [FO-S 01] at Cat Passage. <u>Boom Arrays</u> a. Chevron, 1250 ft per side b. Chevron, 2000 ft per side in 1000 ft cascade	Deployment Equipment 6500 ft protected-water boom. 18 ea ~40 lbs anchor systems for securing boom every 500 feet. Place 2X40 lbs anchor systems in tandem at apex of chevron arrays. 2 ea. 50 ft of tidal-seal boom units 2 anchor stakes 3 marine recovery units Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel Shift 18 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea vessel crew	Same as SE01-06-01	Via marine waters	Marine mammals- Steller sea lions, harbor seals Fish-herring, intertidal salmon spawning (coho, pink, chum) Birds-shorebirds, waterfowl migration (spring & fall), waterfowl concentration >1200 (winter) Habitat-tidal mudflats	Site survey desired to: 1. Check direction and velocity of current. 2. Check chevron and shore side anchor points. Assume oil is coming from the east out of Revillagigedo Channel. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-2 for equipment locations. Tested: not yet
SE01-06-03	Dog Island a. Lat. 54° 59.9 N Lon. 131° 16.4 W b. Lat. 54° 59.13N Lon. 131° 21.1 W	Deflection Protect waters around Dog Island by deflecting oil in Felice Strait and Cat Passage away from a. Islets west of Grave Pt. b. Island west side of Dog Bay.	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Place protected-water boom using class 6 skiffs. <u>Boom Arrays</u> a. 3000 ft, 1000 ft cascade. b. 1000 ft.	Deployment Equipment 4000 ft protected-water boom. 8 ea ~40 lbs anchor systems for securing boom every 500 feet. 1 ea. 50 ft of tidal-seal boom units at 03a. 1 anchor stakes	Same as SE01-06-01		Same as SE01-06-02	Site survey desired to: Check direction and velocity of current. Check anchor points. Assume oil is coming from the north in Felice Channel or east out of Revillagigedo Channel. Tested: not yet
SE01-06-04	Dog Island a. Lat. 55° 01.9 N Lon. 131° 15.4 W b. Lat. 55° 00.1 N Lon. 131° 32 W c. Lat. 54° 59.8 N Lon. 131° 16.5 W d. Lat. 54° 59.7 N Lon. 131° 20.15W	Diversion Protect waters around Dog Island by diverting oil in Felice Strait and Cat Passage to marine recovery units. Diversion locations: a. West side of Cat Island. b. Double Island c. Dog Is. NE cove d. Dog Is. NW side	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Place protected-water boom using class 6 skiffs. Deploy marine recovery units west of Cat Island, between Double Island and Dog Island, in Dog Bay to recover deflected oil. <u>Boom Arrays</u> a. 3000 ft, 1000 ft cascade. b. 8000 ft, anchor every 500 ft. c. 1000 ft, anchor every 500 ft. d. 3000 ft, 1000 ft cascade.	Deployment Equipment 15000 ft protected-water boom. 30 ea ~40 lbs anchor systems for securing boom every 500 feet. 1 ea. 50 ft of tidal-seal boom units at 04a. 2 anchor stakes 3 marine recovery units Vessels/Personnel/Tending Same as SE01-06-02	Same as SE01-06-01	Same as SE01-06-01	Same as SE01-06-01	Site survey desired to: Check direction and velocity of current. Check chevron and shore side anchor points. Consider possibility of placing skimmers at either end of chevron. Tested: not yet

Map & Photo Legend



SE01-07-02 Grindall Island looking northwest.

-  Free-oil Containment and Recovery, Shallow Water
-  Deflection Booming, Live
-  Passive Recovery, Marine Mammal Haulout
-  Protected-water Boom
-  Seal Haulout
-  500 yd Exclusion Zone

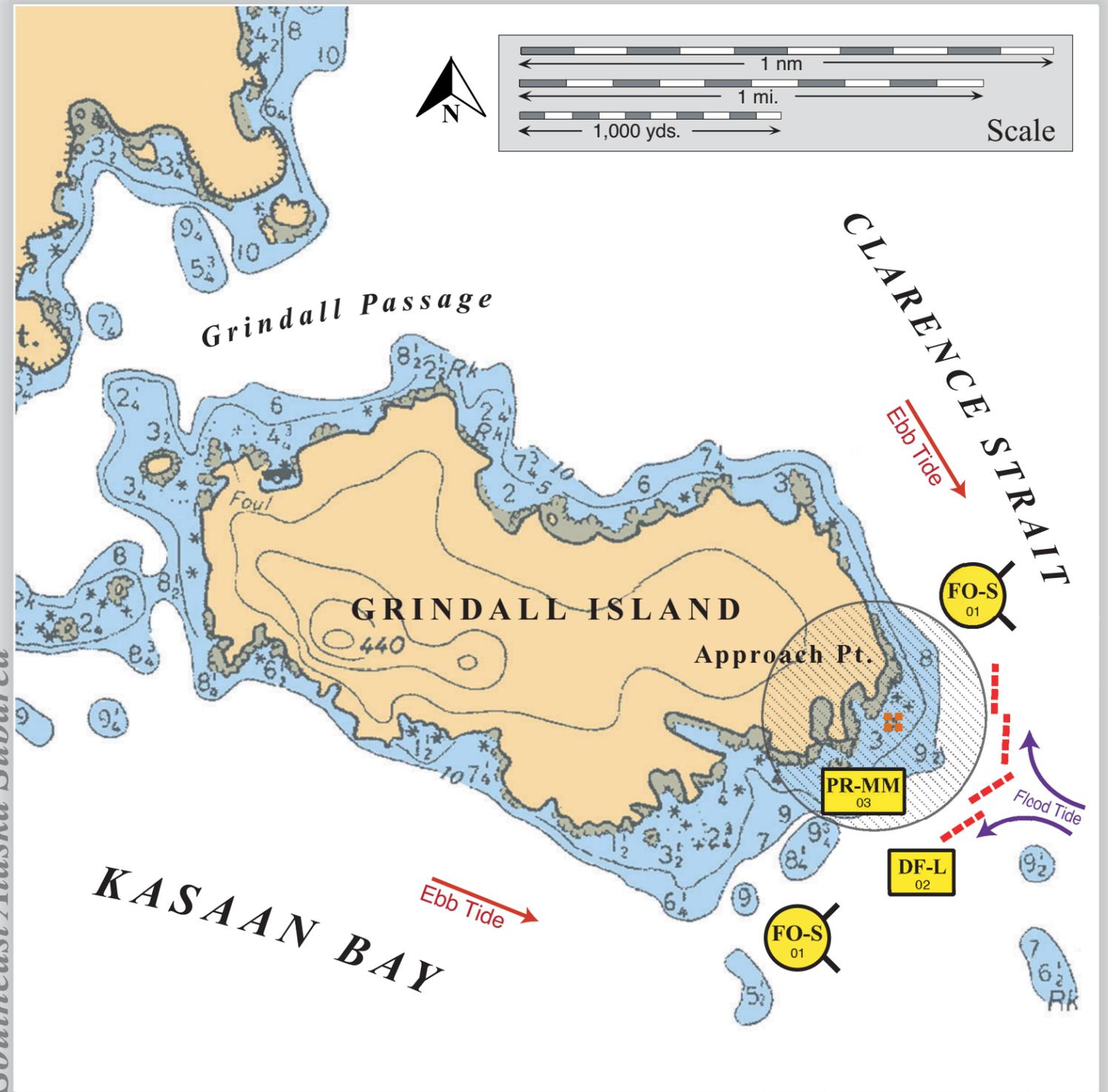


SE01-07 Grindall Haulout from above.

Grindall Island, SE01-07

Center of map at 55° 26' N Lat., 132° 07' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-07-01	Grindall Island Lat. 55° 26 N Lon. 132° 07 W	Free-oil Recovery Maximize free-oil recovery in the offshore and nearshore waters around Grindall Island.	Deploy free-oil recovery strike teams. Ensure operations are not so close to marine mammal haulouts that animals leave the island and enter the water.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts South Marble Island.	Ketchikan; Marine vessel	Via marine waters	Marine mammals-seal haulout, sea lion haulout (500 yd. exclusion zone) Birds- sea bird concentration area	Exposed conditions, shoal water/rocks and marine mammal haulout exclude any direct approach, landing or attachment of equipment to the island.
SE01-07-02	Grindall Island Lat. 55° 26 N Lon. 132° 07 W	Deflection-live Deflect oil away from island using boom tethered to response vessels Boom may not be attached to the island. Deep water precludes anchoring along the nearshore. Arrays of boom must be positioned and held in place by small vessels.	Tow and position 4 X 600 ft of boom using class 3/4 vessels (2 vessels per 600 ft boom string, 8 vessels total). Use aerial surveillance to position boom in a chevron pattern. Deflect oil away from seals and into open water of Clarence Strait for collection.	Deployment Equipment 2400 ft protected-water boom Vessels 8 ea class 3/4 Personnel/Shift 16 ea vessel crew Tending Vessels 8 ea. class 3/4 Personnel/Shift 16 ea vessel crew	Same as SE01-07-01	Same as SE01-07-01	Same as SE01-07-01	Same as SE01-07-01 FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-2 for equipment locations. Exposed to prevailing SE winds Tested: not yet Surveyed: 5/05/03 TLR
SE01-07-03	Grindall Island Lat. 55° 26 N Lon. 132° 07 W Actual location of this protection strategy will depend on field assessment at the time of deployment.	Passive Recovery-Marine Mammal Haulout Minimize impact to marine mammal haulouts, after consulting with NMFS.	Transport equipment by vessel (Class 3/4) from Seward. Broadcast sorbent material on haulout immediately prior to or after oil spill impact. Monitor after each high tide and replace as necessary. Minimize disturbance of marine mammals.	Deployment Equipment Broadcast sorbent material Vessels 1 ea. class 3/4 1 ea. class 6 Personnel / Shift 8 ea. vessel crew Tending Vessels 1 ea. class 3/4 1 ea. class 6 Personnel / Shift 3 ea. vessel crew	Vessel platform	Same as SE01-07-01	Same as SE01-07-01	Consult with the National Marine Fisheries Service prior to implementing this tactic. Exposed to prevailing SE winds Tested: not yet Surveyed: 5/05/03 TLR

Map & Photo Legend



SE01-08-01e&f Karta Bay looking northeast.



SE01-08-01b,c,d,e Karta Bay looking towards the northwest.



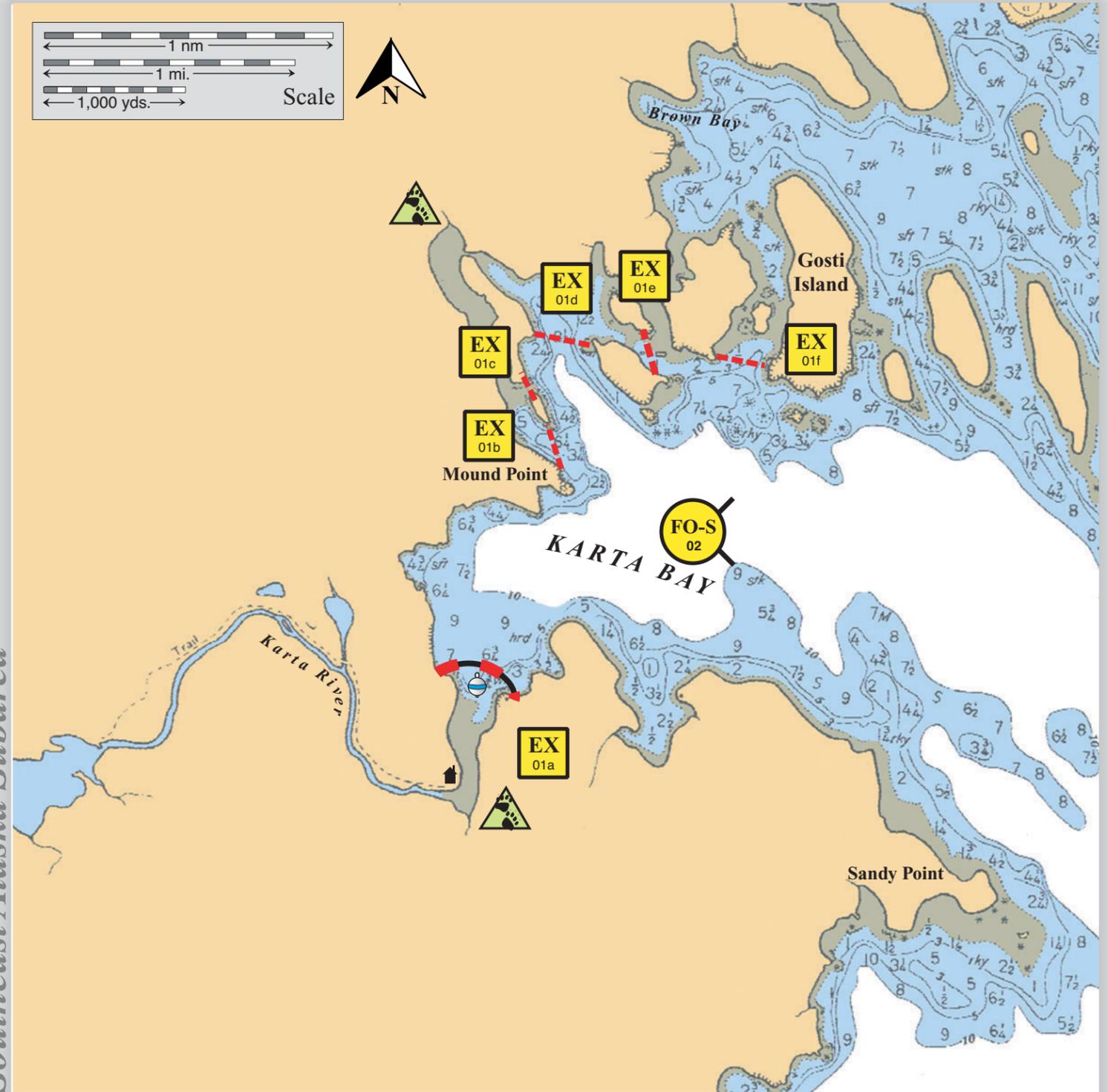
SE01-08-01a Karta River looking south.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Protected-water Boom
-  Calm-water Boom
-  Tidal-seal Boom
-  Shoreside Recovery
-  Mooring Buoy
-  Bears in Area, Guards Needed
-  Public Service Cabin

Geographic Response Strategies for Southeast Alaska Subarea

Karta Bay, SE01-08

Center of map at 55° 34' N Lat., 132° 33' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-08-01	Karta Bay a. Lat. 55° 33 N Lon. 132° 34.5 W b. Lat. 55° 34.7 N Lon. 132° 33.3 W c. Lat. 55° 34.8 N Lon. 132° 34.2 W d. Lat. 55° 34.8 N Lon. 132° 33.7 W e. Lat. 55° 34.9 N Lon. 132° 33.06 W f. Lat. 55° 34.9 N Lon. 132° 32.8 W	Exclusion a. Protect Karta River mouth, mudflats and marsh using exclusion boom anchored to achieve a convex shape. b.-f. Protect intertidal flats and marsh north side of Karta Bay. Recover oil using free oil strike teams.	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Place protected-water boom, with tidal-seal on each end using class 6 skiffs. Boom Array a. 1000 ft. calm-water boom b. 1500 ft. protected-water boom c. 300 ft. protected-water boom d. 900 ft. protected-water boom e. 600 ft. protected-water boom f. 1000 ft. protected-water boom	Deployment Equipment 4300 ft. protected-water boom 1000 ft. calm-water boom 24 ea. ~40 lbs anchor systems 12 anchor stakes Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel Shift 18 ea vessel crew Tending Vessels 1 ea. class 6 Personnel/Shift 3 ea. vessel crew	Ketchikan; Kasaan; marine vessel	Via marine waters	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning(pink, chum, coho, sockeye, steelhead, Dolly Varden, cutthroat) Birds-marbled murrelet >125 (summer), seabirds, waterfowl Habitat-tidal mudflats, sheltered rocky shorelines Human use-subsistence fishing, high recreational Terrestrial mammals-bears	Bears in area. Area logging facilities may be able to provide staging areas and other resources. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-2 for equipment locations. Forest Service cabin near the mouth of the Karta River may be used. Exposed to prevailing SE winds. Tested: not yet Surveyed: 5/5/03 TLR
SE01-08-02	Karta Bay Lat. 55° 33 N Lon. 132° 34.5 W	Free-oil Recovery Maximize free-oil recovery in the waters of Karta Bay and Kasaan Bay.	Deploy multiple free-oil recovery strike teams.	Multiple free-oil recovery strike teams as required to maximize interception of oil.	Ketchikan; Kasaan; marine vessel	Via marine waters	Same as SE01-08-01	

Map
& Photo

Legend



SE01-09-03 Lincoln Channel looking towards the northwest.



SE01-09-02b & 03a Lincoln Channel looking towards the northeast.



SE01-09-03b Looking southwest towards Kanagunut Island.



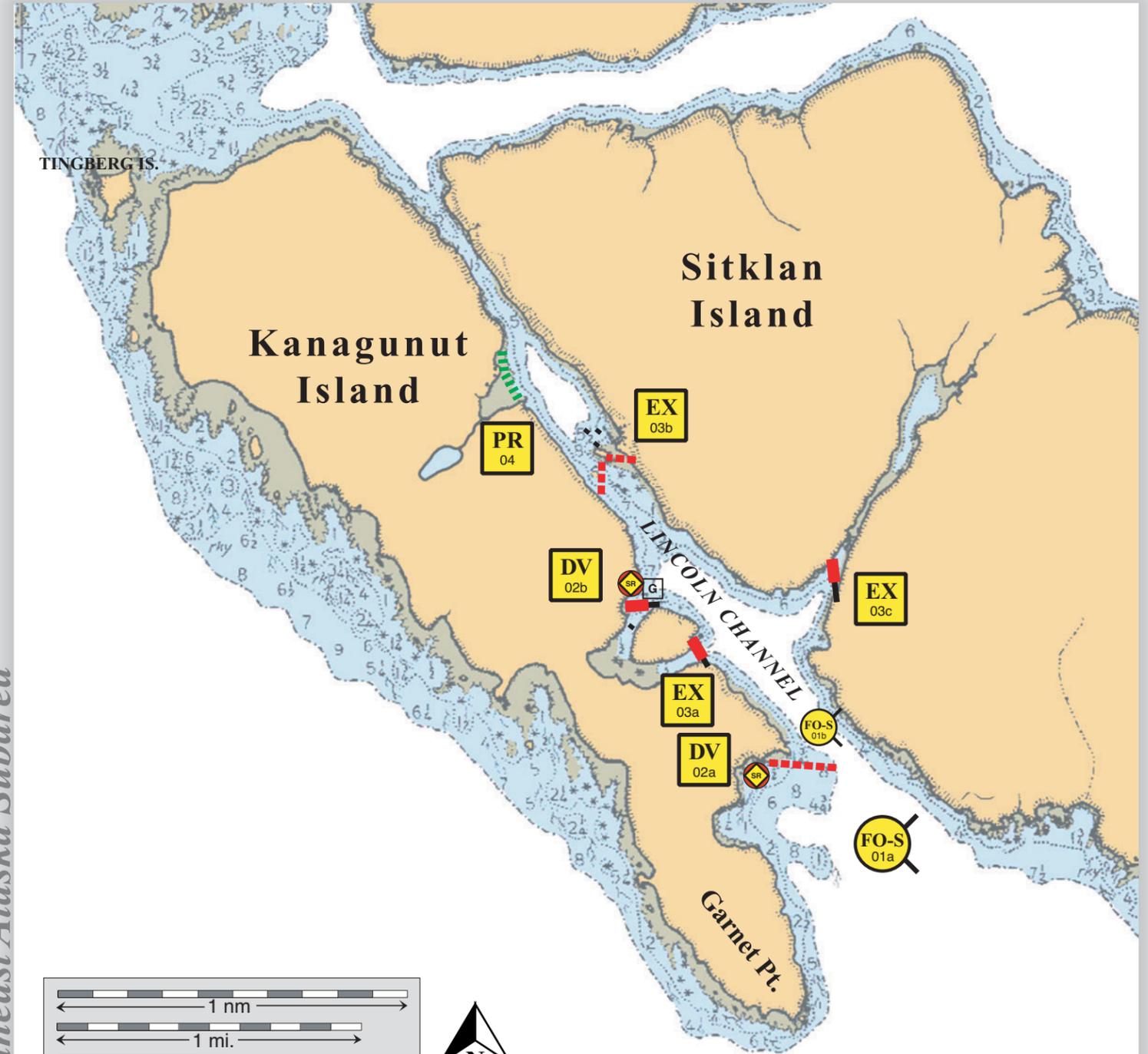
SE01-09-03c Looking northeast towards Sitklan Island.

- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Diversion Booming
- Passive Recovery and Debris Removal
- Protected-water Boom
- Calm-water Boom
- Gate
- Shoreside Recovery, Marine Access
- Snare Line
- Floating docks

Geographic Response Strategies for
Southeast Alaska Subarea

Lincoln Channel, SE01-09

Center of map at 54° 43' N Lat., 130° 40' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE01-09-01	Lincoln Channel Lat. 54° 43 N Lon. 130° 40 W	Free-oil Recovery Maximize free-oil recovery in the offshore and nearshore waters at the south entrance of Lincoln Channel.	Deploy free-oil recovery strike teams.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts Lincoln Channel.	Ketchikan; Marine vessel	Via marine waters	Marine mammals-harbor seals Habitat-tidal mudflats Cultural resources	Vessel master should have local knowledge. See fig. G-3-2 for equipment locations.
SE01-09-02	Lincoln Channel a. Lat. 54° 43.92 N Lon. 130° 41.2W (shoreline anchor point & recovery unit) b. Lat. 54° 44.29 N Lon. 130° 41.9W (shoreline anchor point & recovery unit) c. Lat. 54° 45.5N Lon. 130° 42.9W (shoreline anchor point & recovery unit).	Diversion/Shoreline Recovery Protect Lincoln Channel from oil approaching from Dixon Entrance or Nakat Bay. Divert oil to shoreside recovery units as indicated.	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Deploy protected-water boom, using class 4&6 vessels. Place boom (a) extending into the channel and establish collection on shore. Place (b) between the small island and establish recovery on Kanagunut Island. Establish a gate for vessel traffic. Place (c) at the N. entrance of the channel and establish recovery on Sitklan Island. <u>Boom Array</u> a. 800 ft. protected-water boom b. 500 ft. calm-water boom	Deployment Equipment 800 ft. protected-water boom 500 ft calm-water boom 20 ea. ~40 lbs anchor systems for securing boom 16 anchor stakes 2 shoreside recovery units Vessels 2 ea. class 2 4 ea. class 3/4 2 ea. class 6 Personnel Shift 22 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea vessel crew	Ketchikan; Marine vessel	Via marine waters	Same as SE01-09-01	Exposed to prevailing SE winds. May not be suitable for deployment during inclement weather. SE01-09-02a should be deployed only during favorable conditions. FOSC Historic Properties Specialist should INSPECT site prior to operations. Tested: not yet Surveyed: 4/15/03 ADEC, SEAPRO
SE01-09-03	Lincoln Channel a. Lat. 54° 44.4 N Lon. 130° 41.8 W b. Lat. 54° 44.75N Lon. 130° 42.0W c. Lat. 54° 44.4 N Lon. 130° 41.0 W	Exclusion Protect tidal mudflats and streams along Lincoln Channel.	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Deploy protected-water boom, using class 4/6 vessels. Place (c) in a chevron pattern and anchor on the small island mid-channel. <u>Boom Array</u> a. 300 ft. calm-water boom b. 1200 ft. protected-water boom c. 400 ft. calm-water boom	Deployment Equipment 1200 ft. protected-water boom 700 ft. calm-water boom 13 ea. ~20 lbs anchor systems 12 anchor stakes Vessels / Personnel / Tending Same as SE01-09-02	Ketchikan; Marine vessel	Via marine waters	Same as SE01-09-01	Tested: not yet Surveyed: 4/15/03 ADEC, SEAPRO
SE01-09-04	Lincoln Channel Lat. 54° 44.4 N Lon. 130° 41.8 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place 1000 ft. snare line or sorbent boom across mudflats. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 1000 ft. snare line or sorbent boom 20 ea. anchor stakes Vessels / Personnel / Tending Same as SE01-09-02	Ketchikan; Marine vessel	Via marine waters	Same as SE01-09-01	Tested: not yet Surveyed: 4/15/03 ADEC, SEAPRO

B. SOUTHEAST ALASKA RESPONSE ZONE 2

Figure G-3-3 represents the Southeast Alaska response zone 2. No sites were selected for zone 2, the reason being that the sensitive areas identified were along exposed areas of the Gulf of Alaska where response equipment is not effective or dangerous to deploy. Figure G-3-4 shows the location of oil spill response equipment throughout zone 2.



Figure G-3-3. Southeast Alaska Response Zone 2. No sites have been selected in Zone 2.

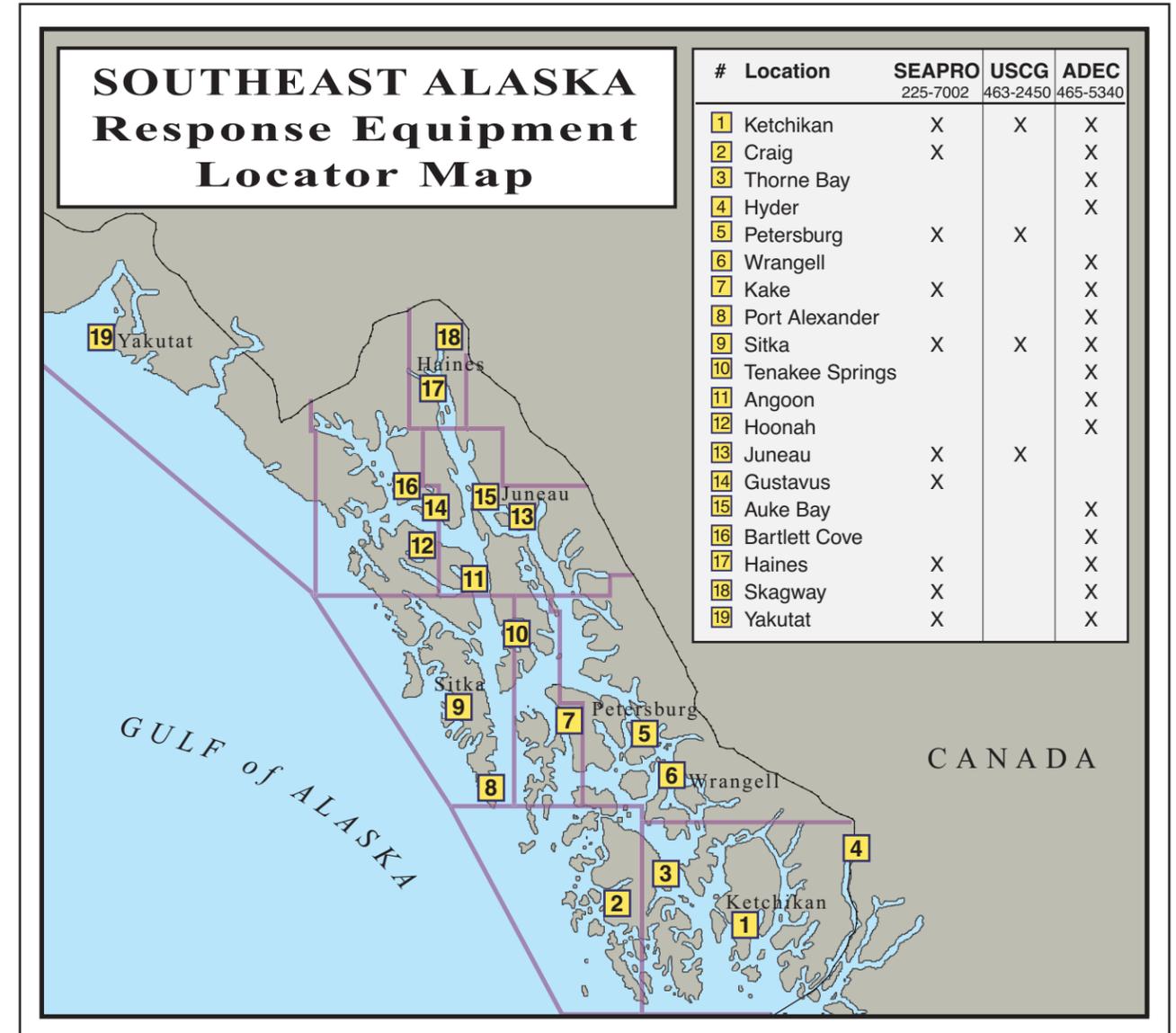


Figure G-3-4 . Southeast Alaska Response Equipment Locator Map.

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C. SOUTHEAST ALASKA RESPONSE ZONE 3

Figure G-3-5 provides an overview of the Southeast Alaska response zone 3, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE03-01. Figure G-3-6 shows the location of oil spill response equipment throughout zone 3.

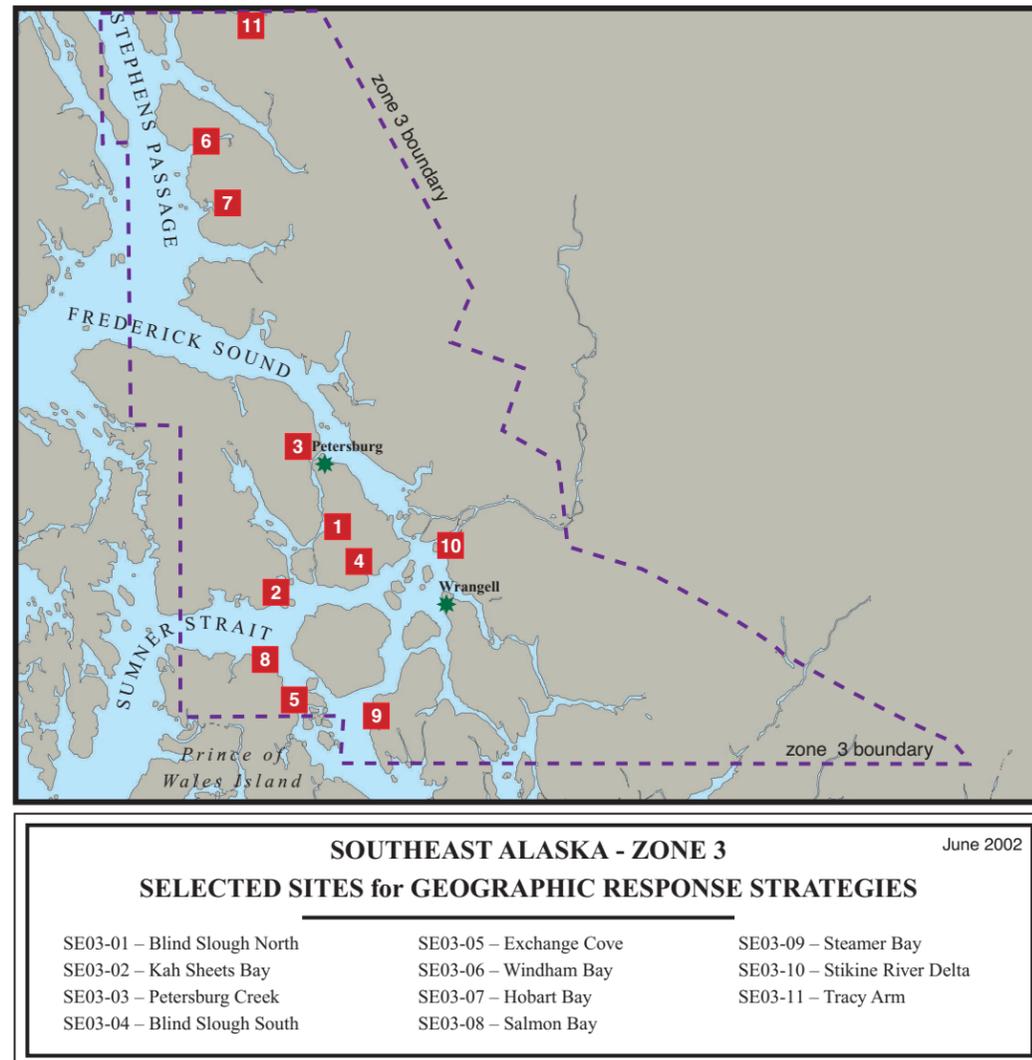


Figure G-3-5. Southeast Alaska Response Zone 3.

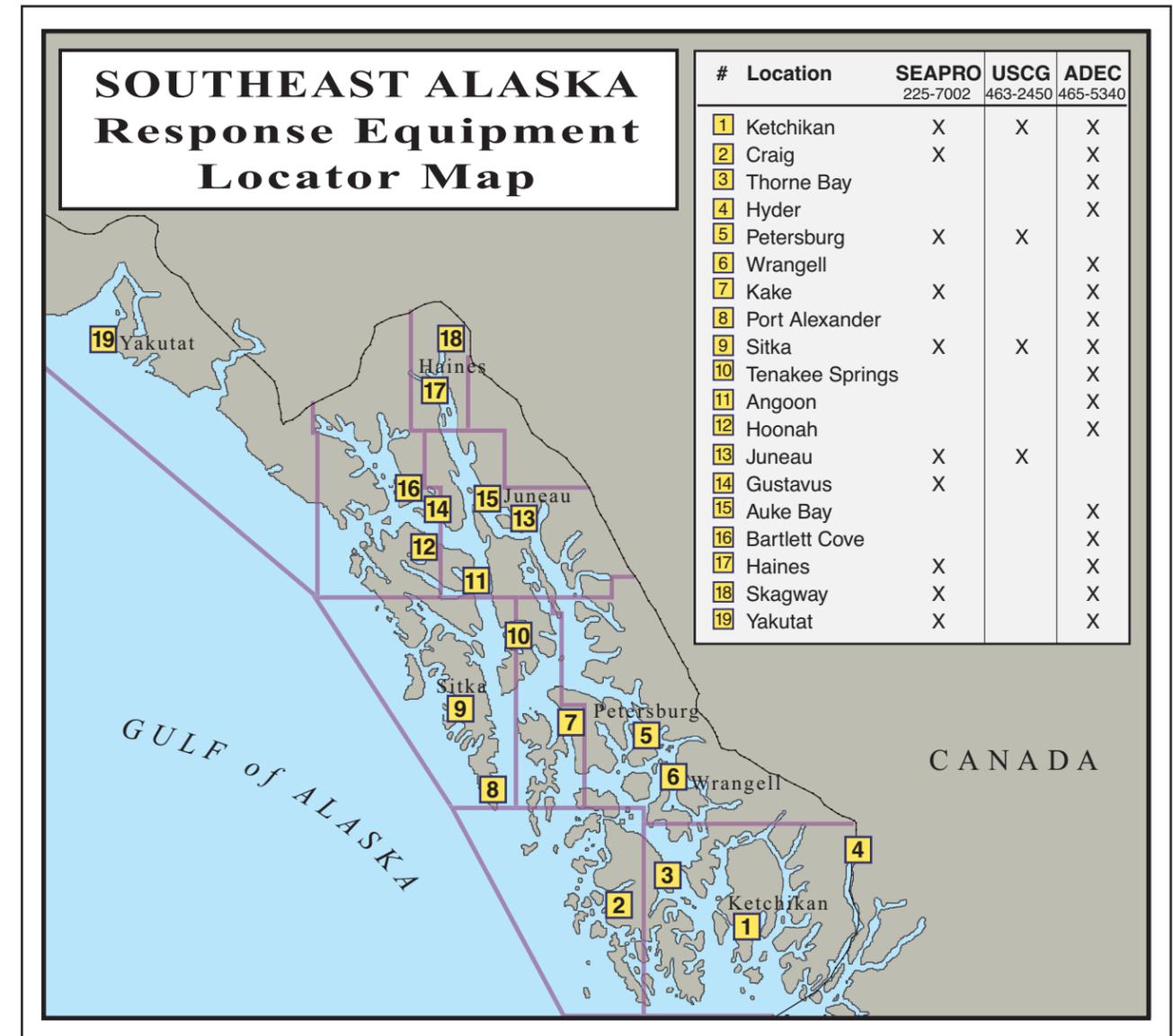


Figure G-3-6. Southeast Alaska Response Equipment Locator Map.

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Map
& Photo

Legend



SE03-01 Wrangell Narrows and Blind Slough North looking towards the north.



SE03-01-03 Blind Slough North looking northeast at Blind Island.



SE03-01-03 Blind Slough North looking east at Blind Island.

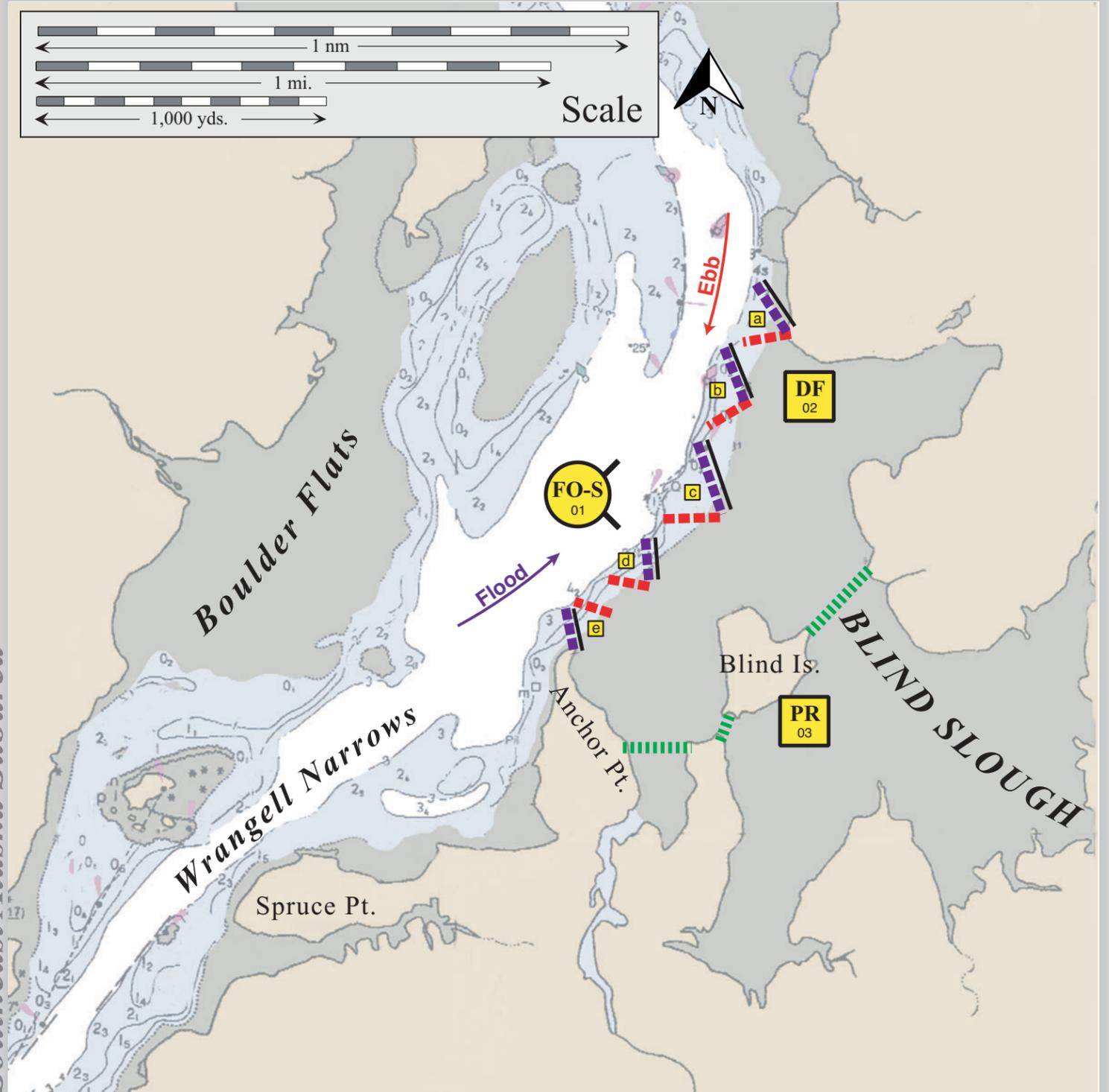
-  Free-oil Containment and Recovery, Shallow Water
-  Deflective Booming
-  Passive Recovery and Debris Removal
-  Protected-water Boom, Ebb Tide
-  Protected-water Boom, Flood Tide
-  Snare Line

Geographic Response Strategies for

Southeast Alaska Subarea

Blind Slough North, SE03-01

Center of map at 56° 38.5' N Lat., 132° 55.8' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-01-01	Wrangell Narrows. Nearshore waters in the general area of: Lat.56°38.5 Lon.132°55.8W	Free-oil Recovery - shallow Maximize free-oil recovery in the nearshore environment.	Deploy free-oil recovery strike teams upwind and up current of Blind Slough. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Wrangell/Marine vessel	Via marine waters Chart 17375 Papkes Landing	Same as SE03-01-02	Vessel masters should have local knowledge.
SE03-01-02	Blind Slough Estuary a. Lat. 56° 38.4N Lon. 132° 55.6W b. Lat. 56° 38.4N Lon. 132° 55.4W c. Lat. 56° 38.6N Lon. 132° 55.2W d. Lat. 56° 38.7N Lon. 132° 55.1W e. Lat. 56° 38.0N Lon. 132° 55.0W	Deflection Deflect oil away from Blind Slough Estuary to FO-S task forces.	Use vessels with deck space (class 2/3/4) to transport equipment and skiffs (class 6) to deploy boom and set anchors. Place 3400 ft.of protected-water boom arrays to deflect oil to FO-S task force. Reverse boom angle with tide change. Monitor throughout tide. <u>Boom Arrays</u> a. 600 ft. b. 600 ft. c. 800 ft. d. 800 ft. e. 600 ft.	Deployment Equipment 3400 ft. protected-water boom 34 ea. anchor systems (~40 lbs.) Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 14 ea. vessel crew Tending Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / shift 6 ea. vessel crew	Wrangell/ Marine Vessel	Via marine waters Papkes Landing	Fish-intertidal salmon/trout spawning (coho, pink, chum, Dolly Varden) Birds-waterfowl and shorebird migration concentrations (April-May and fall) Habitat-sheltered tidal flats, marsh Human use-high recreational use	Mostly longshore currents. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-6 for equipment locations. Tested: not yet
SE03-01-03	Blind Slough Estuary Lat. 56°38.3 N Lon. 132°55.0 W	Passive Recovery From Anchor Point to Blind Island North to nearest headlands.	Place 2400 ft. of snare line or sorbent boom, in three sections, across mouth of Blind Slough. Use snare line for persistent oil or sorbent boom for non-persistent oil. Deploy at high tide; avoid walking on intertidal zone.	Deployment Equipment 2400 ft. snare line or sorbent boom. Vessels, Personnel, Tending Same as SE03-01-02	Wrangell/marine vessel	Helicopter or via marine waters	Same as SE03-01-01	Tested: not yet

Map
& Photo

Legend



SE03-02 Kah Sheets Bay looking south.



SE03-02 Looking northwest into Kah Sheets Bay.



SE03-02 Kah Sheets Bay looking west.

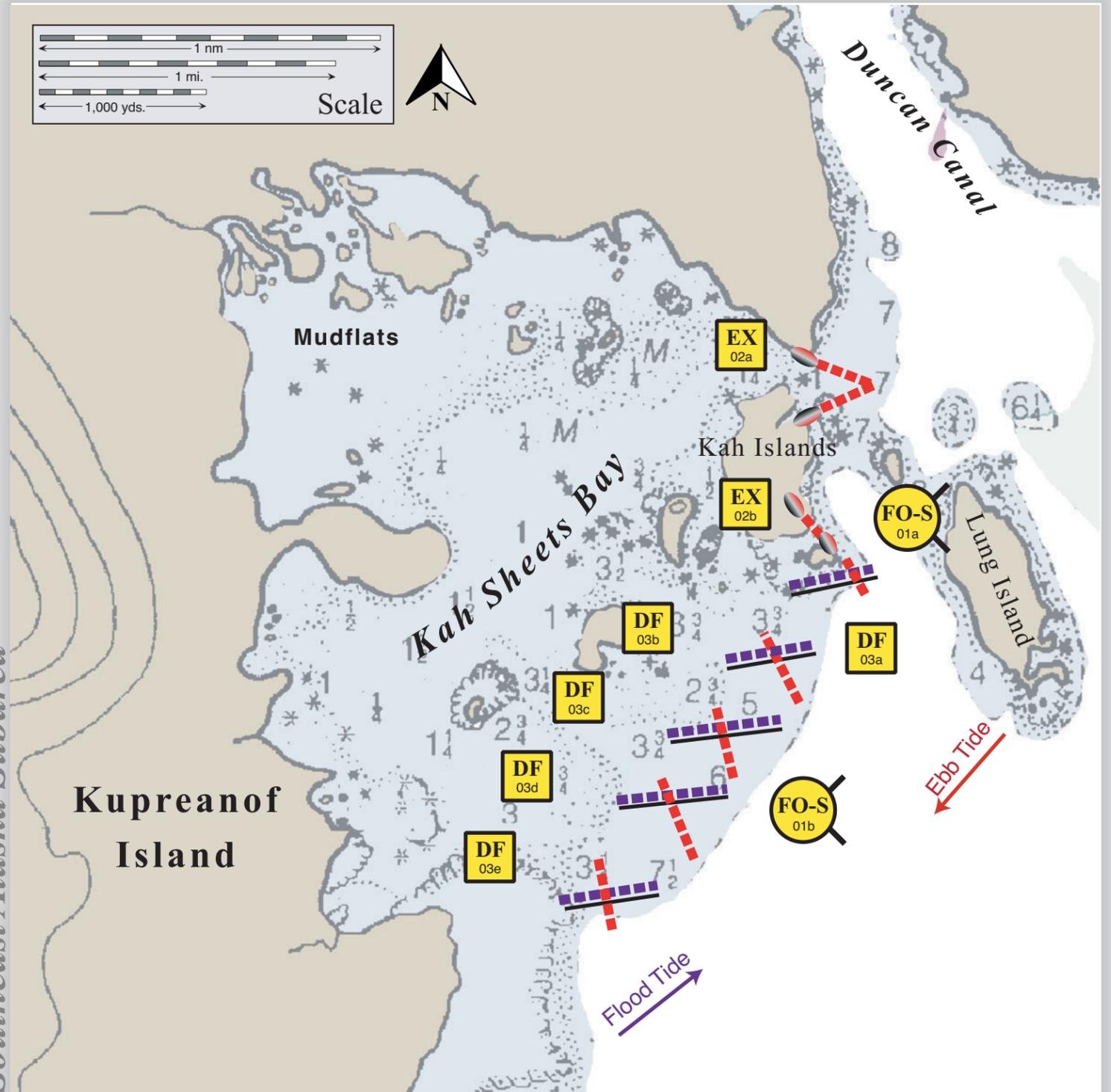
-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Deflection Booming
-  Protected-water Boom, Ebb Tide
-  Protected-water Boom, Flood Tide
-  Tidal-seal Boom

Geographic Response Strategies for

Southeast Alaska Subarea

Kah Sheets Bay, SE03-02

Center of map at 56° 30.8' N Lat., 133° 06.4' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-02-01	Kah Sheets Bay Nearshore waters in the general area of: a. Lat. 56° 30.8 N Lon. 133° 04.7 W b. Lat. 56° 30.1 N Lon. 133° 05.3 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment outside Kah Sheets Bay	Deploy free-oil recovery strike teams upwind and up-current of Kah Sheets Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Petersburg; Marine vessel	Via marine waters NOAA chart: 17382	Same as SE03-02-03	Shallow water Vessel masters should have local knowledge. Hazing shorebirds should be considered – contact USFWS and ADFG.
SE03-02-02	Kah Sheets Bay a. Lat. 56° 31.4 N Lon. 133° 05.4 W b. Lat. 56° 30.9 N Lon. 133° 05.3 W	Exclusion Exclude oil from entering Kah Sheets Bay north of Kah Islands.	Place protected-water boom, with tidal-seal on both ends, between islands, to exclude oil from entering Kah Sheets Bay cove. Place Boom (a) must in a chevron pattern due to strong current through the channel. <u>Boom Arrays</u> a. 2000 ft. b. 400 ft.	Deployment Equipment 2400 ft. protected-water boom 20 ea. anchor systems (~40 lbs.) 4 ea. ≥ 50 ft. section tidal-seal boom 8 ea. anchor stakes Vessels/Personnel/Tending Same as SE03-02-03	Petersburg; Marine vessel	Via marine waters NOAA chart: 17382	Same as SE03-02-03	Significant SE winds may require the exclusion tactics be deployed at key resources within the bay. Tested: not yet Surveyed: not yet
SE03-02-03	Kah Sheets Bay a. Lat. 56° 29.8 N Lon. 133° 06.4 W b. Lat. 56° 30.1 N Lon. 133° 06.0 W c. Lat. 56° 30.3 N Lon. 133° 05.7 W d. Lat. 56° 30.5 N Lon. 133° 05.5 W e. Lat. 56° 30.8 N Lon. 133° 05.0 W	Deflection Deflect oil away from Kah Sheets Bay to free-oil recovery strike teams.	Use vessels with deck space (class 2/3/4) to transport equipment. Use small fishing vessels and skiffs (class 4/6) to deploy boom and set anchors. Place 8800 ft. of protected-water boom in cascaded arrays to deflect oil to free-oil recovery strike teams. Reconfigure boom when tide changes. Monitor throughout tide. <u>Boom Arrays</u> a. 1800 ft. b. 1800 ft. c. 1800 ft. d. 1800 ft. e. 1600 ft.	Deployment Equipment 8800 ft. protected-water boom 176 ea. anchor systems (~40 lbs.) Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 18 ea. vessel crew Tending Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / shift 6 ea. vessel crew	Petersburg; Marine vessel	Via marine waters NOAA chart: 17382	Fish-herring, intertidal salmon/trout spawning (sockeye, coho, chum, pink, steelhead, cutthroat, Dolly Varden) Birds-waterfowl and shorebird concentration area Habitat-kelp and eelgrass beds, mudflats Human use-high recreational use	This aggressive strategy requires significant experience and resources to implement. With limited resources, deploy one 1800 ft. stepped array (600 ft. each) at northern and southern ends of bay. REPORT any cultural resources found during operations to FOSC Historic Properties Specialist. See Figure G-3-6 for equipment locations. Tested: not yet Surveyed: not yet

Map & Photo Legend



SE03-03 Petersburg Creek looking west.

-  Free-oil Containment and Recovery, Shallow Water
-  Diversion Booming
-  Protected-water Boom
-  Marine Recovery
-  Shoreside Recovery

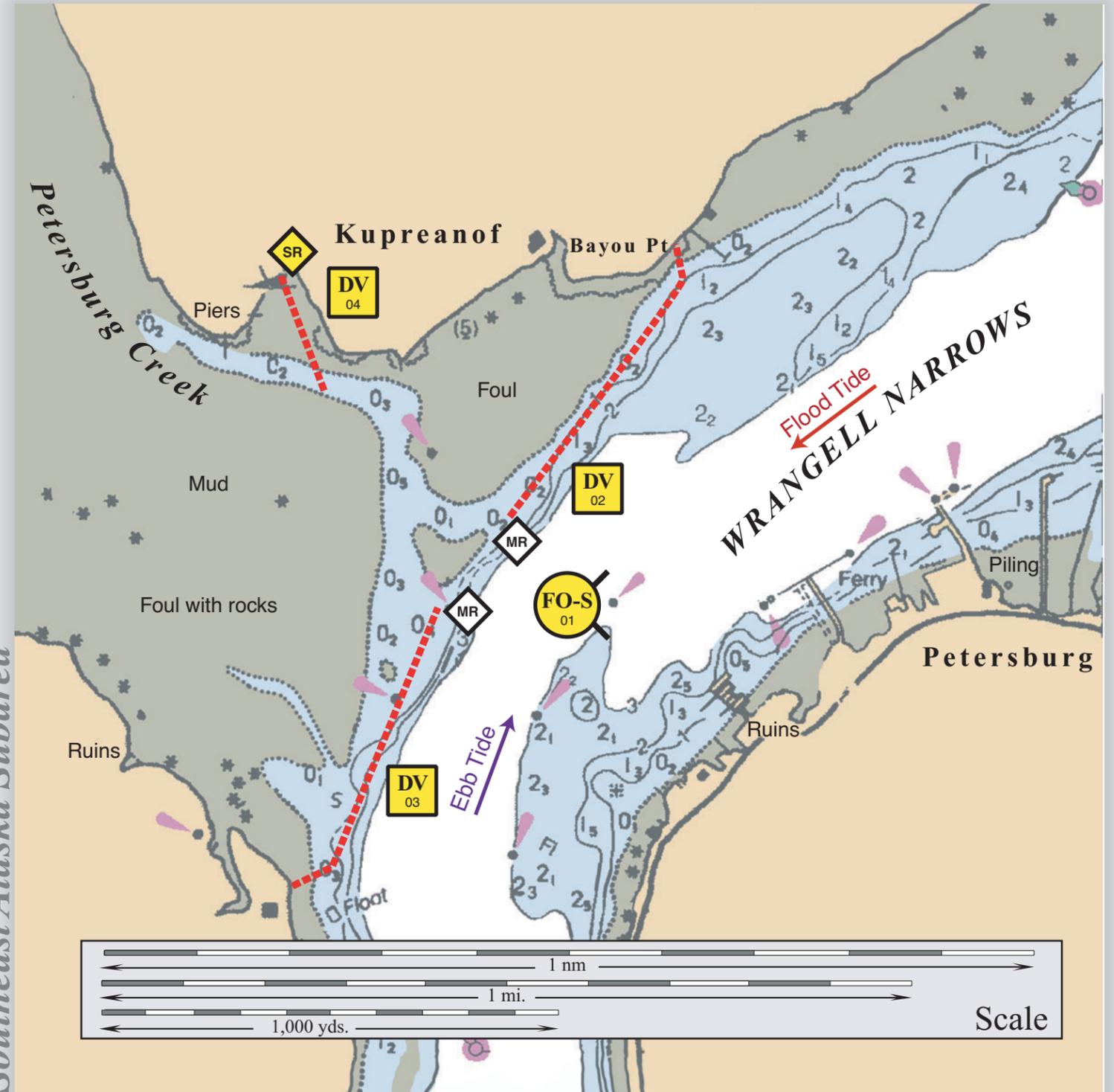


SE03-03 Petersburg Creek looking northwest.

Petersburg Creek, SE03-03

Center of map at 50° 48.5' N Lat., 132° 59.1' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-03-01	Petersburg Creek Nearshore waters in the general area of: Lat. 56°48.4 N Lon. 132° 59.1 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment in the channel, outside of the mudflats.	Deploy free-oil recovery strike teams upwind and up-current of Petersburg Creek. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Vessel platform, or Petersburg	Via marine waters	Same as SE03-03-02	Vessel master should have local knowledge due to strong tidal currents and shoal waters.
SE03-03-02	Petersburg Creek North Lat. 56° 48.7 N Lon. 132° 59.1 W	Divert/Recover (flood) Divert oil traveling south through Wrangell Narrows during flood tide away from Petersburg Creek, to marine recovery.	Use class 3/4 vessels with deck space to transport equipment and class 6 vessels to deploy boom and set anchors. Place 1800 ft. of protected-water boom outside of and parallel to the mudflats, to divert oil traveling south to marine recovery.	Deployment Equipment 1800 ft. protected-water boom 20 ea. anchor systems (~40 lbs.) 1 ea. marine recovery Vessels 4 ea. class 3/4 2 ea. class 6 Personnel/Shift 16 ea. vessel crew Tending Vessels 3 ea. class 3/4 2 ea. class 6 Personnel/Shift 13 ea. vessel crew	Vessel platform, or Petersburg	Via marine waters	Fish-intertidal salmon/trout spawning (sockeye, chum, pink, steelhead, Dolly Varden, cutthroat) Birds-waterfowl concentration (winter) Habitat-marsh, mudflats Human use-commercial herring fishing	Tactic SE03-03-02 is implemented during flood tide and tactic SE03-03-03 is implemented during ebb tide. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-6 for equipment locations. Tested: 5/18/02 SEAPRO Surveyed: 5/18/03 SEAPRO, ADEC
SE03-03-03	Petersburg Creek South Lat. 56° 48.3 N Lon. 132° 59.4 W	Divert / Recover (ebb) Divert oil traveling north through Wrangell Narrows during ebb tide away from Petersburg Creek, to marine recovery.	Place 1500 ft. of protected-water boom outside of and parallel to the mudflats, to divert oil traveling north to marine recovery.	Deployment Equipment 1500 ft. protected-water boom 17 ea. anchor systems (~40 lbs.) 1 ea. marine recovery Vessels, Personnel, Tending Same as SE03-03-02	Vessel platform, or Petersburg	Via marine waters	Same as SE03-03-02	Tested: 5/18/02 SEAPRO Surveyed: 5/18/03 SEAPRO, ADEC
SE03-03-04	Petersburg Creek Channel Lat. 56° 48.8 N Lon. 132° 59.5 W	Divert / Recover Divert oil entering channel to Petersburg Creek to shoreside recovery.	Place 800 ft. of protected-water boom from small cove, out into the channel to divert oil entering the channel to shoreside recovery.	Deployment Equipment 800 ft. protected-water boom 10 ea. anchor systems (~40 lbs.) 1 ea. shoreside recovery Vessels & Personnel Same as SE03-03-02 Tending Same as SE03-03-02	Vessel platform, or Petersburg	Via marine waters	Same as SE03-03-02	Tested: not yet Surveyed: 5/18/03 SEAPRO, ADEC

Map & Photo Legend



SE03-04 Blind Slough South looking towards the northeast.



SE03-04 Blind Slough South looking towards the northwest.



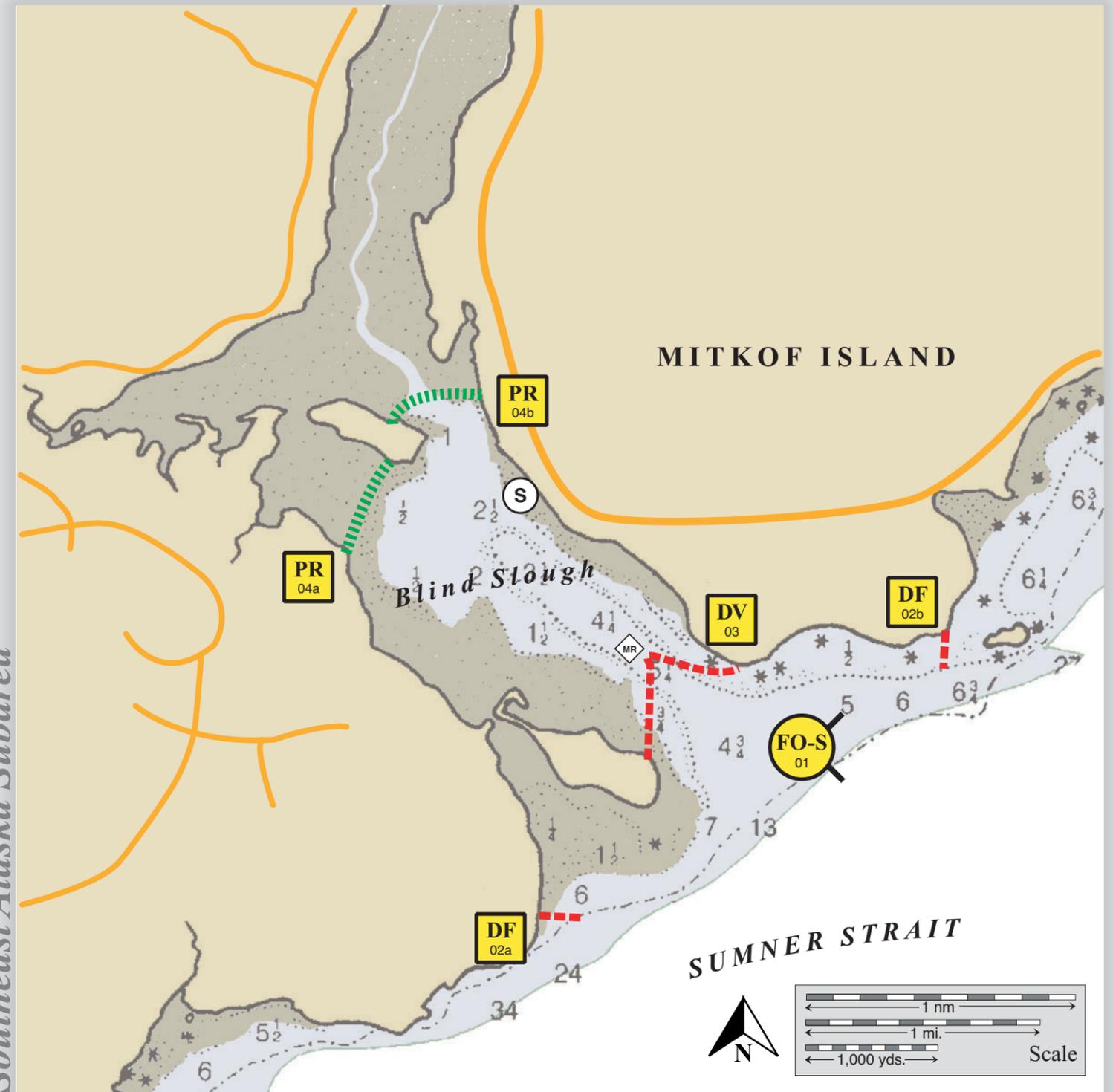
SE03-04 Blind Slough South looking towards the northwest.

-  Free-oil Containment and Recovery, Shallow Water
-  Diversion Booming
-  Deflection Booming, Fixed
-  Passive Recovery and Debris Removal
-  Protected-water Boom
-  Snare Line
-  Marine Recovery
-  Staging Area
-  Road

Geographic Response Strategies for Southeast Alaska Subarea

Blind Slough South, SE03-04

Center of map at 56° 32.0' N Lat., 132° 43.5' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-04-01	Blind Slough South Nearshore waters in the general area of: Lat. 56° 31.4 N Lon. 132° 41.7 W	Free-oil Recovery-Shallow Water Maximize free-oil recovery in the offshore & nearshore environment at the entrance to Blind Slough.	Deploy free-oil recovery strike teams upwind and up-current of Blind Slough. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Wrangell via marine waters Petersburg via the Mitkof Highway	Via marine waters Chart 17382 Petersburg via the Mitkof Highway or Wrangell by marine access	Same as SE03-04-02	Vessel master should have local knowledge.
SE03-04-02	Blind Slough South a. Lat. 56° 30.8 N Lon. 132° 43.3 W b. Lat. 56° 31.8 N Lon. 132° 40.2 W	Deflection Deflect oil away from the entrance to Blind Slough.	Use vessels with deck space to transport equipment to the site (class 2/3/4). Deploy boom and set anchors with fishing vessels and skiffs (class 3/4/6). Place protected-water boom off the headlands to deflect oil to free-oil recovery. Tend throughout tide. <u>Boom Lengths</u> a. 800 ft. b. 800 ft.	Deployment Equipment 1600 ft. protected-water boom 18 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 14 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / shift 7 ea. vessel crew	Vessel platform	Via marine waters Chart 17382 Petersburg via the Mitkof Highway or Wrangell by marine access	Fish-intertidal salmon/trout spawning (coho, chum, sockeye, pink, steelhead, Dolly Varden) Birds-waterfowl (year-round), shorebird migration (spring and fall) Habitat-marsh, sheltered tidal flats, sheltered rocky shoreline Human use-high recreational use	Vessel master should have local knowledge. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-6 for equipment locations. Tested: not yet Surveyed: not yet
SE03-04-03	Blind Slough Entrance Lat. 56° 31.6 N Lon. 132° 09.0 W	Divert / Recover Divert oil coming in the main entrance to Blind Slough South to marine recovery.	Deploy anchors and boom with skiffs and fishing vessels (class 3/4/6) Place 4200 ft. of protected-water boom in a chevron pattern at the mouth of Thorne Bay. Establish marine recovery unit at the apex of the boom. Tend throughout the tide.	Deployment Equipment 4200 ft. protected-water boom 4 ea. anchor stakes 42 ea. anchor systems (~40 lbs.) Vessels 1 ea. marine recovery Personnel 2 ea. recovery techs Tending Same as SE03-04-02	Vessel platform	Chart 17382 Petersburg via the Mitkof Highway or Wrangell by marine access	Same as SE03-04-02	Vessel master should have local knowledge. Tested: not yet Surveyed: not yet
SE03-04-04	Blind Slough Tidal Flats a. Lat. 56° 32.3 N Lon. 132° 44.6 W b. Lat. 56° 32.7 N Lon. 132° 44.2 W	Passive Recovery Minimize impact to designated areas through passive recovery using snare line or sorbent boom.	Place and anchor 4000 ft. of sorbent or snare line, in two arrays, at edge of tidal flats from island to each side of slough. <u>Boom Lengths</u> a. 2000 ft. b. 2000 ft.	Deployment Equipment 4000 ft. snare line 400 ea. anchor stakes Vessels, Personnel, Tending Same as SE03-04-02	Vessel platform	Chart 17382 Petersburg via the Mitkof Highway or Wrangell by marine access	Same as SE03-04-02	Use snare line for persistent oils or sorbent boom for non-persistent oils. Use caution to not drive oil into the substrate.

Map & Photo Legend



SE03-05 Exchange Cove looking south.

	Free-oil Containment and Recovery, Shallow Water		Tidal-seal Boom
	Diversion Booming		Snare Line
	Deflection Booming, Fixed		Shoreside Recovery, Marine Access
	Passive Recovery and Debris Removal		Possible Staging Area
	Protected-water Boom		Eddy
			Road

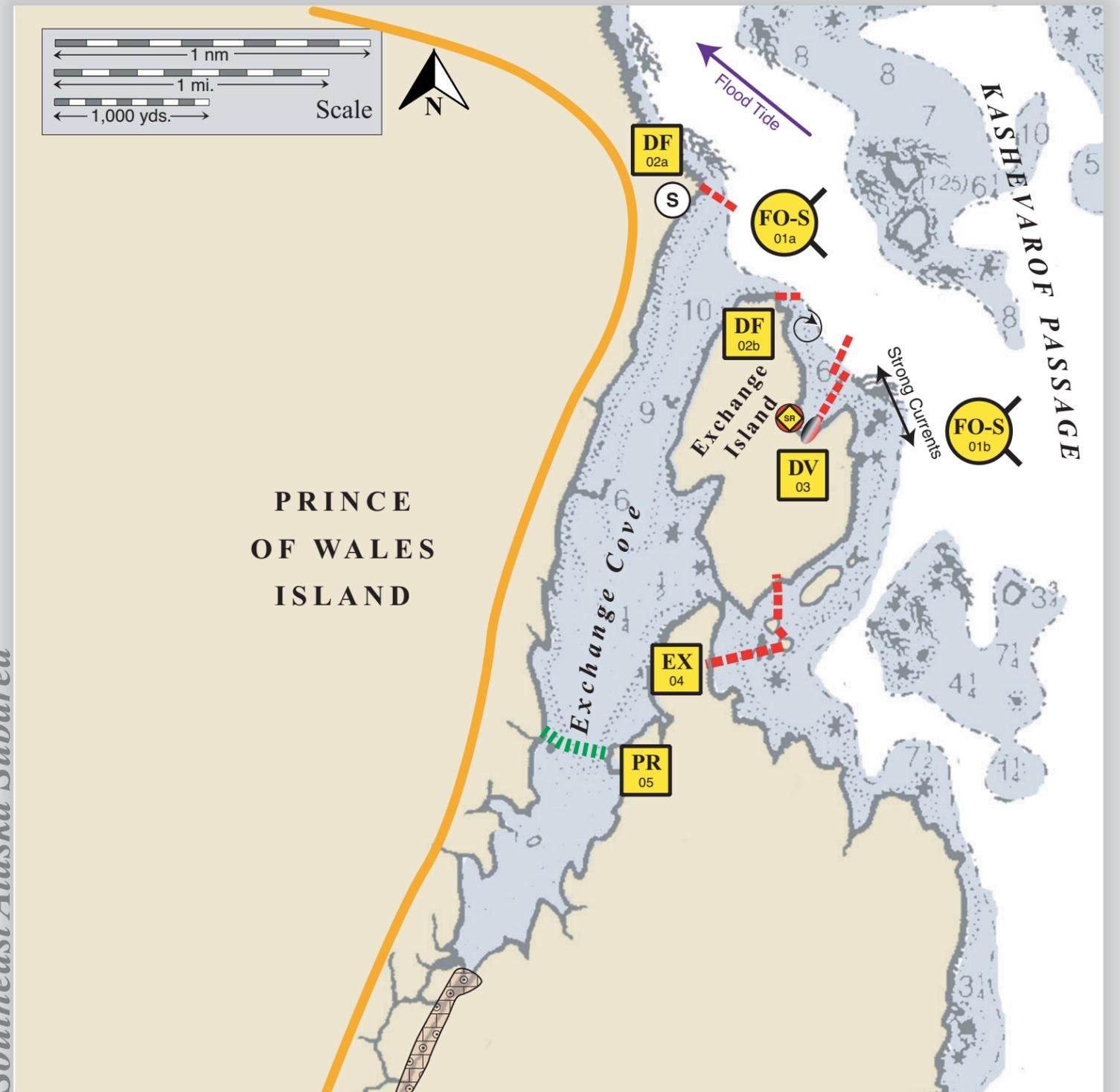


SE03-05-04 Southern entrance to Exchange Cove looking west.

Exchange Cove, SE03-05

Center of map at 56° 12.2' N Lat., 133° 04.0' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-05-01	Exchange Cove Nearshore waters in the general area of: a. Lat. 56° 13.1 N Lon. 133° 03.3 W b. Lat. 56° 12.4 N Lon. 133° 02.4 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment at the entrance to Exchange Cove and east of Exchange Island.	Deploy free-oil recovery strike teams upwind and up current of Exchange Cove. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Wrangell Harbor; Petersburg Harbor	Via marine waters Chart 17382	Same as SE03-05-02	Vessel master should have local knowledge.
SE03-05-02	Exchange Cove a. Lat. 56° 13.20 N Lon. 133° 03.7 W b. Lat. 56° 12.8 N Lon. 133° 03.3 W	Deflection Deflect oil away from Exchange Cove to free oil strike team.	Use vessels with deck space to transport equipment to the site (class 2 and 3/4). Deploy boom and set anchors with fishing vessels and skiffs (class 3/4/6). Place protected-water boom at the entrances to Exchange Cove to deflect oil to free-oil strike team. Adjust boom angle to maximize deflection under current conditions. Tend throughout the tide. <u>Boom Array</u> a. 800 ft. b. 200 ft.	Deployment Equipment 1000 ft. protected-water boom 10 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes Vessels 1 ea. class 2 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 11 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 7 ea. vessel crew	Vessel platform Staging area on point at the north mouth of Exchange Cove.	Via marine waters Chart 17382 Thorne Bay is a 2 hour drive, accessible by logging road. Whale Pass is a 15 minute drive by logging road.	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (coho, pink, chum, Dolly Varden) Birds-waterfowl concentration (winter) Terrestrial mammals-deer Habitat-kelp and eelgrass beds, sheltered tidal flats, marsh	Vessel master should have local knowledge. Probable spill location is north in Snow Passage or Sumner Strait. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-6 for equipment locations. Tested: not yet Surveyed: 5/7/03 TLR
SE03-05-03	Exchange Island Lat. 56° 12.5 N Lon. 133° 02.8 W	Divert / Recover Divert oil into small cove on Exchange Island for shoreside recovery.	Deploy anchors and boom with skiffs and fishing vessels (class 3/4/6). Place 900 ft. of protected-water boom extending from identified point to divert oil into the small cove on Exchange Island. Cascade an additional 600 ft. boom further out in Kashevarof Passage. Adjust boom angle as necessary. Establish shoreside recovery unit at a point in the small cove that maximizes recovery of oil. Tend through out the tide.	Deployment Equipment 1500ft. protected-water boom 2 ea. anchor stakes 15 ea. anchor systems (~40 lbs.) 1 ea. shore side recovery unit Vessels, Personnel, Tending 2 ea. response techs. Same as SE03-05-02	See SE03-05-02	See SE03-05-02	Same as SE03-05-02	Vessel master should have local knowledge. Strong currents are present in Kashevarof Passage. Tested: not yet Surveyed: 5/7/03 TLR
SE03-05-04	Exchange Cove Lat. 56° 11.7 N Lon. 133° 03.5 W	Exclusion Exclude oil from entering Exchange Cove from the eastern entrance.	Deploy protected-water boom, using class 4/6 vessels. Place the boom in a pattern appropriate for the current using the islands as anchor points. Keep boom in currents of less than 1 kt.	Deployment Equipment 2200ft. protected-water boom. 20 ea. ~40 lbs anchor systems for securing boom. 8 ea. anchor stakes Vessels / Personnel / Tending Same as SE03-05-02	See SE03-05-02	See SE03-05-02	Same as SE03-05-02	Tested: not yet Surveyed: 5/7/03 TLR
SE03-05-05	Exchange Cove Lat. 56° 11.3 N Lon. 133° 04.5 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place and anchor 3300 ft. of snare line or sorbent boom across cove south of Exchange Island, at or above the low tide line.	Deployment Equipment 3300 ft. snare line or sorbent boom 35 ea. anchor stakes Vessels, Personnel, Tending Same as SE03-05-02	See SE03-05-02	See SE03-05-02	Same as SE03-05-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Surveyed: 5/7/03 TLR

Map & Photo Legend



SE03-06 Looking east into Windham Bay.



SE03-06-03 Looking east at the head of Windham Bay.



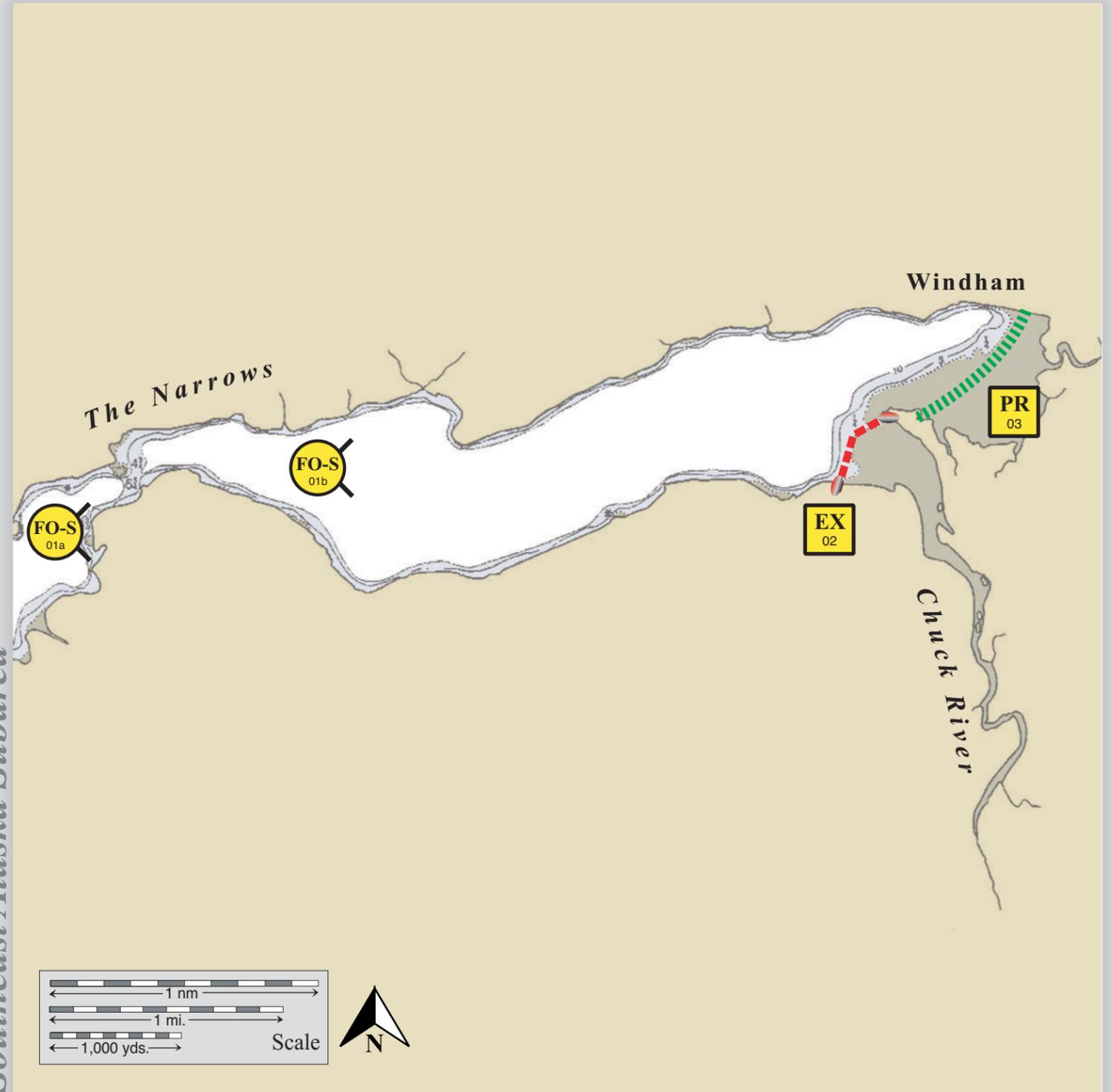
SE03-06-02 Looking south at the Chuck River.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Passive Recovery and Debris Removal
-  Protected-water Boom
-  Tidal-seal Boom
-  Snare Line

Geographic Response Strategies for Southeast Alaska Subarea

Windham Bay, SE03-06

Center of map at 56° 33.1' N Lat., 133° 24.8' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-06-01	Windham Bay / The Narrows Nearshore waters in the general area of: a. Lat. 57° 35.2 N Lon. 133° 26.9 W b. Lat. 57° 35.08 N Lon. 133° 25.57 W	Free-oil Recovery - Shallow Water Maximize free-oil recovery in the offshore & nearshore environment at The Narrows in Windham Bay.	Deploy free-oil recovery strike teams upwind and up current of the head of Windham Bay, near The Narrows. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Juneau	Via marine waters Chart 17360	Same as SE03-06-01	Vessel master should have local knowledge.
SE03-06-02	Windham Bay / Chuck River Lat. 57° 35.3 N Lon. 133° 22.0 W	Exclusion Exclude oil from entering the Chuck River and the adjacent tidal flats.	Use vessels with deck space to transport equipment to the site (class 3/4). Use vessels (class 3/4/6) to deploy boom and set anchors. Place 2200 ft. of protected-water boom across the mouth of the Chuck River.	Deployment Equipment 2200 ft. protected-water boom 24 ea. anchor systems (~40 lbs.) 2 ea. > 50 tidal-seal 4 ea. anchor stakes Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 10 ea. vessel crew Tending Vessels 1 ea. class 3/4 1 ea. class 6 Personnel / Shift 3 ea. vessel crew	Vessel platform	Via marine waters Chart 17360	Marine mammals-harbor seals Fish-salmon/trout concentrations \leq 10000 (sockeye, pink, chum, coho, king, steelhead, Dolly Varden, cutthroat) Birds-waterfowl concentrations (winter) Habitat-marsh/estuary, sheltered tidal flat	Vessel master should have local knowledge. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-6 for equipment locations. Tested: not yet
SE03-06-03	Head of Windham Bay Lat. 57° 35.6 N Lon. 133° 21.0 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place and anchor 3600 ft. of snare line or sorbent boom across the head of Windham Bay at or above the tidal flats.	Deployment Equipment 3600 ft. snare line or sorbent boom 38 ea. anchor stakes Vessels, Personnel, Tending Same as SE03-06-02	Vessel platform	Via marine waters Chart 17360	Same as SE03-06-01	Use snare line for persistent oils and sorbent boom for non-persistent oils.

Map & Photo Legend



SE03-07-02 Looking north at Hobart Bay.



SE03-07-05a Looking south over North Hobart Bay.



SE03-07-05b Looking southeast in Hobart Bay.



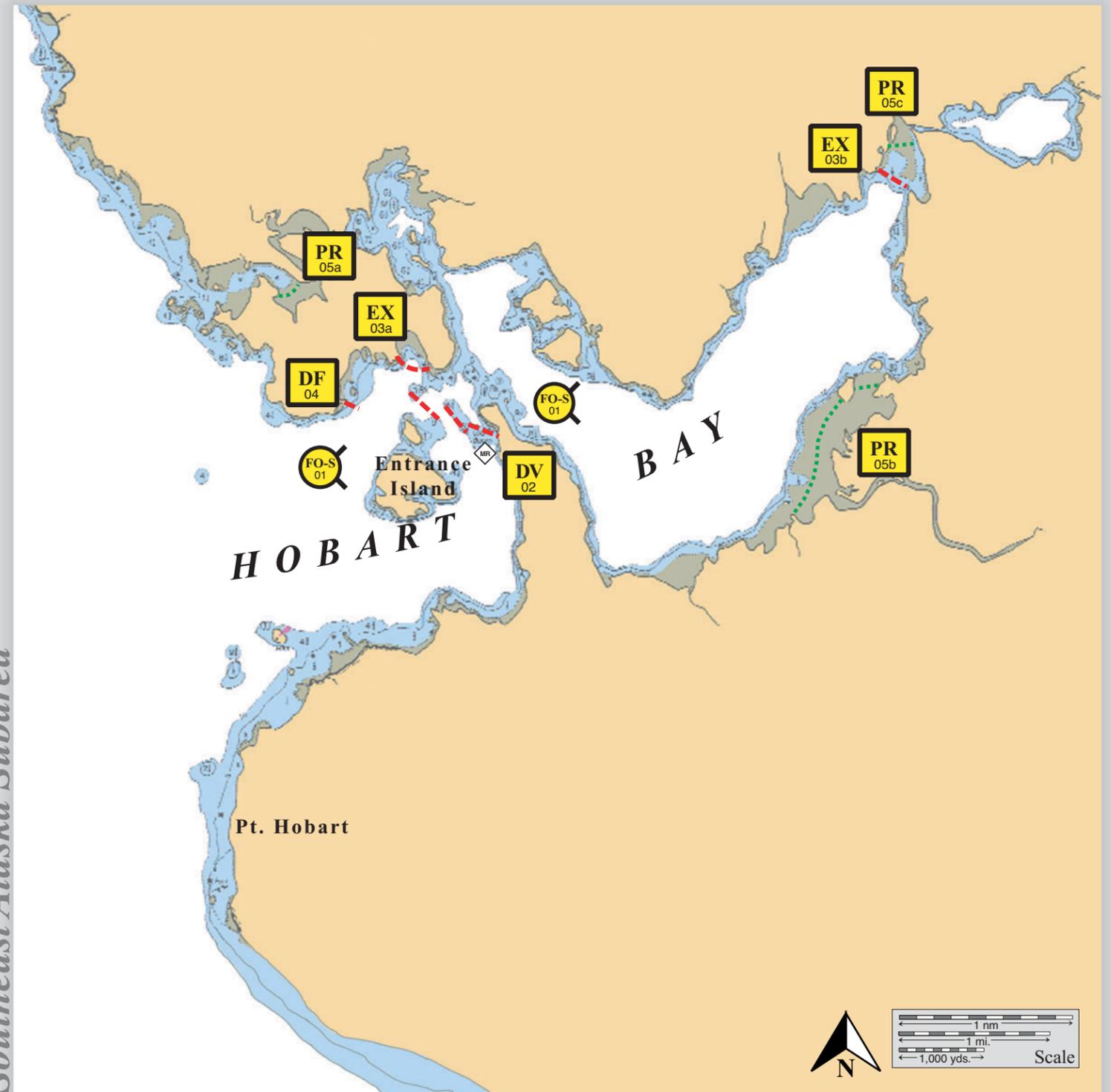
SE03-07-03b & 05c Looking north at the head of Hobart Bay.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Deflection Booming, Fixed
-  Diversion Booming
-  Passive Recovery and Debris Removal
-  Protected-water Boom
-  Snare Line
-  Marine Recovery

Geographic Response Strategies for Southeast Alaska Subarea

Hobart Bay, SE03-07

Center of map at 57° 25' N Lat., 133° 24' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-07-01	Hobart Bay Lat. 57° 25 N Lon. 133° 24 W (approximate location)	Free-oil Recovery Maximize recovery of oil at the mouth of Bay and east of "choke point".	Deploy free-oil recovery strike. Use aerial surveillance to locate areas of heavy slick concentrations.	Two free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Juneau, and/or Petersburg	Via marine waters Note: Bear hazard along shoreline	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (pink, chum, coho, steelhead, Dolly Varden, cutthroat) Birds-waterfowl concentrations >1000 (winter) Invertebrates-crab	FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-6 for equipment locations.
SE03-07-02	Hobart Bay Lat. 57° 25.17 N Lon. 133° 25.6 W (eastern end or location of recovery unit)	Diversion/Recovery Divert oil entering north of Entrance Island to shoreline or marine recovery unit. Boom array deployed as indicated in sections (from right to left or from shoreline outward) of 1000 ft, 1000 ft. and 1200 ft.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place total of 3200 ft. of boom to divert oil to shoreside (or nearshoreside depending on tide) to marine recovery.	Deployment Equipment 3200 ft. protected-water boom. 7 ea ~40 lbs anchor systems for securing each array approx every 500 ft. 1 ea. anchor stakes Shallow water marine recovery unit Vessels 2 ea. class 2 or 3/4 2 ea. class 6 Personnel Shift 12 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea vessel crew	See SE03-07-01	See SE03-07-01	See SE03-07-01	See SE03-07-01 Tested: not yet
SE03-07-03	Hobart Bay a. Lat. 57° 25.6 N Lon. 133° 26.4 W b. Lat. 57° 26.6 N Lon. 133° 21.2 W	Exclusion Protect mudflats and marsh using exclusion boom anchored to achieve a convex shape. a. 1000 ft b. 1400 ft.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 2400 ft. of protected-water boom anchored every 200-300 ft. to achieve convex shape.	Deployment Equipment 2400 ft. protected-water boom 6 ea. ~40 lbs anchor systems (anchor approximately every 200-300 ft.) 4 ea. 50 ft. sections of tidal-seal boom 4 ea. anchor stakes Vessels/Personnel/Tending Use resources listed in SE03-07-02	See SE03-07-01	See SE03-07-01	See SE03-07-01	See SE03-07-01 Tested: not yet
SE03-07-04	Hobart Bay a. Shoreline anchor point Lat. 57° 25.3 N Lon. 133° 27.3 W b. North anchor point Lat. 58° 42.54 N Lon. 136° 00.46 W	Deflection Deflect oil away from shoreline towards diversion/recovery boom.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 500 ft. of protected-water boom.	Deployment Equipment 500 ft. protected-water boom 2 ea. ~40 lbs anchor systems 1 ea. anchor stakes Vessels/Personnel/Tending Use resources listed in SE03-07-02	See SE03-07-01	See SE03-07-01	See SE03-07-01	See SE03-07-01 Tested: not yet
SE03-07-05	Hobart Bay a. Lat. 57° 26.0 N Lon. 133° 27.8 W b. Lat. 57° 26.9 N Lon. 133° 21.1 W c. Lat. 57° 25.2 N Lon. 133° 22.1 W	Passive Recovery Minimize impact to intertidal wetlands, mudflats and marsh through passive recovery using snare line or sorbent boom.	Place up to 7600 ft. of snare line or sorbent boom across mud flats. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent. a. 600 ft b. 6000 ft c. 1000 ft	Deployment Equipment 7600 ft. snare line or sorbent boom 80 ea. anchor stakes. 1000 ft. of line. Vessels/Personnel/Tending Use resources listed in SE03-07-02	See SE03-07-01	See SE03-07-01	See SE03-07-01 Birds-waterfowl concentrations (winter >1000)	See SE03-07-01 Use caution to not drive oil into the substrate.

Map & Photo Legend



SE03-08-02c, 03e&f Salmon Bay looking west.



SE03-08-02b, 03c Salmon Bay looking west.



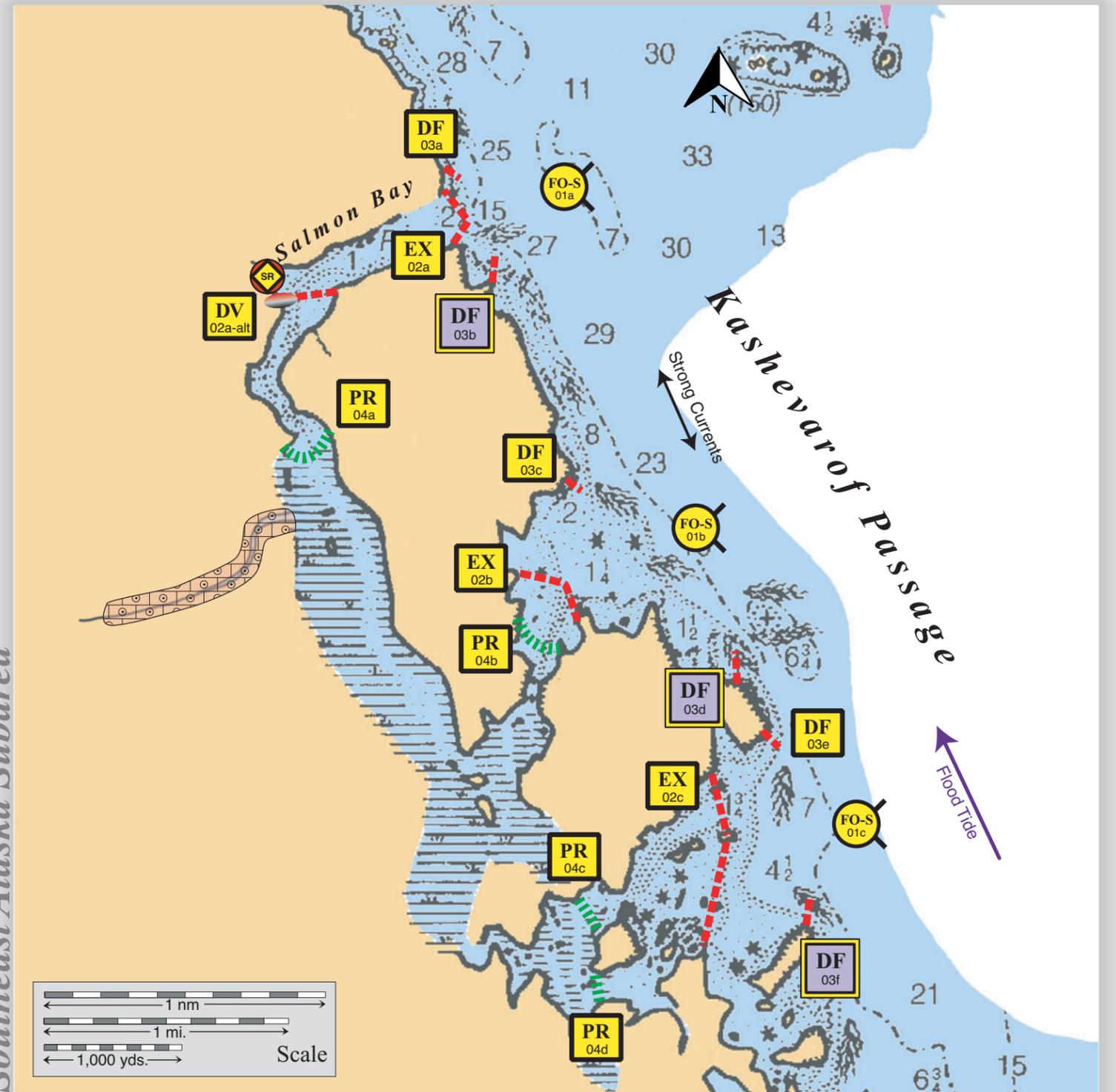
SE03-08-02a, 03a&b Salmon Bay looking west.

- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Deflection Booming, Fixed/ Ebb Tide
- Deflection Booming, Fixed/Flood Tide
- Passive Recovery and Debris Removal
- Protected-water Boom
- Tidal-seal Boom
- Snare Line
- Shoreside Recovery, Marine Access
- Salmon Spawning Stream

Geographic Response Strategies for Southeast Alaska Subarea

Salmon Bay, SE03-08

Center of map at 56° 18' N Lat., 133° 09' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-08-01	Salmon Bay Lat. 56° 18 N Lon. 133° 09 W (approximate location)	Free-oil Recovery Maximize recovery of oil in the offshore and nearshore area.	Deploy free-oil recovery strike team. Use aerial surveillance to locate areas of heavy slick concentrations.	Three free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Wrangell or Whale Pass	Via marine waters	See SE03-08-02	Vessel masters should have local knowledge, many rocks to avoid.
SE03-08-02	Salmon Bay a. Lat. 56° 18.2 N Lon. 133° 09.2 W b. Lat. 56° 16.5 N Lon. 133° 08.2 W c. Lat. 56° 15.9 N Lon. 133° 07.3 W	Exclusion Protect mudflats, marsh and intertidal habitats using exclusion boom. a. 1000 ft. b. 1200 ft. c. 4500 ft.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 6700 ft. of protected-water boom anchored every 500 ft. to achieve convex shape. NOTE: Alternative to SE03-08-02b is to divert oil to shoreside recovery on the gravel beach inside Salmon Bay.	Deployment Equipment 6700 ft. protected-water boom 40 ea. ~40 lbs anchor systems (anchor approximately every 500 ft.) 8 ea. 50 ft. sections of tidal-seal boom 8 ea. anchor stakes Vessels 1 ea. class 2 (transport) 2 ea. class 3/4 2 ea. class 6 Personnel/Shift 15 vessel crew Tending Vessels 1 ea. class 3/4 1 ea. skiff Personnel/Shift 4 ea. vessel crew	See SE03-08-01	See SE03-08-01	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (coho, pink, chum, Dolly Varden, cutthroat) Habitat-marsh Birds-waterfowl concentration, shore bird migration Terrestrial mammals-deer, black bear	FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-6 for equipment locations. Tested: not yet Surveyed: 5/7/03 TLR
SE03-08-03	Salmon Bay Shoreline anchor point a. Lat. 56° 18.3 N Lon. 133° 09.0 W b. Lat. 56° 18.1 N Lon. 133° 08.7 W c. Lat. 56° 17.3 N Lon. 133° 08.3 W d. Lat. 56° 16.6 N Lon. 133° 07.2 W e. Lat. 56° 16.5 N Lon. 133° 07.0 W f. Lat. 56° 15.8 N Lon. 133° 06.8 W	Deflection Deflect oil offshore away from intertidal areas. a. 200 ft. ebb tide b. 800 ft. flood tide c. 600 ft. ebb tide d. 800 ft. flood tide e. 400 ft. ebb tide f. 600 ft. flood tide	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy three arrays of protected-water boom depending on tidal currents. Adjust boom angle to maximize deflection. Tend throughout tide.	Deployment Equipment 2400 ft. protected-water boom 24 ea. ~20 lbs anchor systems 6 ea. anchor stakes Vessels/Personnel/Tending Use resources listed in SE03-08-02	See SE03-08-01	See SE03-08-01	See SE03-08-02	Check currents at various deployment points. Tested: not yet Surveyed: 5/7/03 TLR
SE03-08-04	Salmon Bay a. Lat. 56° 17.5 N Lon. 133° 10.0 W b. Lat. 56° 16.8 N Lon. 133° 08.4 W c. Lat. 56° 15.9 N Lon. 133° 07.9 W d. Lat. 56° 15.6 N Lon. 133° 08.0 W	Passive Recovery Minimize impact to intertidal wetlands, mudflats and marsh through passive recovery using snare line or sorbent boom. a. 600 ft. b. 1200 ft. c. 600 ft. d. 600 ft.	Place up to 3000 ft. of snare line or sorbent boom across mud flats at or above low tide line. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 3000 ft. snare line or sorbent boom 30 ea. anchor stakes. 1000 ft. of line. Vessels/Personnel/Tending Use resources listed in SE03-08-02	See SE03-08-01	See SE03-08-01	See SE03-08-02	Surveyed: 5/7/03 TLR

Map & Photo Legend



SE03-09 Looking southeast into Steamer Bay.

	Free-oil Containment and Recovery, Shallow Water		Snare Line
	Diversion Booming		Shoreside Recovery, Marine Access
	Passive Recovery and Debris Removal		Anchorage
	Protected-water Boom		Mooring Buoy
	Tidal-seal Boom		USFS Public Cabin

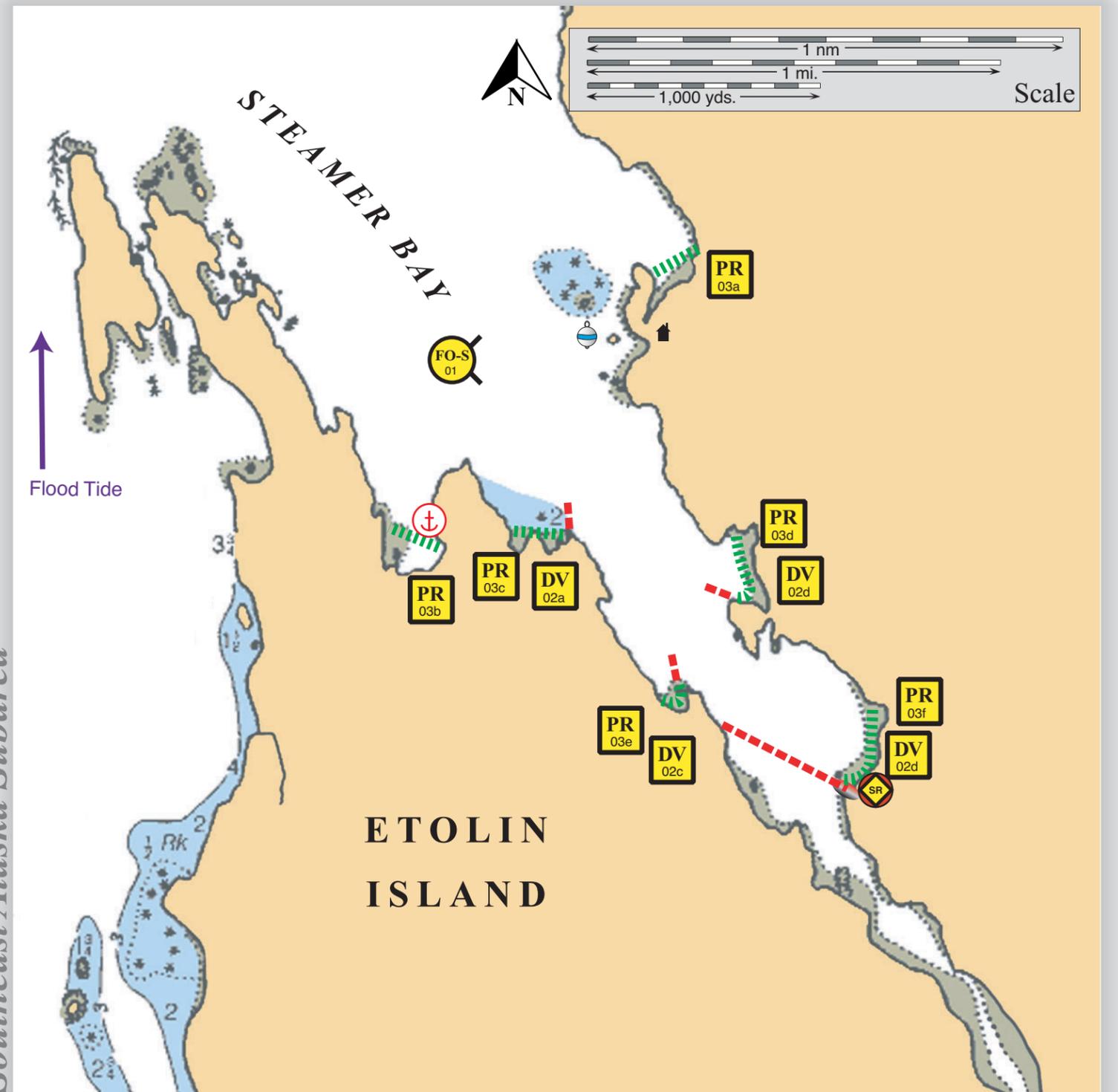


SE03-09-02a Looking south into the cove on the west shore of Steamer Bay.

Steamer Bay, SE03-09

Center of map at 56° 09' N Lat., 132° 41' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-09-01	Steamer Bay Lat. 56° 10 N Lon. 132° 42 W (approximate location)	Free-oil Recovery Maximize recovery of oil at the mouth of Bay.	Deploy free-oil recovery strike teams. Use aerial surveillance to locate areas of heavy slick concentrations.	Two or three free-oil recovery strike team (or more) to intercept oil before it impacts sensitive areas.	Wrangell or marine vessel	Via marine waters	See SE03-09-02	Vessel Masters should have local knowledge.
SE03-09-02	Steamer Bay a. Lat. 56° 09.43N Lon. 132° 41.7 W b. Lat. 56° 09.3N Lon. 132° 41.08 W c. Lat. 56° 09.1N Lon. 132° 41.2 W d. Lat. 56° 08.9N Lon. 132° 40.6 W	Diversion/Recovery Divert oil entering mouth of Bay to shoreline for recovery. Combine with passive recovery (SE03-09-03) to protect adjacent areas.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place total of 3600 ft. of boom to divert oil to shoreside for recovery. Boom (d) can be stepped in 600 ft. sections or may be backed further into the bay if conditions require. <u>Diversion boom</u> a. 600 ft. b. 600 ft. c. 600 ft. d. 1800 ft	Deployment Equipment 3600 ft. protected water boom. 30 ea. ~40 lbs anchor systems 4 ea. Anchor stakes. 1 ea. shore side recovery unit Vessels 2 ea. class 3/4 2 ea. class 6 Personnel/Shift 10 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea. vessel crew 2 ea. response techs	See SE03-09-01	See SE03-09-01 Forest Service public use cabin and mooring might be used by responders.	Fish-intertidal salmon spawning (coho, pink, chum) Habitat-kelp and eelgrass beds Human use-high recreational use Birds-waterfowl concentration Intertidal-clams and blue mussels Terrestrial mammals-deer	Prevailing wind are southeast out of the bay. North winds will push oil to eastern shore. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-6 for equipment locations. Tested: not yet Surveyed: 5/7/03 TLR
SE03-09-03	Steamer Bay a. Lat. 56° 10.0 N Lon. 132° 41.3 W b. Lat. 56° 9.4 N Lon. 132° 42.2 W c. Lat. 56° 9.4 N Lon. 132° 41.8 W d. Lat. 56° 9.3 N Lon. 132° 41.0 W e. Lat. 56° 9.1 N Lon. 132° 41.3 W f. Lat. 56° 8.9 N Lon. 132° 40.6 W	Passive Recovery Minimize impact to intertidal mudflats through passive recovery using snare line or sorbent boom.	Place up to 2500 ft. of snare line or sorbent boom across mud flats. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent. a. 800 ft. b. 800 ft. c. 800 ft. d. 800 ft. e. 300 ft. f. 900 ft.	Deployment Equipment 4400 ft. snare line or sorbent boom 36 ea. anchor stakes. 1000 ft. of line. Vessels/Personnel/Tending Use resources listed in SE03-09-02	See SE03-09-01	See SE03-09-01	See SE03-09-02	See SE03-09-02 Surveyed: 5/7/03 TLR

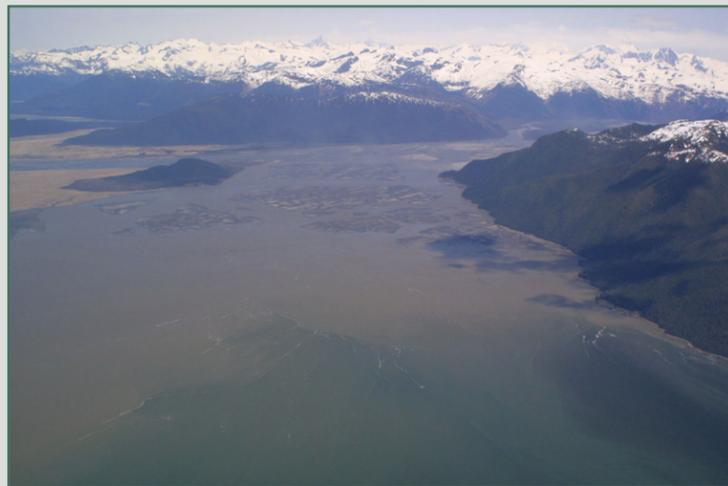
Map & Photo Legend



SE03-10 Stikine River Delta looking north.



SE03-10 Stikine River Delta looking north over Kadin Island.



SE03-10 Stikine River Delta looking towards the northwest.

FO-S Free-oil Containment and Recovery, Shallow Water

PR Passive Recovery and Debris Removal

 Snare Line

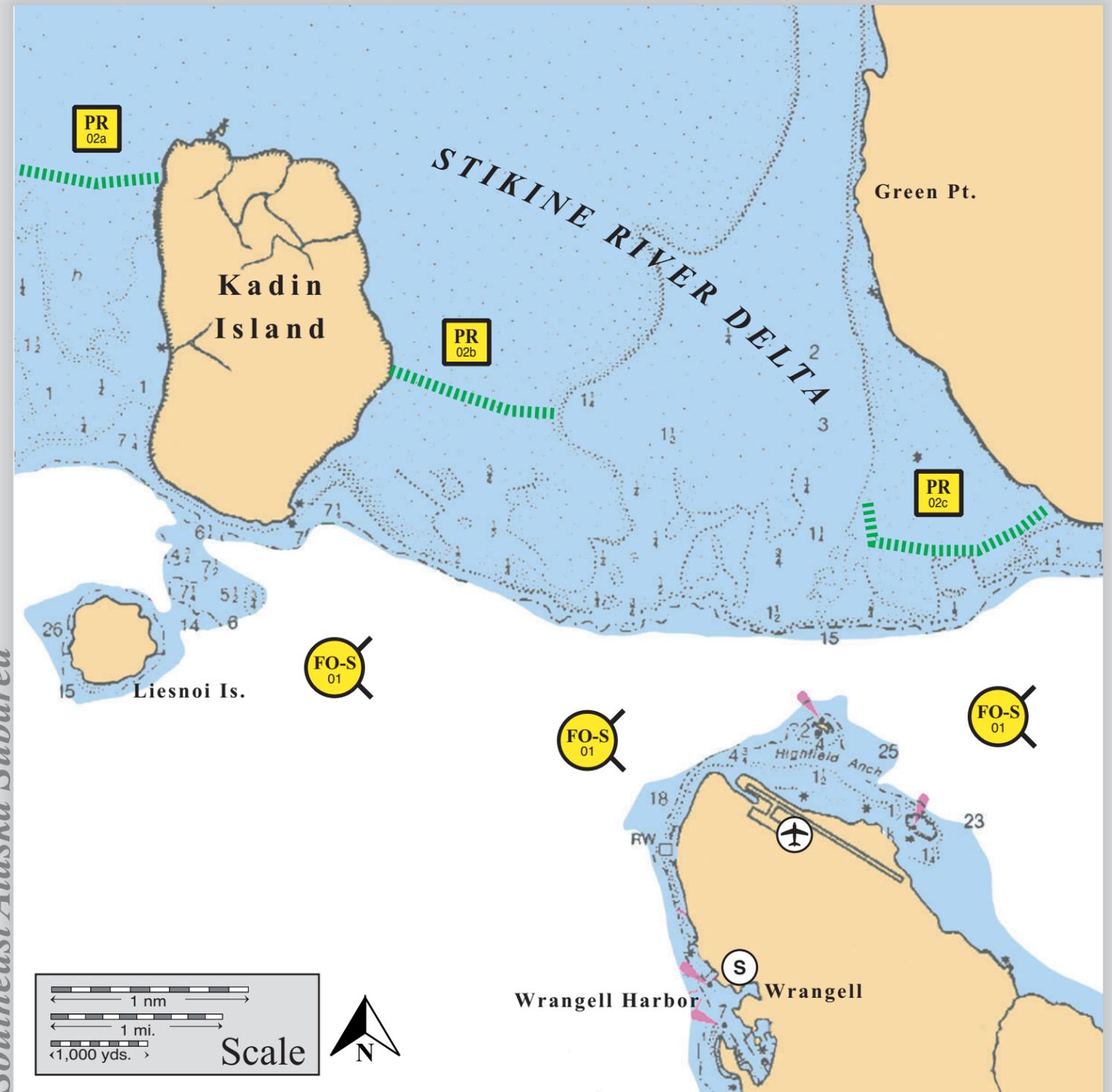
S Staging Area

 Airport

Geographic Response Strategies for Southeast Alaska Subarea

Stikine River Delta, SE03-10

Center of map at 56° 30' N Lat., 132° 24' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-10-01	<p>Stikine River Delta - South Arm Approximate location: Lat. 56° 30 N Lon. 132° 24 W</p>	<p>Free-oil Recovery Maximize recovery of oil at the mouth of Stikine River.</p>	<p>Deploy free-oil recovery strike teams in at the entrances to the Stikine River delta. Use aerial support to locate oil slicks.</p>	<p>Multiple free-oil recovery strike teams to intercept oil before it impacts sensitive areas.</p>	Wrangell	Via marine waters	<p>Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (king, coho, chum, sockeye, pink, steelhead, Dolly Varden, cutthroat) Birds-waterfowl and shorebird concentrations of national significance Habitat-marsh, sheltered tidal flats Human use-subsistence Land Management-International Shorebird Reserve</p>	<p>Aerial surveillance should identify areas of natural convergence where fresh water and brackish water may temporarily contain oil slicks, allowing more efficient marine recovery. Hazing shorebirds should be considered, contact USFWS and ADFG. Tested: not yet Surveyed: 5/6/03 TLR</p>
SE03-10-02	<p>Stikine River Delta – South Arm Approximate locations a. Lat. 56° 30.8 N Lon. 132° 21.2 W b. Lat. 56° 31.4 N Lon. 132° 25.6 W c. Lat. 56° 32.6 N Lon. 132° 29.0 W</p>	<p>Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom. Note: Depending on the location of potential oil impact, this strategy may be moved or repeated across the 12 mile mouth of the Stikine River Delta.</p>	<p>Place up to 6000 ft. of snare line or sorbent boom in each location across mud flats. Deploy on flood tide. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent. <u>Snare line</u> a. 6000 ft. b. 6000 ft. c. 6000 ft.</p>	<p>Deployment Equipment 18000 ft. snare line or sorbent boom 400 ea. anchor stakes 3000 ft. of line Vessels 6 ea. shallow draft or jet driven vessels or air-boats supported by offshore vessel Personnel/Tending 6 ea to deploy and set-up 6 ea. to tend/maintain/recover oily debris</p>	Wrangell	Via marine waters	Same as SE-03-10-01	<p>This area is extremely dynamic. Charts are not accurate. Tactics cannot be proscribed in detail. Site surveys must be conducted immediately before equipment deployment FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-6 for equipment locations. Care must be given to prevent harm to mud flat. In particular, precautions must be taken to prevent oil from being pushed into substrate. The river channels change yearly and require local knowledge to navigate safely. Very shallow waters with numerous bars, stranding is possible. Surveyed: 5/6/03 TLR</p>

Map
& Photo

Legend



SE03-11 Looking southeast at the head of Tracy Arm.
Note cruise ship in photograph.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Containment and Recovery
-  Protected-water Boom

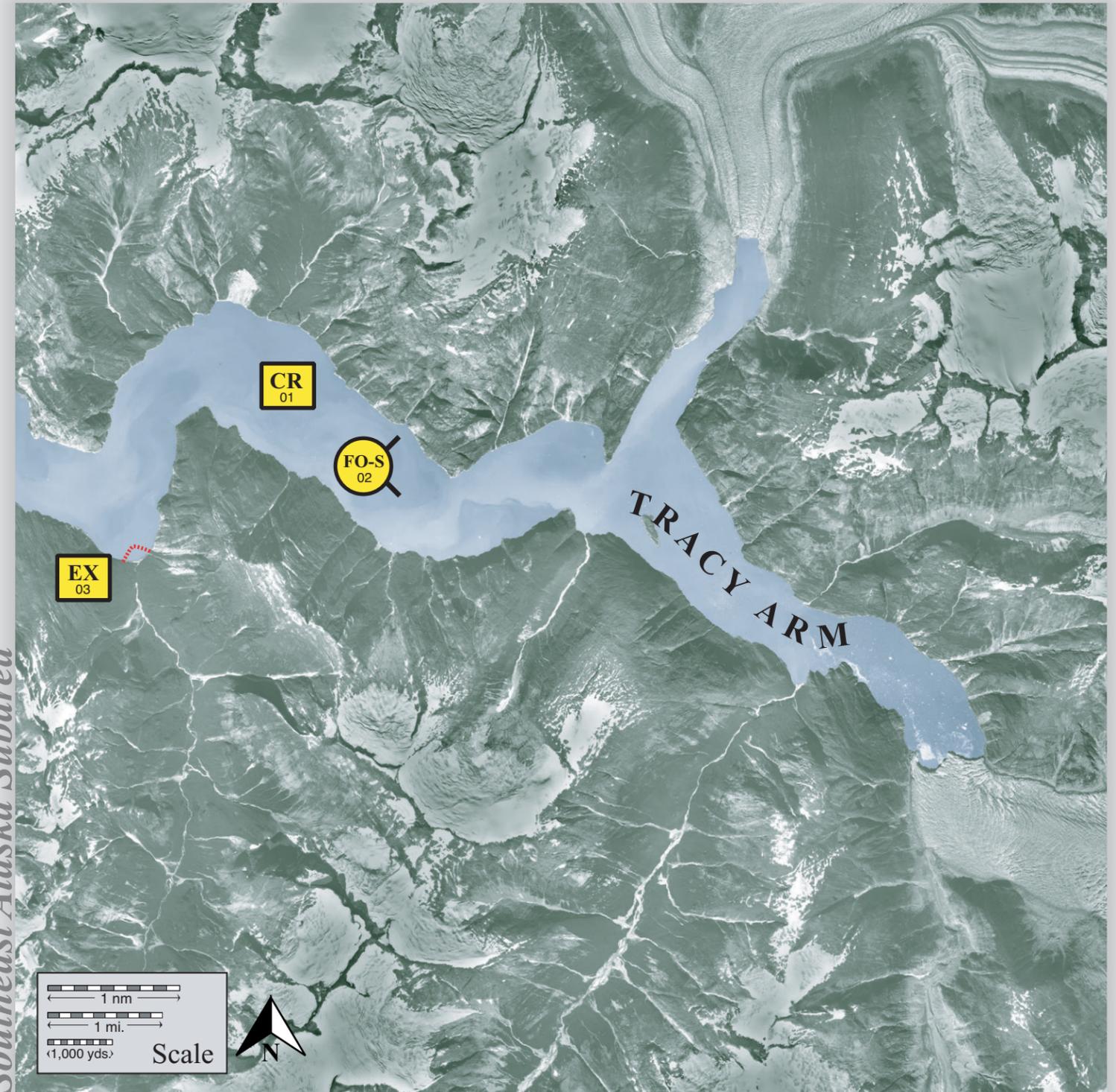


SE03-11-03 Tracy Arm stream looking south.

Tracy Arm, SE03-11

Center of map at 57° 53' N Lat., 133° 12' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



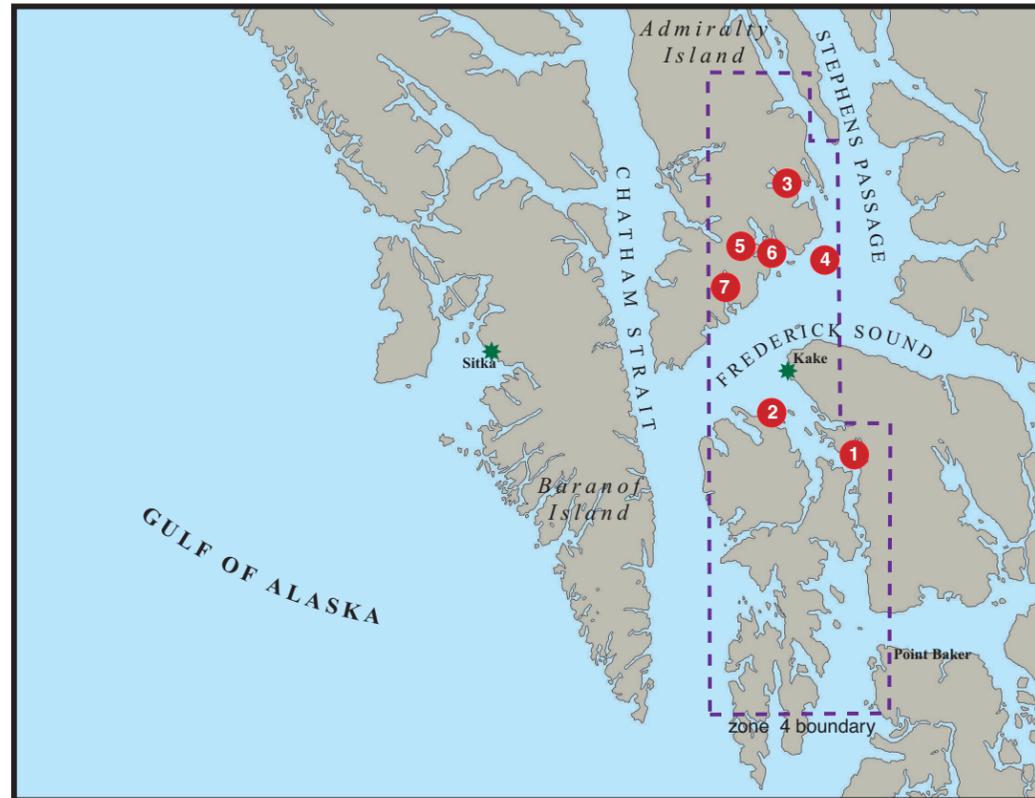
This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE03-11-01	Tracy Arm Lat. 57° 53 N Lon. 133° 12 W	Containment and Recovery near source Deploy boom around vessel casualty, taking care to avoid seal pupping areas.	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Place protected-water boom around vessel using class 6 skiffs.	Deployment Equipment 1500 ft. of calm-water boom. Deep water will likely prevent preclude use of anchors. Skiffs may be used to prevent boom from vessel hull. Vessels/Personnel/Tending See SE03-11-03	Vessel platform	Via marine waters	Marine mammals-harbor seal haulout & pupping on floating ice Fish-pink salmon Birds-gull colonies, kittlitz's and marbled murrelet feeding area Human use-high recreational use	Must contend with floating ice, many of which may be occupied by seal pups. Communications back to Incident Command Post (including satellite phones) will be difficult due to steep fjords and remote location.
SE03-11-02	Tracy Arm Lat. 57° 53 N Lon. 133° 11 W	Free-oil Recovery Maximize free-oil recovery in the waters of Tracy Arm fjord.	Deploy free-oil recovery strike teams. Ensure operations are not close to seal haul-outs & pupping.	Multiple free-oil recovery strike teams as required to maximize interception of oil.	Juneau	Via marine waters	Same as SE03-11-01	FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-6 for equipment locations. See SE03-11-01
SE03-11-03	Tracy Arm a. Lat. 57° 52.5N Lon. 133° 18.5W b. Lat. 57° 52.6 N Lon. 133° 12 W	Exclusion Protect streams, mudflats and marsh using exclusion boom anchored to achieve a convex shape.	Use class 2 and class 3 or 4 vessels with deck space to transport equipment. Place protected-water boom, with tidal-seal on each end using class 6 skiffs. <u>Boom Arrays:</u> 1500 ft.	Deployment Equipment 1500 ft. protected-water boom 6 ea. ~40 lbs anchor systems for securing boom every 250 feet. 2 ea. 50 ft. of tidal-seal boom units 2 anchor stakes Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel Shift 18 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/shift 5 ea. vessel crew	Juneau	Via marine waters.	Same as SE03-11-01	See SE03-11-01 Tested: not yet

D. SOUTHEAST ALASKA RESPONSE ZONE 4

Figure G-3-7 provides an overview of the Southeast Alaska response zone 4, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE04-01. Figure G-3-8 shows the location of oil spill response equipment throughout zone 4.



SOUTHEAST ALASKA - ZONE 4 SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES	
SE04-01 – Big John Bay	SE04-05 – Cannery Cove/Donkey Bay
SE04-02 – Keku Islands	SE04-06 – Pybus Bay
SE04-03 – Gambier Bay	SE04-07 – Eliza Harbor
SE04-04 – The Brothers	

Figure G-3-7. Southeast Alaska Response Zone 4.

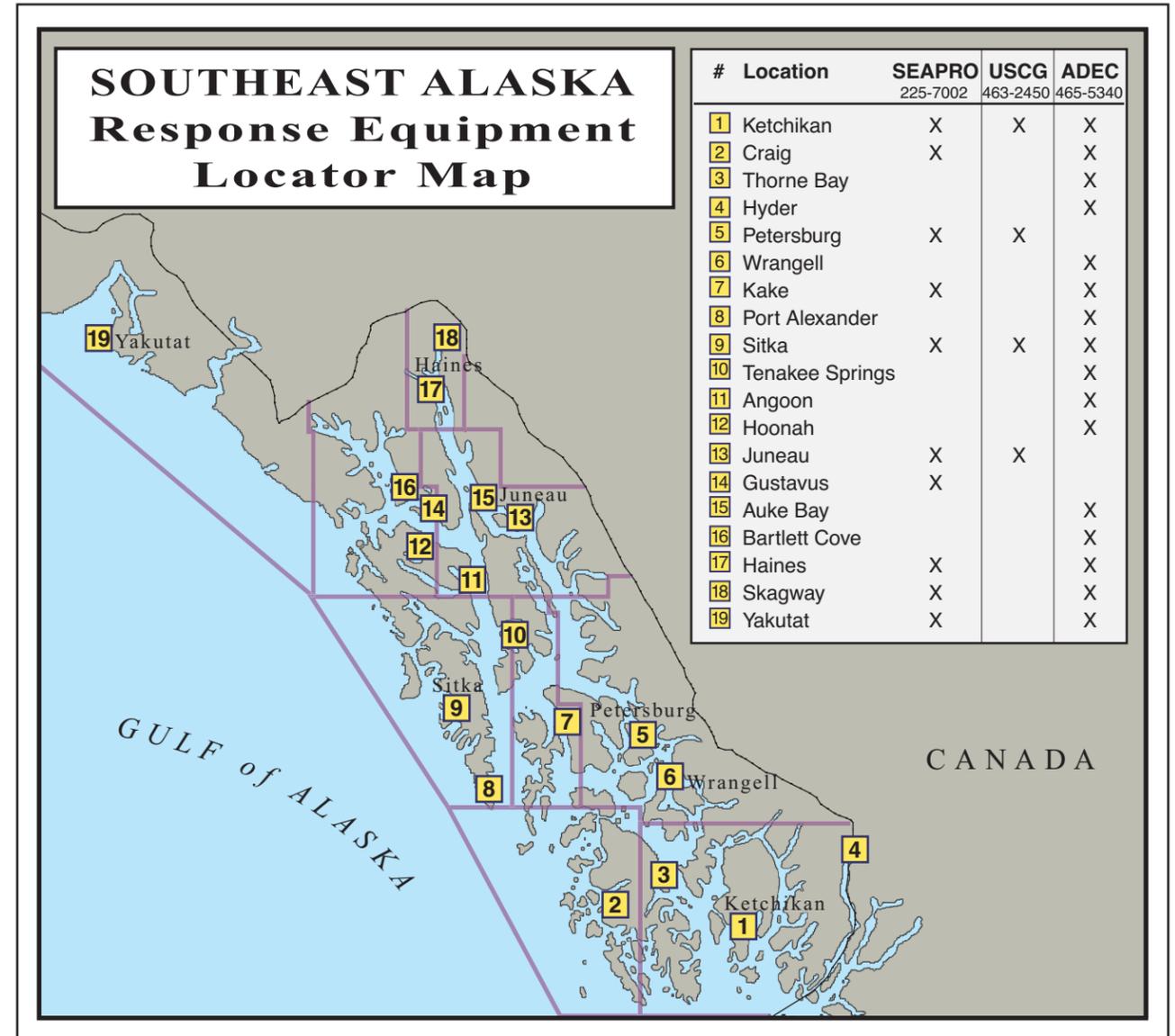


Figure G-3-8. Southeast Alaska Response Equipment Locator Map.

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Map & Photo Legend



SE04-01-02a Big John Bay looking towards the east.

	Free-oil Containment and Recovery, Shallow Water		Tidal-seal Boom
	Exclusion Booming		Marine Recovery
	Diversion Booming		Aquaculture Pens (Oyster Farms)
	Protected-water Boom		

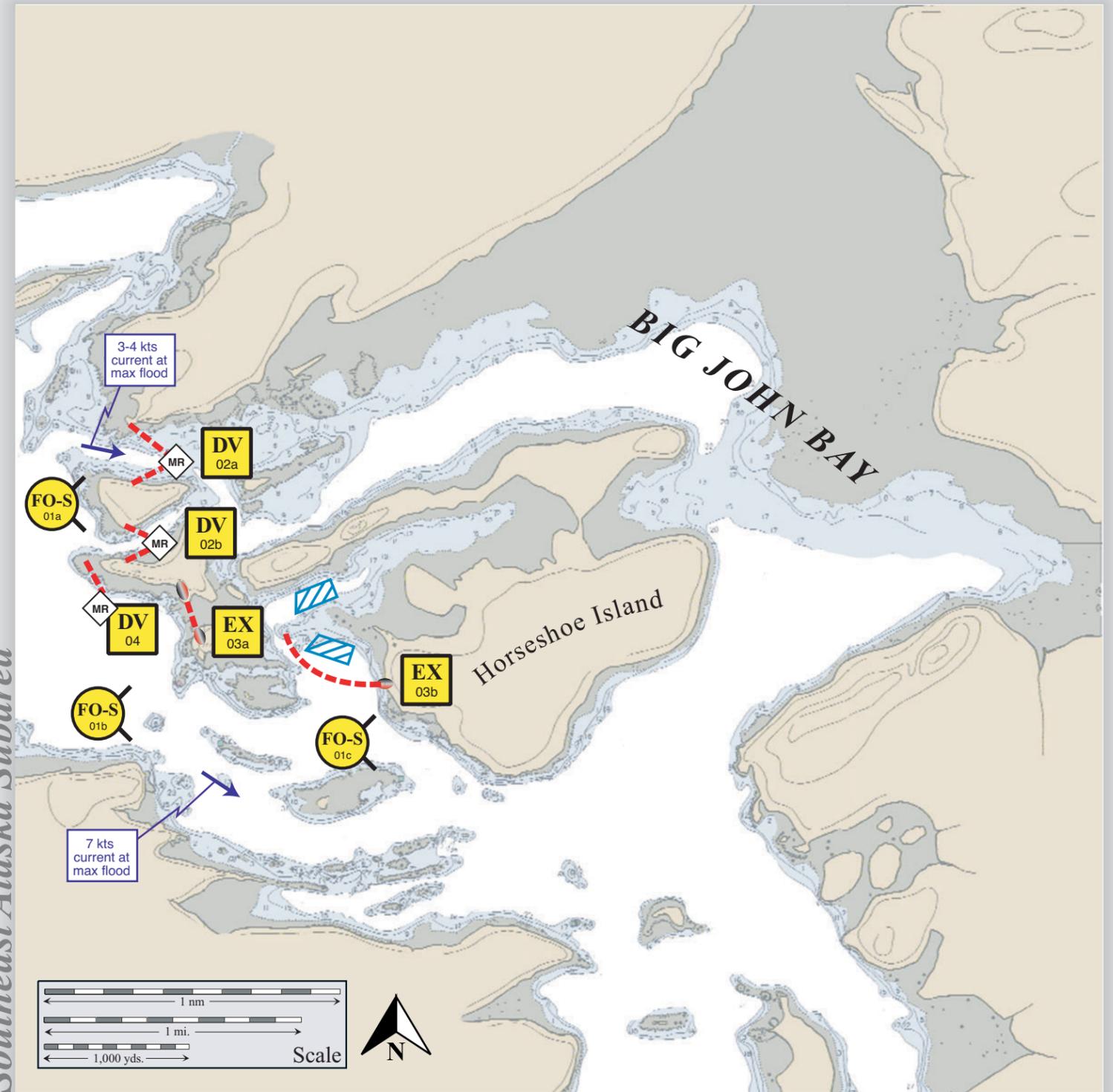


SE04-01-003b Big John Bay looking towards the east. Note aquaculture site.

Big John Bay, SE04-01

Center of map at 56° 48.1' N Lat., 133° 43.4' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE04-01-01	Big John Bay Nearshore waters in the general area of: a. Lat. 56° 48.1 N Lon. 133° 47.0 W b. Lat. 56° 47.6 N Lon. 133° 42.8 W c. Lat. 56° 47.4 N Lon. 133° 46.2 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment inside the entrances to Big John Bay.	Deploy free-oil recovery strike teams inside the entrances to Big John Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Vessel platform Kake	Via marine waters Chart 17372a	Same as SE04-01-02	Vessel masters should have local knowledge.
SE04-01-02	Big John Bay North Entrance a. Lat. 56° 48.3 N Lon. 133° 46.3 W b. Lat. 56° 48.0 N Lon. 133° 46.4 W	Diversion / Recovery Divert oil entering the north entrance to Big John Bay to marine recovery.	Use class 2 and class 3/4 vessels with deck space to transport equipment. Class 6 setnet or seine skiffs to deploy boom and set anchors. Place 1600 ft. of protected-water boom, in a chevron pattern, in the north entrance to Big John Bay, and 1000 ft. in a chevron pattern, between islands to divert oil to marine recovery vessels.	Deployment Equipment 2600 ft. protected-water boom 28 ea. anchor systems (~40 lbs.) 2 ea. marine recovery units Vessels 1 ea. class 2 3 ea. class 3/4 2 ea. class 6 Personnel / Shift 17 ea. vessel crew Tending Vessels 3 ea. class 3/4 2 ea. class 6 Personnel / shift 13 ea. vessel crew	Vessel platform Kake	Via marine waters Chart 17360	Fish-intertidal salmon/trout spawning (coho, chum, pink, cutthroat, Dolly Varden), 8 salmon streams Birds-waterfowl (including geese) and shorebird concentration area, gulls (summer) Habitat-tidal flats Human use-High use subsistence area, salmon harvest, aquaculture (oyster farm)	Vessel masters should have local knowledge. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-8 for equipment locations. Tested: not yet
SE04-01-03	Big John Bay a. Lat. 56° 47.7 N Lon. 133° 46.2 W b. Lat. 56° 47.6 N Lon. 133° 45.3 W	Exclusion Exclude oil from entering Big John Bay between small islands a. 600 b. 1500	a. Place 600 ft. of protected-water boom, with tidal-seal on both ends, between small islands south of northern entrance to Big John Bay. b. Place 1500 ft. of protected-water boom to protect aquaculture pens.	Deployment Equipment 2100 ft. protected-water boom 8 ea. anchor systems (~40 lbs.) 3 ea. 50 ft. tidal-seal boom units 4 ea. anchor stakes Vessels / Personnel / Tending Same as SE04-01-02	Vessel platform Kake	Via marine waters Chart 17360	Same as SE04-01-02	Tested: not yet
SE04-01-04	Big John Bay Lat. 56° 47.8 N Lon. 133° 46.2 W	Deflection Deflect oil entering Big John Bay to free-oil task force	Place 600 ft. of protected-water boom to deflect oil to free-oil task force.	Deployment Equipment 600 ft. protected-water boom 8 ea. anchor systems (~40 lbs.) Vessels / Personnel / Tending Same as SE04-01-02	Vessel platform Kake	Via marine waters Chart 17360	Same as SE04-01-02	Tested: not yet

Map & Photo Legend



▲ SE04-02-04d Keku Islands looking towards the north.



◀ SE04-02-02d Keku Islands looking towards the northwest. Note spill response boom in photograph.



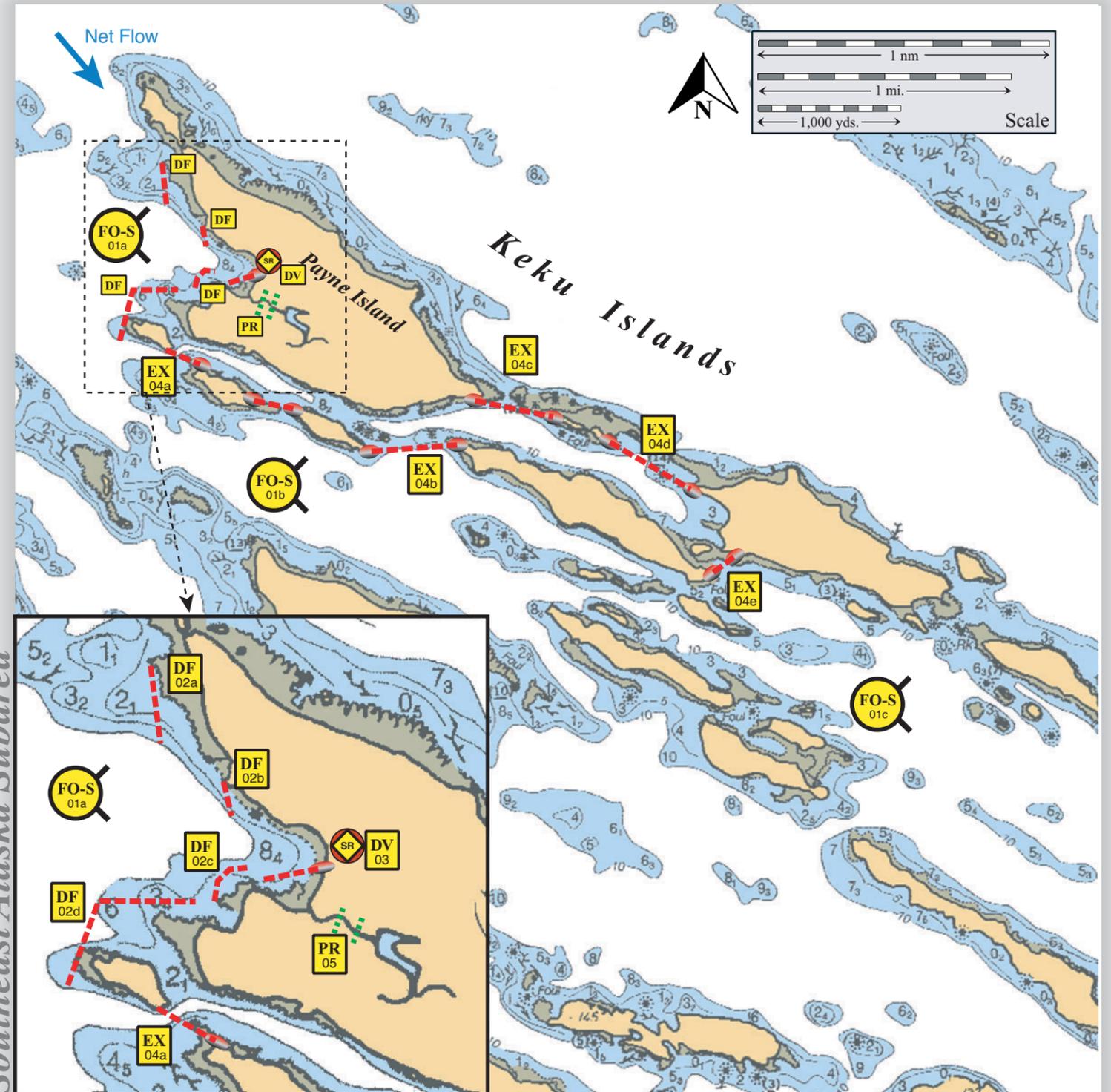
◀ SE04-02-04a Keku Islands looking towards the north. Note spill response boom in photograph.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Diversion Booming
-  Deflection Booming, Fixed
-  Passive Recovery and Debris Removal
-  Protected-water Boom
-  Tidal-seal Boom
-  Shoreside Recovery, Marine Access

Geographic Response Strategies for Southeast Alaska Subarea

Keku Islands, SE04-02

Center of map at 56° 55.8' N Lat., 134° 05.8' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE04-02-01	Keku Islands Nearshore waters in the general area of: a. Lat. 56° 57.3 N Lon. 134° 08.1 W b. Lat. 56° 56.1 N Lon. 134° 08.0 W c. Lat. 56° 55.2 N Lon. 134° 02.8 W	Free-oil Recovery Maximize free-oil recovery inside of Keku Islands.	Deploy nearshore free-oil recovery strike teams inside of Keku Islands Archipelago. Use aerial surveillance to locate incoming slicks.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Vessel platform	Via marine waters	Marine mammals-whales, sea otter Fish-herring Birds-waterfowl concentrations (summer, high winter use), shorebird concentrations (winter) Habitat-kelp beds and eelgrass, salt chuck, high intertidal diversity Human use-high subsistence use, salmon harvest, high recreational use, aquaculture	Vessel masters should have local knowledge. FOOSC Historic Properties Specialist should MONITOR on-site operations.
SE 04-02-02	Payne Island a. Lat. 56° 57.1 N Lon. 134° 08.7 W b. Lat. 56° 56.9 N Lon. 134° 08.4 W c. Lat. 56° 56.7 N Lon. 134° 08.5 W d. Lat. 56° 56.7 N Lon. 134° 08.9 W	Deflection Deflect oil from sensitive areas. a. 800 ft. b. 200 ft. c. 600 ft. d. 1200 ft.	Use fishing vessels and skiffs (class 3/4/6) to set anchors and deploy.	Deployment Equipment 2800 ft. protected-water boom 10 ea. anchor systems (~40 lbs.) 2 ea. anchor stakes	Vessel platform	Via marine waters	Same as SE04-02-01	Tested: 8/20/02 SEAPRO Surveyed: 8/20/02 SEAPRO, USCG, TLR
SE04-02-03	Payne Island Lat. 56° 56.7 N Lon. 134° 08.15 W	Diversion Divert oil to cove on Payne Island for shoreside recovery.	Use vessels with deck space (class 2/3/4) to transport equipment. Use skiffs (class 6) to deploy boom and set anchors. Place 2000 ft. of protected-water boom to divert oil to marine recovery in cove on Payne Island.	Deployment Equipment 2000 ft. protected-water boom 22 ea. anchor systems (~40 lbs.) 1 ea. marine recovery Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 18 ea. vessel crew Tending Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / shift 6 ea. vessel crew	Vessel platform	Via marine waters	Same as SE04-02-01	See Figure G-3-8 for equipment locations. Tested: 8/20/02 SEAPRO Surveyed: 8/20/02 SEAPRO, USCG, TLR
SE04-02-04	a. Lat. 56° 56.6 N Lon. 134° 08.6 W b. Lat. 56° 56.5 N Lon. 134° 08.6 W c. Lat. 56° 56.3 N Lon. 134° 08.0 W d. Lat. 56° 56.2 N Lon. 134° 07.1 W e. Lat. 56° 55.8 N Lon. 134° 05.1 W f. Lat. 56° 56.1 N Lon. 134° 05.6 W g. Lat. 56° 56.3 N Lon. 134° 06.4 W	Exclusion Exclude oil from entering area between islands as shown.	Place 8,800 ft. of protected-water boom in multiple arrays, with tidal-seal on all ends, between islands to exclude oil from area shown. Boom Arrays a. 600 ft. b. 800 ft. c. 1000 ft. d. 2000 ft. e. 800 ft. f. 2000 ft. g. 1600 ft.	Deployment Equipment 8,800 ft. protected-water boom 92 ea. anchor systems (~40 lbs.) 14 ea. 50 ft. tidal-seal 28 ea. anchor stakes Vessels/Personnel/Tending Same as SE03-02-02	Vessel platform	Via marine waters	Same as SE04-02-01	Tested: not yet Surveyed: 8/20/02 SEAPRO, USCG, TLR
SE04-02-05	Payne Island Lat. 56° 56.7 N Lon. 134° 08.08 W	Passive Recovery Protect salt chuck with snare line and sorbent boom.	Place snare-line or sorbent boom across the entrance of the salt marsh at the back of the bay.	Deployment Equipment 200 ft. snare line or sorbent boom 2 ea. anchor stakes	Vessel platform	Via marine waters		Use caution to not drive oil into the substrate. Surveyed: 8/20/02 SEAPRO, USCG, TLR

Map
& Photo

Legend



SE04-03-03 Gambier Bay viewed towards the north.

	Free-oil Containment and Recovery, Shallow Water
	Exclusion Booming
	Protected-water Boom
	Tidal-seal Boom
	Public Use Cabin
	Bear in Area, Guards Needed

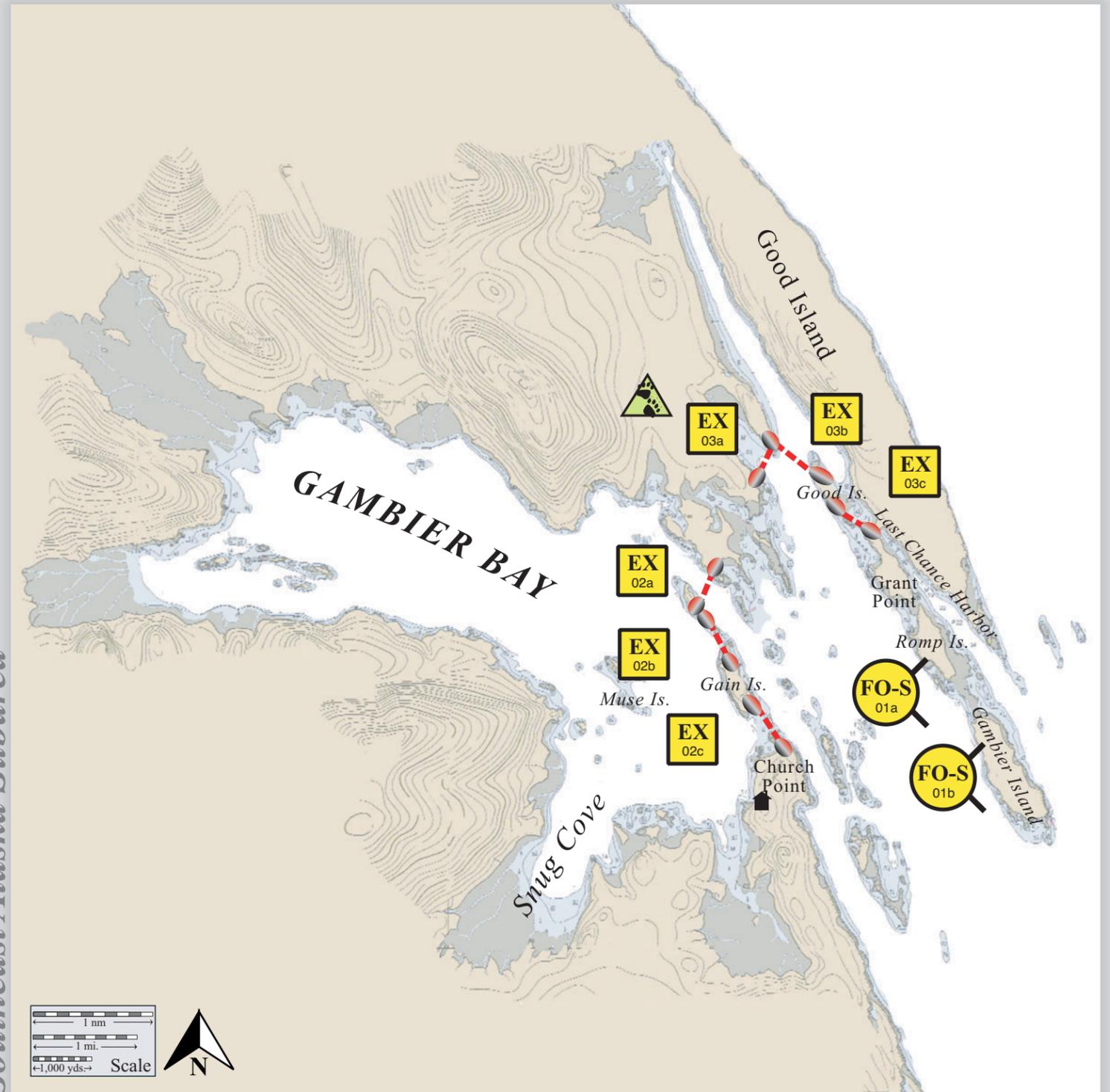


SE04-03-02 Gambier Bay viewed towards the north.

Gambier Bay, SE04-03

Center of map at 57° 27.7' N Lat., 133° 58.8' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE04-03-01	Gambier Bay – NW Arm Nearshore waters in the general area of: a. Lat. 57° 27.2 N Lon. 133° 53.4 W b. Lat. 57° 26.6 N Lon. 133° 51.9 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment of outer Gambier Bay.	Deploy nearshore free-oil recovery strike teams upwind and up-current of Gambier Bay. Use aerial surveillance to locate incoming slicks.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Vessel platform	Via marine waters	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (coho, pink, chum, steelhead, Dolly Varden, cutthroat), 11 salmon streams Birds-waterfowl concentrations (winter >8000), shorebird and seabird concentrations Habitat-sheltered tidal flat, marsh Human use-high recreational use Terrestrial mammals-bears	Shallow and rocky waters. Vessel masters should have local knowledge. Bears in area.
SE04-03-02	Gambier Bay, Gain Island, Church Pt. near Aid “2” a. Lat. 57° 28.1 N Lon. 133° 55.8 W b. Lat. 57° 27.7 N Lon. 133° 55.7 W c. Lat. 57° 26.9 N Lon. 133° 54.9 W	Exclusion Exclude oil from Gambier Bay.	Use class 2 and class 3/4 vessels with deck space to transport equipment. Place 5800 ft. of protected-water boom, in three arrays, with tidal-seal on each end between mainland and islands and between islands, to prevent oil from entering Gambier Bay. <u>Boom Arrays</u> a. 1800 ft. b. 1800 ft. c. 2200 ft.	Deployment Equipment 5800 ft. protected-water boom 58 ea. anchor systems (~40 lbs.) 6 ea. 50 ft. tidal-seal 12 ea. anchor stakes Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 18 ea. vessel crew Tending Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / shift 5 ea. vessel crew	Vessel platform	Via marine waters	Same as SE04-03-01	USFS Public use cabin. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-8 for equipment locations. Bears in area. Tested: not yet
SE04-03-03	Entrance to North Arm and cove a. Lat. 57° 29.2 N Lon. 133° 55.0 W b. Lat. 57° 29.3 N Lon. 133° 54.4 W c. Lat. 57° 28.7 N Lon. 133° 53.5 W	Exclusion Exclude oil from cove and north arm of Gambier Bay.	Place 5200 ft. of protected-water boom, in two arrays, with tidal-seal on each end, from each end of Good Island to the mainland to prevent oil from entering North arm of Gambier Bay and one array, with tidal-seal on each end, across mouth of small cove. <u>Boom Arrays</u> a. 1600 ft. b. 2400 ft. c. 1200 ft.	Deployment Equipment 5200 ft. protected-water boom 52 ea. anchor systems (~40 lbs.) 6 ea. 50 ft. tidal-seal 12 ea. anchor stakes Vessels, Personnel, Tending Same as SE04-03-02	Vessel platform	Via marine waters	Same as SE04-03-01	Tested: not yet

Map & Photo Legend



SE04-04 Looking south at West Brother Island.



SE04-04 Looking northeast over the Brothers Islands.



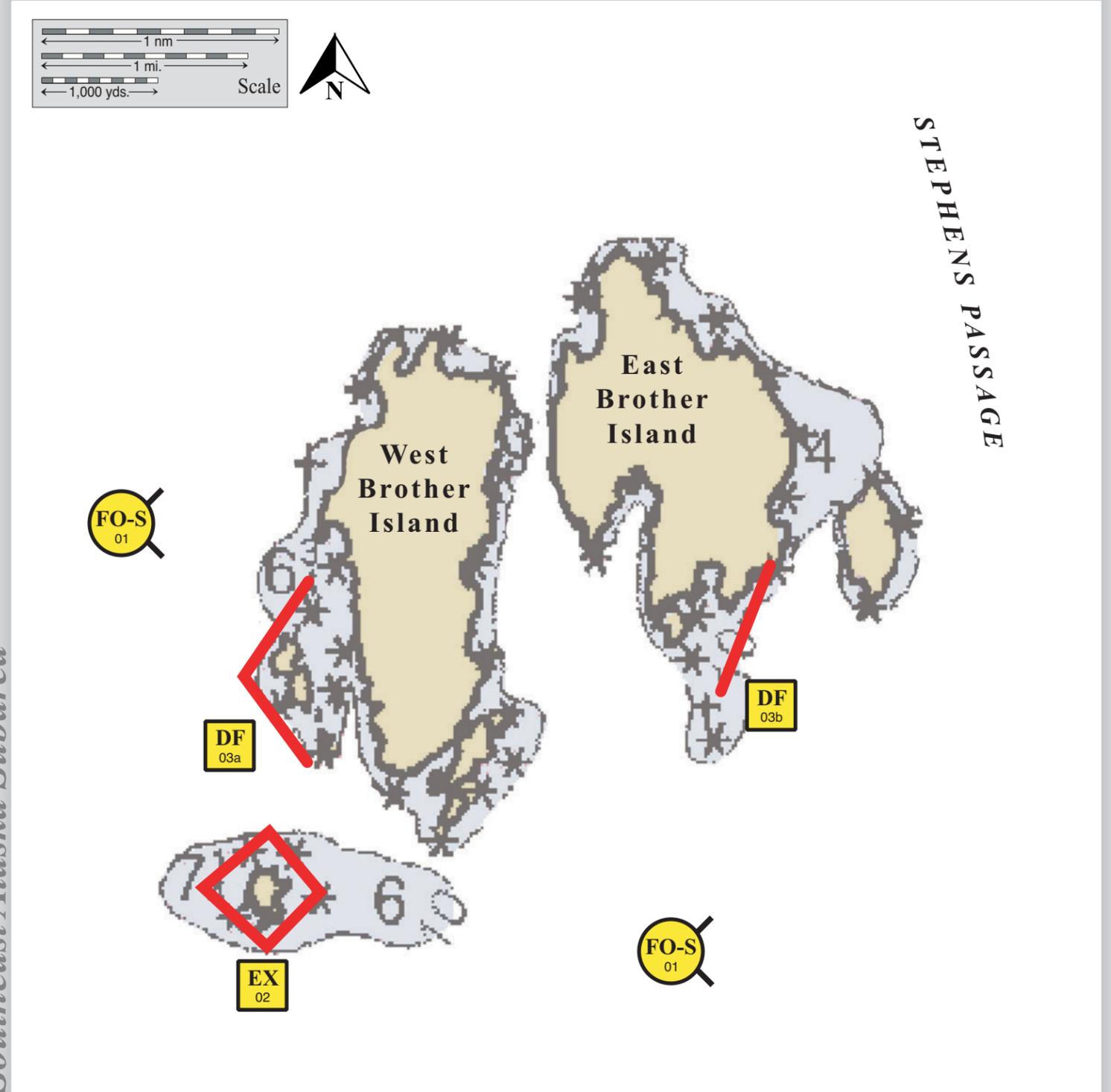
SE04-04 Looking southwest over the Brothers Islands.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Deflection Booming, Fixed
-  Open-water Boom

Geographic Response Strategies for Southeast Alaska Subarea

The Brothers, SE04-04

Center of map at 57° 17.6' N Lat., 133° 50.6' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE04-04-01	The Brother Islands Nearshore waters in the general area of: Lat. 57° 17.6 N Lon. 133° 50.6 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of The Brothers Islands depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of The Brother Islands. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kake	Via marine waters Chart 17320	Same as SE04-04-02	Vessel masters should have local knowledge.
SE04-04-02	The Brother Islands Lat. 57° 16.17 N Lon. 133° 52.48 W The southern most island in the Brother Island group. Approx. 3500 ft. southwest of the West Island.	Exclusion Exclude oil from entering identified areas around The Brother Islands.	Transport equipment by vessel (class 2/3/4). Place protected-water boom and anchors in a diamond shape around the island. Tend throughout the tide.	Deployment Equipment 9000 ft open water boom 4 ea. anchor systems (~1000 lbs.) 20 ea. anchor systems (~40 Lbs.) Vessels 3 ea. class 2 3 ea. class 3/4 2 ea. class 6 Personnel / Shift 25 ea. vessel crew Tending Vessels 1 ea. class 3/4 1 ea. class 6 Personnel / shift 4 ea. vessel crew	Vessel platform	Via marine waters Chart 17320	Marine mammals-harbor seals, Steller sea lion haulout(500 yd. exclusion zone) & rookery (1/4 to 1/2 mile exclusion zone) Birds-seabirds, waterfowl, shorebirds (all year-round) Human use-high recreational use (May-September)	Vessel masters should have local knowledge. Consider the use of live deflection booms if sea state is marginal. FOOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-8 for equipment locations. Tested: not yet
SE04-04-03	The Brother Islands a. West Brother Island Lat.57° 17.07 N Lon. 133° 52.23 W b. East Brother Island Lat.57° 17.38 N Lon. 133° 48.73 W	Deflection-Fixed Deflect oil from The Brothers Islands and the identified sensitive areas. Establish boom position on The Brother Islands to maximize the deflection of oil. Order of deployment should be determined by spill source and trajectory.	Place boom and anchor system with fishing vessels and skiffs (class 3/4/6). Position boom at appropriate angle to deflect oil from The Brother Islands and set up for nearshore free-oil recovery. <u>Boom Length</u> a. 5800 ft. b. 3800 ft.	Deployment Equipment 9600 ft. open-water boom 4 ea. anchor systems (~1000 lbs.) 25 ea. anchor systems (~40 lbs.) Vessels, Personnel/Shift Same as SE-04-04-02 Tending Same as SE-04-04-02	Vessel platform	Via marine waters Chart 17320	Same as SE04-04-02	Vessel master should have local knowledge. Tested: not yet

Map
& Photo

Legend



SE04-05-02 Donkey Bay looking towards the west.

- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Deflection Booming, Fixed
- Protected-water Boom
- Tidal-seal Boom
- Bears in Area, Guards Needed

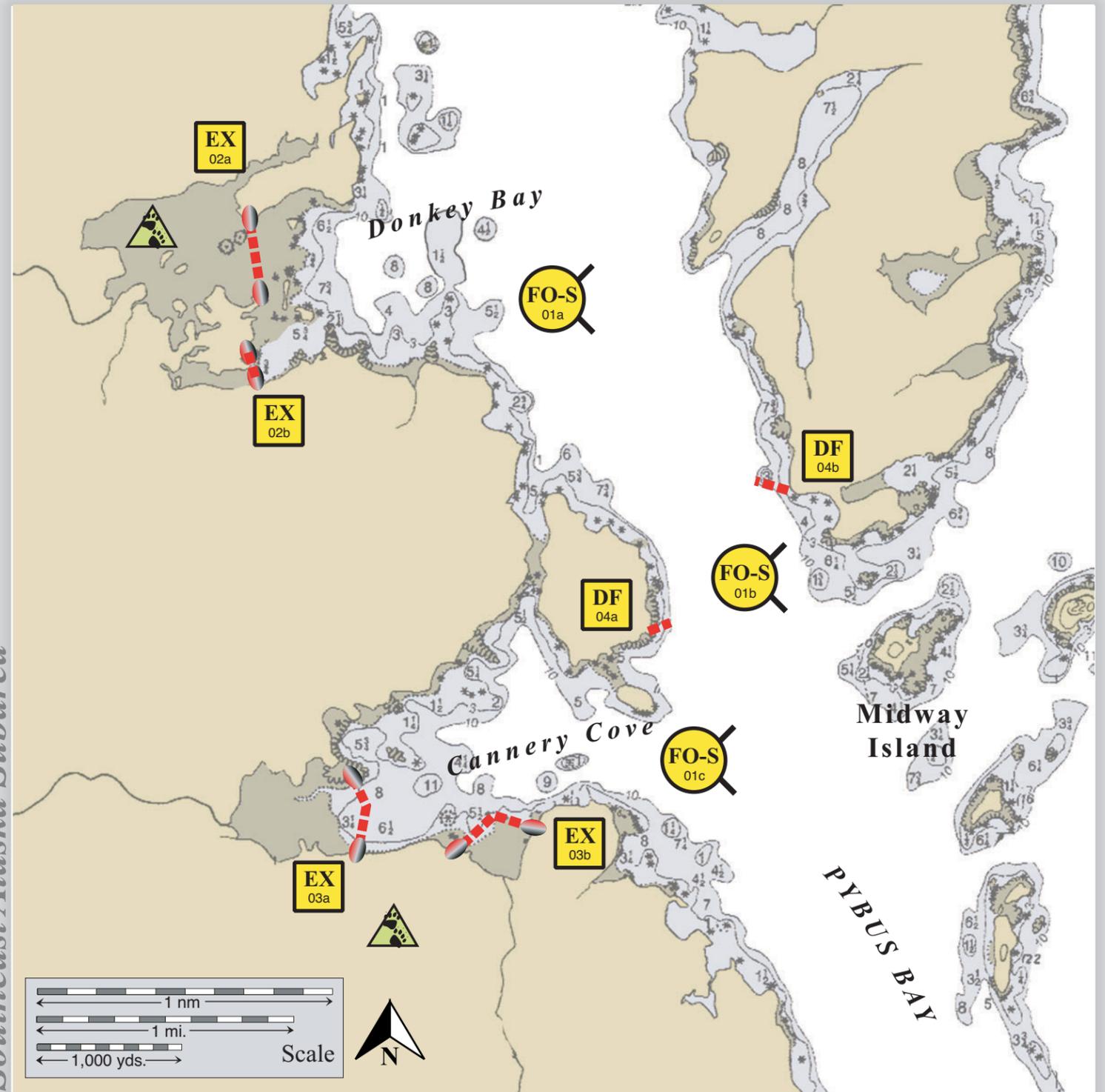


SE04-05-03 Cannery Cove looking towards the west.

Cannery Cove/Donkey Bay, SE04-05

Center of map at 57° 19.5' N Lat., 134° 0.80' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea

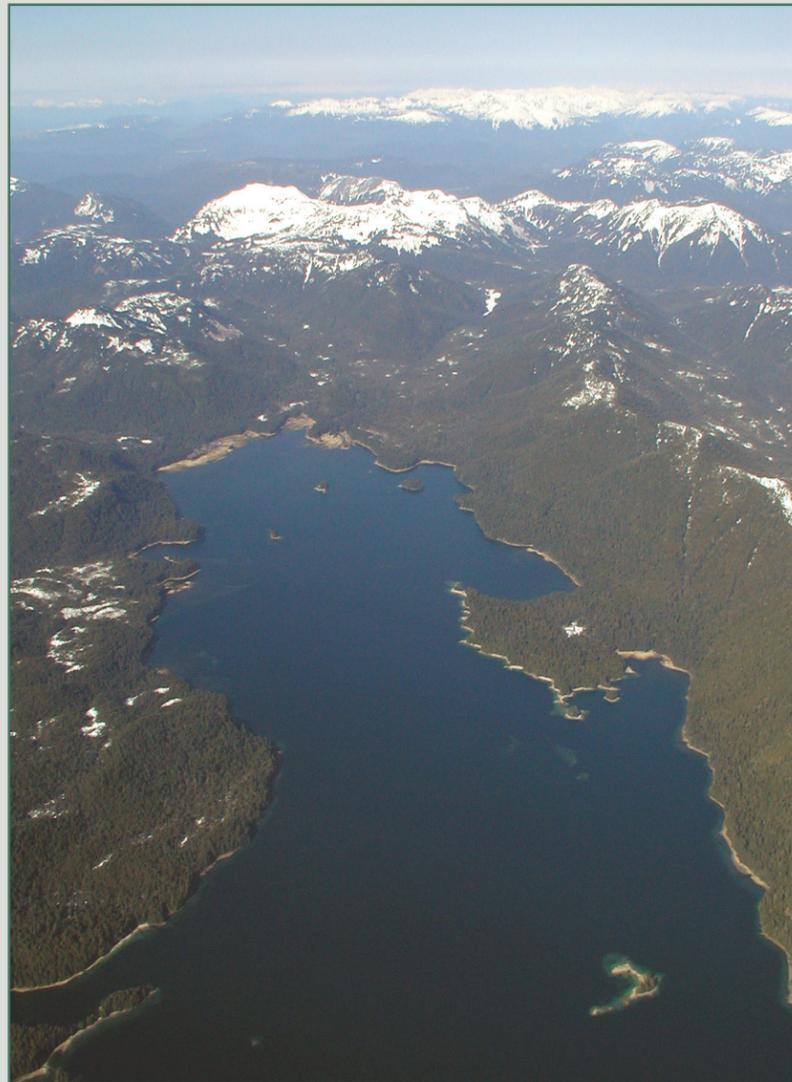


This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE04-05-01	Cannery Cove / Donkey Bay Nearshore waters in the general area of: a. Lat. 57° 20.2 N Lon. 134° 09.3 W b. Lat. 57° 19.2 N Lon. 134° 07.2 W c. Lat. 57° 18.6 N Lon. 134° 07.8 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment in outer Pybus Bay	Deploy free-oil recovery strike teams upwind and up-current of Cannery Cove, Donkey Bay, and the entrance to the West Arm of Pybus Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kake	Via marine waters Chart 17320	Same as SE04-05-02	Same as SE04-05-02
SE04-05-02	Donkey Bay a. Lat. 57° 20.2 N Lon. 134° 10.1 W b. Lat. 57° 19.9 N Lon. 134° 10.1 W	Exclusion Exclude oil from entering the streams and intertidal areas at the head of Donkey Bay.	Transport equipment to the site with vessels (class 2/3/4) Use fishing vessels and skiffs to set anchors and deploy 2400 ft of protected water and tidal-seal boom outside of the tidal flats of Donkey Bay <u>Boom lengths:</u> a. 1600 ft. b. 800 ft.	Deployment Equipment 2400 ft. protected-water boom 12 ea. anchor systems (~40 lbs.) 4 ea. > 50 ft section tidal-seal 8 ea. anchor stakes Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / shift 18 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / shift 7 ea. vessel crew	Vessel platform	Via marine waters Chart 17320	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (coho, pink, chum, Dolly Varden) Birds-waterfowl and shorebird migration, molting, and winter concentrations Habitat-kelp and eelgrass beds Human use-high recreational use (May-Sept.), intensive commercial salmon fishing Terrestrial mammals-bears	Vessel masters should have local knowledge. Bears in area. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-8 for equipment locations. Tested: not yet
SE04-05-03	Cannery Cove a. Lat. 57° 18.4 N Lon. 134° 9.3 W b. Lat. 57° 18.3 N Lon. 134° 8.6 W	Exclusion Exclude oil from entering the streams and intertidal areas at the head of Cannery Cove.	Use fishing vessels and skiffs (class 3/4/6) to set anchors and deploy protected water and tidal-seal boom outside of the tidal flats across the mouth of Cannery Cove. <u>Boom lengths:</u> a. 2200 ft. b. 2600 ft.	Deployment Equipment 4800 ft. protected-water boom 24 ea. anchor systems (~40 lbs.) 8 ea. anchor stakes 4 ea. ≥ 50 ft section tidal-seal Vessels, Personnel, Tending Same as SE07-03-02	Vessel platform	Via marine waters Chart 17320	Same as SE04-05-02	Same as SE04-05-02 Tested: not yet
SE04-05-04	Entrance to Pybus Bay NW Arm a. Lat. 57° 19.0 N Lon. 134° 07.5 W b. Lat. 57° 19.4 N Lon. 134° 06.7 W	Deflection Deflect oil entering West Arm of Pybus Bay to nearshore free-oil strike team working in the channel	Use fishing vessels and skiffs (class 3/4/6) to set anchors and deploy 1200 ft of protected-water boom. Place boom in two arrays on each side of the West Arm of Pybus Bay to maximize deflection for recovery. Tend throughout the tide. <u>Boom Lengths:</u> a. 600 ft. b. 600 ft.	Deployment Equipment 1200 ft. protected-water boom 14 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes Vessels, Personnel, Tending Same as SE07-03-02	Vessel platform	Via marine waters Chart 17320	Same as SE04-05-02	Same as SE04-05-02 Tested: not yet

Map & Photo Legend



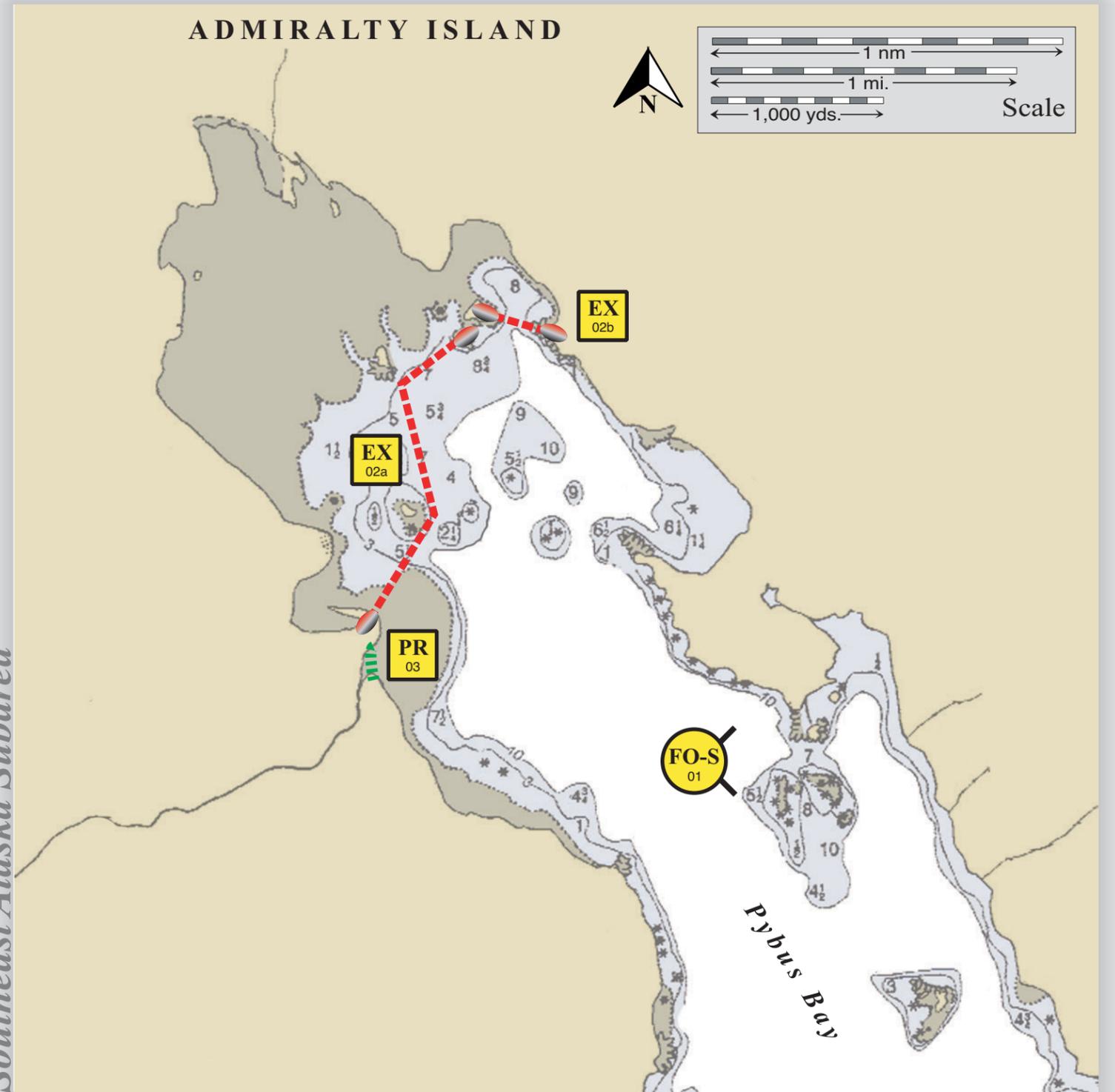
SE04-06 Pybus Bay Northwest Arm looking towards the northwest.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Passive Recovery and Debris Removal
-  Protected-water Boom
-  Tidal-seal Boom
-  Snare Line

Geographic Response Strategies for Southeast Alaska Subarea

Pybus Bay NW Arm, SE04-06

Center of map at 57° 22.0' N Lat., 134° 09.5' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE04-06-01	Pybus Bay NW Arm Nearshore waters in the general area of: Lat. 57° 22.0 N Lon. 134° 09.3 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment in the NW Arm of Pybus Bay.	Deploy free-oil recovery strike teams upwind and up-current of the head of Pybus Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kake	Via marine waters. Chart 17320	Same as SE04-06-02	Vessel masters should have local knowledge.
SE04-06-02	West Arm of Pybus Bay a. Lat. 57° 22.4 N Lon. 134° 11.1 W b. Lat. 57° 23.3 N Lon. 134° 10.3 W	Exclusion Exclude oil from the head of Pybus Bay.	Transport equipment by marine vessel to the site (class 2/3/4). Deploy anchors and boom with fishing vessels or skiffs (class 3/4/6). Place boom (a) beyond the small island in the Arm and outside of the tidal flats. <u>Boom Lengths:</u> a. 6400 ft. b. 1200 ft.	Deployment Equipment 7600 ft. protected-water boom 78 ea. anchor systems (~40 lbs.) 4 ea. 50 ft. section tidal-seal 8 ea. anchor stakes Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 18 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / shift 7 ea. vessel crew	Vessel platform	Via marine waters. Chart 17320	Marine mammals-harbor seals Fish-intertidal salmon spawning (coho, pink, chum) Birds-waterfowl and shorebird migration, molting, and winter concentrations Habitat-kelp and eelgrass beds Human use-high recreational use (May-Sept.), intensive commercial fishing Terrestrial mammals-bears	Vessel masters should have local knowledge. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-8 for equipment locations. Bears in area. Tested: not yet
SE04-06-03	Stream entering Pybus Bay in the area of: Lat. 57° 22.3 N Lon. 134° 11.1 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom	Place snare line or sorbent boom across the tidal flats at the mouth of stream located on the west side of Pybus Bay, outside of SE04-05-02a.	Deployment Equipment 500 ft. snare line or sorbent boom 6 ea. anchor stakes Vessels, Personnel, Tending Same as SE07-03-02	Vessel platform	Via marine waters. Chart 17320	Same as SE04-06-02	Use snare line for persistent oils and sorbent boom for non-persistent oils.

Map
& Photo

Legend



SE04-07 Eliza Harbor looking towards the north.

- | | | | |
|--|--|--|------------------------------|
| | Free-oil Containment and Recovery, Shallow Water | | Protected-water Boom |
| | Exclusion Booming | | Tidal-seal Boom |
| | Deflection Booming, Fixed | | Snare Line |
| | Passive Recovery and Debris Removal | | Bears in Area, Guards Needed |

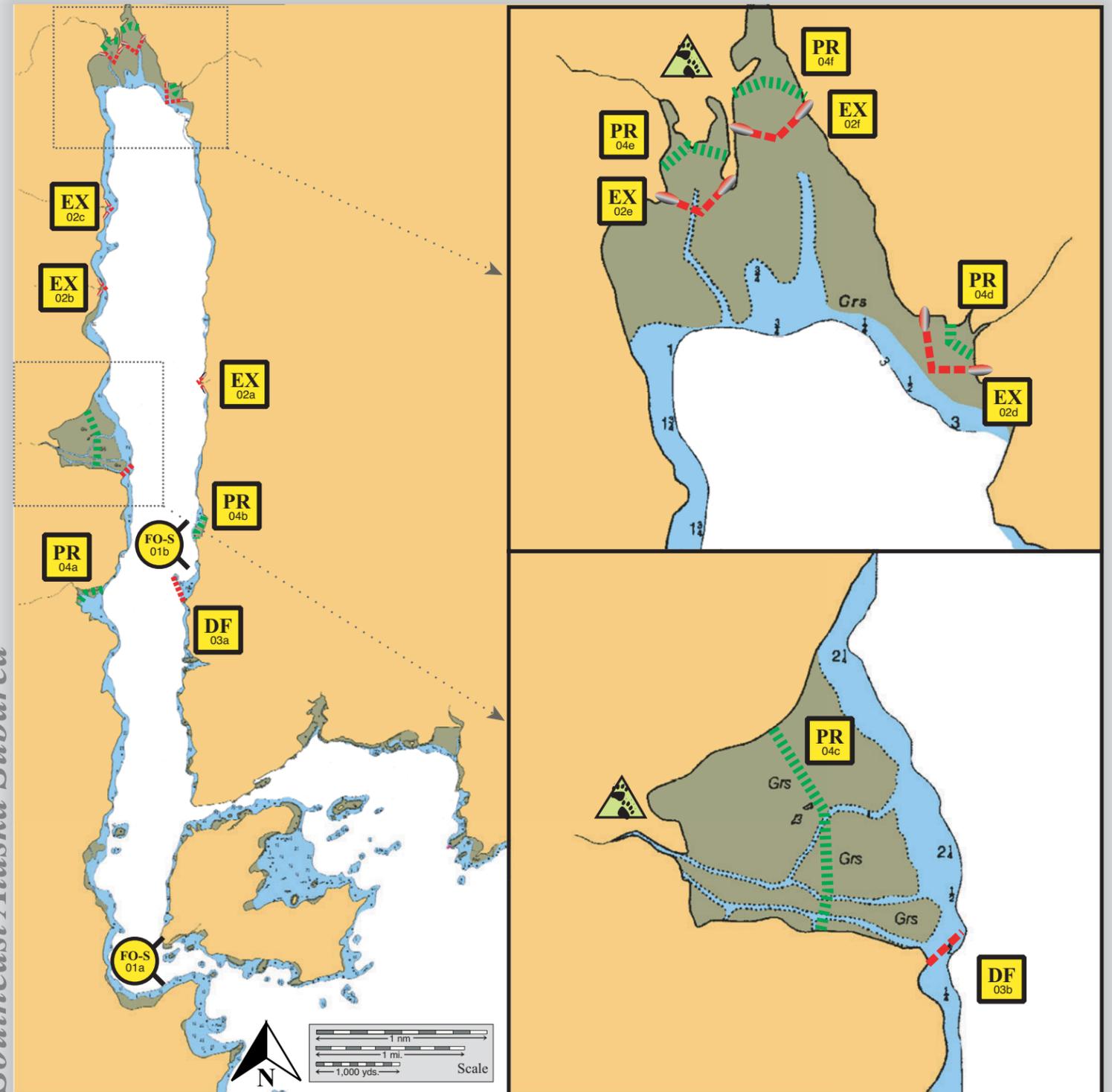


SE04-07 Eliza Harbor looking towards the north.

Eliza Harbor, SE04-07

Center of map at 57° 12' N Lat., 134° 17' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE04-07-01	Eliza Harbor Lat. 57° 12 N Lon. 134° 17 W (approximate location)	Free-oil Recovery Maximize recovery of oil at the mouth of harbor and along length of harbor.	Deploy nearshore free-oil recovery strike team. Use aerial surveillance to locate areas of heavy slick concentrations.	Two (or more) nearshore free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Angoon, Petersburg, and/or Juneau	Via marine waters	See SE04-07-02	Strong currents possible at the mouth of the harbor. Oil is likely to impact the shoreline in the vicinity of Liesnor Island.
SE04-07-02	Eliza Harbor a. Lat. 57° 13.0 N Lon. 134° 17.0 W b. Lat. 57° 13.7N Lon. 134° 18.06 W c. Lat. 57° 14.15N Lon. 134° 18.0 W d. Lat. 57° 14.8 N Lon. 134° 17.18 W e. Lat. 57° 15.0 N Lon. 134° 17.9 W f. Lat. 57° 15.2 N Lon. 134° 17.7 W	Exclusion Protect mudflats and marsh using exclusion boom anchored to achieve a convex shape. a. 200 ft b. 500 ft c. 300 ft d. 1000 ft e. 800 ft f. 800 ft	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 3600 ft of protected-water boom anchored to achieve convex shape.	Deployment Equipment 3600 ft protected-water boom 6 ea ~40 lbs anchor systems. 12 ea 50 ft sections of tidal-seal boom. 12 ea anchor stakes. Vessels 2 ea. class 2 or 3/4 2 ea. class 6 Personnel Shift 12 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea vessel crew	See SE04-07-01	See SE04-07-01	Fish-intertidal salmon/trout spawning (pink, coho, chum, Dolly Varden) Birds-waterfowl and shorebirds (winter) Habitat-marsh, wetlands Terrestrial mammals-bears	Deploy boom at high tide to prevent further damage to mudflats and marsh. Bears in area. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-8 for equipment locations. Tested: not yet
SE04-07-03	Eliza Harbor a. Lat. 57° 11.8 N Lon. 134° 17.15 W b. Lat. 57° 12.6 N Lon. 134° 17.7 W	Deflection Deflect oil away from sensitive area to allow free-oil recovery.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy protected-water boom. a. 600 ft b. 500 ft	Deployment Equipment 500 ft protected-water boom 2 ea ~40 lbs anchor systems. 1 ea anchor stakes. Vessels/Personnel/Tending Use resources listed in SE04-07-02	See SE04-07-01	See SE04-07-01	See SE04-07-02	Tested: not yet
SE04-07-04	Eliza Harbor a. Lat. 57° 11.8 N Lon. 134° 18.3 W b. Lat. 57° 12.3N Lon. 134° 16.9 W c. Lat. 57° 12.7N Lon. 134° 18.2 W d. Lat. 57° 14.8 N Lon. 134° 17.18 W e. Lat. 57° 15.15N Lon. 134° 17.9 W f. Lat. 57° 15.2 N Lon. 134° 17.7 W	Passive Recovery Minimize impact to intertidal mudflats and marsh through passive recovery using snare line or sorbent boom.	Place up to 5400 ft. of snare line or sorbent boom across mudflats and marsh. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent. a. 1000 ft b. 1000 ft c. 2000 ft d. 300 ft e. 600 ft f. 500 ft	Deployment Equipment 5400 ft. snare line or sorbent boom 54 ea. anchor stakes. 1000 ft of line. Vessels/Personnel/Tending Use resources listed in SE04-07-02	See SE04-07-01	See SE04-07-01	See SE04-07-01	Deploy boom at high tide to prevent further damage to mudflats and marsh.

E. SOUTHEAST ALASKA RESPONSE ZONE 5

Figure G-3-9 provides an overview of the Southeast Alaska response zone 5, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE05-01. Figure G-3-10 shows the location of oil spill response equipment throughout zone 5.

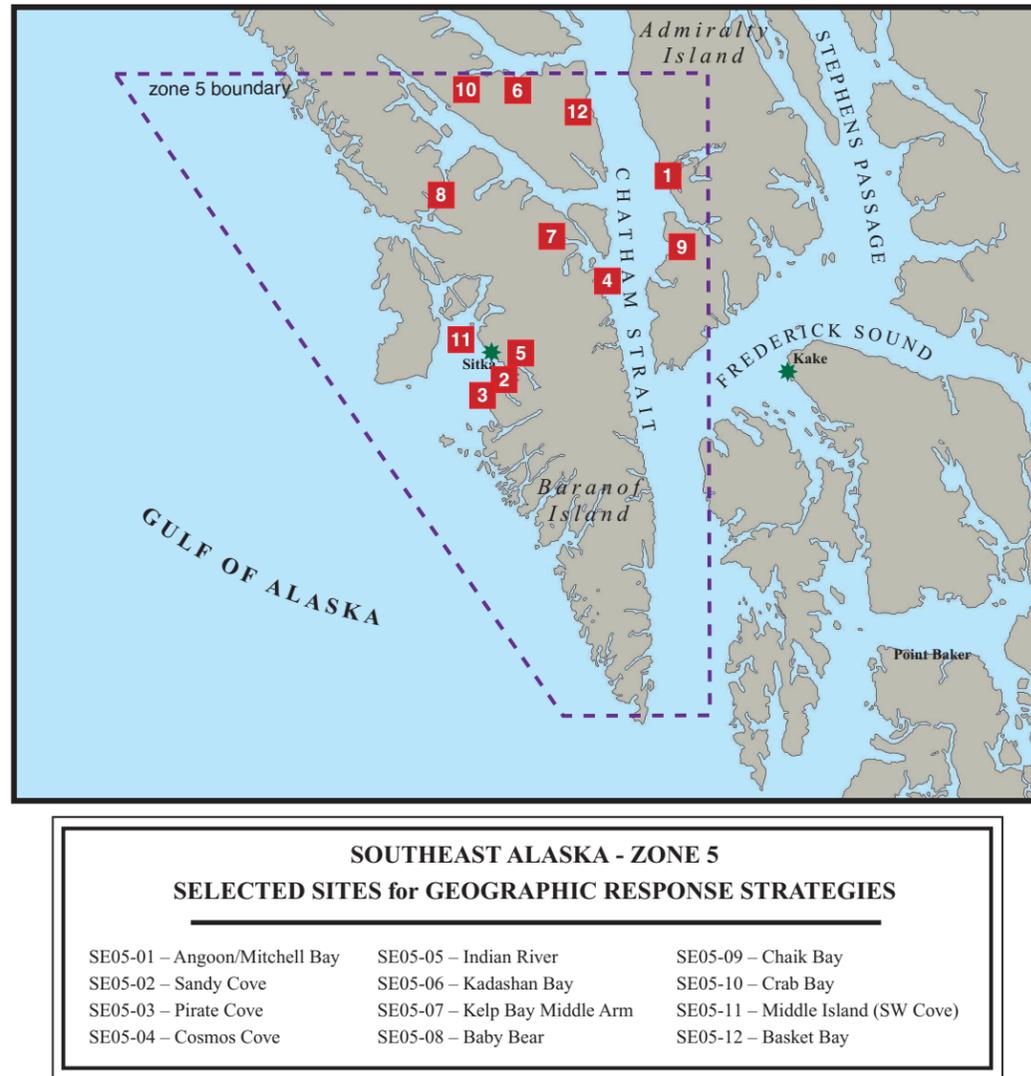


Figure G-3-9. Southeast Alaska Response Zone 5.

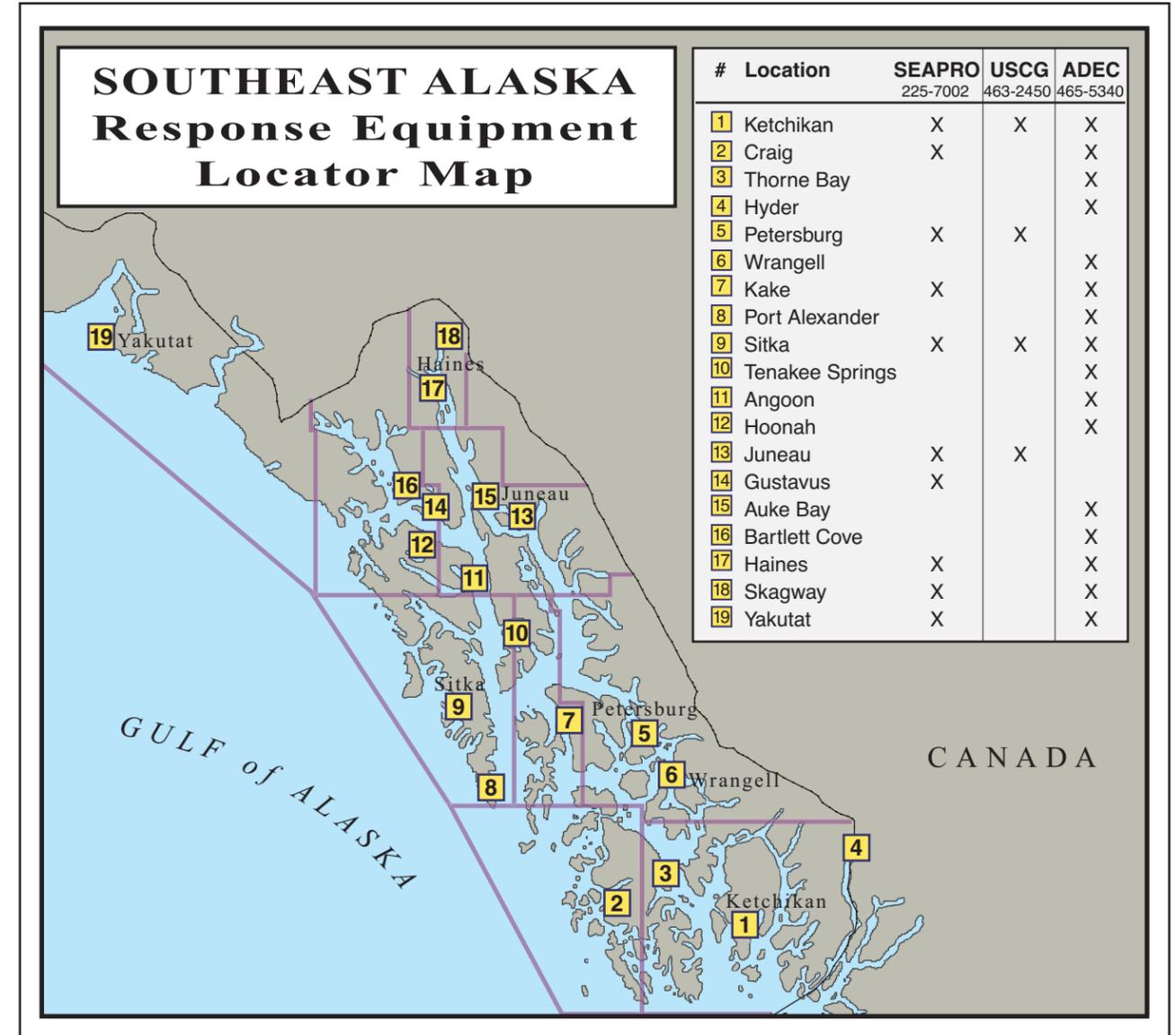


Figure G-3-10. Southeast Alaska Response Equipment Locator Map.

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Map & Photo Legend



SE05-01 Danger Point and Mitchell Bay Entrance looking south.



SE05-01-03 Looking east at Kootznahoo Inlet.



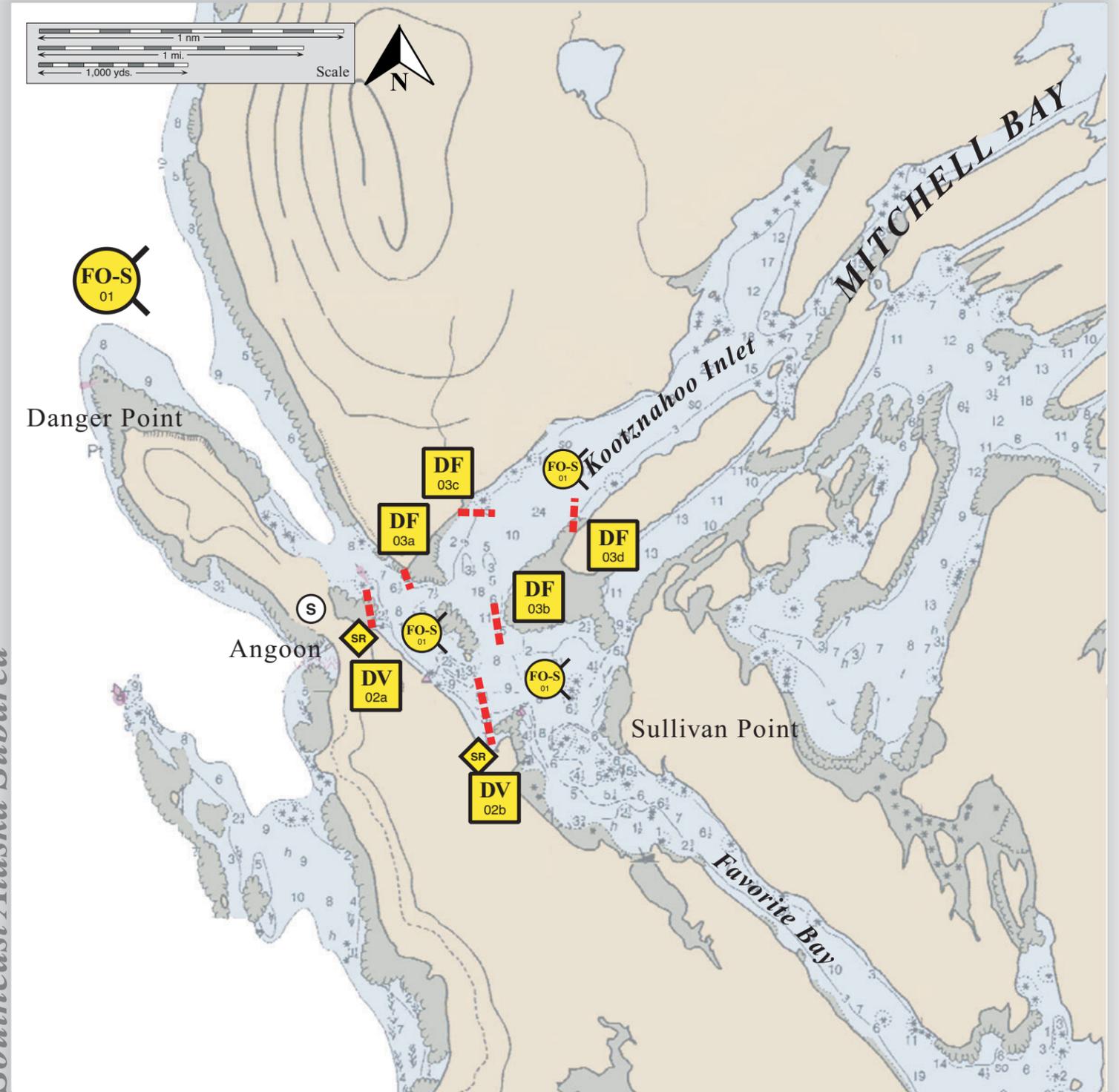
SE05-01-02 Looking south at Angoon and Favorite Bay.

-  Free-oil Containment and Recovery, Shallow Water
-  Deflection Booming
-  Diversion Booming
-  Protected-water Boom
-  Shoreside Recovery
-  Staging Area

Geographic Response Strategies for Southeast Alaska Subarea

Mitchell Bay/Angoon, SE05-01

Center of map at 57° 30.4' N Lat., 134° 36.6' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-01-01	Mitchell Bay/Angoon Nearshore waters in the general area of: Lat. 57° 31.3 N Long. 134° 36.6 W	Free-oil Recovery Maximize free-oil recovery in the shallow water of Mitchell Bay.	Deploy nearshore free-oil recovery strike teams upwind and up current of Turning Point Channel. Use aerial surveillance to locate incoming slicks. Deploy shallow water skimmer and booms in shallow water of Mitchell Bay.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Angoon/vessel platform	Via marine waters	Same as for SE05-01-02	Local knowledge needed for strength of current and natural recovery points.
SE05-01-02	Angoon a. Lat. 57° 30.2 N Lon. 134° 35.0 W b. Lat. 57° 29.8 N Lon. 134° 34.3 W	Diversion Divert oil entering Turn Point Channel to shore recovery units near Angoon.	Use class 2 and class 3/4 vessels with deck space to transport equipment and crane to set lg. anchors, class 6 setnet or seine skiffs to deploy boom and anchors. Place 1600 ft. of open-water boom in a cascade array. Deploy anchoring system in tandem due to high currents. <u>Boom Lengths:</u> a. 600 ft. b. 1000 ft.	Deployment Equipment 1600 ft. open-water boom 10 ea. anchor systems (~40 lbs.) 2 anchor stakes Vessels 3 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 22 ea. vessel crew Tending Vessels 1 ea. class 3/4 with crane 2 ea. class 6 Personnel / Shift 5 ea. vessel crew	Angoon/vessel platform	Via marine waters	Marine mammals-harbor seal rookeries and haulouts, humpback whales, sea otters Fish-intertidal salmon/trout spawning (coho, pink, chum, steelhead, Dolly Varden, cutthroat) Birds-waterfowl and shorebird concentration (winter) Habitat-high intertidal diversity Human use-high subsistence use (salmon harvest), high recreational use	Consider permanent anchor systems. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-10 for equipment locations. Boom must be tended continuously due to strong tides. Tested: not yet Surveyed: 10/03/02 SEAPRO
SE05-01-03	Turn Point/Channel Point a. Lat. 57° 30.4 N Lon. 134° 34.8 W b. Lat. 57° 30.2 N Lon. 134° 34.3 W c. Lat. 57° 30.5 N Lon. 134° 34.5 W d. Lat. 57° 30.5 N Lon. 134° 34.9 W	Deflection Deflect oil away from Turn Point and Channel Point.	Place 2000 ft. of protected-water boom in four 500 ft. boom strings as shown.	Deployment Equipment 2000 ft. protected-water boom 8 ea. anchor systems (~40 lbs.) 4 anchor stakes Vessels / Personnel / Tending Same as SE05-01-02	Angoon/vessel platform	Via marine waters	Same as for SE05-01-02	Boom strings should be anchored every 250 ft. due to strong tidal currents. Tested: not yet Surveyed: 10/03/02 SEAPRO

Map & Photo Legend



SE05-02 Sandy Cove looking towards the south.
Note fishing vessels in photograph.

	Free-oil Containment and Recovery, Shallow Water		Protected-water Boom
	Exclusion Booming		Tidal-seal Boom
	Deflection Booming		Marine Recovery

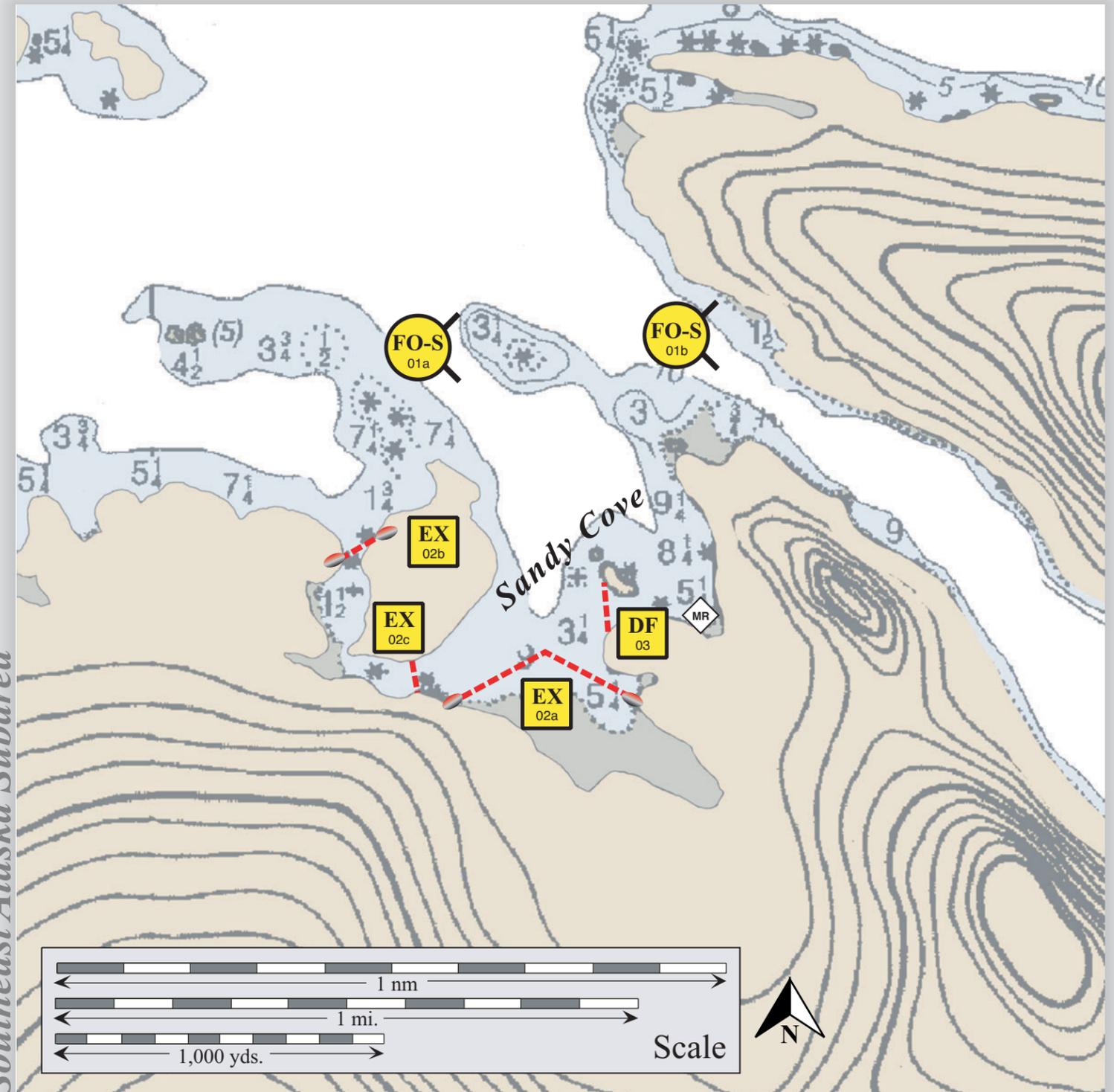


SE05-02 Sandy Cove looking towards the southeast.

Sandy Cove, SE05-02

Center of map at 59° 59.0' N Lat., 135° 22.4' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-02-01	Sandy Cove Nearshore waters in the general area of: a. Lat. 56° 59.1 N Lon. 135° 18.9 W b. Lat 56° 59.2 N Lon. 135° 18.4 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment outside of Sandy Cove.	Deploy nearshore free-oil recovery strike teams upwind and up current of Sandy Cove. Use aerial surveillance to locate incoming slicks. If winds and chop adverse, deploy skimmers within cove.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Sitka/vessel platform	Via marine waters	Fish-intertidal salmon spawning (pink, chum, coho) Habitat-marsh, eelgrass, sheltered rocky shore, high intertidal diversity Human use-high recreational use	Vessel master should have local knowledge
SE05-02-02	Sandy Cove a. Lat. 56° 58.7 N Lon. 135° 18.7 W b. Lat. 56° 59.0 N Lon. 135° 191.4 W c. Lat. 56° 58.8 1N Lon. 135° 19.2 W	Exclusion Exclude oil from entering head of Sandy Cove.	Use class 2 and class 3/4 vessels with deck space to transport equipment, class 6 setnet or seine skiffs to set boom and anchors. Place 1200 ft. of protected-water boom, in a chevron pattern, across large head of Sandy Cove and 500 ft. across each small entrance, with tidal-seal on each end, to exclude oil from entering Sandy Cove. Under ideal conditions, oil may be recovered by manual recovery at small cove east of EX 02a chevron. <u>Boom Arrays:</u> a. 1200 ft. b. 500 ft. c. 500 ft.	Deployment Equipment 2200 ft. protected-water boom 8 ea. anchor systems (~40 lbs.) 6 ea. 50 ft. tidal-seal 6 ea. anchor stakes Vessels 3 ea. class 3/4 2 ea. class 6 Personnel / Shift 14 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 5 ea. vessel crew	Sitka/vessel platform	Via marine waters	Same as SE05-02-01	FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-10 for equipment locations. Tested: 3/5/03 SEAPRO Surveyed: 3/5/03 SEAPRO, ADEC, TLR
SE05-02-03	Sandy Cove Lat. 56° 58.9 N Lon. 135° 18.7 W	Deflection Deflect oil away from water between Islet and promontory.	Place 400ft. protected-water boom between islet and point. See SE05-02-02	Deployment Equipment 400 ft. protected-water boom 2 anchor stakes 2 ea. anchor systems (~40 lbs.) Vessels / Personnel / Tending See SE05-02-02.	Sitka/vessel platform	Via marine waters	Same as SE05-02-01	Tested: 3/5/03 SEAPRO Surveyed: 3/5/03 SEAPRO, ADEC, TLR

Map & Photo Legend



SE05-03-02b Looking east into Pirate Cove.

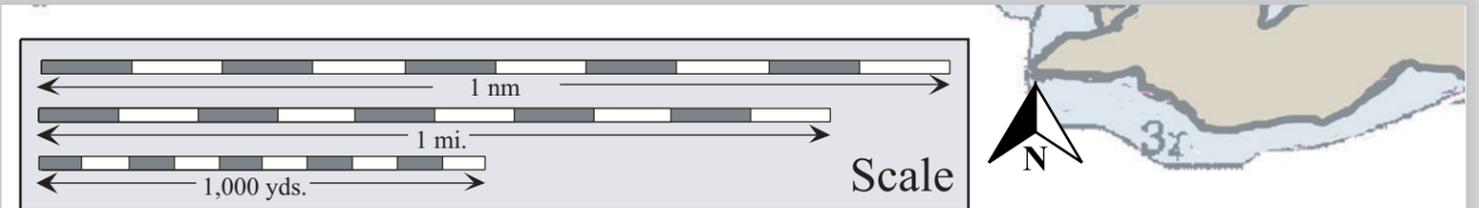
	Free-oil Containment and Recovery, Shallow Water
	Exclusion Boom
	Protected-water Boom
	Tidal-seal Boom
	Marine Recovery



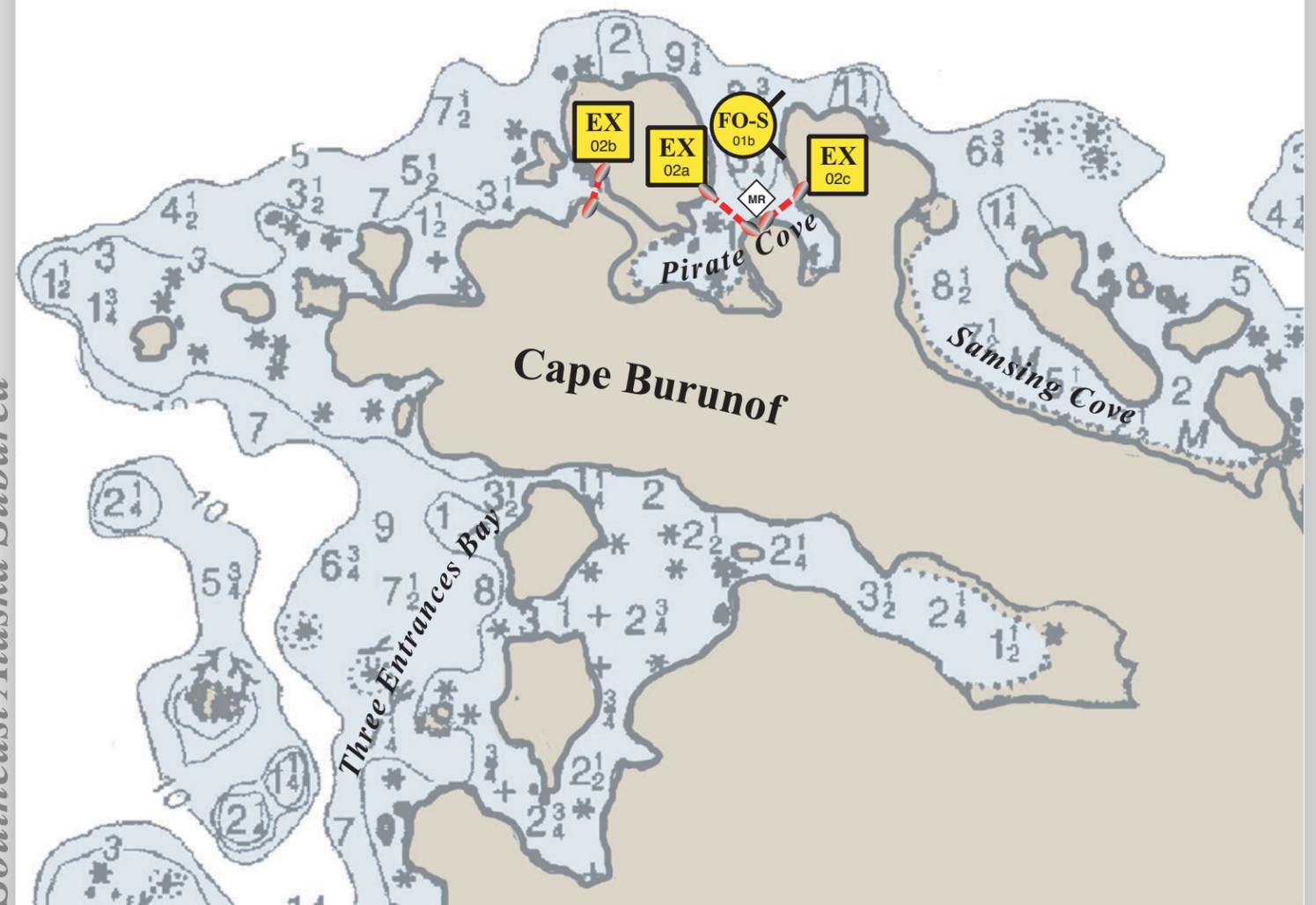
SE05-03-01b Looking south into Pirate Cove.

Pirate Cove, SE05-03

Center of map at 56° 59.2' N Lat., 135° 22.4' W Lon.



Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-03-01	<p>Pirate Cove Nearshore waters in the general area of:</p> <p>a. Lat. 56° 59.3 N Lon. 135° 22.7 W</p> <p>b. Lat. 56° 59.2 N Lon. 135° 22.8 W</p>	<p>Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment at the mouth of Pirate Cove and west of Pirate Cove.</p>	Deploy nearshore free-oil recovery strike teams upwind and up current of Pirate Cove. Use aerial surveillance to locate incoming slicks.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Sitka Harbor/vessel platform	Via marine waters	<p>Fish-herring spawning</p> <p>Habitat-kelp and eelgrass beds, sheltered tidal flats, sheltered rocky shore, high intertidal diversity</p> <p>Human use-high recreational use</p>	Vessel masters should have local knowledge
SE05-03-02	<p>Pirate Cove – Mouth</p> <p>a. Lat. 56° 59.2 N Lon. 135° 22.7 W</p> <p>b. Lat. 56° 59.2 N Lon. 135° 22.3 W</p> <p>c. Lat. 56° 55.2 N Lon. 135° 22.8 W</p>	<p>Exclusion Exclude oil from entering head of Pirate Cove.</p>	<p>Use class 3/4 vessels with deck space to transport equipment, class 6 setnet or seine skiffs to deploy boom and set anchors. Place 1150 ft. of protected-water boom to exclude oil from entering head of Pirate Cove.</p> <p><u>Boom Lengths</u></p> <p>a. 150 ft. (tidal-seal)</p> <p>b. 500 ft.</p> <p>c. 500 ft.</p> <p>Place marine recovery unit on skimmer at apex of EX 02b and EX 02c.</p>	<p>Deployment Equipment 1150 ft. protected-water boom 2 ea. anchor systems (~40 lbs.) 2 ea. 50 ft. tidal-seal 6 ea. anchor stakes</p> <p>Vessels 2 ea. class 3/4 2 ea. class 6</p> <p>Personnel / Shift 10 ea. vessel crew</p> <p>Tending Vessels 2 ea. class 3/4 2 ea. class 6</p> <p>Personnel / Shift 5 ea. vessel crew</p>	Sitka Harbor/vessel platform	Via marine waters	Same as SE05-03-01	<p>REPORT any cultural resources found during operations to FOSC Historic Properties Specialist</p> <p>See Figure G-3-10 for equipment locations.</p> <p>Tested: 3/5/03 SEAPRO</p> <p>Surveyed: 3/5/03 SEAPRO, ADEC, TLR</p>

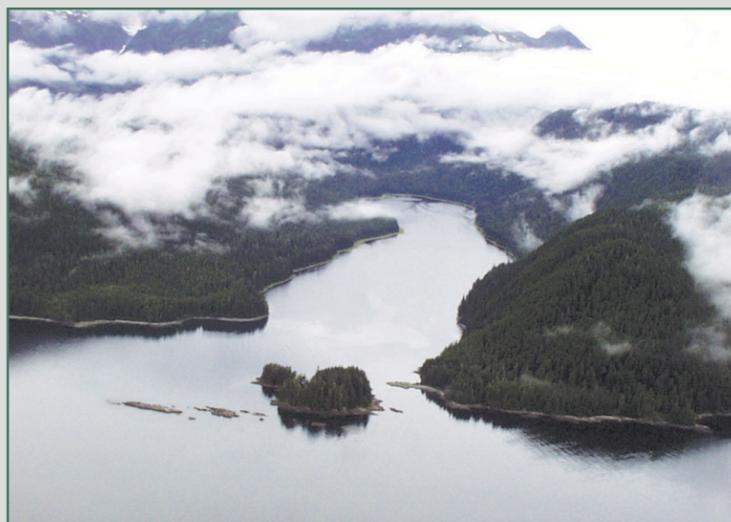
Map & Photo Legend



▲ SE05-04 Looking west into Cosmos Cove.



◀ SE05-04-04 Looking west at head of Cosmos Cove.



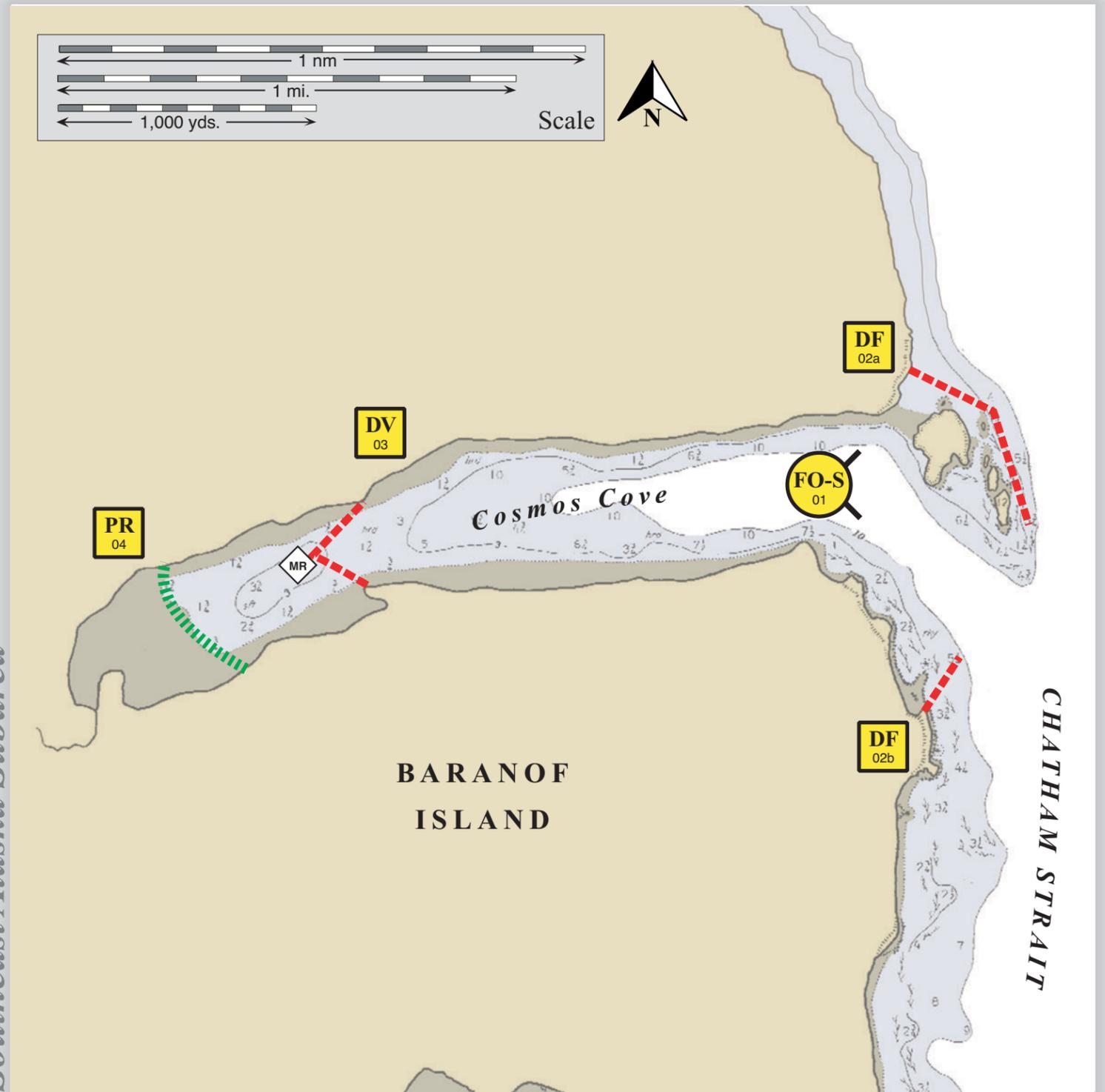
◀ SE05-04-02a Looking west into Cosmos Cove.

-  **FO-S** Free-oil Containment and Recovery, Shallow Water
-  **DF** Deflection Booming, Fixed
-  **DV** Diversion Booming
-  **PR** Passive Recovery and Debris Removal
-  Protected-water Boom
-  Snare Line
-  **MR** Marine Recovery

Geographic Response Strategies for Southeast Alaska Subarea

Cosmos Cove, SE05-04

Center of map at 57° 14.7' N Lat., 134° 51.7' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-04-01	Cosmos Cove Nearshore waters in the general area of: Lat. 57° 14.7 N Lon. 134° 50.8 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment in the entrance to Cosmos Cove.	Deploy free-oil recovery strike teams at the entrance to Cosmos Cove. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kake or Angoon	Via marine waters Chart 17337	Same as SE05-04-02	Vessel master should have local knowledge.
SE05-04-02	Cosmos Cove a. Lat. 57° 14.8 N Lon. 134° 50.8 W b. Lat. 57° 14.3 N Lon. 134° 50.4 W	Deflection Deflect oil away from Cosmos Cove.	Use vessels with deck space to transport equipment to the site (class 2/3/4) Deploy boom and set anchors with fishing vessels and skiffs (class 3/4/6). Place cascaded arrays (200-400 ft.) of protected-water boom at the northern and southern entrances to Cosmos Cove to deflect oil away from the islands and to the free-oil strike team. Tend throughout the tide. <u>Boom Lengths:</u> a. 2600 ft. b. 800 ft.	Deployment Equipment 3400 ft. protected-water boom 4 ea. anchor stakes 36 ea. anchor systems (~40 lbs.) Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 14 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 7 ea. vessel crew	Vessel platform	Via marine waters Chart 17337	Fish-intertidal salmon spawning (coho, pink, chum) Birds-waterfowl, shorebirds (winter, low density) Habitat-kelp/eelgrass beds Human use-high recreational use (May-Sept.)	Vessel master should have local knowledge. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-10 for equipment locations. Tested: not yet
SE05-04-03	Cosmos Cove Lat. 57° 14.52 N Lon. 134° 52.63 W	Divert / Recover Divert oil entering Cosmos Cove to marine recovery.	Deploy anchors and boom with skiffs and fishing vessels (class 3/4/6). Place 2900 ft. of protected-water boom in a chevron pattern in Cosmos Cove. Establish marine recovery unit at the apex of the boom. Tend throughout the tide.	Deployment Equipment 2900 ft. protected-water boom 4 ea. anchor stakes 31 ea. anchor systems (~70 lbs.) Vessels 1 ea. marine recovery unit Personnel, Tending Same as SE05-04-02	Vessel platform	Via marine waters Chart 17337	Same as SE05-04-02	Vessel master should have local knowledge. Tested: not yet
SE05-04-04	Head of Cosmos Cove Lat. 57° 14.4 N Lon. 134° 53.1 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place and anchor snare line or sorbent boom across the tidal flats at the head of Cosmos Cove.	Deployment Equipment 1800 ft. snare line or sorbent boom. 20 ea. anchor stakes Vessels, Personnel, Tending Same as SE05-04-02	Vessel platform	Via marine waters Chart 17337	Same as SE05-04-02	Use snare line for persistent oils and sorbent boom for non-persistent oils.

Map & Photo Legend



SE05-05-03 Indian River looking towards the west.

	Free-oil Containment and Recovery, Shallow Water		Protected-water Boom
	Exclusion Booming		Staging Area
	Diversion Booming		Boat Launch
	Shoreside Recovery		ATV Trail

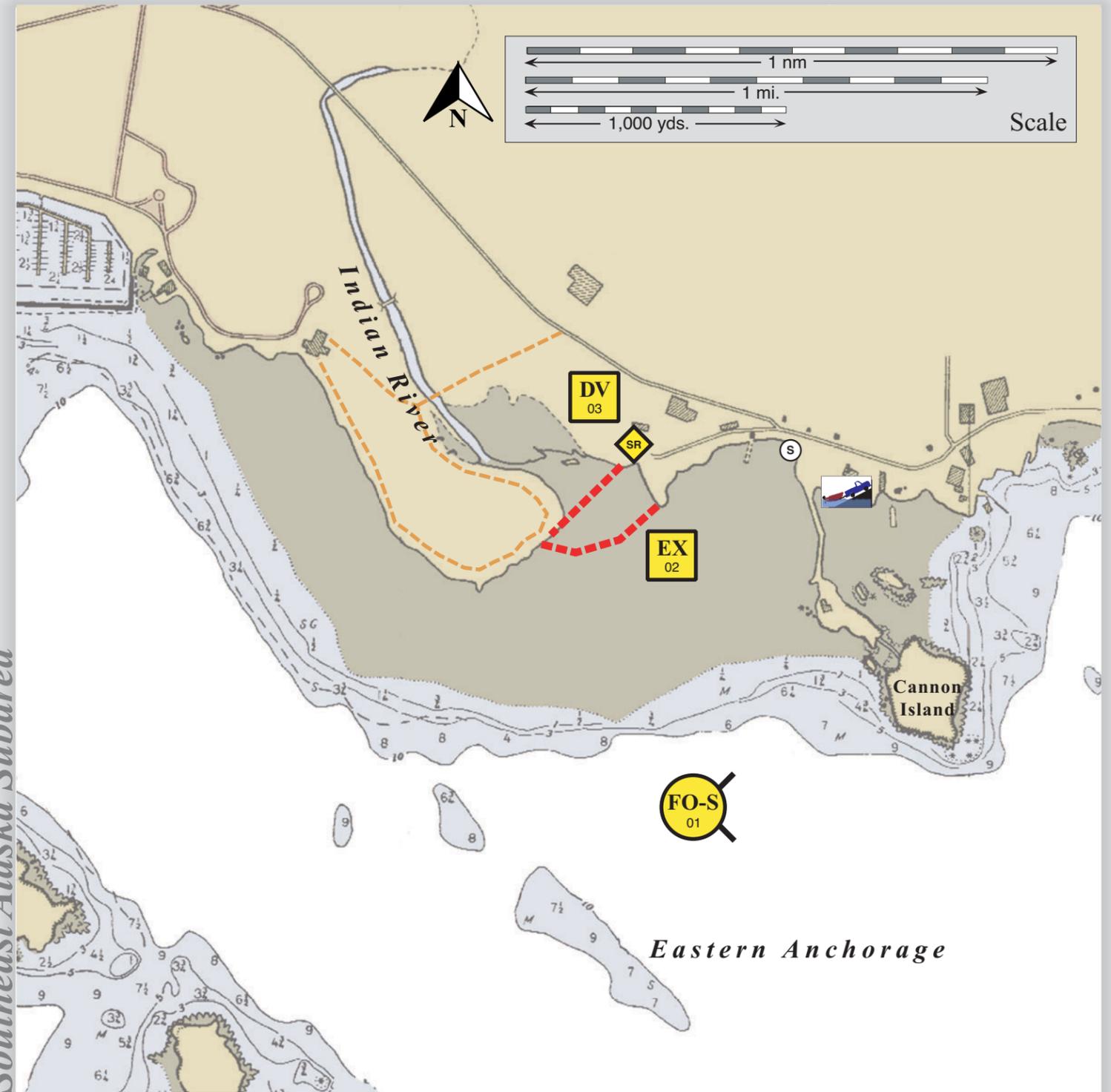


SE05-05-02 Indian River looking towards the northwest.

Indian River, SE05-05

Center of map at 59° 38.2' N Lat., 151° 31.1' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-05-01	Indian River Nearshore waters in the general area of: a. Lat. 57° 02.5 N Lon. 134° 18.7 W b. Lat. 57° 02.6 N Lon. 134° 18.3 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment outside the mouth of Indian River.	Deploy free-oil recovery strike teams upwind and up current of Indian River. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Sitka Harbor	Road access Chart 17327	Same as SE05-05-02	Vessel master should have local knowledge. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-10 for equipment locations.
SE05-05-02	Indian River a. Lat. 57° 02.7 N Lon. 134° 18.6 W b. Lat. 57° 02.8 N Lon. 134° 18.7 W	Exclusion Exclude oil from Indian River.	Transport equipment by road or by vessel (class 3/4) from Sitka. Use skiffs (class 6) to deploy boom and set anchors. Place 900 ft of protected-water boom across the mouth of Indian River. Tend throughout tide.	Deployment Equipment 900 ft. protected-water boom 11 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 7 ea. vessel crew Tending Vessels 1 ea. class 6 Personnel / Shift 2 ea. vessel crew	Sitka	Road access Chart 17327	Fish-intertidal salmon/trout spawning (coho, pink, chum, steelhead), salmon concentrations \leq 10000, herring spawning, juvenile fish habitat Birds-waterfowl and shorebird migration, molting and winter habitat Human use-historic Property, high recreational use (May-Sept.), commercial fishing, salmon hatchery/pen Land management-National Park/Preserve	Vessel master should have local knowledge. Exclusion strategy is first line of defense. The divert and recovery strategy is the second line of defense to be used if exclusion fails. Tested: not yet Surveyed: 8/26/02 TLR
SE05-05-03	Indian River Lat. 57° 02.8 N Lon. 134° 18.58 W	Divert and Recover Divert oil to shoreside recovery points determined by spill source and trajectory.	Deploy anchors and boom with skiffs (class 6). Place protected-water boom at the proper angle to divert oil to recovery site. Set-up recovery unit and tend throughout the tide.	Deployment Equipment 400 ft. protected-water boom 5 ea. anchor systems (~40 lbs.) 1 ea. shoreside recovery units. Vessels Same as SE05-02-02 Personnel / Shift 3 ea. response techs. Tending Vessels Same as SE05-02-02 Personnel / Shift 2 ea. response techs.	Sitka	Road access Chart 17327	Same as SE05-05-02	Vessel master should have local knowledge. Tested: not yet Surveyed: 8/26/02 TLR

Map & Photo Legend



SE05-06 Kadashan Bay looking towards the south.

-  Free-oil Containment and Recovery, Shallow Water
-  Passive Recovery and Debris Removal
-  Deflection Booming, Fixed
-  Protected-water Boom
-  Snare Line
-  Bears in Area, Guards Needed

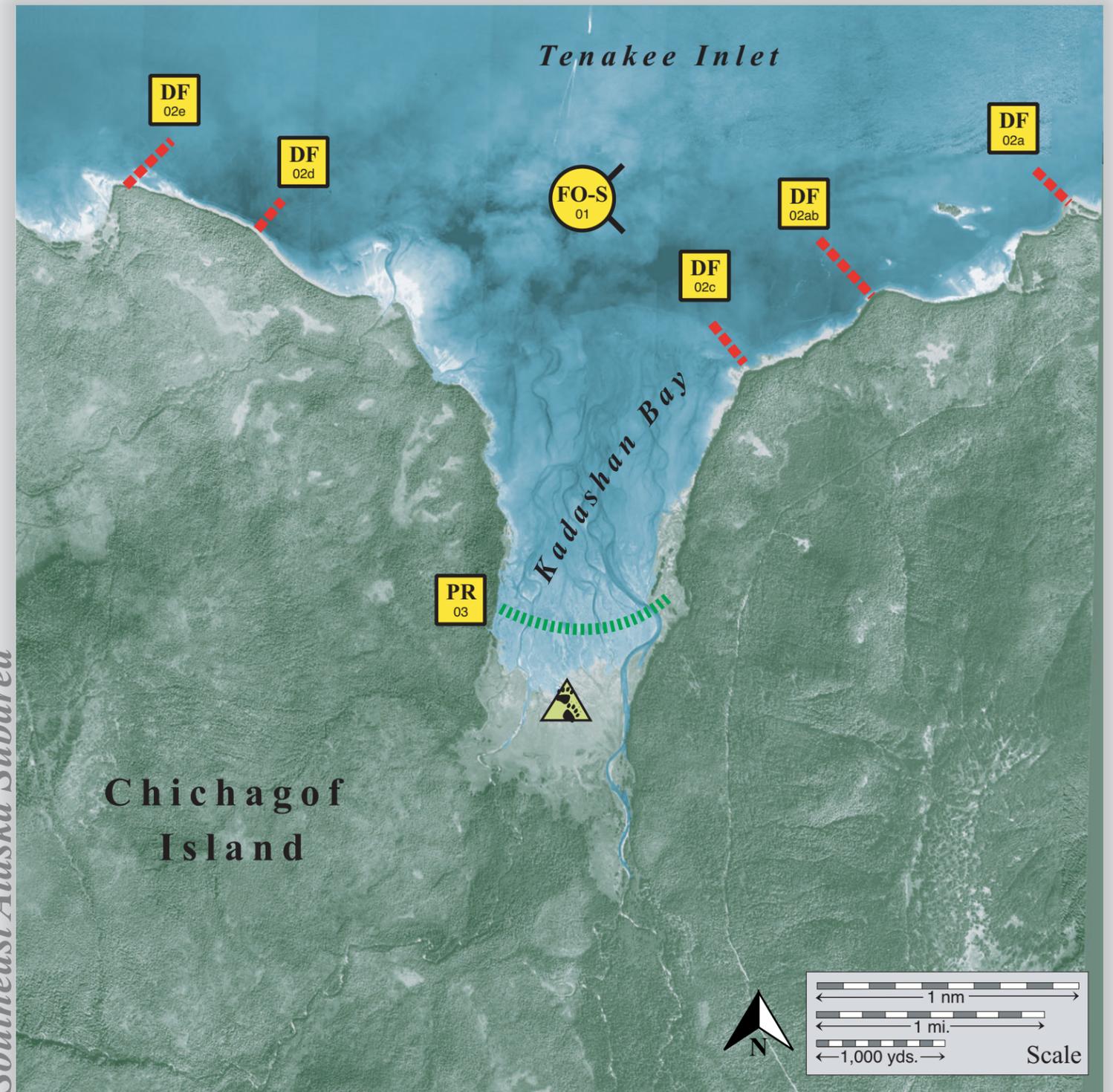


SE05-06 Kadashan Bay looking towards the southeast.

Geographic Response Strategies for Southeast Alaska Subarea

Kadashan Bay, SE05-06

Center of map at 57° 44.0' N Lat., 135° 13.3' W Lon.



This is not intended for navigational use.

Soundings in fathoms

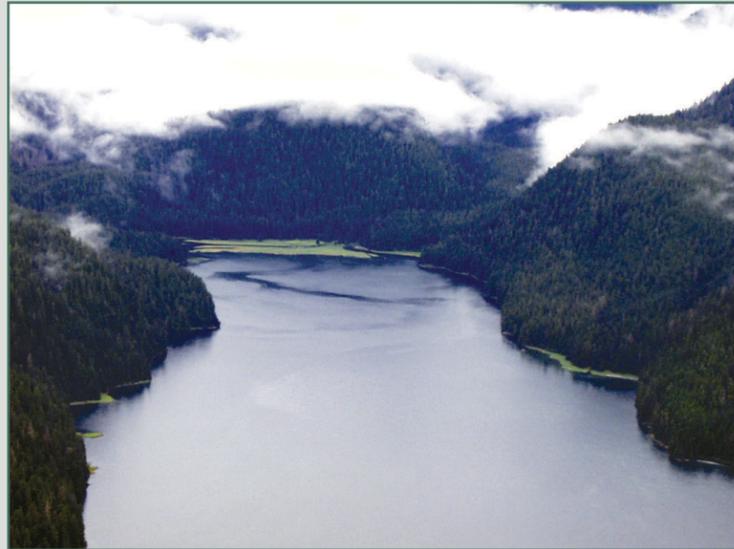
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-06-01	Kadashan Bay Nearshore waters in the general area of: Lat. 57° 44.5 N Lon. 135° 13.1 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment outside of Kadashan Bay.	Deploy free-oil recovery strike teams upwind and up current of Kadashan Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Juneau Auke Bay, Hoonah	Via marine waters Chart 17320	Same as SE05-06-02	Vessel master should have local knowledge.
SE05-06-02	Kadashan Bay a. Lat. 57° 44.20 N Lon. 135° 10.46W b. Lat. 57° 43.99N Lon. 135°11.42W c. Lat. 57° 43.68N Lon. 135° 12.30W d. Lat. 57° 44.15N Lon. 135° 15.65W e. Lat. 57° 44.30N Lon. 135° 16.61W	Deflection-Fixed Deflect oil away from Kadashan Bay.	Transport equipment to the site with marine vessels(class 2/3/4). Use fishing vessels and skiffs (class 3/4/6)to deploy anchors and protected-water boom. Place 6400 ft. of protected-water boom in five sections. Establish angle to deflect the oil into Tenakee Inlet for free-oil recovery. Tend throughout the tide. <u>Boom lengths:</u> a. 1200 ft. b. 1400 ft. c. 1200 ft. d. 1200 ft. e. 1400 ft.	Deployment Equipment 6400 ft. protected-water boom 32 ea. anchor systems (~40 lbs.) 10 anchor stakes Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 18 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 5 ea. vessel crew	Vessel platform Corner Bay may be suitable staging area.	Via marine waters Chart 17320	Fish-intertidal salmon/trout spawning (coho, pink, chum, steelhead, Dolly Varden) Birds-waterfowl, shorebirds (winter) Habitat-tidal flats, marsh Terrestrial mammals-bears	Vessel master should have local knowledge. Bears in area. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-10 for equipment locations. Title 41 permit may be necessary. Contact ADNR. Tested: not yet
SE05-06-03	Kadashan Bay Lat. 57° 43.6 N Lon. 135° 13.4 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place and anchor 6000 ft. of snare line or sorbent boom across the tidal flats at the mouth of Kadashan Bay	Deployment Equipment 6000 ft. snare line or sorbent boom 62 ea. anchor stakes Vessels, Personnel, Tending Same as SE05-06-02	Vessel platform	Via marine waters Chart 17320	Same as SE05-06-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Deploy boom at high tide to avoid driving oil into the substrate. Tested: not yet

Map
& Photo

Legend



▲ SE05-07 Kelp Bay looking towards the west.



◀ SE05-07-02b Head of Kelp Bay looking towards the west.



◀ SE05-07-02a Kelp Bay looking towards the south.

FO-S Free-oil Containment and Recovery, Shallow Water

DF Deflection Booming, Fixed

EX Exclusion Booming

 Protected-water Boom

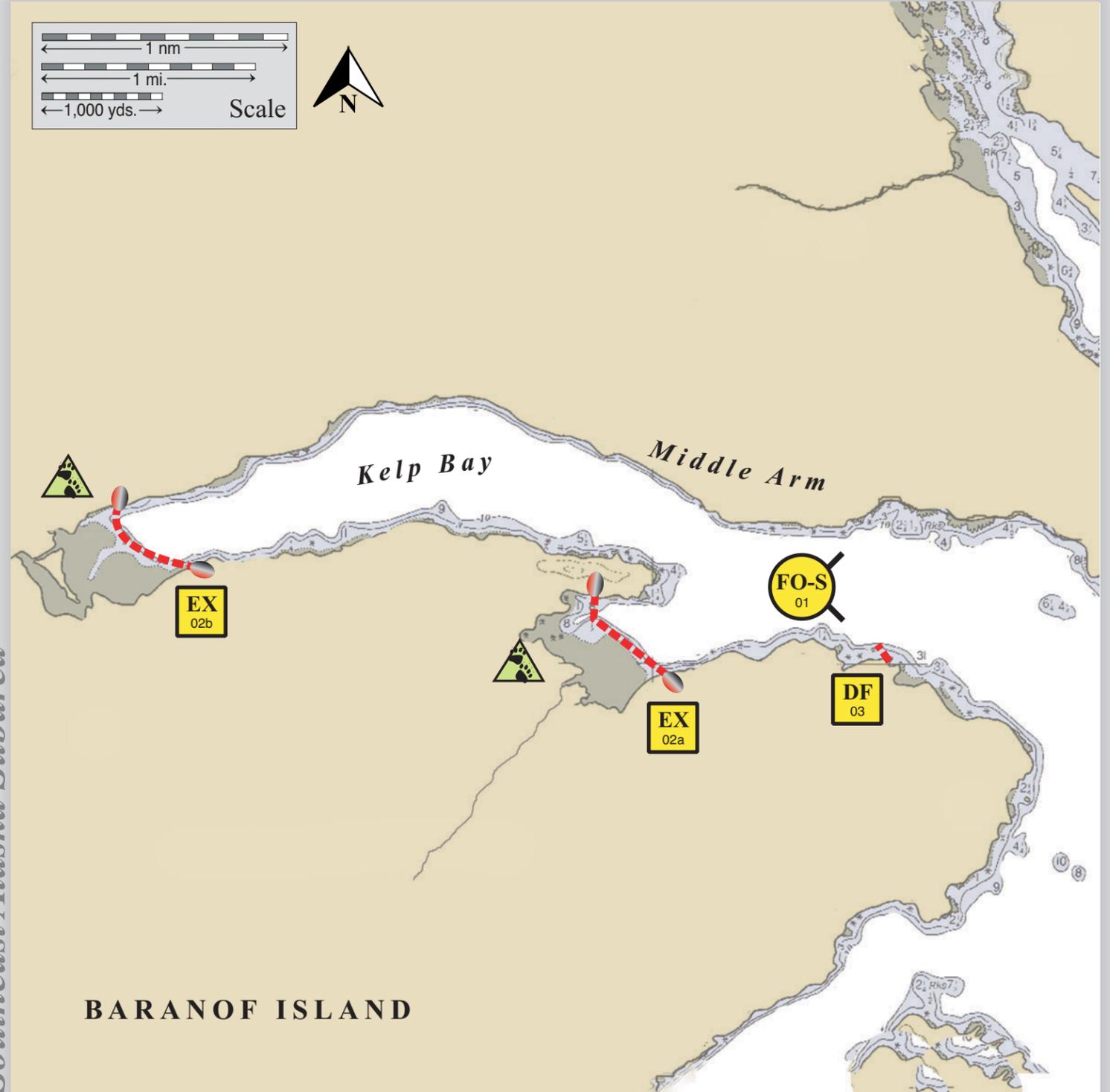
 Tidal-seal Boom

 Bears in Area, Guards Needed

Geographic Response Strategies for Southeast Alaska Subarea

Kelp Bay, SE05-07

Center of map at 57° 20.6' N Lat., 135° 00.4' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-07-01	Kelp Bay Middle Arm Nearshore waters in the general area of: Lat. 57° 20.0 N Lon. 134° 58.1 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment in Kelp Bay Middle Arm.	Deploy free-oil recovery strike teams upwind and up current of cove and head of Middle Arm. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Angoon, Hoonah, Juneau	Via marine waters. Chart 17337B	Same as SE05-07-02	Vessel master should have local knowledge.
SE05-07-02	Kelp Bay Middle Arm a. Lat. 57° 20.1 N Lon. 135° 00.3 W b. Lat. 57° 20.5 N Lon. 135° 04.0 W	Exclusion Exclude oil from cove in Middle Arm and at the head of Middle Arm	Use vessels with deck space to transport equipment to the site (class 2/3/4). Use fishing vessels and skiffs (class 3/4/6) to deploy boom and set anchors. Place protected water and tidal-seal boom in two arrays immediately outside the tidal flats of the two rivers entering the Middle Arm of Kelp Bay. Tend throughout tide. <u>Boom Lengths</u> a. 2800 ft. b. 2400 ft.	Deployment Equipment 5200 ft. protected-water boom 54 ea. anchor systems (~40 lbs.) 4 ea. 50 ft. tidal-seal 8 ea. anchor stakes Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 14 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 7 ea. vessel crew	Vessel platform	Via marine waters. Chart 17337B	Fish-intertidal salmon spawning (coho, pink, chum) Birds- waterfowl concentrations ~170 (low count) Habitat- marsh, eel grass, sheltered tidal flats, sheltered rocky shoreline Human use-high recreational use (May-Sept.) Terrestrial mammals-bears	Vessel master should have local knowledge. Bears in area. REPORT any cultural resources found during operations to FOSC Historic Properties Specialist. See Figure G-3-10 for equipment locations. Title 41 permit may be necessary. Contact ADNR. Tested: not yet
SE05-07-03	Kelp Bay Middle Arm Lat. 57° 20.0 N Lon. 134° 58.2 W	Deflection Deflect oil entering Middle Arm to free-oil strike teams in the channel.	Use fishing vessels and skiffs (class 3/4/6) to deploy boom and set anchors. Place protected-water boom at or near the identified position at appropriate angle to maximize deflection for recovery.	Deployment Equipment 400 ft. protected-water boom 6 ea. anchor systems (~40 lbs.) Vessels, Personnel, Tending Same as SE05-07-02	Vessel platform	Via marine waters. Chart 17337B	Same as SE05-07-02	Vessel master should have local knowledge. Bears Tested: not yet

Map & Photo Legend



SE05-08-02 Baby Bear Marine Park looking towards the southeast.

	Free-oil Containment and Recovery, Shallow Water		Protected-water Boom
	Exclusion Booming		Tidal-seal Boom
	Deflection Booming, Live		Snare Line
	Passive Recovery and Debris Removal		Bears in Area, Guards Needed

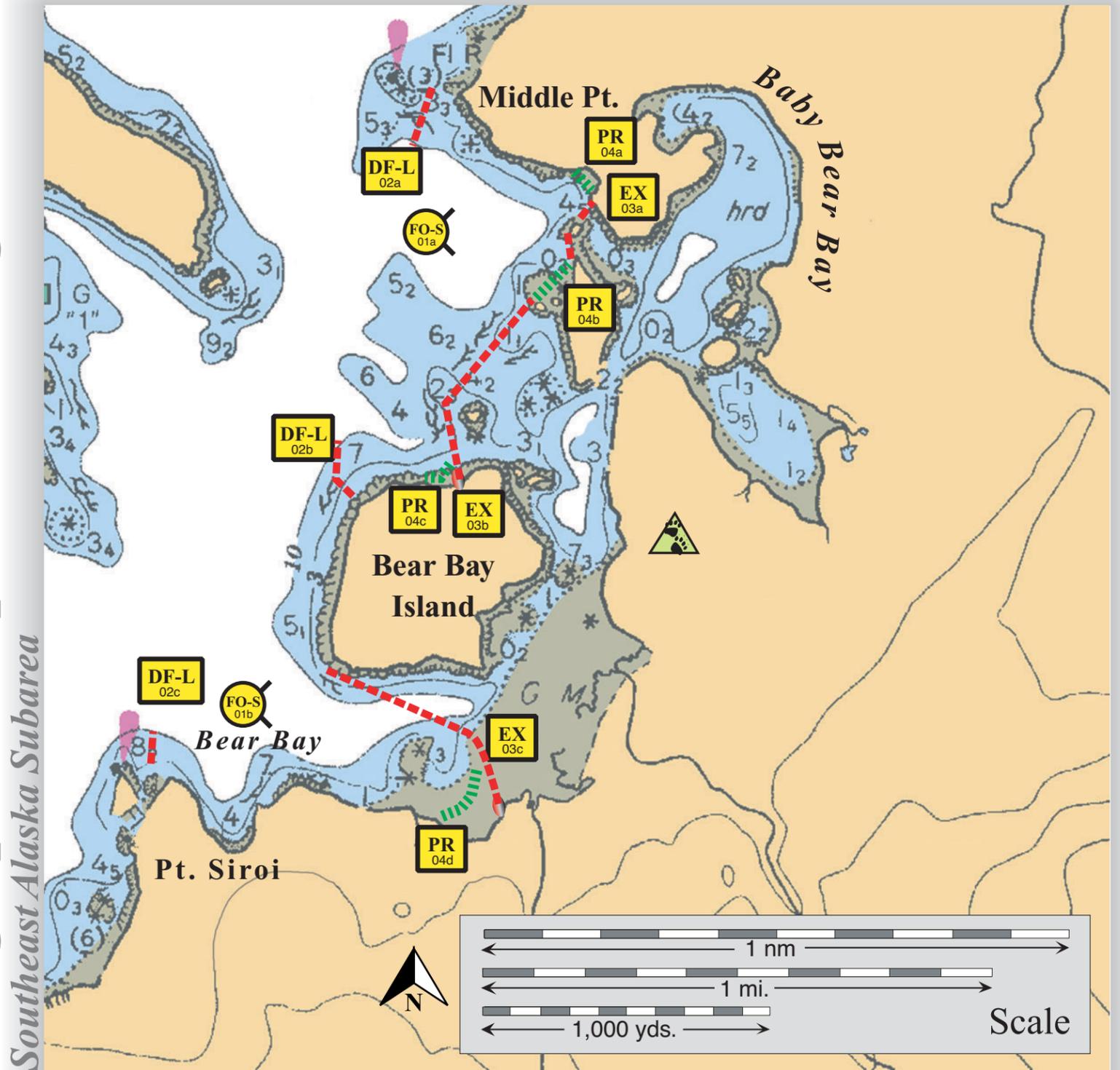


SE05-08-02 Baby Bear Marine Park looking towards the northeast.

Baby Bear Marine Park, SE05-08

Center of map at 57° 26' N Lat., 135° 34' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-08-01	Baby Bear Marine Park Lat. 57° 26N Lon. 135° 34 W (approximate location)	Free-oil Recovery Maximize recovery of oil in Peril Strait in the vicinity of Baby Bear Marine Park.	Deploy nearshore free-oil recovery strike teams. Use aerial surveillance to locate areas of heavy slick concentrations.	Two or more nearshore free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Sitka Angoon	Via marine waters Note: Bear hazard along shoreline	Marine mammals-harbor seals Fish-intertidal salmon spawning (coho, chum, pink) Birds-waterfowl, shorebirds (winter, low density) Habitat-kelp and eelgrass beds, sheltered tidal flats, sheltered rocky shore, high intertidal diversity Human use-high recreational use Land management-State Marine Park Terrestrial mammals-bears	Bear hazard. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-10 for equipment locations.
SE05-08-02	Baby Bear Marine Park a. Lat. 57° 26.3 N Lon. 135° 34.4 W b. Lat. 57° 25.6 N Lon. 135° 34.5 W c. Lat. 57° 25.2 N Lon. 135° 35.2 W	Deflection Deflect oil entering Bear Bay. <u>Boom strings:</u> a. 800 ft b. 800 ft c. 300 ft	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place total of 1900 ft of boom to deflect oil.	Deployment Equipment 1900 ft protected-water boom. 7 ea ~40 lbs anchor systems for securing each array approx every 400 ft. 1 ea. Anchor stakes. Vessels 2 ea. class 2 or 3/4 2 ea. class 6 Personnel Shift 12 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea vessel crew	See SE05-08-01	See SE05-08-01	See SE05-08-01	See SE05-08-01 Tested: not yet Surveyed: 8/27/02 TLR
SE05-08-03	Baby Bear Marine Park a. Lat. 57° 26.08N Lon. 135° 33.9 W b. Lat. 57° 25.8 N Lon. 135° 34.3 W c. Lat. 57° 25.2 N Lon. 135° 34.2 W	Exclusion Protect sensitive areas in Bear Bay and Baby Bear Bay. <u>Boom strings:</u> a. 600 ft b. 1800 ft c. 2600 ft	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 5000 ft of protected-water boom.	Deployment Equipment 5000 ft protected-water boom 9 ea ~40 lbs anchor systems. Anchor approximately every 400 ft. 8 ea 50 ft sections of tidal-seal boom. 8 ea anchor stakes. Vessels/Personnel/Tending Use resources listed in SE05-08-02	See SE05-08-01	See SE05-08-01	See SE05-08-01	Place boom during high tide to ensure oil is not pushed into substrate. Tested: not yet Surveyed: 8/27/02 TLR
SE05-08-04	Baby Bear Marine Park a. Lat. 57° 26.14N Lon. 135° 33.9 W b. Lat. 57° 26 N Lon. 135° 34.0 W c. Lat. 57° 25.6 N Lon. 135° 34.3 W d. Lat. 57° 25.1 N Lon. 135° 34.2 W	Passive Recovery Minimize impact to intertidal mudflats and marsh through passive recovery using snare line or sorbent boom. Placed in tandem with exclusion boom (see SE05-08-03).	Place up to 1700 ft. of snare line or sorbent boom across mudflats and marsh. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent. a. 300 ft b. 600 ft c. 200 ft d. 600 ft	Deployment Equipment 1700 ft. snare line or sorbent boom 17 ea. anchor stakes. 1000 ft of line. Vessels/Personnel/Tending Use resources listed in SE05-08-02	See SE05-08-01	See SE05-08-01	See SE05-08-01	Place boom during high tide to ensure oil is not pushed into substrate. Surveyed: 8/27/02 TLR

Map
& Photo

Legend



SE05-09-02a,b,c looking northeast into the north arm of Chaik Bay.

	Free-oil Containment and Recovery, Shallow Water		Protected-water Boom
	Exclusion Booming		Tidal-seal Boom
	Diversion Booming		Snare Line
	Passive Recovery and Debris Removal		Marine Recovery
			Bears in Area, Guards Needed

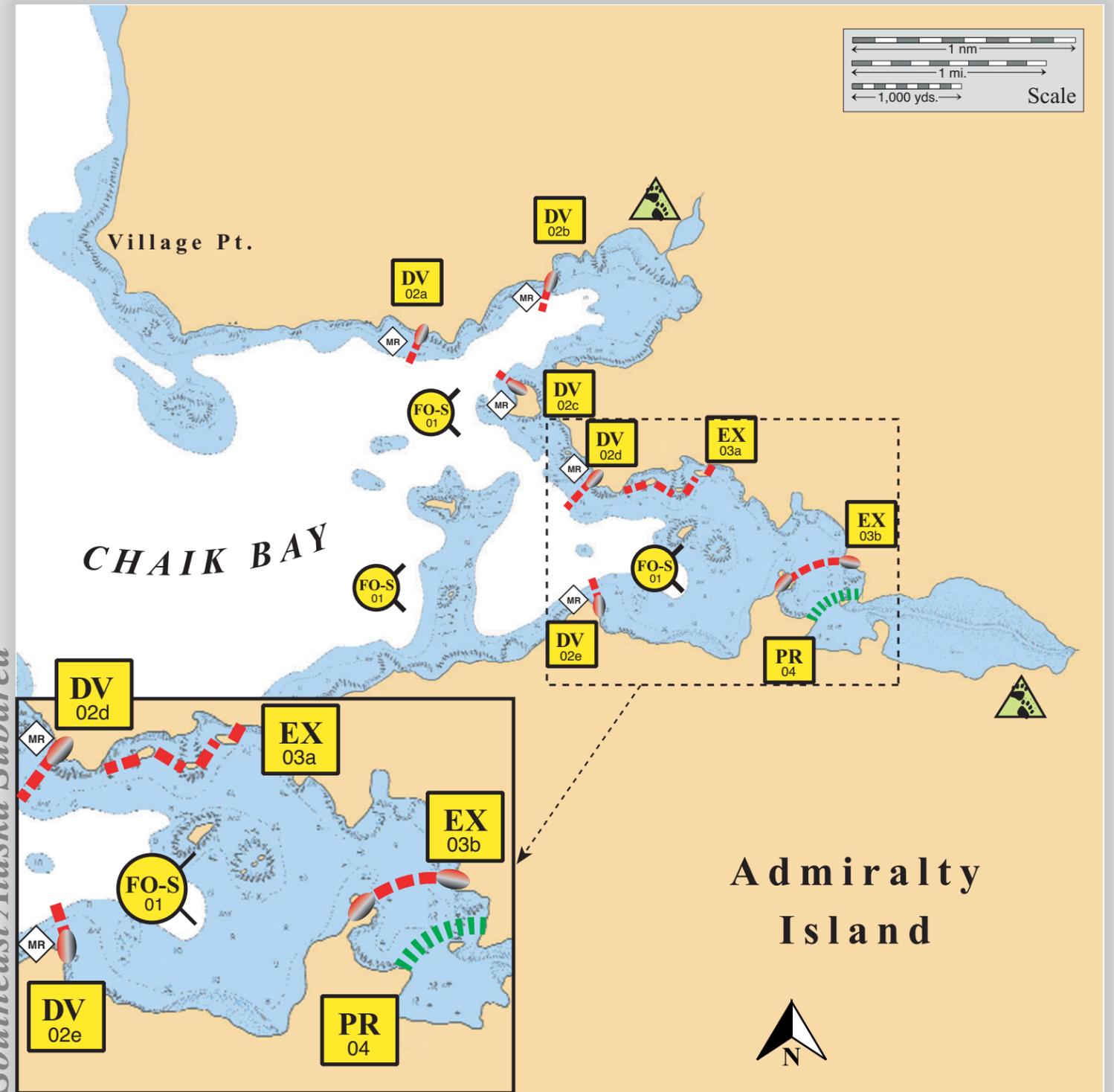


SE05-09 South arm of Chaik Bay looking west at tactics 02d,e, 03a,b and 04.

Chaik Bay, SE05-09

Center of map at 57° 20' N Lat., 134° 31' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-09-01	Chaik Bay (Northeast Arm) Lat. 57° 20 N Lon. 134° 31 W	Free-oil Recovery Maximize recovery of oil in vicinity of northeast arm.	Deploy nearshore free-oil recovery strike teams at the mouth of the arm and inside the arm as a backup to diversion/recovery booms.	Multiple nearshore free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Angoon	Via marine waters	Fish-intertidal salmon/trout spawning (coho, pink, chum, Dolly Varden) Birds-waterfowl (winter) Habitat-marsh, sheltered tidal flats Human use-subsistence (fishing)	FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-10 for equipment locations. Bears in area. Tested: not yet
SE05-09-02	Chaik Bay a. Shoreline anchor point Lat. 57° 20.2 N Lon. 134° 32.1 W b. Shoreline anchor point Lat. 57° 20.5 N Lon. 134° 31.0 W c. Shoreline anchor point Lat. 57° 20.02 N Lon. 134° 31.2 W d. Shoreline anchor point Lat. 57° 19.6 N Lon. 134° 30.6 W e. Shoreline anchor point Lat. 57° 19.03 N Lon. 134° 30.5 W	Diversion/Recovery Divert oil to marine recovery. <i>Note: If shoreline is suitable, may divert to shore for manual clean-up.</i>	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place boom at locations a - e to divert oil to shoreside (or near shoreside depending on tide) to marine recovery. 5 marine recovery or shoreside recovery units. <u>Boom Arrays:</u> a. 600 ft b. 400 ft c. 600 ft d. 800 ft e. 600 ft	Deployment Equipment 3000 ft protected-water boom. 8 ea ~40 lbs anchor systems for securing each 500 ft array at 3 points. 5 ea. 50 ft of tidal-seal boom units. 5 ea. anchor stakes Marine Recovery Units 3 ea shallow water recovery Vessels 2 ea. class 2 or 3/4 2 ea. class 6 Personnel Shift 12 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea vessel crew	Same as SE05-09-01	Same as SE05-09-01	Same as SE05-09-01	Bears Tested: not yet
SE05-09-03	Chaik Bay (Southeast Arm) a. Lat. 57° 19.5 N Lon. 134° 29.8 W b. Lat. 57° 19.1 N Lon. 134° 28.7 W	Exclusion Protect tidal mudflats and intertidal reefs using exclusion boom	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy protected-water boom between islets and main shoreline. <u>Boom arrays:</u> a. 3000 ft b. 1500 ft	Deployment Equipment 4500 ft protected-water boom. 6 ea ~40 lbs anchor systems for securing boom at mid-points. 10 ea. 50 ft of tidal-seal boom units. 10 ea. anchor stakes Vessel/Personnel/Tending See SE05-09-02	Same as SE05-09-01	Same as SE05-09-01	Same as SE05-09-01	Bears Deploy boom at high tide to avoid driving oil into the substrate. Tested: not yet
SE05-09-04	Chaik Bay (Southeast Arm) Lat. 57° 19.5 N Lon. 134° 29.8 W	Passive Recovery Protect sensitive marshes at head of SE arm of bay using passive recovery snare line or sorbent boom to back-up exclusion boom (SE05-09-03b).	Place up to 1500 ft. of snare line or sorbent boom across mudflats and marsh. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 1500 ft. snare line or sorbent boom 15 ea. anchor stakes. 1000 ft of line.	Same as SE05-09-01	Same as SE05-09-01	Same as SE05-09-01	Bears Tested: not yet

Map & Photo Legend



SE05-10-02 Entrance to Crab Bay looking towards the south.

- | | | | |
|--|--|--|-----------------------------------|
| | Free-oil Containment and Recovery, Shallow Water | | Protected-water Boom |
| | Exclusion Booming | | Tidal-seal Boom |
| | Passive Recovery and Debris Removal | | Snare Line |
| | Diversion Booming | | Shoreside Recovery, Marine Access |
| | | | Bears in Area, Guards Needed |

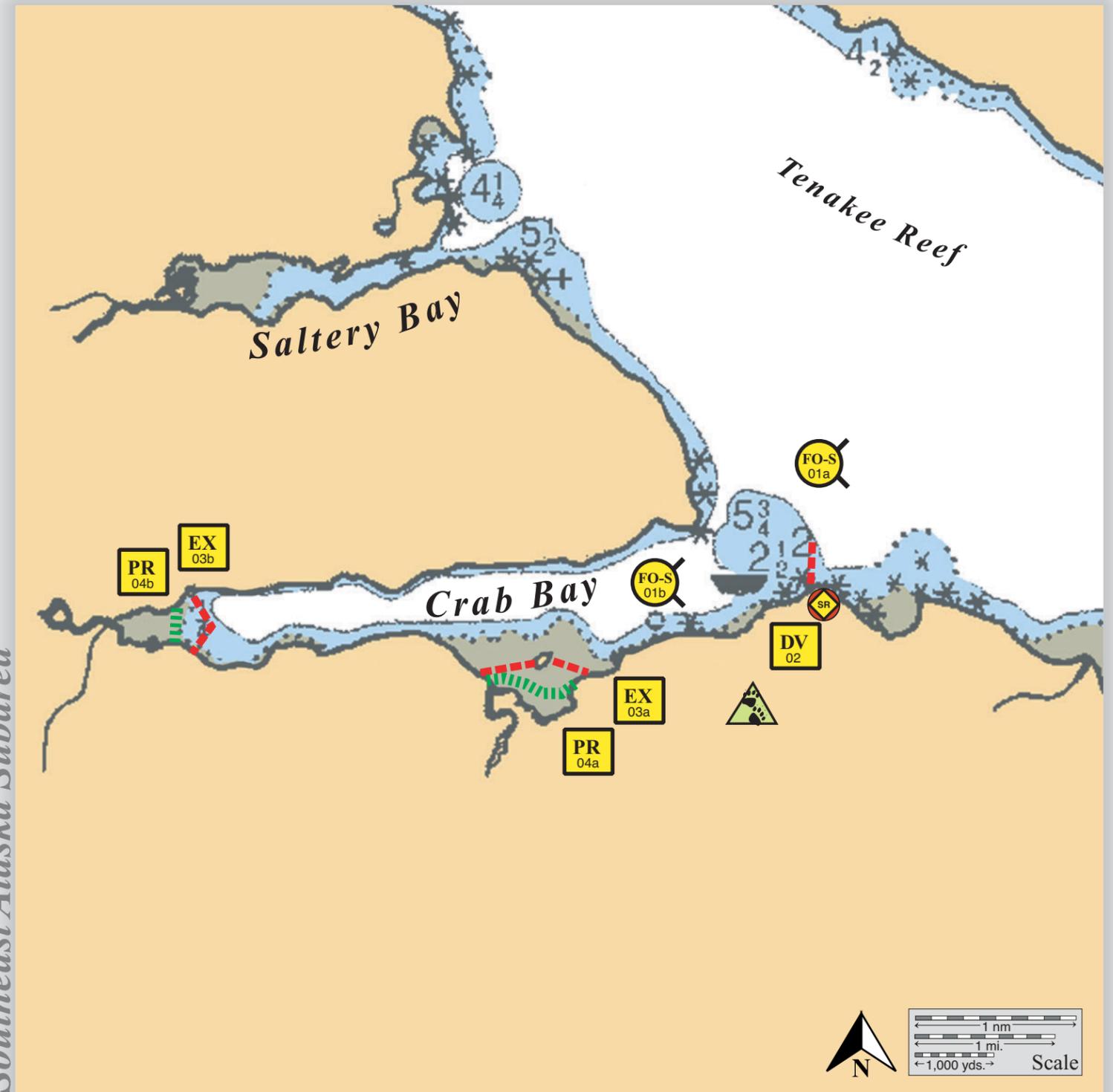


SE05-10 Crab Bay looking towards the west.

Geographic Response Strategies for Southeast Alaska Subarea

Crab Bay, SE05-10

Center of map at 57° 44.4' N Lat., 135° 20' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-10-01	Crab Bay Lat. 57° 44.4N Long. 135° 20 W (approximate location)	Free-oil Recovery Maximize recovery of oil at mouth of Crab Bay.	Deploy nearshore free-oil recovery strike teams. Use aerial surveillance to locate areas of heavy slick concentrations.	Two or more nearshore free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Corner Bay Angoon Gustavus	Via marine waters	Marine mammals-harbor seal haulout (rock at entrance) Fish-intertidal spawning (coho, pink, chum) Birds-waterfowl (winter concentration), shorebirds Habitat-marsh, kelp and eelgrass beds, sheltered tidal flats, sheltered rocky shore Human use-high recreational use, subsistence (fish and invertebrates) Terrestrial mammals-bears	Bear hazard FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-10 for equipment locations. Tested: not yet
SE05-10-02	Crab Bay Lat. 57° 44.5 N Long. 135° 18.1 W	Diversions/Recovery Divert oil entering Crab Bay to shoreline recovery unit. Boom array: 2000 ft in 500 ft stepped array.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place total of 2000 ft of boom to divert oil to shoreside recovery.	Deployment Equipment 2000 ft protected-water boom 7 ea. ~40 lbs anchor systems for securing each 500 ft string array 1 ea. anchor stakes 1 shore recovery unit Vessels 2 ea. class 2 or 3/4 2 ea. class 6 Personnel Shift 12 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea vessel crew	See SE05-10-01	See SE05-10-01	See SE05-10-01	See SE05-10-01 Tested: not yet
SE05-10-03	Crab Bay a. Lat. 57° 43.9 N Lon. 135° 21.6 W b. Lat. 57° 43.9 N Lon. 135° 21.6 W	Exclusion Protect sensitive areas at stream mouth. a. 5000 ft b. 2000 ft	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 7000 ft of protected-water boom.	Deployment Equipment 7000 ft protected-water boom 11 ea ~40 lbs anchor systems. Anchor approximately every 500 ft. 4 ea 50 ft sections of tidal-seal boom. 4 ea anchor stakes. Vessels/Personnel/Tending Use resources listed in SE05-10-01	See SE05-08-01	See SE05-08-01	See SE05-08-01	Avoid physical contact with the tide flat during low tide. Deploy boom at high tide to avoid driving oil into the substrate. Tested: not yet
SE05-10-04	Crab Bay a. Lat. 57° 43.9N Lon. 135° 21.4 W b. Lat. 57° 44.2 N Lon. 135° 25.9 W	Passive Recovery Minimize impact to intertidal mudflats and marsh through passive recovery using snare line or sorbent boom. Placed in tandem with exclusion boom (see SE05-10-03).	Place up to 4200 ft. of snare line or sorbent boom across mudflats and marsh. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 4200 ft. snare line or sorbent boom 42 ea. anchor stakes. 1000 ft of line. Vessels/Personnel/Tending Use resources listed in SE05-10-01	See SE05-08-01	See SE05-08-01	See SE05-08-01	Deploy boom at high tide to avoid driving oil into the substrate.

Map & Photo Legend



SE05-11 Middle Island looking towards the east.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Diversion Booming
-  Protected-water Boom
-  Shoreside Recovery, Marine Access

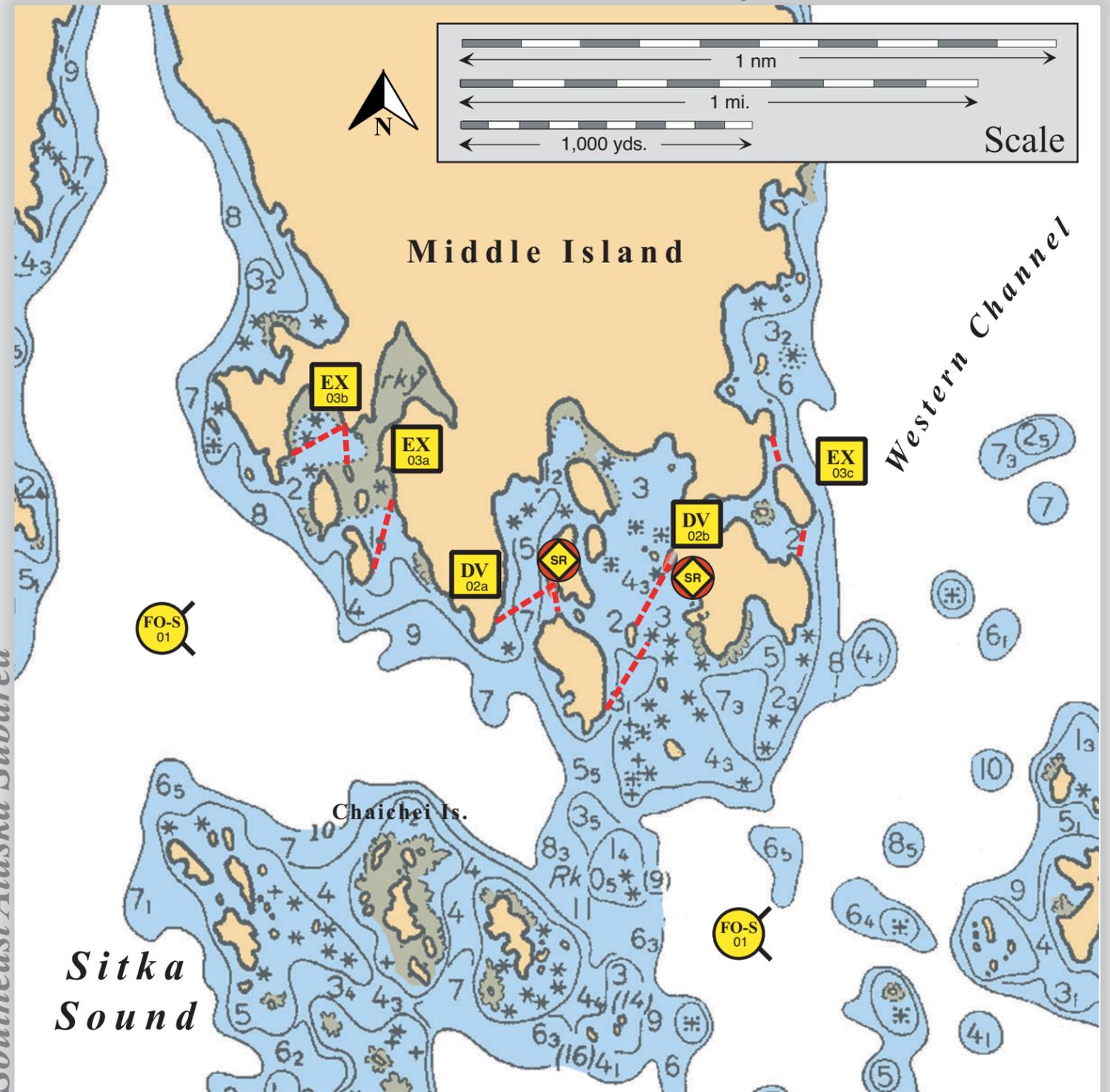


SE05-11 Middle Island looking towards the north.

Middle Island, SE05-11

Center of map at 57° 06.0' N Lat., 135° 27.0' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

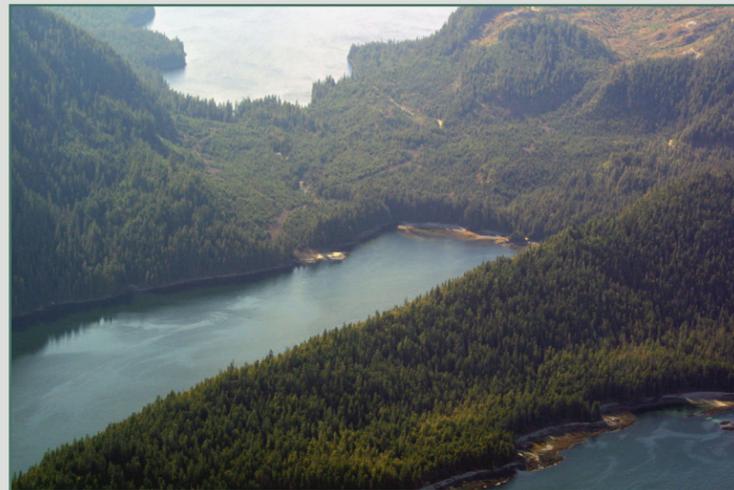
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-11-01	Middle Island (Southwest cove) Lat. 57° 05 N Lon. 135° 27 W	Free-oil Recovery Maximize recovery of oil in offshore and nearshore environment.	Deploy nearshore free-oil recovery strike teams. Use aerial surveillance to locate areas of heavy slick concentrations.	Multiple nearshore free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Sitka Harbor, Sitka Ferry Terminal	Via marine waters	See SE05-11-02	REPORT any cultural resources found during operations to FOSC Historic Properties Specialist. See Figure G-3-10 for equipment locations.
SE05-11-02	Middle Island (South end) a. Lat. 57° 05.3 N Lon. 135° 27.0 W b. Lat. 57° 05.3 N Lon. 135° 26.6 W	Diversion/Recovery Divert oil to shoreside recovery.	Use class 2 and class 3/4 vessels with deck space to transport equipment. Place protected-water boom, with tidal-seal on each end using class 6 skiffs. Deploy shoreside recovery units with shallow-water skiffs. <u>Boom arrays</u> a. 600 ft and 200 ft. sections deployed in chevron with shoreside recovery at apex. b. Two 300 ft. sections deployed in cascade or stepped array to shoreside recovery.	Deployment Equipment 1400 ft. protected-water boom. 5 ea ~40 lbs. anchor systems for securing boom at approximately 300 ft. intervals. 6 ea. 50 ft. of tidal-seal boom units 6 anchor stakes 2 ea. shoreline recovery units Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel Shift 18 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea. vessel crew	See SE05-11-01	See SE05-11-01	Marine mammals-harbor seals, whales Fish-herring spawning Habitat-kelp and eelgrass beds, sheltered tidal flats, sheltered rocky shore, intertidal diversity Marine invertebrates Human use-subsistence use, high recreational use, private residences	Tested: not yet Surveyed: 8/27/02 TLR
SE05-11-03	Middle Island (South end) a. (apex or mid-point) Lat. 57° 05.57 N Lon. 135° 27.64 W b. Lat. 57° 05.5 N Lon. 135° 27.6 W c. Lat. 57° 05.5 N Lon. 135° 26.3 W	Exclusion Exclude oil from small coves on southeast and southwest sides of Middle Island.	Use class 2 and class 3/4 vessels with deck space to transport equipment. Place protected-water boom, with tidal-seal on each end using class 6 skiffs. <u>Boom Arrays</u> a. Three 500 ft. boom strings as shown b. Two 300 ft. boom strings as shown c. Two 300 ft. boom strings as shown	Deployment Equipment 2700 ft. protected-water boom. 6 ea ~40 lbs. anchor systems for securing boom at mid-points, if needed. 10 ea. 50 ft. of tidal-seal boom units 12 anchor stakes Vessels/Personnel/Tending See SE05-11-02	See SE05-11-01	See SE05-11-01	See SE05-11-02	Tested: not yet Surveyed: 8/27/02 TLR

Map
& Photo

Legend



SE05-12 Looking northwest into Basket Bay.



SE05-12-02 Looking west at the head of Basket Bay.



SE05-12 Looking northwest into Basket Bay.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Protected-water Boom
-  Tidal-seal Boom
-  Marine Recovery
-  Bears in Area, Guards Needed

Geographic Response Strategies for
Southeast Alaska Subarea

Basket Bay, SE05-12

Center of map at 57° 39' N Lat., 134° 54' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE05-12-01	Basket Bay Lat. 57° 39.6 N Lon. 134° 54.2 W	Free-oil Recovery Maximize free-oil recovery in calm waters of Basket Bay.	Deploy nearshore free-oil recovery strike teams in calm waters inside mouth of Basket Bay. Use aerial surveillance to locate areas of heavy slick concentrations.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it reaches the head of the Bay.	Juneau; Angoon; Vessel platform	Via marine waters	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (coho, pink, sockeye, steelhead, Dolly Varden) Habitat-marsh, sheltered tidal flats, wetlands Terrestrial mammals-bears Cave mouth (unique geological formation)	See Figure G-3-10 for equipment locations. FOSC Historic Properties Specialist should INSPECT site prior to operations. Bears in area.
SE05-12-02	Basket Bay Lat. 57° 40.2 N Lon. 134° 56.1 W	Exclusion Exclude oil from entering tidal flats and caves at head of Basket Bay. A marine recovery unit can be placed at the mid-point of the boom string.	Deploy 1500 ft of boom roughly north to south inside the 7-fathom line. Boom should bow westward.	Deployment Equipment 1500 ft protected-water boom. 12 ea ~40 lbs anchor systems for securing boom every 250 feet. 2 ea. 50 ft of tidal-seal boom units. 6 ea. anchor stakes Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel Shift 18 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea vessel crew	Juneau; Angoon; Vessel platform	Via marine waters.	Same as SE05-12-01	Bears in area. Tested: not yet

E. SOUTHEAST ALASKA RESPONSE ZONE 6

Figure G-3-11 provides an overview of the Southeast Alaska response zone 6, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE06-01. Figure G-3-12 shows the location of oil spill response equipment throughout zone 6.

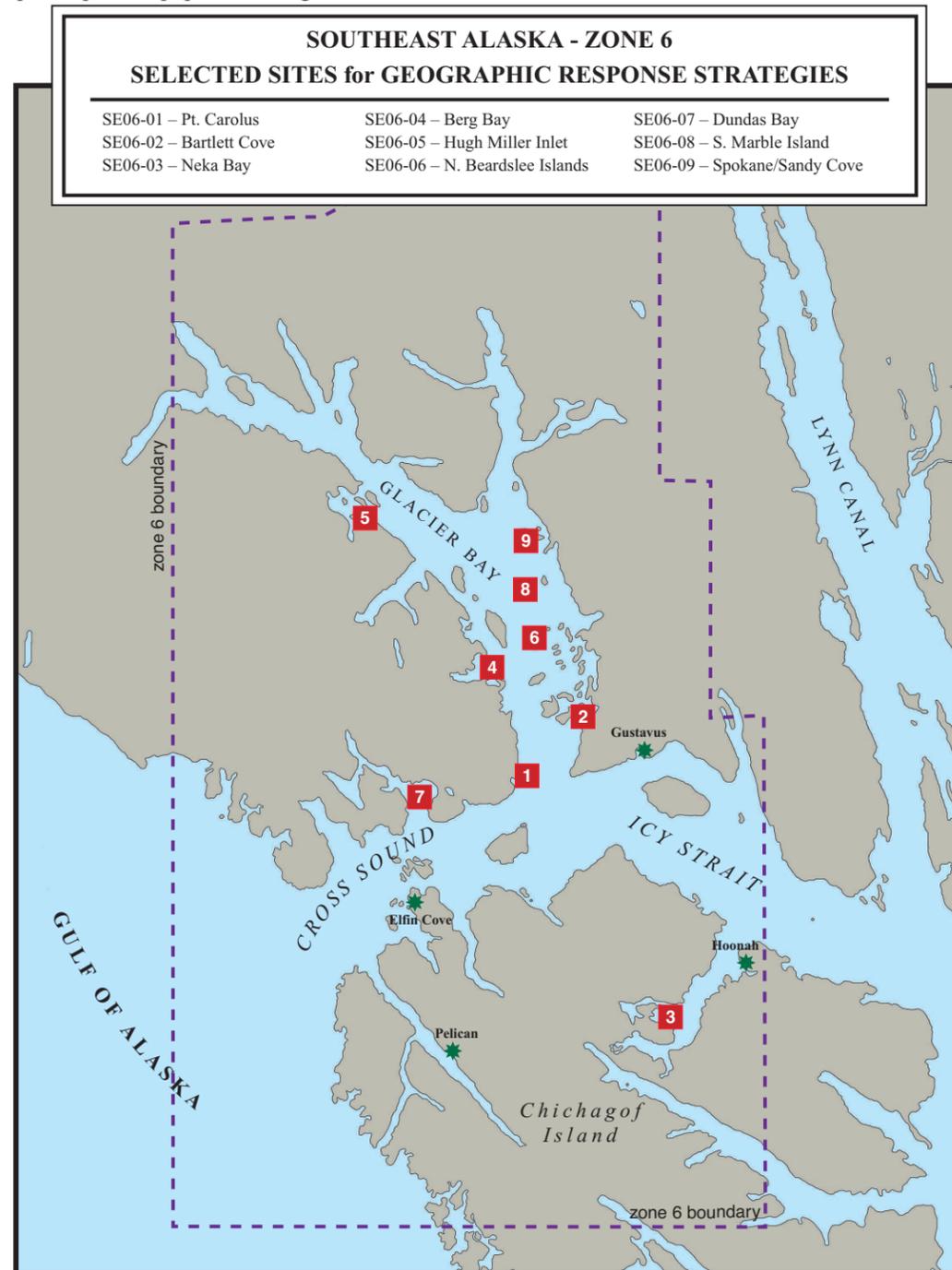


Figure G-3-11. Southeast Alaska Response Zone 6.

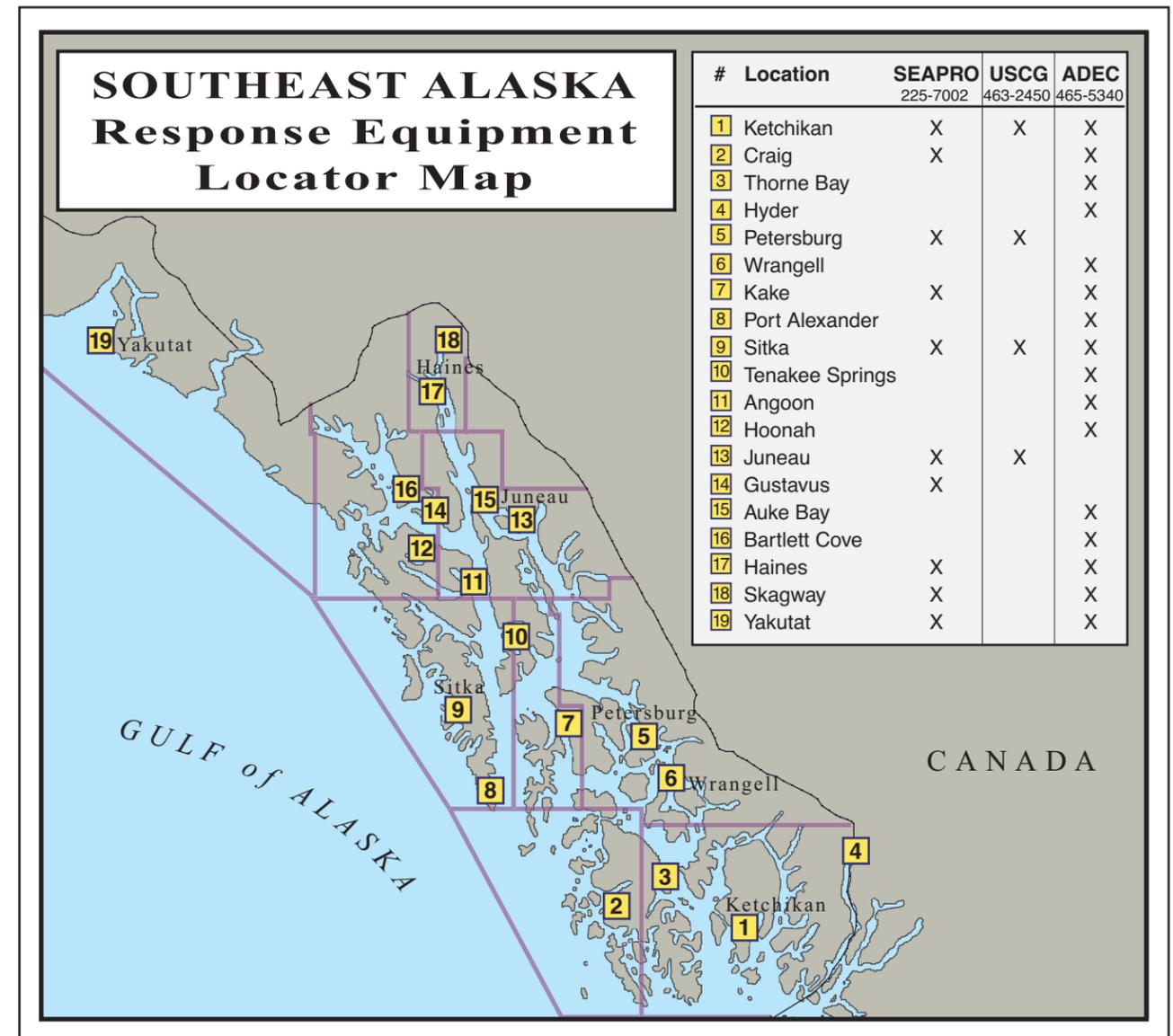


Figure G-3-12. Southeast Alaska Response Equipment Locator Map.

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Map & Photo Legend



SE06-01 Looking southwest at Point Carolus.



SE06-01 Looking west at Point Carolus.



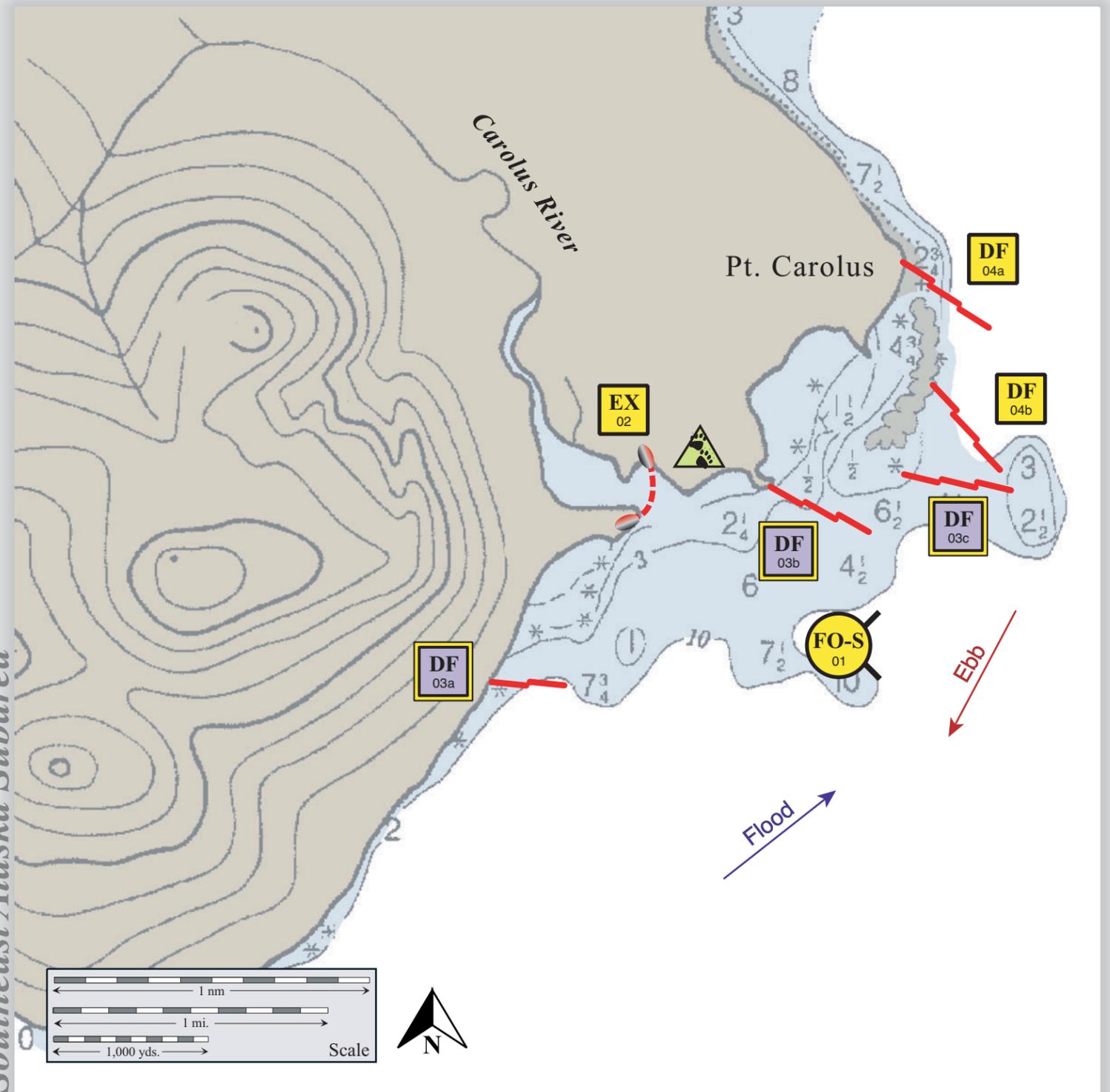
SE06-01-02 Looking north at the Carolus River.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Boom
-  Deflection Boom, Ebb Tide
-  Deflection Boom, Flood Tide
-  Protected-water Boom
-  Open-water Boom
-  Tidal-seal Boom
-  Bear Guard Needed

Geographic Response Strategies for Southeast Alaska Subarea

Pt. Carolus, SE06-01

Center of map at 58° 21.9' N Lat., 136° 04.5' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-01-01	Point Carolus (Carolus River) Nearshore waters in the general area of: Lat. 58° 21.7 N Lon. 136° 02.7 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment near Point Carolus and Carolus River.	Deploy nearshore free-oil recovery strike teams upwind and up current of Point Carolus and Carolus River. Use aerial surveillance to locate incoming slicks.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Public access dock, Bartlett Cove	Via marine waters	Same as for SE06-01-02	Vessel masters should have local knowledge.
SE06-01-02	Carolus River Lat. 58° 22.2 N Lon. 136° 03.9 W	Exclusion Exclude oil from entering Carolus River.	Use class 2 and class 3/4 vessels with deck space to transport equipment. class 6 setnet or seine skiffs to deploy boom and set anchors. Place 800 ft. of protected-water boom, with tidal-seal on both ends, across the mouth of Carolus River.	Deployment Equipment 800 ft. protected-water boom 10 ea. anchor systems (~40 lbs.) 2 ea. 50 ft. tidal-seal 4 ea. anchor stakes. Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 18 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel 7 ea. vessel crew	Public access dock, Bartlett Cove	Via marine waters	Marine mammals-harbor seal and Steller Sea Lion rookeries and haulouts (summer - 500 yd. exclusion zone around haulout), humpback whale concentration (April – October) Fish-intertidal salmon/trout spawning (coho, chum, pink, Dolly Varden), juvenile fish rearing in kelp and reefs (summer) Birds-waterfowl and shorebird feeding and concentration area (year-round) Habitat-kelp beds, marsh, sheltered rocky shore Human use-high recreational use Land management-National Park Terrestrial mammals-bears	See Figure G-3-12 for equipment locations. This area is located in Glacier Bay National Park. FOSC Historic Properties Specialist should MONITOR on-site operations. Title 41 permit may be necessary. Contact ADNR. Bears in area. 160 acres of private land at Carolus River mouth. Vessel masters should have local knowledge. Tested: 06/04/03 SEAPRO, NPS Surveyed: 5/02 NPS, TLR
SE06-01-03	Point Carolus DF-03 a. Lat. 58° 22.0 N Lon. 136° 03.8 W b. Lat. 58° 22.2 N Lon. 136° 02.9 W c. Lat. 58° 22.3 N Lon. 136° 02.2 W	Deflection (ebb) Deflect oil away from Carolus River and Pt. Carolus reef.	Place open-water boom in cascade arrays, with 660 ft. sections, to deflect oil traveling northeast away from Carolus River and Pt. Carolus reef. <u>Boom Arrays</u> a. 1320 ft. b. 1980 ft. c. 1980 ft.	Deployment Equipment 5280 ft. open-water boom 16 ea. anchor systems (~500 lbs.) Vessels / Personnel / Tending Same as SE03-01-02	Public access dock, Bartlett Cove	Via marine waters	Same as for SE06-01-02	This tactic for flood tides, let booms flag during ebb. Currents up to 4 kts. Tested: 06/04/03 SEAPRO, NPS Surveyed: 5/02 NPS, TLR
SE06-01-04	Point Carolus DF-04 a. Lat. 58° 22.8 N Lon. 136° 02.1 W b. Lat. 58° 22.4 N Lon. 136° 01.9 W	Deflection (flood) Deflect oil away from reef	Place open-water boom in cascade arrays, with 660 ft. sections, to deflect oil traveling southwest away from reef at Pt. Carolus. <u>Boom Arrays</u> a. 1980 ft. b. 1980 ft.	Deployment Equipment 3960 ft. open-water boom 12 ea. anchor systems (~500 lbs.) Vessels / Personnel / Tending Same as SE03-01-02	Public access dock, Bartlett Cove	Via marine waters	Same as for SE06-01-02	This tactic for ebb tides, let boom flag during flood. Currents up to 4 kts. Tested: 06/04/03 SEAPRO, NPS Surveyed: 5/02 NPS, TLR

Map
& Photo

Legend



SE06-02 Bartlett Cove looking north.



SE06-02 Bartlett Cove looking east.



SE06-02 Bartlett Cove looking southeast.

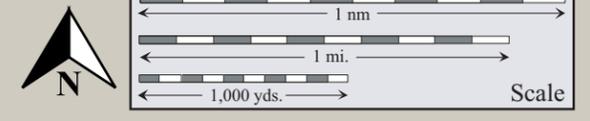
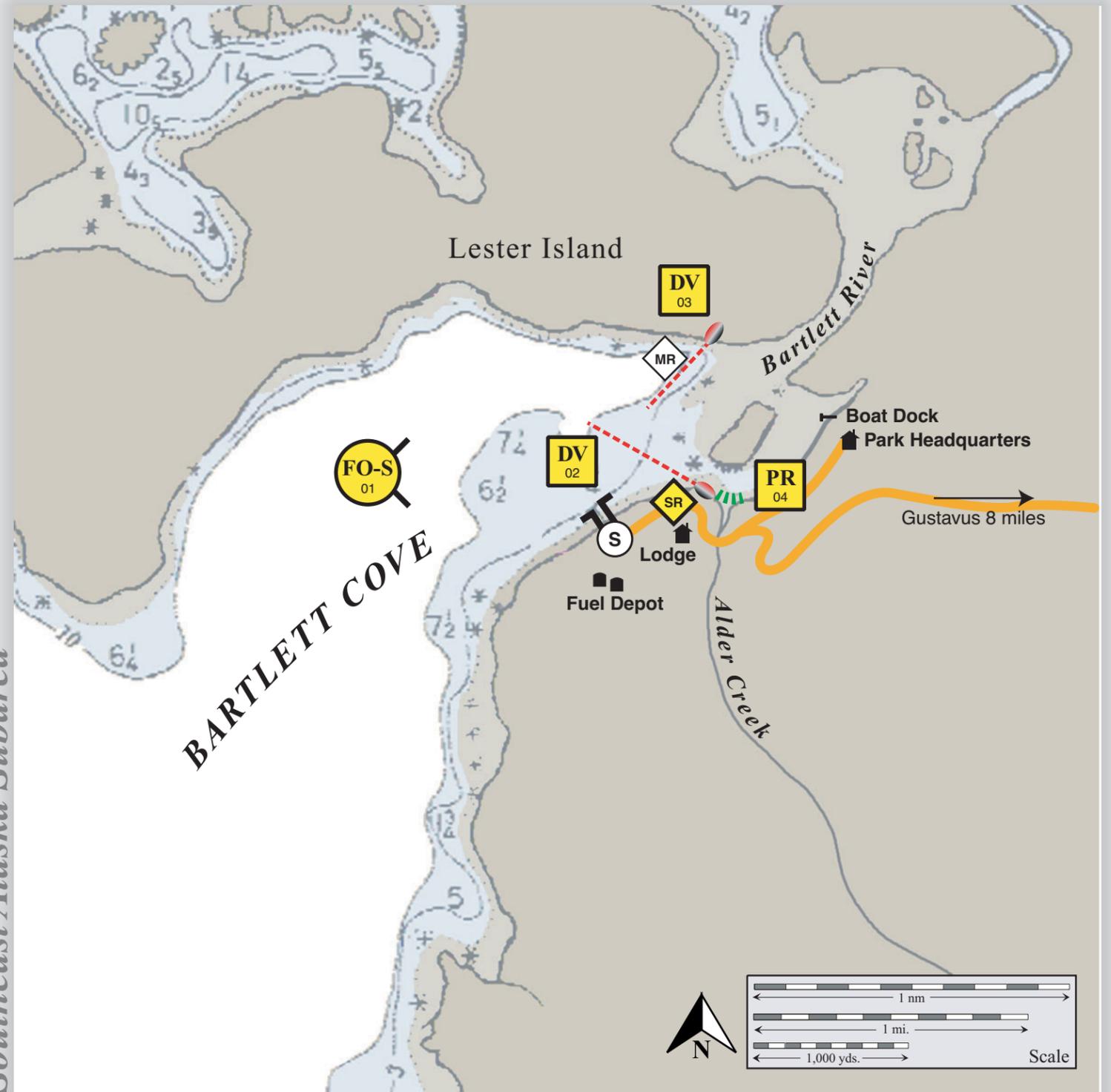
-  Free-oil Containment and Recovery, Shallow Water
-  Diversion Booming
-  Protected-water Boom
-  Tidal-seal Boom
-  Shoreside Recovery
-  Marine Recovery
-  Staging Area
-  Road
-  Dock

Geographic Response Strategies for

Southeast Alaska Subarea

Bartlett Cove, SE06-02

Center of map at 58° 28.4' N Lat., 135° 53.6' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-02-01	Bartlett Cove Nearshore waters in the general area of: Lat. 58° 27 N Long. 135° 53 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore and nearshore environment in Bartlett Cove and southeast of Lester Island at Bartlett River mouth.	Deploy free-oil recovery strike teams upwind and up current of head of Bartlett Cove. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Public use dock or fuel dock	Via marine waters	Same as SE06-02-02	See Figure G-3-12 for equipment locations. Vessel masters should have local knowledge.
SE06-02-02	Bartlett River Mouth Lat. 58° 26.395 N Lon. 135° 52.857 W	Diversion / Recovery Divert oil to designated shoreside recovery site at mouth of inner lagoon.	Use class 3/4 vessels with deck space to transport equipment. Deploy tactic from the shoreside by placing 2000 ft. of protected-water boom in a cascade array, with 10 sections and tidal-seal on the end. Divert oil to shoreside recovery site.	Deployment Equipment 2000 ft. protected-water boom 20 ea. anchor systems (~40 lbs.) 50 ft. tidal-seal boom 2 ea. anchor stakes 1 ea. shoreside recovery unit Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 10 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 5 ea. vessel crew	Public use dock or fuel dock	Maintenance road to "cut" at mouth of inner lagoon	Marine mammals-humpback whale concentration area (summer) Fish-intertidal salmon/trout spawning (coho, chum, pink, sockeye, steelhead, Dolly Varden) Birds-waterfowl and shorebird migratory and feeding concentration area (year-round) Habitat-marsh, sheltered rocky shore, eel grass (inside public use dock) Human use-high recreational use Land management-National Park	Same as SE06-02-01 See Figure G-3-12 for equipment locations. This area is located in Glacier Bay National Park. FOSC Historic Properties Specialist should MONITOR on-site operations. Tested: 5/29/02 NPS, SEAPRO Surveyed: 5/29/02 NPS, SEAPRO, TLR
SE06-02-03	Bartlett River Mouth Lat. 58° 26.82 N Lon. 135° 52.704 W	Diversion / Recovery Divert oil to designated marine recovery sites at mouth of inner lagoon.	Deploy from shore by placing 1600 ft. of protected-water boom in a cascade array, with 8 sections and tidal-seal on the end. Divert oil to marine recovery site.	Deployment Equipment 1600 ft. protected-water boom 18 ea. anchor systems (≤40 lbs.) 50 ft. tidal-seal boom 2 ea. anchor stakes 1 ea. marine recovery unit Vessels / Personnel / Tending Same as SE06-02-02	Public use dock or fuel dock	Via marine waters	Same as SE06-02-02	Same as SE06-02-01 Tested: 5/29/02 NPS, SEAPRO Surveyed: 5/29/02 NPS, SEAPRO, TLR
SE06-02-04	Alder Creek Lat. 58° 27.7 N Lon. 135° 51.6 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place 60 ft. snare line or sorbent boom across mudflats. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 60 ft. snare line or sorbent boom 4 ea. anchor stakes Vessels / Personnel / Tending Same as SE06-02-02	Public use dock or fuel dock.	Maintenance road to "cut" at mouth of inner lagoon or via marine waters at high tide	Same as SE06-02-02	Same as SE06-02-01 Title 14 permit may be required by ANDR. If heavy oiling is expected, consider adding an array of calm-water boom behind the passive recovery. Surveyed: 5/29/02 NPS, SEAPRO, TLR

Map & Photo Legend



SE06-03 Looking northwest over the North and South Bight of Neka Bay.

	Free-oil Containment and Recovery, Shallow Water		Snare Line
	Exclusion Booming		Calm-water Boom
	Diversion Booming		Tidal-seal Boom
	Deflection Booming, Fixed		Marine Recovery
	Passive Recovery and Debris		Bears in Area, Guards Needed
	Protected-water Boom		

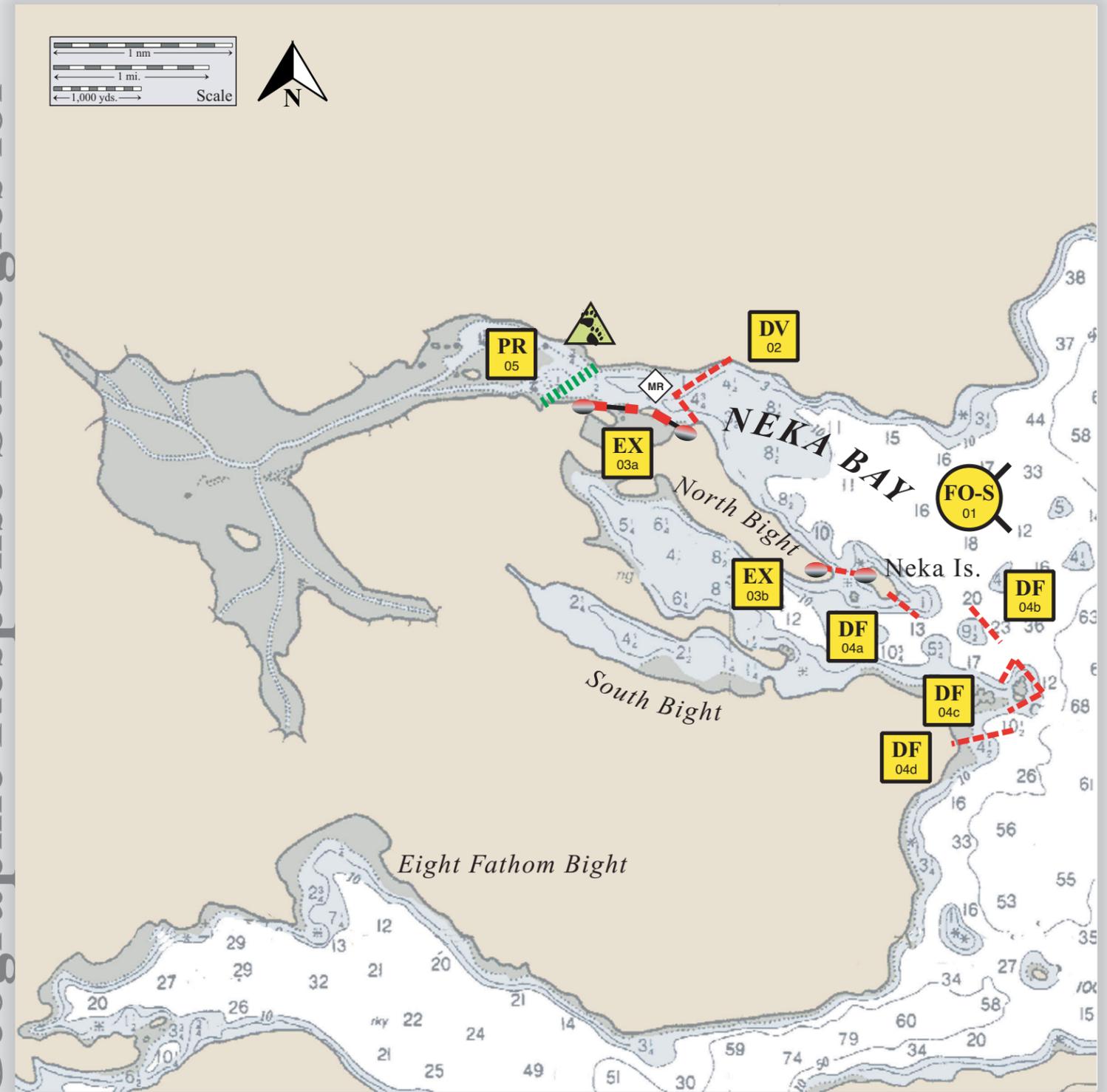


SE06-03-02,03a,05 Looking west into Neka Bay.

Neka Bay, SE06-03

Center of map at 58° 02.3' N Lat., 135° 37.3' W Lon.

Geographic Response Strategies for



This map is not intended to be used for navigation.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-03-01	Mouth of Neka Bay Nearshore waters in the general area of: Lat. 58° 02.4 N Long. 135° 37.3 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment.	Deploy free-oil recovery strike teams upwind and up-current. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Vessel platform	Via marine waters	Same as SE06-03-02	
SE06-03-02	Neka River mouth Lat. 58° 03.1 N Lon. 135° 40.5 W	Diversion / Recovery Divert oil entering mouth of Neka River to marine recovery.	Use class 2 and class 3/4 vessels with deck space to transport equipment. class 6 setnet or seine skiffs to deploy boom and set anchors. Place 3200 ft. of protected-water boom at the head of Neka Bay, in a chevron pattern, to divert oil to marine recovery.	Deployment Equipment 3200 ft. protected-water boom 34 ea. anchor systems (~40 lbs.) 1 marine recovery unit Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 18 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel / Shift 5 ea. vessel crew	Vessel platform or Hoonah	Via marine waters	Marine mammals-harbor seal rookeries and haulouts, whale and seal feeding area Fish-intertidal salmon/trout spawning (coho, pink, chum, sockeye, king, Dolly Varden) (May-Aug.) Birds-high density pigeon guillemots at Chimney Rock, waterfowl and shorebird concentration area (year-round) Habitat-sheltered tidal flats, extensive marsh, eelgrass beds Human use-subsistence use area, shellfish harvesting/clam flat, high recreational use Terrestrial mammals-bears	See Figure G-3-12 for equipment locations. Bears in area. FOSC Historic Properties Specialist should MONITOR on-site operations. Consider using log boom. Title 41 permit may be necessary. Contact ADNR. Tested: not yet
SE06-03-03	Cove in Neka Bay a. Lat. 58° 03.0 N Lon. 135° 41.0 W b. Lat. 58° 02.1 N Lon. 135° 38.7 W	Exclusion Exclude oil from entering North Bight.	Place protected-water boom in two arrays, with tidal-seal on each end, from small island to headlands of cove to exclude oil from entering cove, <u>Boom Arrays</u> a. 1800 ft. b. 1200 ft.	Deployment Equipment 3000 ft. protected-water boom 32 ea. anchor systems (~40 lbs.) 4 ea. 50 ft. tidal-seal boom units 12 ea. anchor stakes Vessels / Personnel / Tending Same as SE03-01-02	Vessel platform or Hoonah	Via marine waters	Same as SE06-03-02	Consider using log boom in front of oil boom Tested: not yet
SE06-03-04	Neka Island /Open Water between North Bight and Chimney Rock a. Lat. 58° 01.9 N Lon. 135° 38.0 W b. Lat. 58° 01.8 N Lon. 135° 37.1 W c. Lat. 58° 01.4 N Lon. 135° 36.8 W d. Lat. 58° 01.1 N Lon. 134° 37.2 W	Deflection Deflect oil away from Neka Bay.	Place array (a) at the southeast point of Neka Island, array b. offshore between Neka Island and Chimney Rock, array c. around Chimney Rock to deflect oil coming from the north and array d. south of chimney rock to deflect oil coming from the south. Swing boom with tide. <u>Boom Arrays</u> a. 1200 ft. b. 1400 ft. c. 3000 ft. d. 2000 ft.	Deployment Equipment 7600 ft. protected-water boom 78 ea. anchor systems (~40 lbs.) Vessels / Personnel / Tending Same as SE03-01-02	Vessel platform or Hoonah	Via marine waters	Same as SE06-03-02	See Figure G-3-12 for equipment locations. Tested: not yet
SE06-03-05	Mouth of Neka River Lat. 58° 03.2 N Lon. 135° 41.7 W	Passive Recovery Exclude oil from entering mouth of Neka Bay.	Place 2000 ft. of snare line or sorbent boom across mouth of Neka River to exclude oil from entering Neka River Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 2000 ft. protected-water boom 22 ea. anchor systems (~40 lbs.) Vessels / Personnel / Tending Same as SE03-01-02	Vessel platform or Hoonah	Via marine waters	Same as SE06-03-02	Consider placing a harbor boom behind passive recovery.

Map & Photo Legend



SE06-04-03 Looking west into Berg Bay.



SE06-04-05c Looking west into intertidal cove in Berg Bay.



SE06-04-05d Looking west into intertidal cove in Berg Bay.



SE06-04-02a Berg Bay/Netland Island looking west.



SE06-04-05a&b Head of Berg Bay looking west.

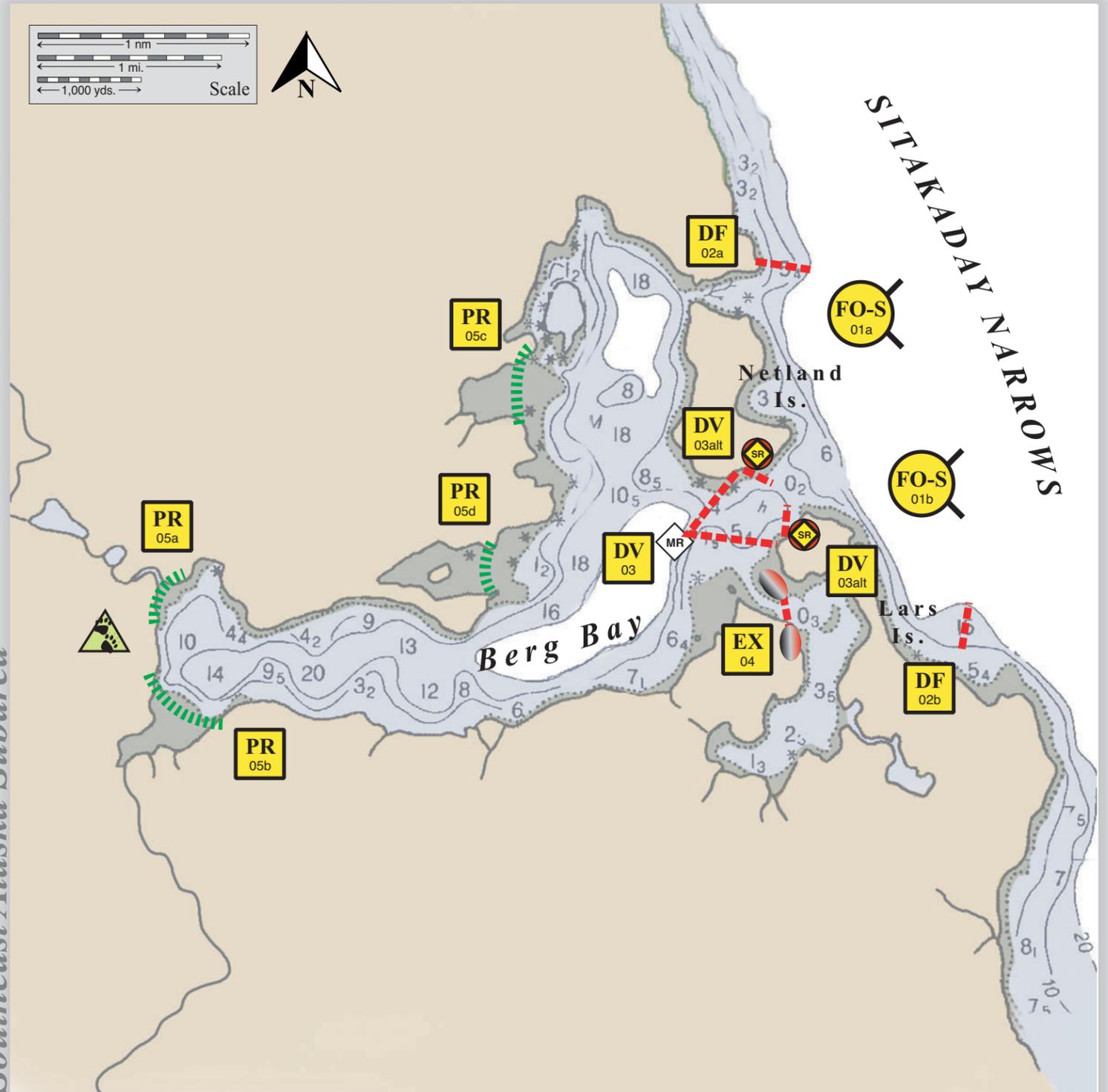
- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Diversion Booming
- Deflection Booming, Fixed
- Passive Recovery and Debris Removal
- Protected-water Boom
- Tidal-seal Boom
- Snare Line
- Marine Recovery
- Shoreside Recovery, Marine Access
- Bears in Area, Guards Needed

Geographic Response Strategies for

Southeast Alaska Subarea

Berg Bay, SE06-04

Center of map at 58° 31.5' N Lat., 136° 09.7' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-04-01	Berg Bay Nearshore waters in the general area of: a. Lat. 58° 32.6 N Lon. 136° 07.9 W b. Lat. 58°31.9 N Lon. 136° 07.4 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment at the entrance to Berg Bay.	Deploy free-oil recovery strike teams upwind and up-current of Berg Bay. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Bartlett Cove and vessel platform	Via marine waters Chart 17318	Same as SE06-04-02	Vessel master should have local knowledge.
SE06-04-02	Berg Bay a. Lat. 58° 32.8 N Lon. 136° 08.2 W b. Lat. 58° 31.1 N Lon. 136° 06.6 W	Deflection Deflect oil away from the entrance to Berg Bay.	Transport equipment to the site by marine vessel (class 2/3/4). Place booms on both sides of the entrance to Berg Bay in 200 ft. cascaded arrays with fishing vessels and skiffs (class 3/4/6) at appropriate angle to deflect to free-oil strike teams. Tend throughout tide. <u>Boom Lengths:</u> a. 1200ft b. 1400ft	Deployment Equipment 2600 ft. protected-water boom 30 ea. anchor systems (~30 lbs.) 2 ea. anchor stakes Vessels 2 ea. class 2 3 ea. class 3/4 2 ea. class 6 Personnel / Shift 24 ea. vessel crew Tending Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 10 ea. vessel crew	Bartlett Cove and vessel platform	Via marine waters Chart 17318	Marine mammals-humpback whale feeding(summer) Fish-intertidal salmon spawning ≤ 10000 (pink, chum, sockeye) Birds-waterfowl and shorebirds migration, molting, and winter concentration Habitat-marsh/estuary, sheltered rocky shore, high intertidal diversity Human use-high recreational use (May-Sept.) Land management-National Park Terrestrial mammals-bears	Vessel master should have local knowledge. This area is located in Glacier Bay National Park. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-12 for equipment locations. Title 41 permit may be necessary. Contact ADNDR. Surveyed: 5/15/02 NPS, TLR Tested: not yet
SE06-04-03	Berg Bay Entrance Lat. 58° 31.6 N Lon. 136° 09.0 W Alternative shoreside locations: Lat. 58° 31.82N Lon. 136° 08.54 W Lat. 58° 31.51 N Lon. 136° 08.27 W	Divert / Recover Divert oil coming in the main entrance to Berg Bay to marine recovery.	Use fishing vessels and skiffs (class 3/4/6) to place protected-water and tidal-seal boom in a chevron pattern. Establish marine recovery at the apex. If current is too high, detach marine recovery and operate as free-oil recovery. Consider alternative divert and recovery tactic using shoreside recovery. Tend throughout the tide.	Deployment Equipment 4600 ft. protected-water boom 2 ea. < 50 ft. section tidal-seal boom 14 ea. anchor systems (~40 lbs.) 1 ea. marine recovery unit Vessels Same as SE07-03-02 Personnel Same as SE07-03-02 Tending Vessels, Personnel Same as SE07-03-02	Bartlett Cove and vessel platform	Via marine waters Chart 17318	Same as SE06-04-02	Vessel master should have local knowledge. Submerged rocks are present in the center of the channel. Bears in area. Surveyed: 5/15/02 NPS, TLR Tested: not yet
SE06-04-04	Berg Bay Southeast Cove Lat. 58° 31.2 N Lon. 136° 08.2 W	Exclusion Exclude oil from entering cove on southeast side of Berg Bay.	Use fishing vessels and skiffs (class 3/4/6) to place protected-water and tidal-seal boom across entrance to cove on the southeast side of Berg Bay.	Deployment Equipment 1400 ft. protected-water boom 16 ea. anchor systems (~30 lbs.) 2 ea. < 50 ft. section tidal-seal boom 4 ea. anchor stakes Vessels, Personnel, Tending Same as SE07-03-02	Bartlett Cove and vessel platform	Via marine waters Chart 17318	Same as SE06-04-02	Vessel master should have local knowledge. Bears in area. Surveyed: 5/15/02 NPS, TLR Tested: not yet
SE06-04-05	Berg Bay Coves and Streams a. Lat. 58° 32.2 N Lon. 136° 10.6 W b. Lat. 58° 31.4 N Lon. 136° 10.8 W c. Lat. 58° 31.3 N Lon. 136° 13.8 W d. Lat. 58° 30.7 N Lon. 136° 13.7 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place and anchor snare line or sorbent boom across the tidal flats at the mouths of coves on the northeast side of Berg Bay and across tidal flats at streams at the head of the bay. <u>Boom Lengths:</u> a. 1200 ft. b. 2000 ft. c. 1800 ft. d. 1400 ft.	Deployment Equipment 6400 ft. snare line or sorbent boom 64 ea. anchor stakes Vessels, Personnel, Tending Same as SE07-03-02	Bartlett Cove and vessel platform	Via marine waters Chart 17318	Same as SE06-04-02	Use snare line for persistent oils and sorbent boom for nonpersistent oils. Surveyed: 5/15/02 NPS, TLR Bears in area.

Map & Photo Legend



SE06-05 Looking northwest into Blue Mouse Cove and Hugh Miller Inlet.



SE06-05 Looking southwest into Blue Mouse Cove.



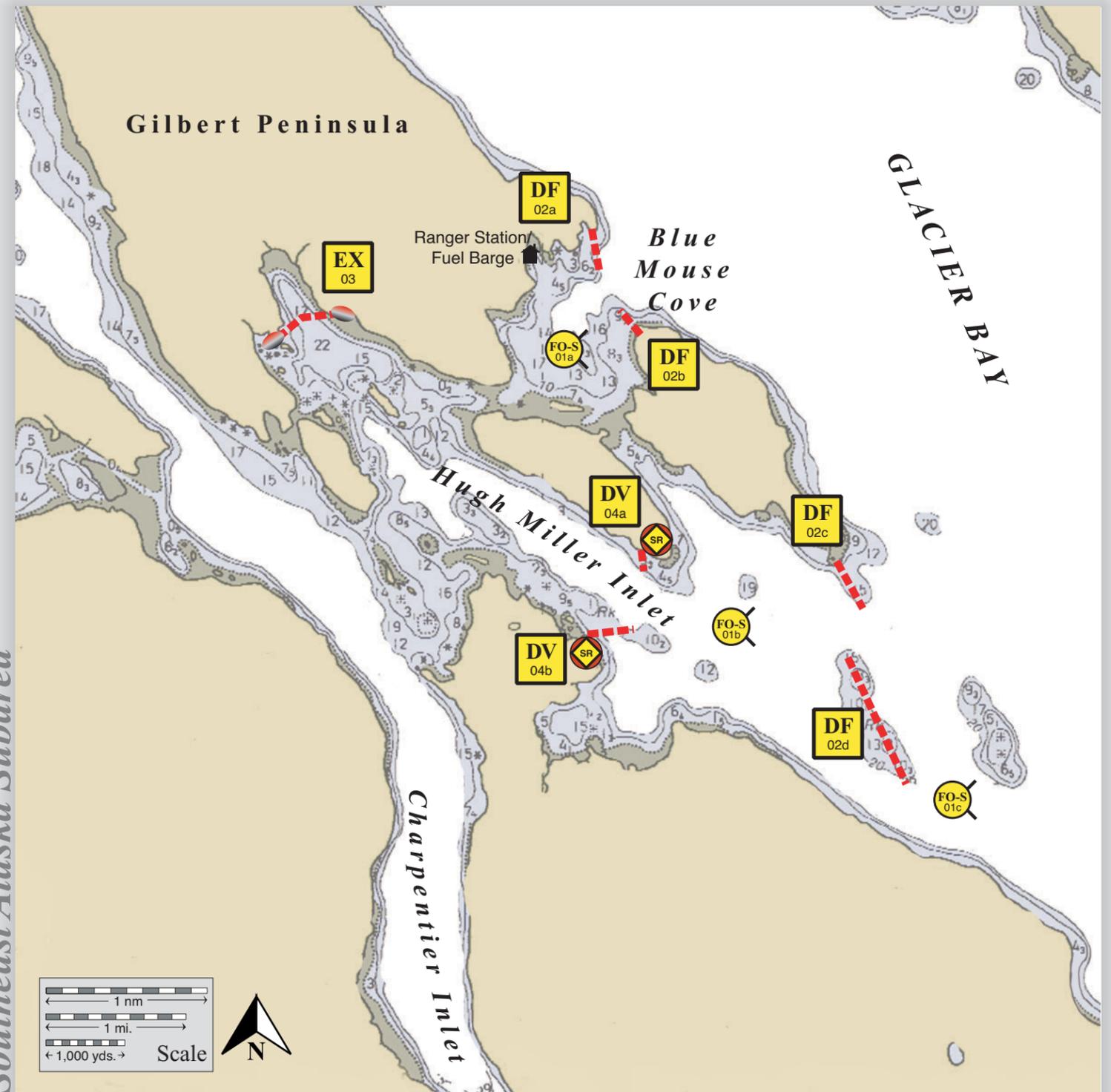
SE06-05-03 Looking north at the head of Hugh Miller Inlet.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Deflection Booming, Fixed
-  Diversion Booming
-  Protected-water Boom
-  Tidal-seal Boom
-  Shoreside Recovery, Marine Access

Geographic Response Strategies for Southeast Alaska Subarea

Hugh Miller Inlet, SE06-05

Center of map at 58° 45.8' N Lat., 136° 30.2' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-05-01	<p>Blue Mouse Cove Nearshore waters in the general area of: Lat. 58° 47.01 N Lon. 136° 29.62 W</p> <p>Hugh Miller Inlet Nearshore waters in the general area of: Lat. 58° 44.95 N Lon. 136° 26.97 W</p>	<p>Free-oil Recovery- Shallow Water</p> <p>Maximize free-oil recovery in the offshore & nearshore environment of Blue Mouse Cove and Hugh Miller Inlet depending on spill source and trajectory.</p>	<p>Deploy free-oil recovery strike teams upwind and up-current of Hugh Miller Inlet and Blue Mouse Cove.</p> <p>Use aerial surveillance to locate incoming slicks.</p>	<p>Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.</p>	<p>Bartlett Cove Vessel platform</p>	<p>Via marine waters Chart 17318</p>	<p>Same as SE06-05-02</p>	<p>Vessel master should have local knowledge.</p>
SE06-05-02	<p>Blue Mouse Cove a. Lat.58° 47.67 N Lon. 136° 29.27 W b. Lat.58° 47.67 N Lon. 136° 29.27 W</p> <p>Hugh Miller Inlet c. Lat.58° 45.49 N Lon. 136° 26.29 W d. Lat.58° 43.91 N Lon. 136° 25.07 W</p> <p>Establish boom position in designated areas around Blue Mouse Cove and Hugh Miller Inlet to maximize the deflection of oil to the center of the inlet.</p>	<p>Deflection-Fixed</p> <p>Deflect oil from the identified shorelines back into the channel for recovery. Establish boom position in designated areas around Blue Mouse Cove and Hugh Miller Inlet to maximize the deflection of oil to the center of the inlet.</p>	<p>Transport equipment to site by vessel (class 2/3/4).</p> <p>Place boom and anchor systems with class 6 vessel.</p> <p>Position boom in cascaded arrays at an appropriate angle to deflect oil from the shorelines and set up for free-oil recovery</p> <p><u>Boom Lengths</u></p> <p>a. 1200 ft. b. 2000 ft. c. 1800 ft. d. 5400 ft.</p>	<p>Deployment Equipment 10,400 ft. protected-water boom 15 ea. anchor stakes 104 anchor systems (~30 lbs)</p> <p>Vessels 1 ea. class 2 2 ea. class 3/4 2 ea. class 6</p> <p>Personnel / Shift 14 ea. vessel crew</p> <p>Tending Vessels 1 ea.class 3/4 2 ea. class 6</p> <p>Personnel / Shift 5 ea. vessel crew</p>	<p>Vessel platform Ranger station and fuel barge in summer months</p>	<p>Via marine waters Chart 17318</p>	<p>Marine mammals-humpback whales (summer)</p> <p>Birds-waterfowl and shorebirds migration, molting, and winter concentration</p> <p>Habitat-marsh/estuary, sheltered rocky shoreline, high intertidal diversity</p> <p>Human use-high recreational use (May-Sept.)</p> <p>Land management-National Park</p>	<p>Vessel master should have local knowledge.</p> <p>See Figure G-3-12 for equipment locations.</p> <p>This area is located in Glacier Bay National Park.</p> <p>Surveyed: 5/15/02 NPS, TLR</p> <p>Tested: not yet</p>
SE06-05-03	<p>Hugh Miller Inlet Stream Lat.58° 47.25 N Lon. 136° 33.15 W</p>	<p>Exclusion</p> <p>Exclude oil from entering the stream and surrounding area at the head of Hugh Miller Inlet.</p>	<p>Deploy tidal-seal boom and protected-water boom across identified area.</p> <p>Tend throughout the tide.</p>	<p>Deployment Equipment 2ea. ≥ 50 ft. tidal-seal boom 1600 ft. calm-water boom 6 ea. anchor stakes 16 anchor systems (~30 lbs)</p> <p>Vessels, Personnel/Shift, Tending Same as SE-06-05-02</p>	<p>Vessel platform</p>	<p>Via marine waters Chart 17318</p>	<p>Same as SE06-05-02</p>	<p>Vessel master should have local knowledge.</p> <p>Tested: not yet</p> <p>Surveyed: 5/15/02 NPS, TLR</p>
SE06-05-04	<p>Hugh Miller Inlet a. Lat. 58° 45.47 N Lon. 136°28.56 W b. Lat. 58° 44.91N Lon. 136° 29.33W</p>	<p>Divert and Recover</p> <p>Divert oil to shoreside recovery points determined by spill source and course.</p>	<p>Deploy anchors and boom with fishing vessels and skiffs(class 3/4/6).</p> <p>Place protected-water boom at the proper angle to divert oil to recovery site.</p> <p>Set up recovery units and tend throughout the tide.</p> <p><u>Boom lengths</u></p> <p>a. 1000 ft. b. 1000 ft.</p>	<p>Deployment Equipment 2000 ft. protected-water boom 2 sections ≥50 ft. tidal-seal boom 10 ea. anchor systems (~30 lbs.) 4 ea. anchor stakes 2 ea. shoreside recovery units</p> <p>Vessels Same as SE-06-05-02</p> <p>Personnel / Shift Same as SE-06-05-02</p> <p>6 ea. response techs</p> <p>Tending Vessels Same as SE-06-05-02</p> <p>Personnel / Shift Same as SE-06-05-02</p> <p>4 ea. response techs.</p>	<p>Vessel platform</p>	<p>Via marine waters Chart 17318</p>	<p>Same as SE06-05-02</p>	<p>Take appropriate measures as outlined in Part 2 of this document to protect the beach at the recovery site.</p> <p>Tested: not yet</p> <p>Surveyed: 5/15/02 NPS, TLR</p>

Map & Photo Legend



SE06-06 North Beardslee Islands looking north.

	Free-oil Containment and Recovery, Shallow Water
	Deflection Booming, Live
	Protected-water Boom

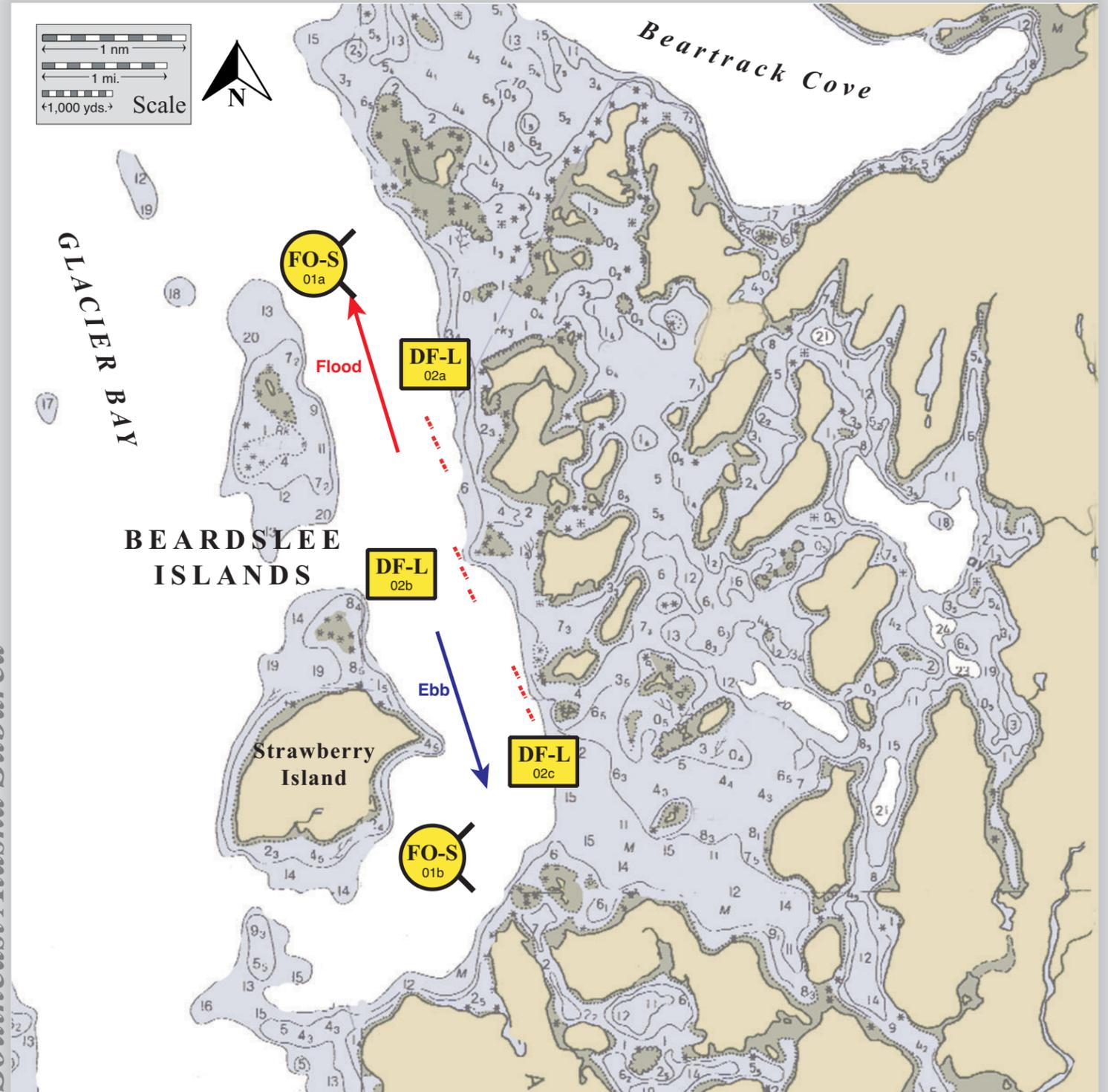


SE06-06 North Beardslee Islands looking northeast.

North Beardslee Islands, SE06-06

Center of map at 58° 32.6' N Lat., 135° 57.8' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-06-01	North Beardslee Islands Nearshore waters in the general area of: a. Lat. 58° 34.50 N Lon. 136° 00.61 W b. Lat. 58° 29. 65 N Lon. 136° 00.64 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environments of N. Beardslee Islands depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of N. Beardslee Islands. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Gustavus or Bartlett Cove	Via marine waters Chart 17318	Same as SE-06-06-02	Vessel masters should have local knowledge. There are many submerged rocks in the immediate area.
SE06-06-02	North Beardslee Islands a. Lat. 58° 35.05 N Lon. 135° 59.68 W b. Lat. 58° 33.57 N Lon. 135° 58.72 W c. Lat. 58° 31.47 N Lon. 135° 58.09 W	Deflection-Live Deflect oil from the N. Beardslee Islands and back into the channel for recovery. Currents of 8 kts.	Transport equipment to site by marine vessel (class 2/3/4). Place booms and hold in place with fishing vessel(class 3/4). Position booms at adequate angle to deflect oil from the N. Beardslee Islands and set up for free-oil recovery. <u>Boom lengths</u> a. 600 ft. b. 600 ft. c. 600 ft.	Deployment Equipment 1800 ft. protected-water boom Vessels 6 ea. class 3/4 Personnel / Shift 18 ea. vessel crew Tending Vessels 6 ea. class 3/4 Personnel / Shift 18 ea. vessel crew	Vessel platform	Via marine waters Chart 17318	Marine mammals-harbor seals, humpback whales (summer) Fish-juvenile fishes Birds-waterfowl and shorebirds migration, molting, and winter concentration Habitat-marsh/estuary, sheltered rocky shoreline, kelp/eel grass beds, high intertidal diversity High recreational use (May-Sept.) Land management-National Park Terrestrial mammals-bears	Vessel master should have local knowledge. See Figure G-3-12 for equipment locations This area is located in Glacier Bay National Park. Bears in area. Surveyed: 5/15/02 NPS, TLR Tested: not yet

Map & Photo Legend



SE06-07 Dundas Bay entrance looking towards the northwest.



SE06-07-04 Looking north at a stream in Dundas Bay.



SE06-07-02 & 03 Looking northwest at the islands in Dundas Bay



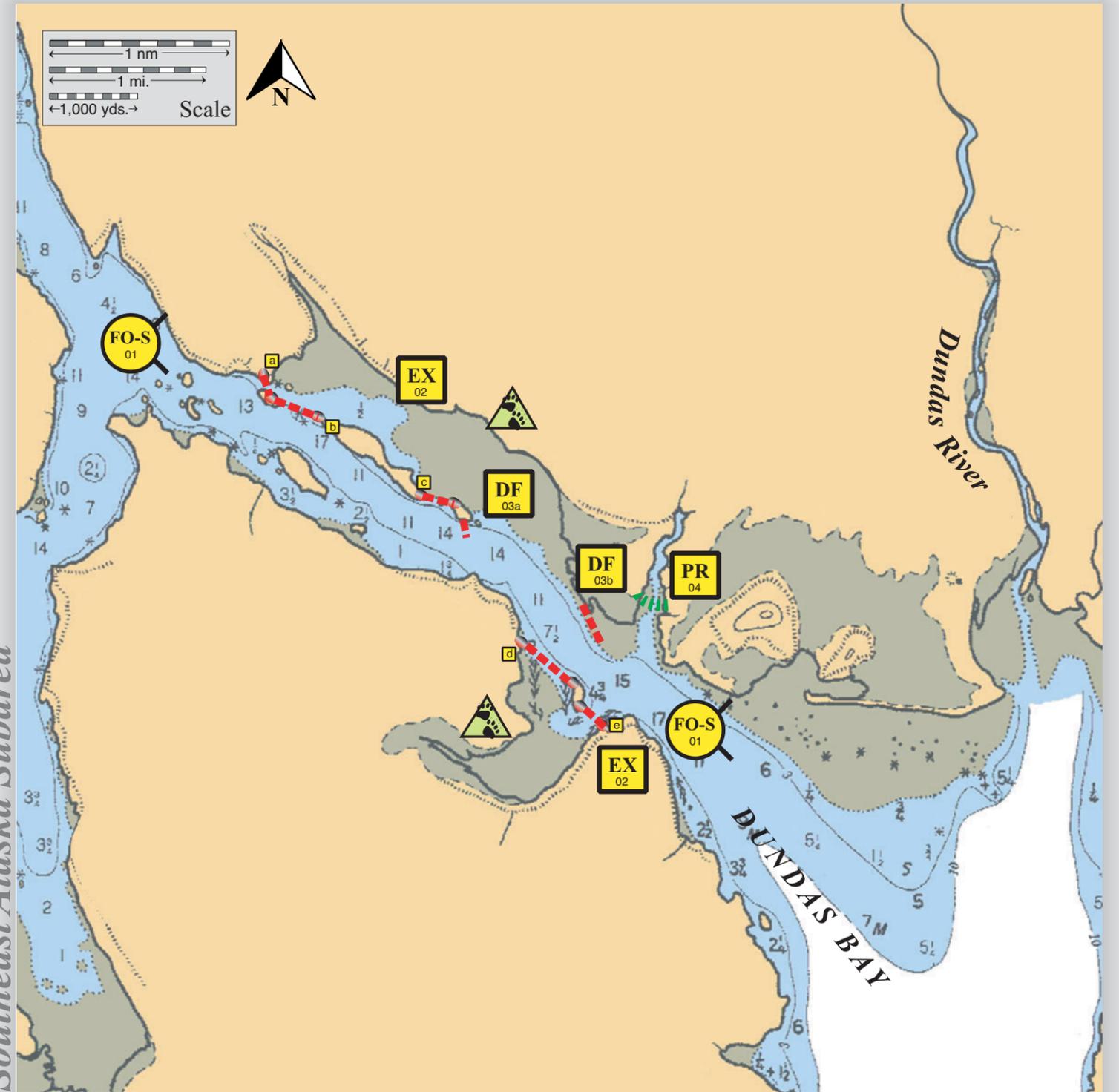
SE06-07-02d&e Looking southwest in Dundas Bay.

- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Deflection Booming, Fixed
- Passive Recovery and Debris Removal
- Protected-water Boom
- Snare Line
- Tidal-seal Boom
- Bears in Area, Guards Needed

Geographic Response Strategies for Southeast Alaska Subarea

Dundas Bay, SE06-07

Center of map at 58°27' N Lat., 136° 31' W Lon.



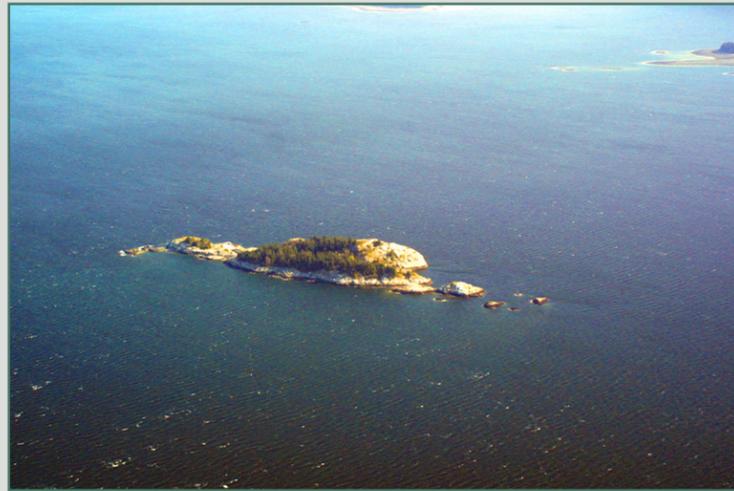
This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-07-01	Dundas Bay (confluence of NW and SW arms) at: Lat. 58° 24.05 N Lon. 136° 28.4 W	Free-oil Recovery Maximize free-oil recovery in near the source of the spill. Note: The confluence is a choke point and poses the highest risk of a grounding of the areas in Dundas Bay.	Deploy free-oil recovery strike teams in areas immediately adjacent to the vessel casualty. Use aerial surveillance to locate areas of heavy slick concentrations.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Bartlett Cove, Glacier Bay National Park, or Gustavus	Via marine waters.	Marine mammals-harbor seals Fish-intertidal salmon spawning (pink, chum) (summer-fall) Birds-waterfowl and shorebirds (year-round) Habitat-marsh, tidal mudflats and wetlands Human use-high recreational use Land management-National Park Terrestrial mammals-bears	Bear hazard along shoreline. See Figure G-3-12 for equipment locations.
SE06-07-02	Dundas Bay (confluence of NW and SW arms) Between islets along northeast & southeast shoreline at: a. Lat. 58° 24.0 N Lon. 136° 27.4 W b. Lat. 58° 23.8 N Lon. 136° 27.0 W c. Lat. 58° 23.3 N Lon. 136° 25.4 W d. Lat. 58° 22.4 N Lon. 136° 24.3 W e. Lat. 58° 22.15 N Lon. 136° 23.7 W	Exclusion Exclude oil from entering wetlands north of islets.	Use class 2 and class 3/4 vessels with deck space to transport equipment. Place protected-water boom, with tidal-seal on each end between islets using class 6 skiffs. Boom should roughly follow the line of the channel. <u>Boom Arrays</u> a. 500 ft. b. 1500 ft. c. 1000 ft. d. 3000 ft. e. 800 ft.	Deployment Equipment 6800 ft. protected-water boom. 9 ea ~40 lbs. anchor systems for boom every 500 feet. 10 ea. 50 ft. of tidal-seal boom units 10 ea. Anchor stakes Vessels 2 ea. class 2 2 ea. class 3/4 2 ea. class 6 Personnel Shift 18 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea vessel crew	Bartlett Cove, Glacier Bay National Park, or Gustavus	Via marine waters.	See SE06-07-02	Bear hazard along shoreline. This area is located in Glacier Bay National Park. Title 41 permit may be necessary. Contact ADNR. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-12 for equipment locations. Tested: not yet Surveyed: 5/15/02 NPS, TLR
SE06-07-03	Dundas Bay (confluence of NW and SW arms) a. Lat. 58° 23.2 N Lon. 136° 25.0 W b. Lat. 58° 22.7 N Lon. 136° 23.8 W	Deflection Deflect non-persistent oils away from wetlands and mudflats.	Deploy 1500 ft. of boom at angle appropriate for current velocity. Heaviest concentration of oil is likely to be from northeast. a. 300 ft. b. 1200 ft. (three 400 ft. arrays)	Deployment Equipment 1500 ft. protected-water boom. 4 ea. ~40 lbs. anchor systems. 7 ea ~40 lbs. anchor systems for securing boom every 500 ft. 1 ea. anchor stakes Vessels/Personnel/Tending Use resources listed in SE06-07-02	See SE06-07-02	See SE06-07-02	See SE06-07-02	See SE06-07-02 Located in a National Park. Tested: not yet Surveyed: 5/15/02 NPS, TLR
SE06-07-04	Dundas Bay Old Dundas River mouth (fossil river) Lat. 58° 22.7 N Lon. 136° 23.8 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place 500 ft. snare line or sorbent boom across mudflats. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 500 ft. snare line or sorbent boom 10 ea. anchor stakes Vessels / Personnel / Tending Use resources listed in SE06-07-02	See SE06-07-02	See SE06-07-02	See SE06-07-02	See SE06-07-02

Map
& Photo

Legend



SE06-08 Looking northeast towards South Marble Island.



SE06-08 Looking southwest at South Marble Island.



SE06-08 Looking northwest at South Marble Island.

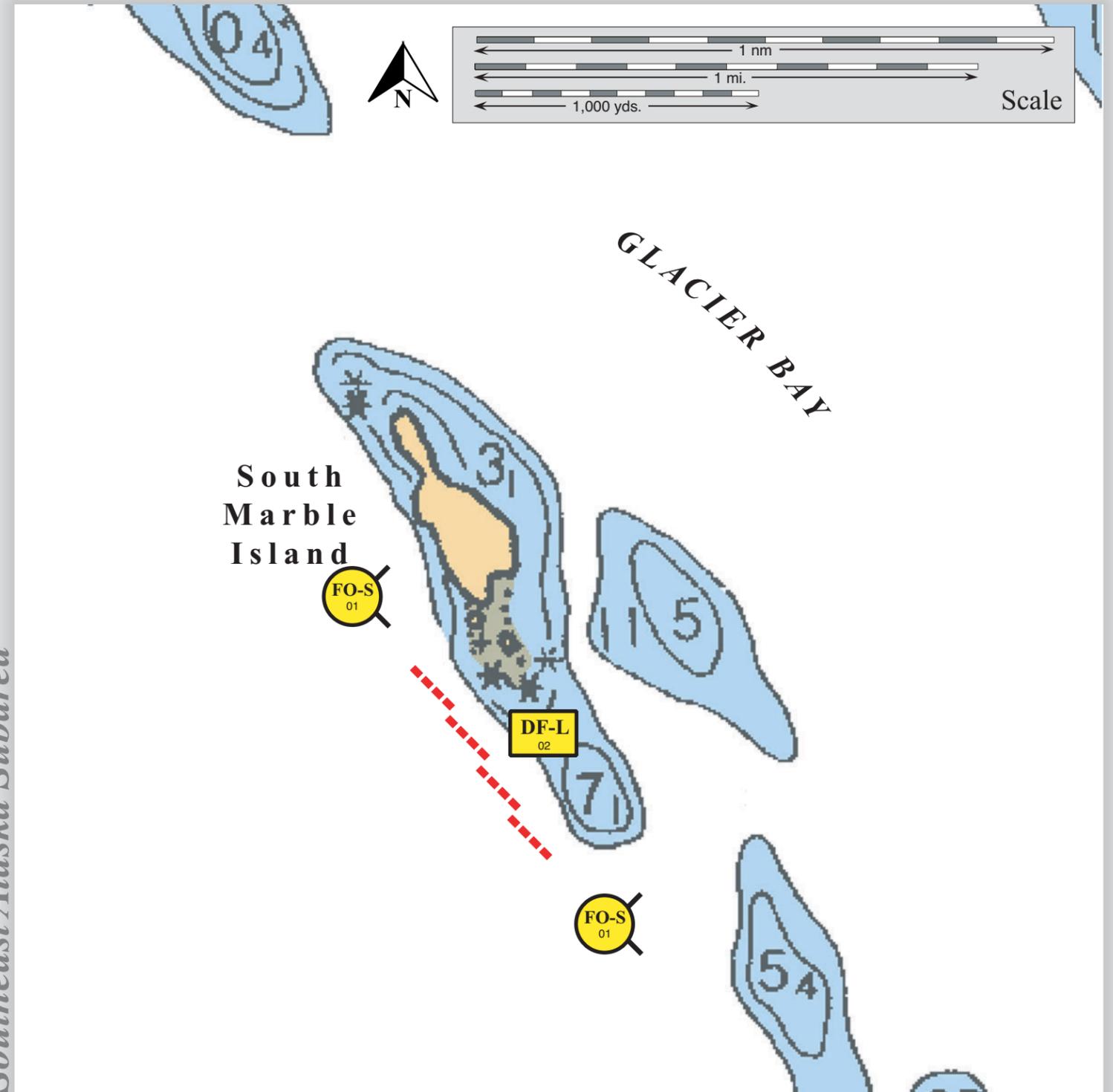
-  Free-oil Containment and Recovery, Shallow Water
-  Deflection Booming, Live
-  Protected-water Boom

Geographic Response Strategies for

Southeast Alaska Subarea

South Marble Island, SE06-08

Center of map at 58° 38' N Lat., 136° 02' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-08-01	South Marble Island (Glacier Bay) Lat. 58° 38 N Lon. 136° 02 W	Free-oil Recovery Maximize free-oil recovery in the off-shore and nearshore waters around South Marble Island.	Deploy free-oil recovery strike teams. Ensure operations do not disturb sea lions and seals on haulouts. Maintain 100 yds. off north shore and 50 yds. off south shore.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts South Marble Island.	Bartlett Cove or vessel platform	Via marine waters	Marine mammals-seal and Steller sea lion haulout (500 yd. exclusion zone)(year-round), humpback whale feeding area (summer) Birds-puffins, gulls, pigeon guillemots, oystercatchers, cormorants (extensive colonies) Habitat-sheltered rocky shores Human use-high recreational use Land management-National Park	Exposed conditions, shoal water/rocks and marine mammal haul-out prohibit any direct approach, landing or attachment of equipment to the island.
SE06-08-02	South Marble Island (Glacier Bay) Lat. 58° 38 N Lon. 136° 02 W	Deflection - Live Deflect oil away from island using boom tethered to response vessels Boom may not be attached to the island. Deep water precludes anchoring along the nearshore. Arrays of boom must be positioned and held in place by small vessels.	Tow and position 600 ft. of boom using class 3/4 vessels (2 vessels per 600 ft. boom string). Use aerial surveillance to position boom. Deflect oil away from island and into open water of Glacier Bay.	Deployment Equipment 2400 ft. protected-water boom Vessels 8 ea. class 3/4 Personnel/Shift 16 ea. vessel crew Tending Vessels 2 ea. class 2 2 ea. class 6 Personnel/Shift 12 ea. vessel crew	Same as SE06-08-02	Same as SE06-08-02	Same as SE06-08-02	Same as SE06-08-02 Towing required. See Figure G-3-12 for equipment locations. This area is located in Glacier Bay National Park. Tested: not yet Surveyed: 5/15/02 NPS, TLR

Map
& Photo

Legend



SE06-09 Looking east into South Sandy Cove.



SE06-09 Looking southeast over Puffin Island into North Sandy Cove.



SE06-09-02d Looking northeast into head of Spokane Cove.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Deflection Booming, Fixed
-  Diversion Booming
-  Protected-water Boom
-  Tidal-seal Boom
-  Shoreside Recovery, Marine Access
-  Marine Recovery
-  Bears in Area, Guards Needed

Geographic Response Strategies for

Southeast Alaska Subarea

Spokane/Sandy Cove, SE06-09

Center of map at 58° 42' N Lat., 135° 58' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE06-09-01	Spokane/Sandy Cove Lat. 58° 42.6 N Lon. 135° 59.2 W (approximate location)	Free-oil Recovery Maximize recovery of oil in the vicinity of the mouths of Spokane Cove, South Sandy Cove & North Sandy Cove.	Deploy free-oil recovery strike. Use aerial surveillance to locate areas of heavy slick concentrations.	Four free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Bartlett Cove, Glacier Bay National Park.	Via marine waters	See SE06-09-02	See Figure G-3-12 for equipment locations.
SE06-09-02	Spokane/Sandy Cove a. Lat. 58° 43.5 N Lon. 136° 00.93 W b. Lat. 58° 43.54N Lon. 136° 00.20 W c. Lat. 58° 42.3 N Lon. 135° 58.9 W d. Lat. 58° 42.07N Lon. 135° 57.1 W	Diversion/Recovery Divert oil entering South Sandy Cove to shoreline or marine recovery unit. <u>Boom strings</u> a. 600 ft. to marine recovery unit b. 1000 ft. in 500 ft. stepped array to shoreline recovery c. 2000 ft. in 500 ft. stepped arrays to shoreline recovery d. 2000 ft. in 500 ft. stepped arrays to shoreline recovery	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place total of 5600 ft. of boom to divert oil to shoreside (or nearshoreside depending on tide) to marine recovery.	Deployment Equipment 5600 ft. protected-water boom. 12 ea. ~40 lbs. anchor systems for securing each array approx every 500 ft. 3 ea. anchor stakes 1 ea. shallow water marine recovery unit Vessels 2 ea. class 2 or 3/4 2 ea. class 6 Personnel Shift 12 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea. vessel crew	See SE06-09-01	See SE06-09-01	Marine mammals-humpback whales (summer), harbor seals Fish-intertidal salmon spawning (pink) Birds-waterfowl, shorebirds Human use-high recreational use (summer) Land management-National Park Terrestrial mammals-bears	See SE06-09-01 See Figure G-3-12 for equipment locations. Bear hazard along shoreline. This area is located in Glacier Bay National Park. Tested: not yet Surveyed: 5/15/02 NPS, TLR
SE06-09-03	Spokane/Sandy Cove a. North anchor point Lat. 58° 42.7 N Lon. 136° 00.6 W b. North anchor point Lat. 58° 42.54 N Lon. 136° 00.46 W	Deflection - Live Deflect oil away from mouth of South Sandy Cove.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 2500 ft. of protected-water boom in 1000 and 1500 ft. sections at an angle appropriate for current velocity and direction. a. 1000 ft. may be deployed from shore and anchored. b. North end of 1500 ft. section may be anchored in approximate position with south end tended/secured to class 3/4 vessel.	Deployment Equipment 2500 ft. protected-water boom 5 ea. ~40 lbs. anchor systems. Anchor approximately every 500 ft. 1 ea. anchor stakes Vessels/Personnel/Tending Use resources listed in SE06-07-02 plus two dedicated class 3/4 vessels to tend or secure south end of 1500 ft. boom section.	See SE06-09-01	See SE06-09-01	See SE06-09-02	See SE06-09-01 Tested: not yet Surveyed: 5/15/02 NPS, TLR
SE06-09-04	Spokane/Sandy Cove Lat. 58° 43.9 N Lon. 136° 00.8 W	Exclusion Protect mudflats and marsh between Little Puffin and Big Puffin Island using exclusion boom anchored to achieve a convex shape.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 1200 ft. of protected-water boom as follows: <u>Boom configuration</u> Use 1200 ft. anchored every 300 ft. to achieve a convex shape. 50 ft. of tidal-seal boom at either end.	Deployment Equipment 1200 ft protected-water boom 4 ea. ~40 lbs. anchor systems. Anchor approximately every 300 ft. 2 ea. 50 ft. sections of tidal-seal boom 3 ea. anchor stakes. Vessels/Personnel/Tending Use resources listed in SE06-07-02	See SE06-09-01	See SE06-09-01	See SE06-09-02	See SE06-09-01 Tested: not yet Surveyed: 5/15/02 NPS, TLR
SE06-09-05	Spokane/Sandy Cove Lat. 58° 43.9 N Lon. 135° 58.0 W	Exclusion Prevent movement of oil between North and South Sandy Cove during high tide using exclusion boom.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Deploy 300 ft. of protected-water boom with 50 ft. of tidal-seal boom at either end.	Deployment Equipment 300 ft. protected-water boom 1 ea. ~40 lbs. anchor systems. Anchor at midpoint. 2 ea 50 ft. sections of tidal-seal boom 2 ea. anchor stakes Vessels/Personnel/Tending Use resources listed in SE06-07-02	See SE06-09-01	See SE06-09-01	See SE06-09-02	See SE06-09-01 Tested: not yet Surveyed: 5/15/02 NPS, TLR

G. SOUTHEAST ALASKA RESPONSE ZONE 7

Figure G-3-13 provides an overview of the Southeast Alaska response zone 7, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE07-01. Figure G-3-14 shows the location of oil spill response equipment throughout zone 7.

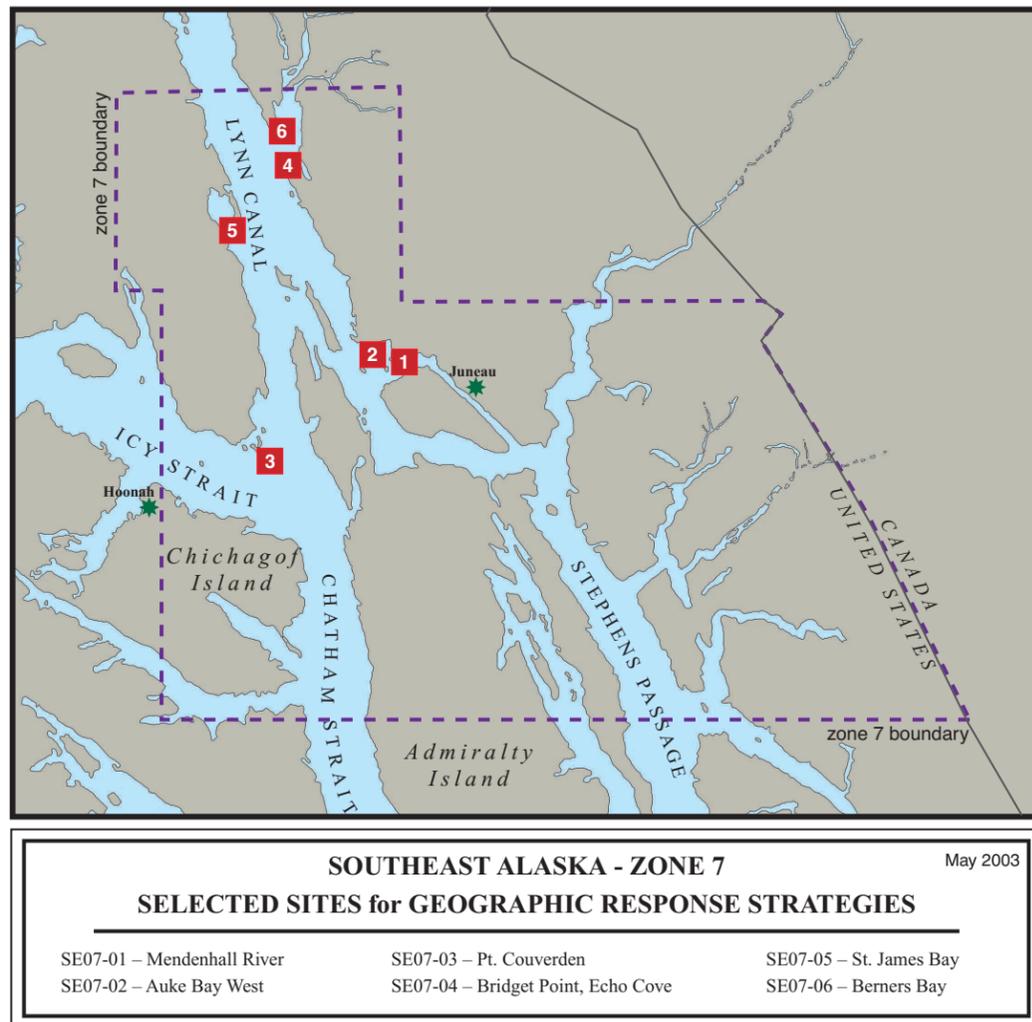


Figure G-3-13. Southeast Alaska Response Zone 7.

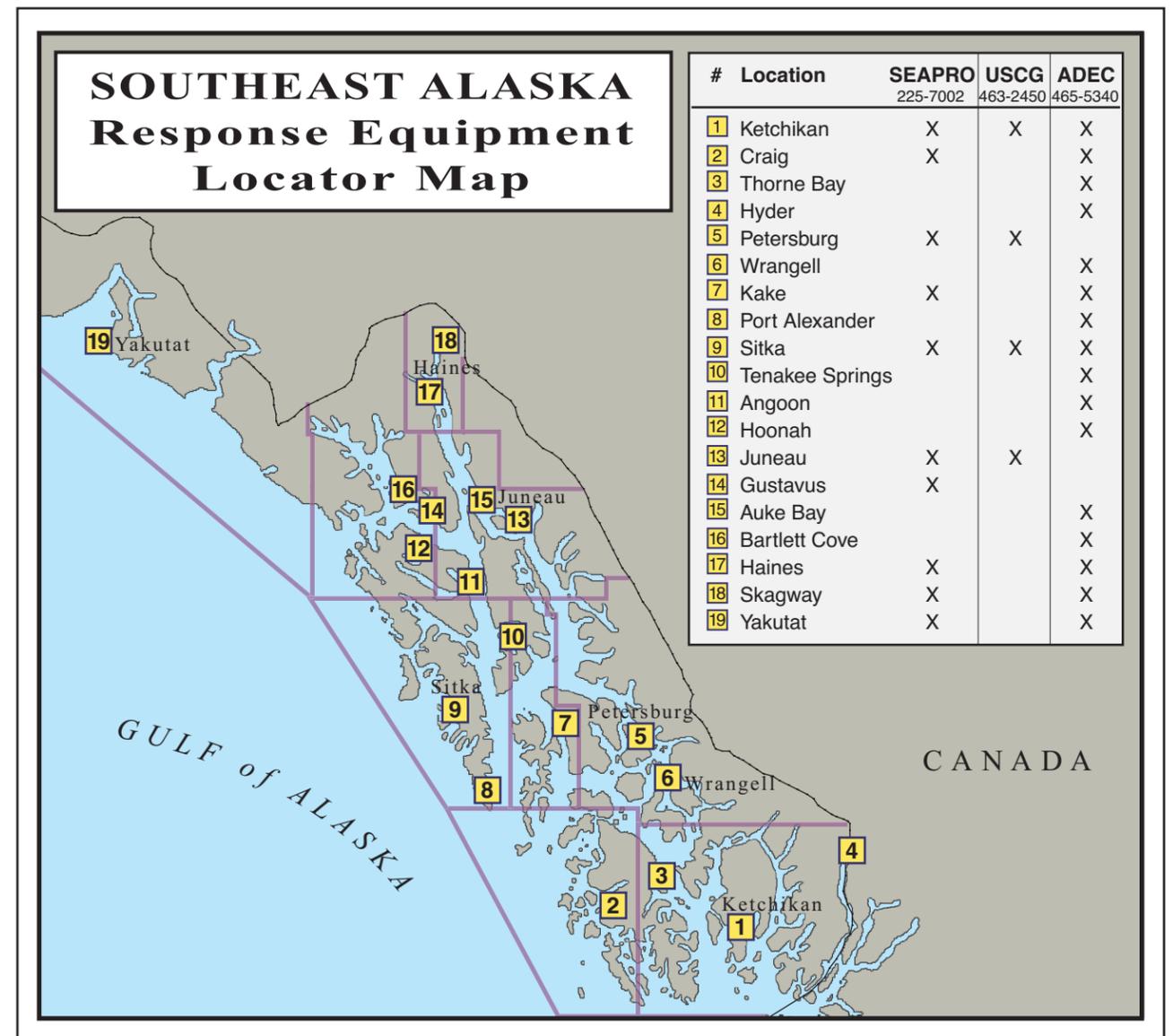


Figure G-3-14. Southeast Alaska Response Equipment Locator Map.

Map
& Photo

Legend



SE07-01-02 Looking east across peninsula at Mendenhall Bar and Hut Point.



SE07-01 Looking south over Hut Point.



SE07-01-02 Looking over the Mendenhall Bar to the northeast.

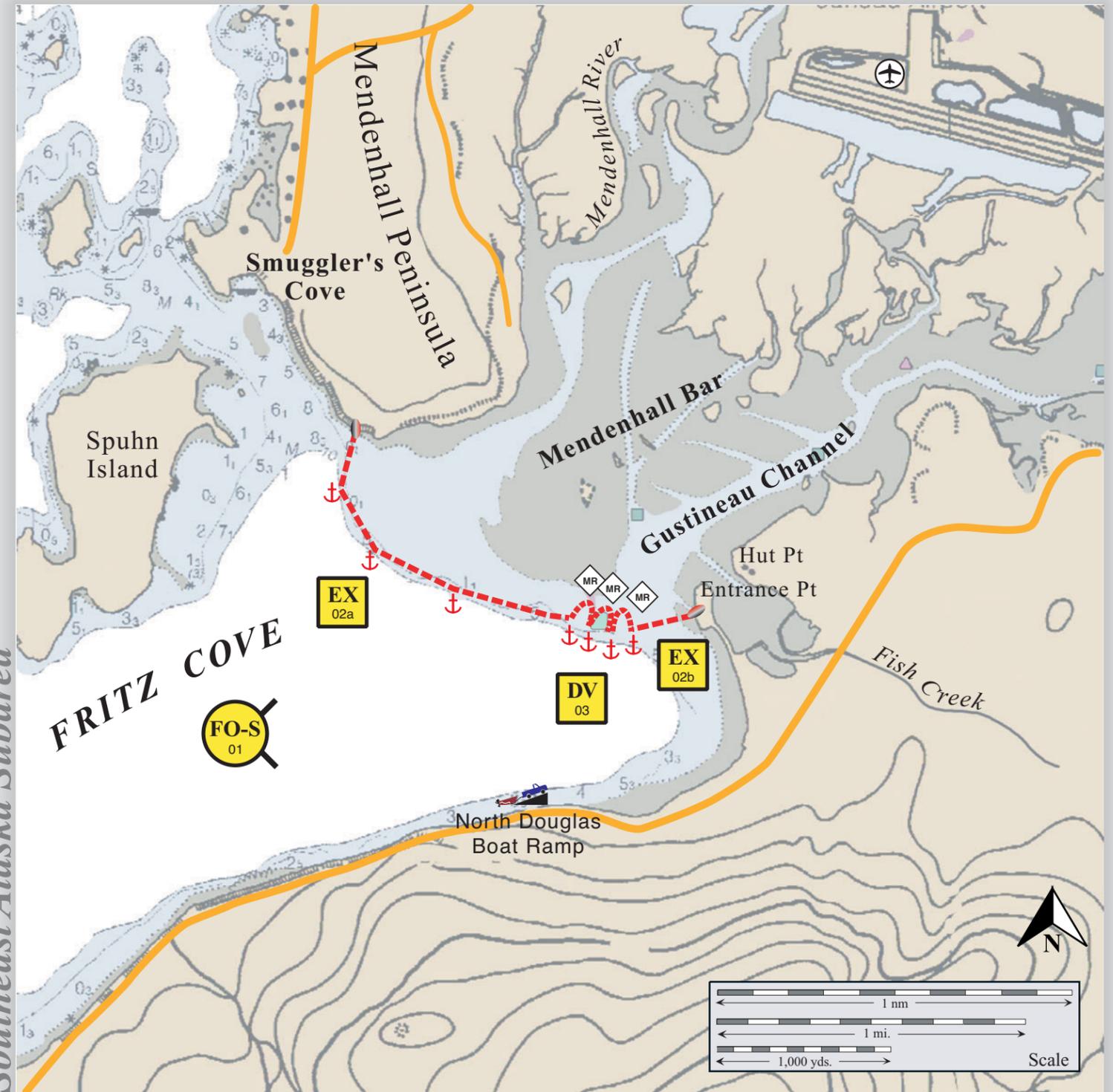
-  Free-oil Containment and Recovery, Shallow Water
-  Diversion Booming
-  Protected-water Boom
-  Marine Recovery
-  Tidal-seal Boom
-  Navigational Markers (seasonal)
-  Boat Ramp
-  Road
-  Airport

Geographic Response Strategies for

Southwest Alaska Subarea

Mendenhall River, SE07-01

Center of map at 58° 20.1' N Lat., 134° 37.0' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE07-01-01	Fritz Cove Nearshore waters in the general area of: Lat. 58° 19.6 N Lon. 134° 39.2 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment near Mendenhall River.	Deploy free-oil recovery strike teams upwind and up-current of Mendenhall River. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	N. Douglas boat ramp or Auke Bay public dock	Via marine waters	Same as SE07-01-02	Vessel masters should have local knowledge.
SE07-01-02	Mendenhall Bar Boom Segment Locations: Segment a. Northwest end Lat. 58° 20.47 N Lon. 134° 38.25 W Southeast end Lat. 58° 19.91 N Lon. 134° 37.10 W Segment b. West end Lat. 58° 19.85 N Lon. 134° 36.77 W East end Lat. 58° 19.91 N Lon. 134° 36.38 W	Exclusion Exclude oil for the Mendenhall Bar where the flood tide currents are less than 1 kt.	Use class 2 and class 3/4 vessels with deck space to transport equipment, class 6 setnet or seine skiffs to deploy boom and set sm. anchors. Place boom segment a., ~5,500 ft. of protected-water, boom from Mendenhall Peninsula to entrance of Gastineau Channel. Place boom segment b., ~1,200 ft. of protected-water, boom from entrance of Gastineau Channel to Entrance Point. Tend boom throughout tide. If current exceeds boom's ability to exclude oil, convert to Divert/Recovery as shown in SE07-01-03.	Deployment Equipment 6,700 ft. protected-water boom 35 ea. anchor systems (~40 lbs.) 2 ea. 50 ft. tidal-seal 4 ea. anchor stakes Vessels 1 ea. class 2 3 ea. class 3/4 4 ea. class 6 Personnel / Shift 28 ea. vessel crew Tending Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 10 ea. vessel crew	N. Douglas boat ramp or Auke Bay public dock	Via marine waters	Fish-intertidal salmon/trout spawning (pink, chum, coho, sockeye, steelhead, Dolly Varden, cutthroat) Birds-waterfowl (year-round) and shorebird (spring and fall) concentrations Habitat-sheltered tidal flats, marsh Human use-high recreational use	REPORT any cultural resources found during operations to FOSC Historic Properties Specialist. See Figure G-3-14 for equipment locations. Title 41 permit may be necessary. Contact ADNR. Tested: 6/17/03 SEAPRO Surveyed: 5/2/03, 6/17/03 TLR, SEAPRO, ADEC
SE07-01-03	Northern End of Gastineau Channel In the general area of: Lat. 58° 19.87 N Lon. 134° 39.95 W	Diversion / Recovery Divert oil to designated marine recovery in areas where the flood tide currents exceed 1 kt.	Use class 2 and class 3/4 vessels with deck space to transport equipment, class 6 setnet or seine skiffs to deploy boom and set sm. anchors. Place three 1,000 protected-water U-boom arrays in the gap of the exclusion boom to collect oil moving on the flood tide current. The mouth of each U-boom should be approximately 330 ft. wide. Use marine recovery units to recover oil collected in booms or gate the U-boom arrays and recover oil concentrated oil as it flows through the gate. Tend throughout the flood tide.	Deployment Equipment 3,000 ft. protected-water boom 12 ea. lg. anchor systems (~75 lbs.) 6 ea. 25 ft. chains for gates 3 ea. marine recovery units Vessels Same as SE07-01-02 Personnel / Shift Same as SE07-01-02 Tending Vessels Same as SE07-01-02 Personnel / Shift Same as SE07-01-02	N. Douglas boat ramp or Auke Bay public dock	Via marine waters	Same as SE07-01-02	Tested: 6/17/03 SEAPRO Surveyed: 5/2/03, 6/17/03 TLR, SEAPRO, ADEC

Map & Photo Legend



SE07-02 Point Louisa and West Auke Bay looking towards the north.



SE07-02-02a Behind Auke Cape looking west.



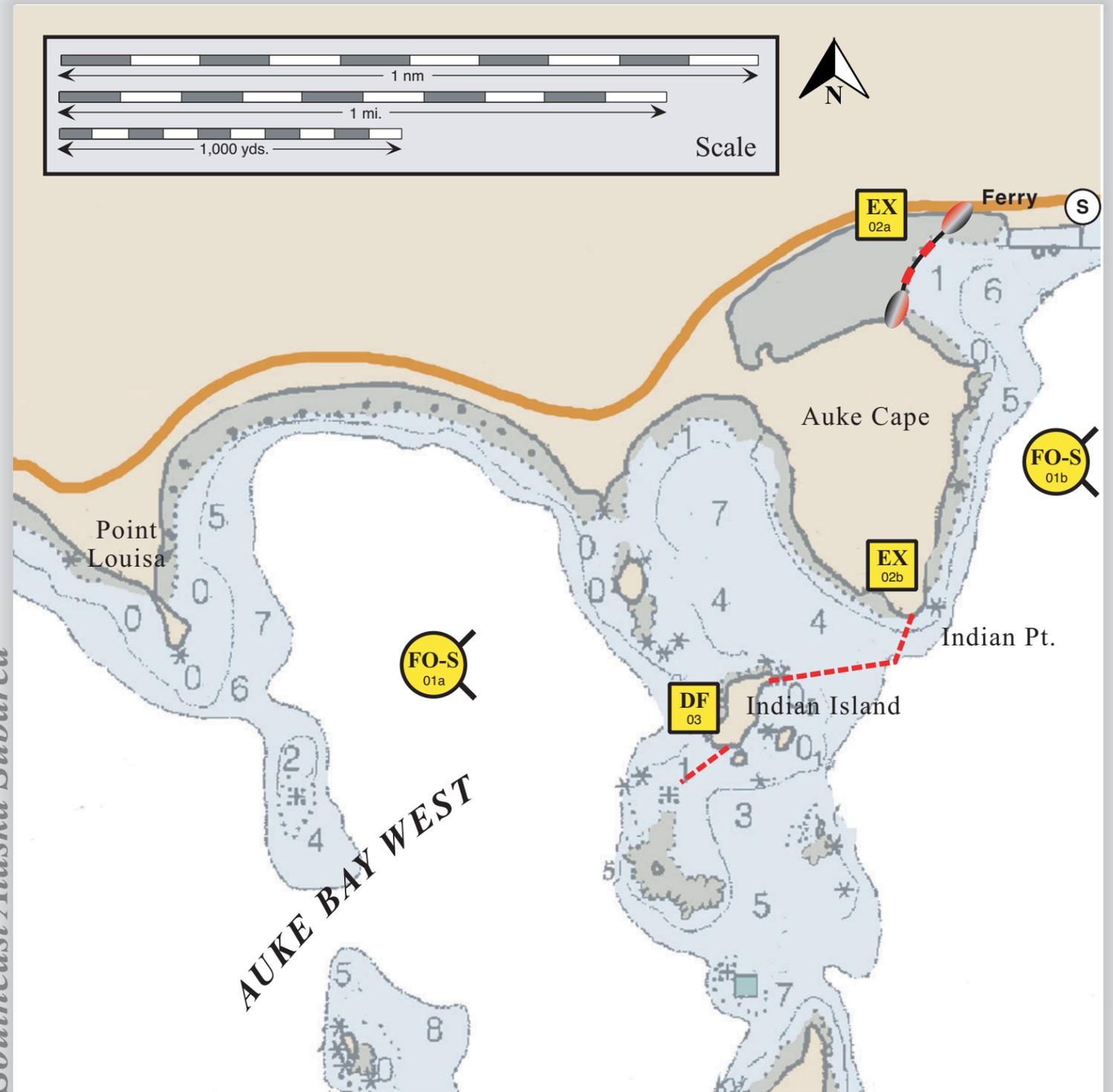
SE07-02-02b & 03 Looking northwest at Indian Point and Indian Island.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Deflection Booming
-  Protected-water Boom
-  Calm-water Boom
-  Tidal-seal Boom
-  Staging Area
-  Road

Geographic Response Strategies for Southeast Alaska Subarea

Auke Bay West, SE07-02

Center of map at 58° 22.5' N Lat., 134° 42.6' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE07-02-01	West Auke Bay (Auke Rec.) Nearshore waters in the general area of: a. Lat. 58° 22.3 N Lon. 134° 42.9 W b. Lat. 58° 22.4 N Lon. 134° 41.0 W	Free-oil Recovery Maximize free-oil recovery in the offshore and nearshore environment outside the tidal flats.	Deploy free-oil recovery strike teams upwind and up-current of tidal flats. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Auke Bay public dock or state ferry terminal	Via marine waters	Same as SE07-02-02	Vessel masters should have local knowledge.
SE07-02-02	West Auke Bay (Auke Nu Cove) a. Lat. 58° 22.8 N Lon. 134° 41.6 W b. Lat. 58° 22.4 N Lon. 134° 41.0 W	Exclusion Exclude oil from entering wetlands west of ferry terminal and behind Indian Island.	Use class 3/4 vessels with deck space to transport equipment. Class 6 setnet or seine skiffs to deploy boom and set anchors. 02a - Place 900 ft. of calm-water boom with tidal-seal on each end, at or above low tide line, in Auke Nu Cove. 02b - Deploy at high tide. Place 1700 ft protected-water boom between Indian Island and Indian Point.	Deployment Equipment 900 ft. calm-water boom 1700 ft. protected water boom 21 ea. anchor systems (~40 lbs.) 100 ft. tidal-seal boom 8 ea. anchor stakes Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 10 ea. vessel crew Tending Vessels 1 ea. class 6 Personnel / Shift 2 ea. vessel crew	Auke Bay public dock or state ferry terminal	Via marine waters	Human use-high recreational use (year-round) Birds-waterfowl and shorebird concentrations (winter) Invertebrates-clam bed Habitat-marsh, kelp and eelgrass beds	Same as SE07-02-01 FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-14 for equipment locations. Tested: not yet Surveyed: 5/2/03 TLR
SE07-02-03	West Auke Bay (Indian Point) Lat. 58° 22.1 N Lon. 134° 42.1 W	Deflection Deflect oil at south end of Indian Island.	Place 400 ft. of protected-water boom in a cascade pattern, in 2 sections, to divert oil away from Indian Cove.	Deployment Equipment 400 ft. protected-water boom 4 ea. anchor systems (~40 lbs.) Vessels, Personnel, Tending Same as SE06-02-02	Auke Bay public dock or state ferry terminal	Via marine waters	Same as SE07-02-02	Close bay to marine traffic. Tested: 6/17/03 SEAPRO Surveyed: 5/2/03 TLR

Map & Photo Legend



SE07-03-02b and 03a-e Looking southwest into the cove behind Couverden Island.



SE07-03-02b Looking west at the east entrance to the cove behind Couverden Island.



SE07-03-03a-h Looking north over Couverden Island.



SE07-03-02a Looking north at the salmon stream at the head of Swanson Harbor.

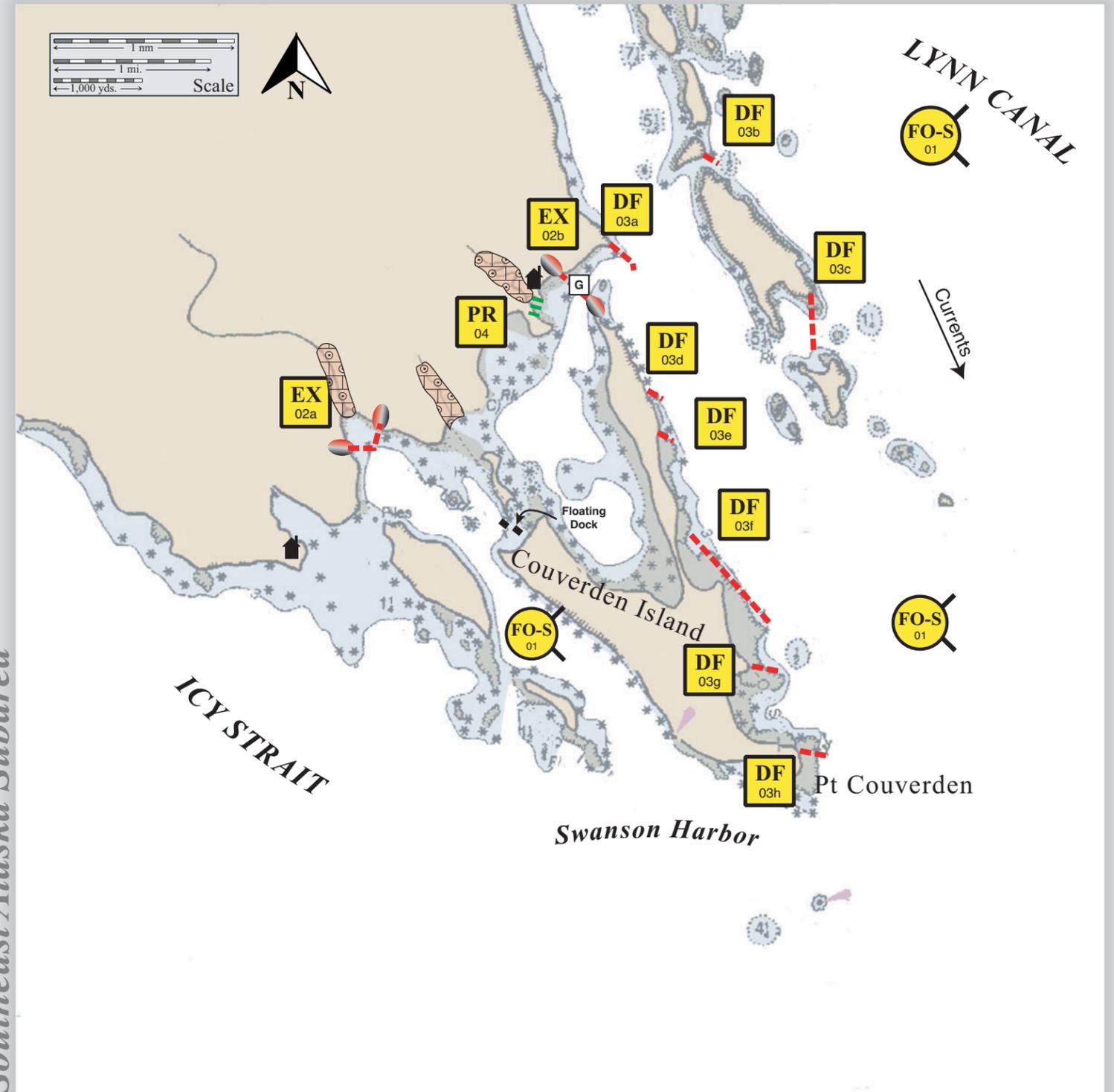
- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Passive Recovery and Debris Removal
- Deflection Booming, Fixed
- Protected-water Boom
- Gate
- Marine Recovery
- Tidal-seal Boom
- Salmon Spawning Stream
- Private Cabin

Geographic Response Strategies for

Southeast Alaska Subarea

Point Couverden, SE07-03

Center of map at 58° 12.6' N Lat., 135° 05.7' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE07-03-01	Point Couverden – NE and NW Nearshore waters in the general area of: Lat. 58° 11.0 N Lon. 135° 02.7 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment between Ansley and Couverden Island.	Deploy free-oil recovery strike teams upwind and up-current of Pt. Couverden. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Auke Bay or vessel platform	Via marine waters NOAA chart 17316	Same as SE07-03-02	Vessel masters should have local knowledge. Tactics on the west side of Couverden Island should only be deployed when winds are from the SE.
SE07-03-02	Point Couverden West Boom Arrays a. Lat. 58° 13.22 N Lon. 135° 08.17 W b. Lat. 58° 14.06 N Lon. 135° 05.69W	Exclusion Exclude oil from salmon stream in Swanson Harbor and entering the eastern entrance to Swanson Harbor. Establish a gate in the eastern array.	Use protected-water boom with tidal-seal to exclude oil from salmon stream and Swanson Harbor. <u>Boom Arrays</u> a. 1800 ft. b. 1500 ft.	Deployment Equipment 3300 ft. protected-water boom 4 ea. 50 ft. tidal-seal 29 ea. anchor systems (~40 lbs.) 8 ea. Anchor stakes Vessels 2 ea. class 2 (transport equipment) 2 ea. class 3/4 2 ea. class 6 Personnel/Shift 20 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea. vessel crew	Auke Bay or vessel platform	Via marine waters NOAA chart 17316	Fish-intertidal salmon spawning (pink, coho, chum) Birds-waterfowl (year-round) and shorebird (spring-fall) concentrations Habitat-high intertidal diversity, marsh, sheltered tidal flats Human use-high recreational use Invertebrates-crabs, blue mussels	Surface current always flows south on the west side of Lynn Canal. Oil will move toward Whitestone Harbor. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-14 for equipment locations. Tested: not yet Surveyed: 4/26/03 TLR
SE07-03-03	Point Couverden East <u>Boom Arrays</u> a. Lat. 58° 13.3 N Lon. 135° 08.0 W b. Lat. 58° 14.93 N Lon. 135° 04.35 W c. Lat. 58° 13.96 N Lon. 135° 02.97W d. Lat. 58° 13.55 N Lon. 135° 04.99 W e. Lat. 58° 13.29N Lon. 135° 04.8 W f. Lat. 58° 12.86 N Lon. 135° 04.57W g. Lat. 58° 11.97N Lon. 135° 03.88W h. Lat. 58° 11.48N Lon. 135° 03.33W	Deflection Deflect oil away from northeast side of Couverden Island towards free oil strike teams.	Place protected-water boom at given locations on the northeast side of Couverden Island to deflect oil traveling south and west. <u>Boom Arrays</u> a. 1000 ft. b. 600 ft. c. 3000 ft. d. 150 ft. e. 300 ft. f. 3000 ft. g. 600 ft. h. 600 ft.	Deployment Equipment 9250 ft. protected-water boom 90 ea. anchor systems (~40 lbs.) 16 ea. anchor stakes Vessels & Personnel Same as SE07-03-02 Tending Same as SE07-03-02	Auke Bay or vessel platform	Via marine waters NOAA chart 17316	See SE07-03-02	This tactic is based on currents flowing south and the presumption that oil is spilled north of Pt. Couverden in Lynn Canal Tested: not yet Surveyed: 4/26/03 TLR
SE07-03-04	Point Couverden Lat. 58° 14.1 N Lon. 135° 06.24 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place 800 ft. of snare line or sorbent boom across the tidal flats and stream mouth.	Deployment Equipment 800 ft. snare line or sorbent boom 8 ea. anchor stakes Vessels, Personnel, Tending Same as SE07-03-02	Auke Bay or vessel platform	Via marine waters NOAA chart 17316	See SE07-03-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Surveyed: 4/26/03 TLR

Map
& Photo

Legend



SE07-04-02 & 05 Point Bridget looking south towards Cowee Creek.

FO-S	Free-oil Containment and Recovery, Shallow Water		Tidal-seal Boom
EX	Exclusion Booming		Snare Line
DF	Deflection Booming, Fixed		Public Use Cabin
PR	Passive Recovery and Debris Removal		Mooring
	Protected-water Boom		ATV Trail
			Road
			Boat Ramp



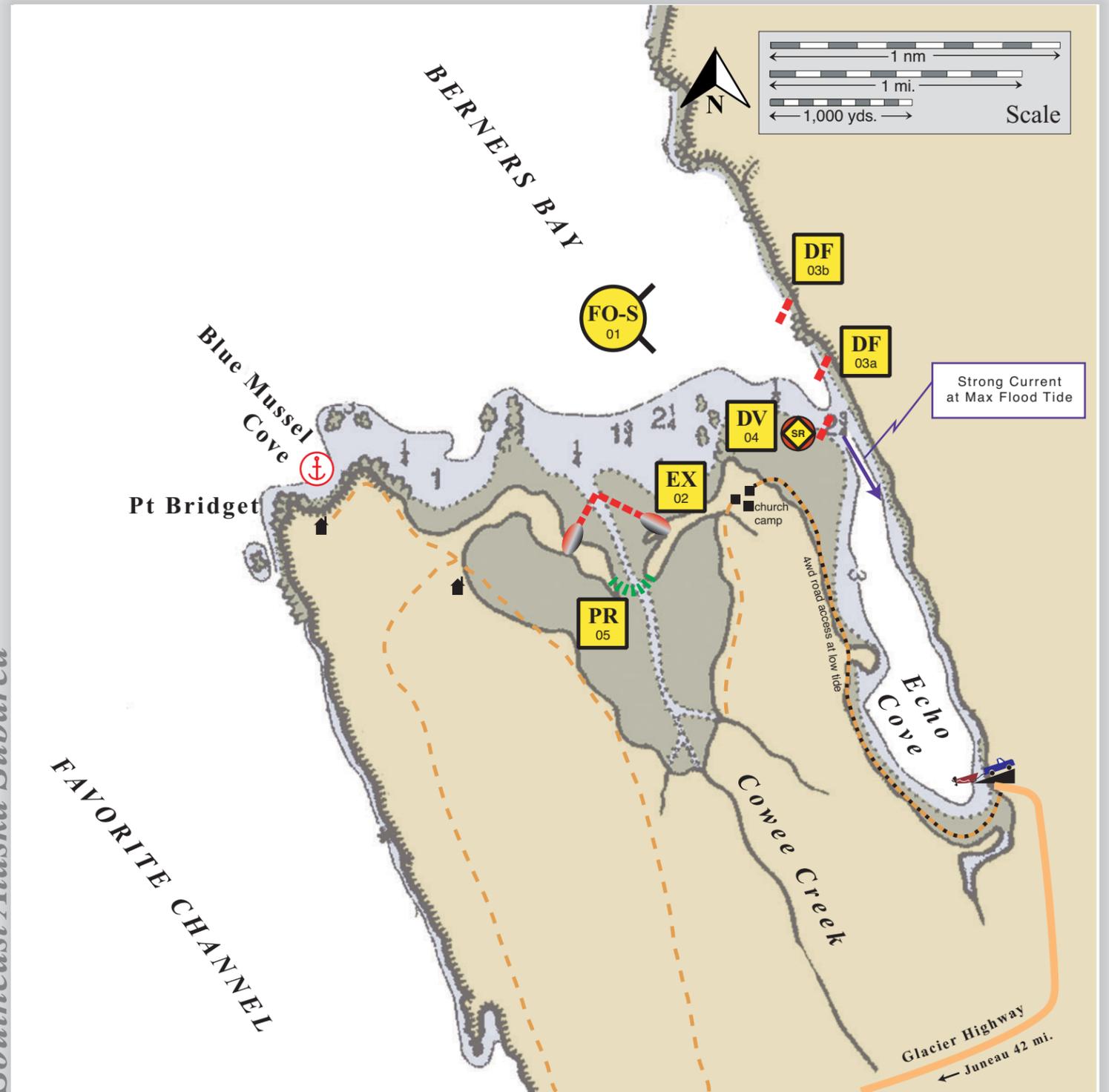
SE07-04-03a,b & 04 Looking south into Echo Cove.

Geographic Response Strategies for

Southeast Alaska Subarea

Point Bridget/Echo Cove, SE07-04

Center of map at 58° 40.9' N Lat., 134° 57.4' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE07-04-01	Point Bridget, Echo Cove Nearshore waters in the general area of: Lat. 58° 41.1 N Lon. 134° 58.4 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of Point Bridget and Echo Cove depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of Bridget Cove. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Juneau Echo Cove Vessel platform	Via marine waters Chart 17316	Same as SE04-07-02	Vessel master should have local knowledge.
SE07-04-02	Cowee Creek Lagoon Lat. 58° 40.9 N Lon. 134° 57.3 W	Exclusion Exclude oil from entering tidal lagoon between Point Bridget and Echo Cove.	Deploy tidal-seal boom and protected-water boom with fishing vessels and skiffs across the entrance to Cowee Creek and adjacent tidal marsh. Establish apex to maximize deflection of oil. Tend throughout the tide.	Deployment Equipment 1800 ft. protected water boom 2 ea. ≤ 50 ft. sections tidal-seal boom 18 ea. anchor systems (~20 lbs.) 4 ea. anchor stakes Vessels 2 ea. class 3/4 2 ea. class 6 Personnel/Shift 10 ea. vessel crew Tending Vessels 1 ea. class 3/4 1 ea. class 6 Personnel/Shift 3 ea. vessel crew	See SE07-04-01	Via marine waters Chart 17316 2 public use cabins.	Marine mammals- harbor seals, sea lions Fish-intertidal salmon/trout spawning (pink, chum, coho, steelhead, Dolly Varden, cutthroat), eulachon spawning Birds-waterfowl concentrations Habitat-marsh, sheltered rocky shore, kelp and eelgrass beds, high intertidal diversity Human use-high recreational use, commercial fishing Land management –State Park Terrestrial mammals-bears	Vessel master should have local knowledge. The church camp at Echo Cove has a landing craft that might be available for response efforts. The area is a natural collection spot during north winds. See Figure G-3-14 for equipment locations. FOSC Historic Properties Specialist should INSPECT site prior to operations. Tested: not yet Surveyed: 4/28/03 TLR
SE07-04-03	Entrance to Echo Cove a. Lat. 58° 41.45 N Lon. 134° 55.83W b. Lat. 58° 41.21N Lon. 134° 55.61W	Deflection-Fixed Deflect oil entering Echo Cove towards the shoreside recovery.	Transport equipment to site by marine vessel (class 2/3/4). Place boom and anchors with fishing vessels and skiffs (class 3/4/6). Position boom at appropriate angle to deflect oil from Echo Cove and set up for shore side recovery. <u>Boom Array</u> a. 600 ft. b. 600 ft.	Deployment Equipment 1200 ft. protected-water boom 4 ea. anchor stakes 10 ea. anchor systems (~40 lbs.) Vessel, Personnel/Shift, Tending Same as SE07-04-02	See SE07-04-01	Via marine waters Chart 17316 State Park lands	See SE07-07-02	Vessel master should have local knowledge. Echo Cove launch may be restricted by low tide and winter road conditions. Uncharted submerged rocks are present in the immediate area. Bears in area. Title 41 permit may be necessary. Contact ADNDR. Tested: not yet Surveyed: 4/28/03 TLR
SE07-04-04	Entrance to Echo Cove Lat. 58° 40.93N Lon. 134° 55.68 W	Diversion/Recovery Divert oil entering Echo Cove to shoreside recovery.	Use class 6 skiffs to deploy boom and set anchors. Place 600 ft. of boom to divert oil to shoreside for recovery. Establish recovery site on the sandbar extending into the mouth of the cove.	Deployment Equipment 600 ft. protected water boom. 6 ea. ~40 lbs anchor systems 2 ea. Anchor stakes. 1 ea. shore side recovery unit Vessel, Personnel/Shift, Tending Same as SE07-04-02 plus 2 ea. response techs	See SE07-04-01	See SE07-07-01 Chart 17316	See SE07-07-02	See SE03-09-01 Prevailing SE winds. Tested: not yet Surveyed: 4/28/02 TLR
SE07-04-05	Cowee Creek Lagoon Lat. 58° 40.4 N Lon. 134° 57.0 W	Passive Recovery Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place 1000 ft. of snare line or sorbent boom across the tidal flats and stream mouth, in the entrance to the lagoon.	Deployment Equipment 1000 ft. snare line or sorbent boom 10 ea. anchor stakes Vessels, Personnel, Tending Same as SE07-04-02	See SE07-04-01	Via marine waters Chart 17316	See SE07-07-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Surveyed: 4/28/02 TLR

Map & Photo Legend



SE07-05 Looking north into St. James Bay.



SE07-05 Looking southwest at the Lynn Brothers Islands.



SE07-05 Looking northwest in St. James Bay.

- Free-oil Containment and Recovery, Shallow Water
- Exclusion Booming
- Diversion Booming, Fixed
- Passive Recovery and Debris Removal
- Protected-water Boom
- Calm-water Boom
- Tidal-seal Boom
- Snare Line
- Marine Recovery
- Shoreside Recover, Marine Access
- Bears in Area, Guards Needed
- Salmon Spawning Stream
- Public Use Cabin

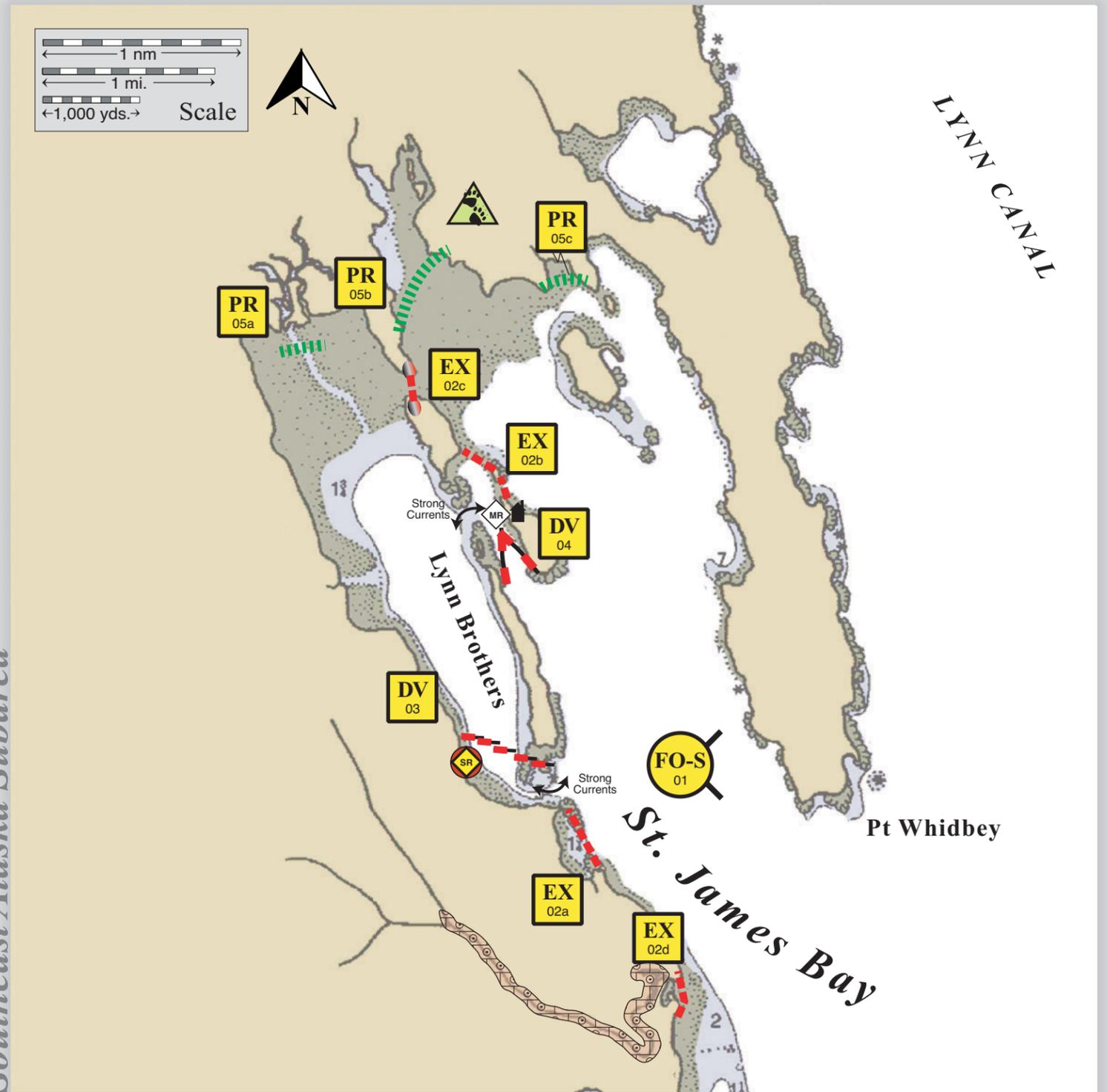


SE07-05-02d Overlooking the stream at the mouth of St. James Bay.

St. James Bay, SE07-05

Center of map at 58° 35.9' N Lat., 135° 10.7' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE07-05-01	St. James Bay Nearshore waters in the general area of: Lat. 58° 35.9 N Lon. 135° 10.7 W	Free-oil Recovery-Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of St. James Bay depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of St. James Bay Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Juneau Harbor Amalga Harbor Echo Cove Marine vessel	Same as SE07-05-02	Same as SE07-05-02	Vessel master should have local knowledge.
SE07-05-02	St. James Bay a. Lat. 58° 34.39 N Lon. 135° 10.93W b. Lat. 58° 36.35N Lon. 135° 11.76W c. Lat. 58° 36.82 N Lon. 135° 12.93W d. Lat. 58° 33.67 N Lon. 135° 09.91W	Exclusion Exclude oil from entering the west side of St. James Bay and the stream at the mouth of the Bay.	Transport equipment by vessel (class 2/3/4) from staging area. Deploy tidal-seal (on boom (c)), protected-water booms and anchors with fishing vessels and skiffs (class 3/4/6) across identified areas to exclude oil from entering the identified environmentally sensitive areas. Tend throughout the tide. <u>Boom Lengths</u> a. 1300 ft. b. 2000 ft. c. 900 ft. d. 1000 ft.	Deployment Equipment 5200 ft. protected-water boom 2 ea. 50 ft < tidal-seal boom 44 ea. anchor systems (~20 lbs.) 2 ea. anchor systems (~40 lbs.) 20 ea. anchor stakes Vessels 2 ea. class 2 (transport equipment) 2 ea. class 3/4 2 ea. class 6 Personnel/Shift 18 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea. vessel crew	Same as SE07-05-01	Via marine waters Chart 17316 USFG public use cabin may be used by response crews.	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (pink, chum, coho, Dolly Varden) Birds-waterfowl and shorebird migration, molting, and winter concentration, gulls(summer) Habitat-sheltered tidal flats, marsh/estuary, kelp and eelgrass beds High recreational use (May-Sept.) Land management-State Park Terrestrial mammals-bears	Vessel master should have local knowledge. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-14 for equipment locations. Echo Cove launch may be restricted by low tide and winter road conditions. Tested: not yet Surveyed: 4/28/03 TLR
SE07-05-03	St. James Bay Lat. 58°34.81 N Lon. 135°11.94 W	Divert / Shore side Recovery Divert oil entering behind the Lynn Brothers for shoreside recovery.	Deploy anchors and boom with skiffs and fishing vessels (class 3/4/6). Place 5 600 ft. sections of calm-water boom extending from identified point to divert oil into a collection area in St. James Bay. Establish shoreside recovery unit at a point that maximizes recovery of oil. Tend through out the tide.	Deployment Equipment 3000 ft. calm-water boom 4 ea. anchor stakes 30 ea. anchor systems (~40 lbs.) 1 ea. shoreside recovery unit Vessels, Personnel, Tending Same as SE03-05-02 plus 2 ea. response techs	Same as SE07-05-01	Same as SE07-05-02	Same as SE03-05-02	Tested: not yet Surveyed: 4/28/03 TLR
SE07-05-04	St. James Bay Anchor Locations Lat. 58° 20.20 N Lon. 134° 38.23 W	Diversion / Marine Recovery Divert oil to designated recovery vessels.	Use class 6 setnet or seine skiffs to deploy boom and set anchors. Place calm-water boom in a chevron pattern to maximize the recovery of oil between the islands. Recover oil with marine vessels at the apex.	Deployment Equipment 2400 ft. calm-water booms 6 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes 1 ea. marine recovery unit Vessels, Personnel/Shift, Tending: Same as SE-07-05-02	Same as SE07-05-01	Same as SE07-05-02	Same as SE07-05-02	See Figure G-3-14 for equipment locations. Tested: not yet Surveyed: 4/28/03 TLR
SE07-05-05	St. James Bay Tidal Flats a. Lat. 58° 39.95 N Lon. 135°13.62 W b. Lat. 58° 37.35 N Lon. 135°12.42W c. Lat. 58° 37.35 N Lon. 135°11.13 W	Passive Recovery Use passive recovery as dictated by conditions to minimize impact to the tidal flats.	Place snare line or sorbent boom across the entrance to the tidal flats. Anchor with stakes. Replace as necessary to maximize recovery of oil. <u>Boom Lengths</u> a. 2200 ft. b. 1200 ft.	Deployment Equipment 3400 ft of snare line or sorbent boom 42 ea. anchor stakes Vessels, Personnel/Shift, Tending: Same as SE-07-05-02	Same as SE07-05-01	Same as SE07-05-02	Same as SE07-05-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Bears in area. Tested: not yet Surveyed: 4/28/03 TLR

Map
& Photo

Legend



SE07-06 Looking northwest in Berners Bay.



SE07-06-03b & 04 The northeast corner of Berners Bay.



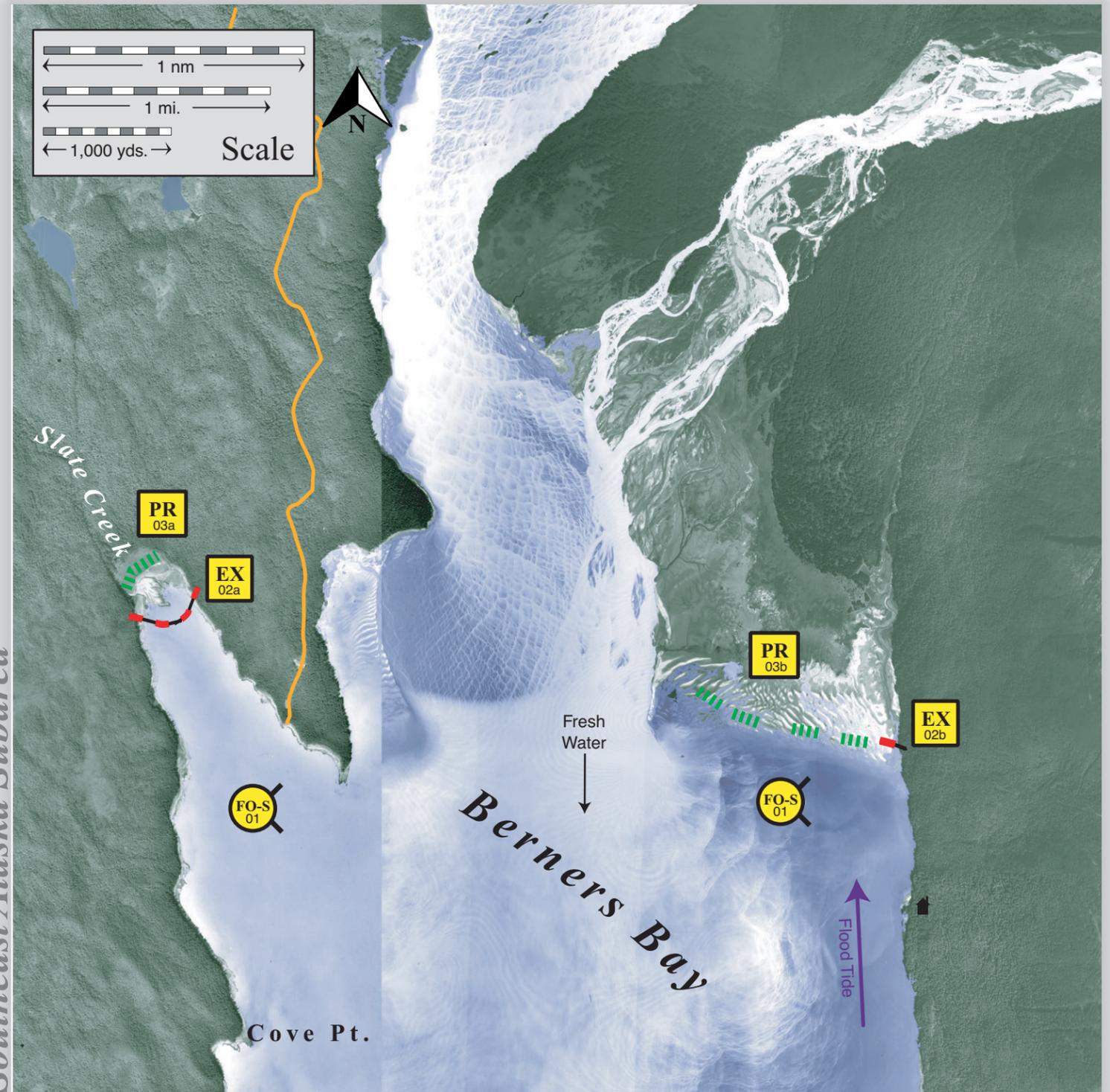
SE07-06-02 & 03a Looking north over Slate Creek in Berners Bay.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Passive Recovery and Debris Removal
-  Calm-water Boom
-  Snare Line
-  Road
-  Cabin

Geographic Response Strategies for Southeast Alaska Subarea

Berners Bay, SE07-06

Center of map at 58° 44' N Lat., 134° 59' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE07-06-01	Berners Bay Lat. 58° 44 N Lon. 134° 59 W (approximate location)	Free-oil Recovery Maximize recovery of oil at head of bay.	Deploy free-oil recovery strike teams. Use aerial surveillance to locate areas of heavy slick concentrations.	Two free-oil recovery strike teams to intercept oil before it impacts sensitive areas.	Juneau Amalga Harbor Echo Cove	Via marine waters Echo Cove boat launch (Echo Cove launch may be restricted by low tide and winter road conditions).	See SE07-06-03	Title 41 permit may be necessary. Contact ADNDR. Bears in area. See Figure G-3-14 for equipment locations.
SE07-06-02	Berners Bay a. Lat. 58° 47.3 N Lon. 135° 01.8 W b. Lat. 58° 46.88 N Lon. 134° 56.37W	Exclusion Exclude oil from entering the intertidal area around Slate Creek and the creek on the east side of the bay.	Transport equipment by vessel (class 2/3/4) from staging area. Deploy calm-water boom and anchors with fishing vessels and skiffs (class 3/4/6) across the mouth of Slate Creek and the creek on the east side of the bay to exclude oil from entering the identified environmentally sensitive areas. <u>Boom Arrays</u> a. 2000 ft. b. 600 ft.	Deployment Equipment 2600 ft. calm-water boom 22 ea. anchor systems (~20 lbs.) 8 ea. anchor stakes Vessels 2 ea. class 3/4 2 ea. class 6 Personnel/Shift 10 ea. vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 5 ea. vessel crew	Vessel platform	Same as SE07-06-01	See SE07-06-03	Vessel master should have local knowledge. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-14 for equipment locations. Echo Cove launch may be restricted by low tide and winter road conditions. Bears in area. Tested: not yet Surveyed: 4/28/03 TLR
SE07-06-03	Berners Bay a. Lat. 58° 47.3 N Lon. 135° 01.8 W b. Lat. 58° 46.9 N Lon. 134° 56.9 W	Passive Recovery Minimize impact to intertidal mudflats through passive recovery using snare line or sorbent boom.	Place snare line or sorbent boom across intertidal areas in front of Slate Creek and on the east side in areas where high tide may flow through low spots in the storm berm. Replace oiled sections as needed using marine vessels.	Deployment Equipment 8200 ft. snare line or sorbent boom 82 ea. anchor stakes. 1000 ft of line. Vessels/Personnel/Tending Use resources listed in SE07-06-02	See SE07-06-01	Same as SE07-06-01	Marine mammals-harbor seals haulout, Steller sea lion feeding (spring-eulachon run) Fish-intertidal salmon/trout spawning (coho, pink, chum, sockeye, Dolly Varden, cutthroat) (summer-fall), herring spawning (spring), eulachon spawning (spring) Birds-waterfowl, gulls, shorebirds Habitat-marsh, tidal flats Human use-high recreational use Terrestrial mammals-bears	Approximate locations (Note: This is a dynamic river delta, particularly the east side. Site survey required immediately before deployment to identify best deployment locations.) Higher tides (~16 ft.) require additional boom Use snare line for persistent oils and sorbent boom for non-persistent. Place boom during high tide to ensure oil is not pushed into substrate by deployment activity. Surveyed: 4/28/03 TLR

H. SOUTHEAST ALASKA RESPONSE ZONE 8

Figure G-3-15 provides an overview of the Southeast Alaska response zone 8, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE08-01. Figure G-3-16 shows the location of oil spill response equipment throughout zone 8.

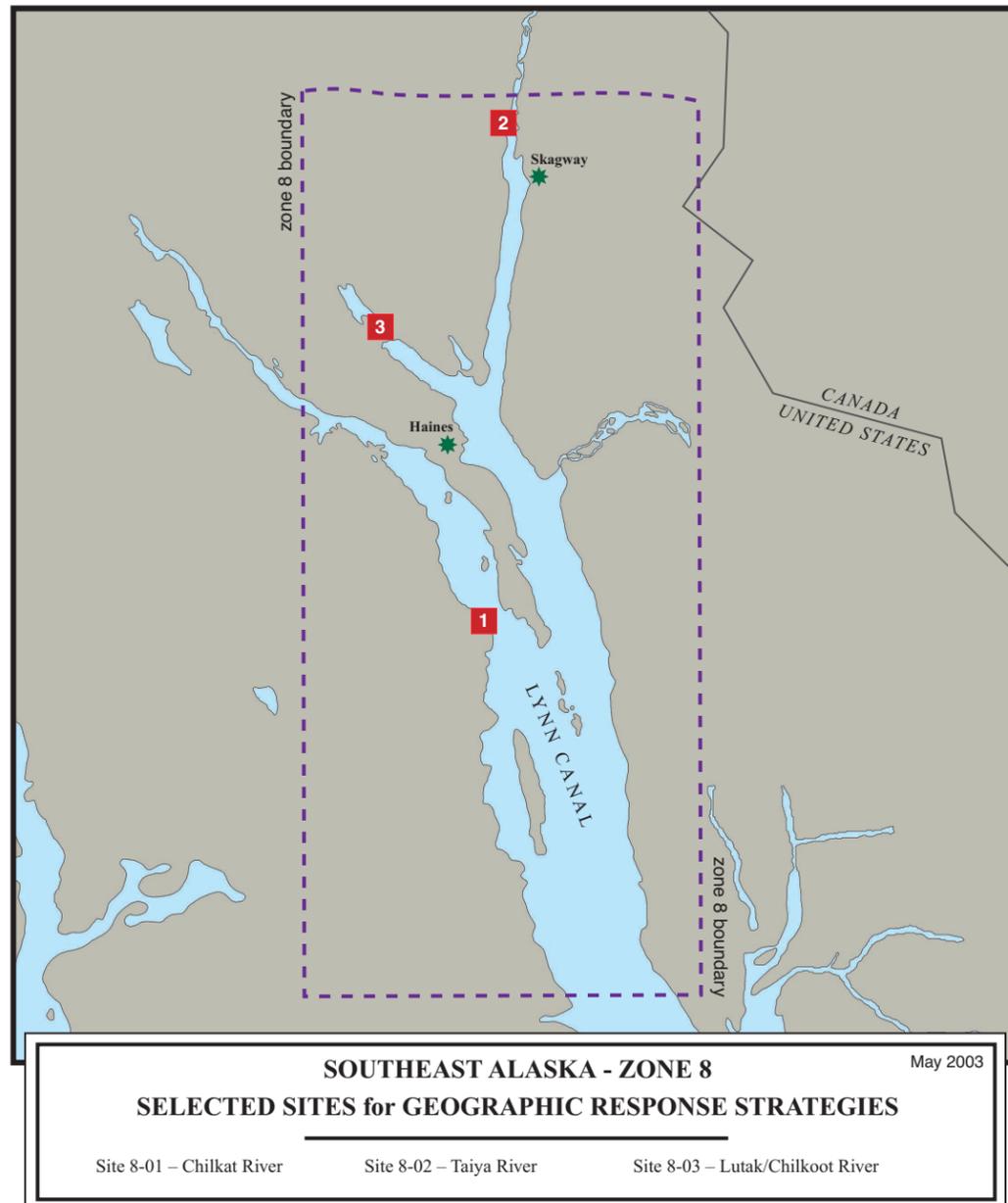


Figure G-3-15. Southeast Alaska Response Zone 8.

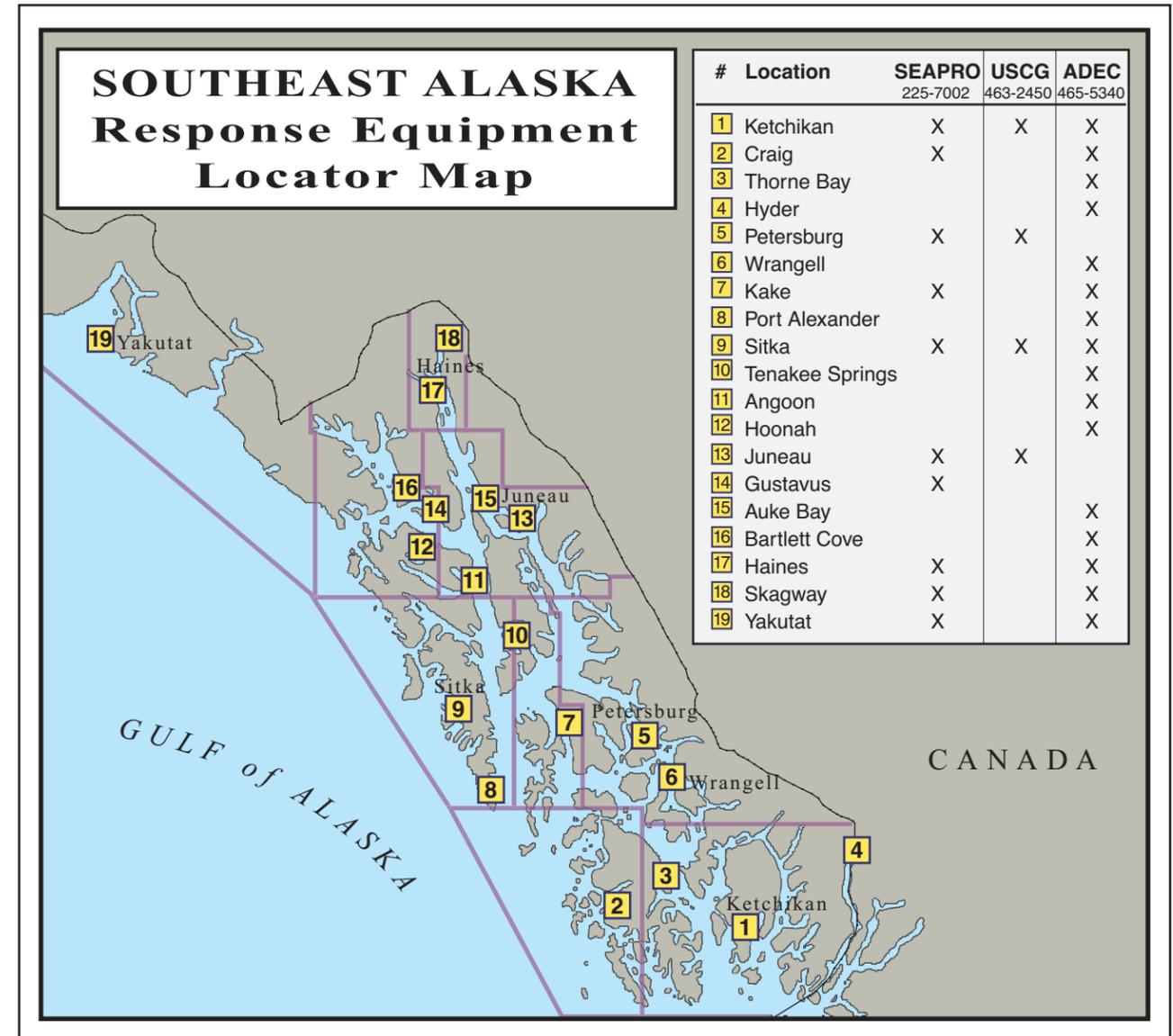


Figure G-3-16. Southeast Alaska Response Equipment Locator Map.

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Map
& Photo

Legend



SE08-01 Looking northwest into the Chilkat Inlet.



SE08-01-02 Looking northeast over Kalhagu Cove.



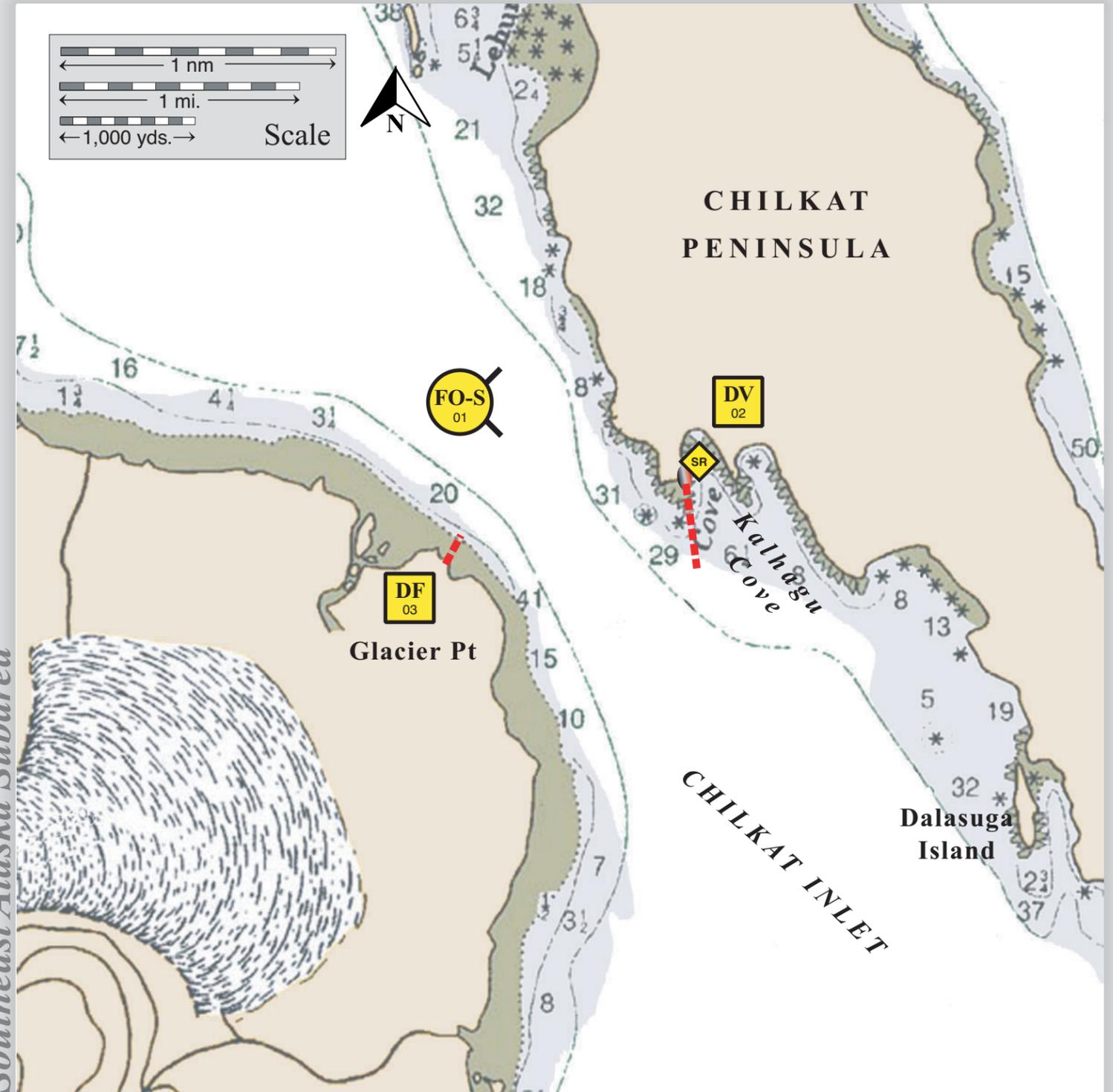
SE08-01-03 Looking north over Glacier Point.

-  Free-oil Containment and Recovery, Shallow Water
-  Diversion Booming
-  Deflection Booming, Fixed
-  Protected-water Boom
-  Tidal-seal Boom
-  Shoreside Recovery

Geographic Response Strategies for
Southeast Alaska Subarea

Chilkat River, SE08-01

Center of map at 59° 06.4' N Lat., 135° 22.4' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE08-01-01	Chilkat River Nearshore waters in the general area of: Lat. 59° 06.5 N Lon. 135° 22.65W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of Chilkat River depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of Chilkat River. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Haines Harbor	Via marine waters Chart 17317	Same as SE08-01-02	Vessel master should have local knowledge. Tested: not yet
SE08-01-02	Kalhagu Cove Lat. 59° 06.57N Lon. 135° 21.68W	Divert and Recover Divert oil to shoreside recovery points within Kalhagu Cove determined by spill source and trajectory.	Transport equipment by vessel (class 2/3/4) from Haines. Deploy anchors and boom with fishing vessels and skiffs (class 3/4/6). Place protected-water boom at the proper angle to divert oil to recovery site. Set-up recovery unit and tend throughout the tide.	Deployment Equipment 1600 ft. protected-water boom 1 section ≥50 ft. section tidal-seal boom 16 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes 1 ea. shoreside recovery unit. Vessels 2 ea. class 3/4 2 ea. class 6 Personnel / Shift 10 ea. vessel crew 3 ea. response techs. Tending Vessels 1 ea. class 3/4 1 ea. class 6 Personnel / Shift 4 ea. vessel crew 2 ea. response techs.	Vessel platform	Via marine waters	Fish-eulachon spawning, intertidal salmon/trout spawning ≤10,000 (coho, pink, chum, king, sockeye, steelhead, Dolly Varden, cutthroat) (summer-fall), herring spawning, whitefish spawning Birds-waterfowl and shorebirds migration, molting, and winter concentration, bald eagle concentration ≥3000 (late fall-early winter) Human use-high use subsistence (salmon), intensive commercial salmon fishing, high recreational use Terrestrial mammals-bears	Vessel master should have local knowledge. FOSC Historic Properties Specialist should MONITOR on-site operations. Bears in area. See Figure G-3-16 for equipment locations. Tested: not yet
SE08-01-03	Glacier Point Lat. 59° 06.22N Lon. 135° 23.38W Establish boom position on Glacier Point to maximize the deflection of oil to the center of the inlet for free-oil recovery.	Deflection-Fixed Deflect oil from Glacier Point away from the mouth of the nearby river back into the channel for recovery. Maximize the deflection of oil to the center of the inlet for free-oil recovery.	Place boom and anchor system with fishing vessels and skiffs (class 3/4/6). Position boom at adequate angle to deflect oil from the mouth of nearby river and set up free-oil recovery	Deployment Equipment 1000 ft. protected-water boom 1 ea. 50≥ ft. tidal-seal boom 3 ea. anchor stakes 10 ea. anchor systems (~20 lbs.) Vessels, Personnel / Shift, Tending: Same as SE-08-01-02	Vessel platform	Via marine waters	Same as SE08-01-02	Vessel master should have local knowledge. Tested: not yet

Map & Photo Legend



SE08-02-02,03 & 04 Taiya River looking northwest.

-  Free-oil Containment and Recovery, Shallow Water
-  Diversion Booming
-  Protected-water Boom
-  Tidal-seal Boom
-  Shoreside Recovery
-  Road
-  Campground

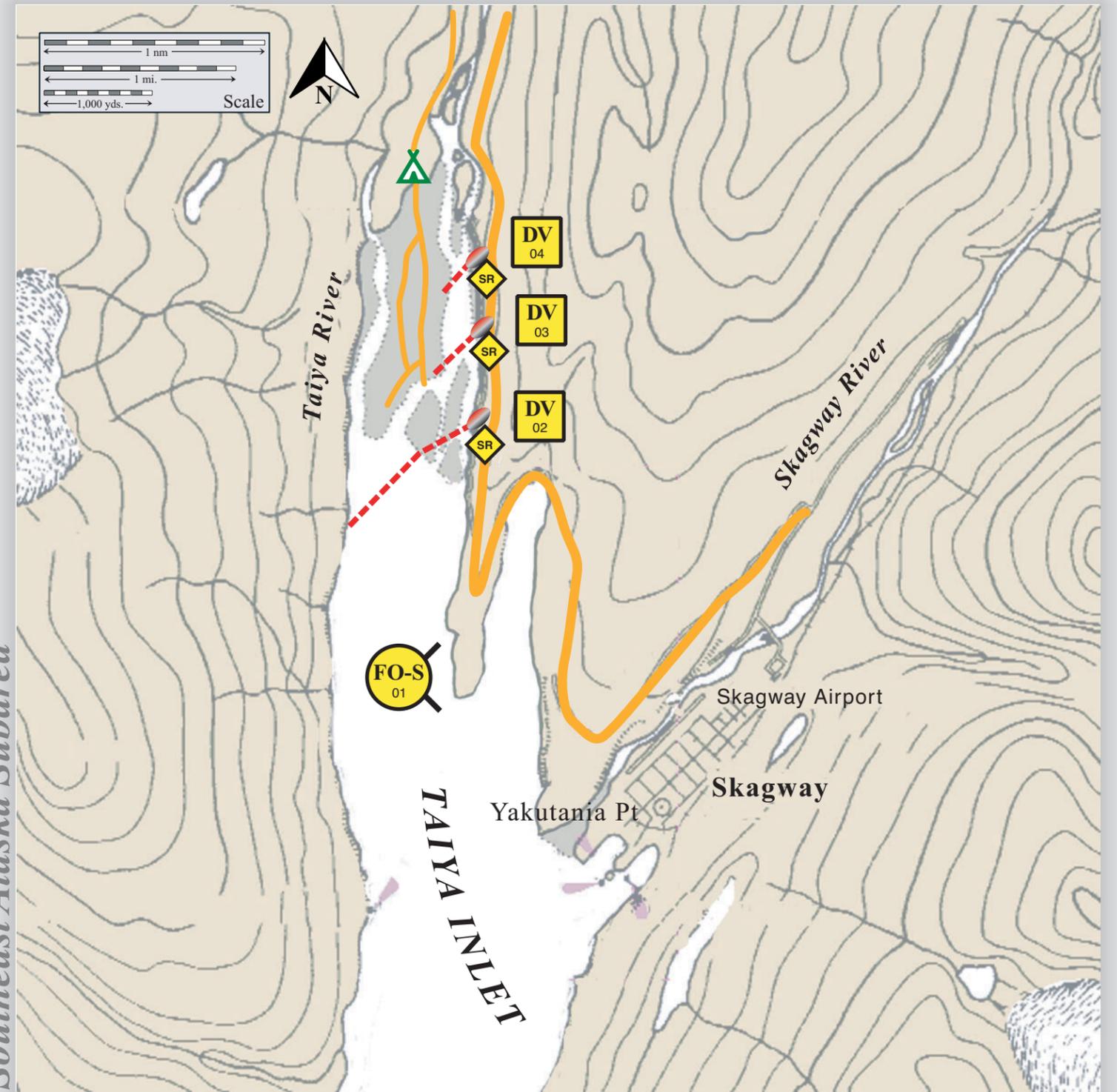


SE08-02-02,03 & 04 Taiya River looking north.

Geographic Response Strategies for Southeast Alaska Subarea

Taiya River, SE08-02

Center of map at 59° 28.6' N Lat., 135° 19.9' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE08-02-01	Taiya River Nearshore waters in the general area of: Lat. 59° 27.9 N Lon. 135° 21.3 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment at the head of Taiya Bay.	Deploy free-oil recovery strike teams upwind and up-current of Taiya River. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Skagway and along road	Same as SE08-02-02	Same as SE08-02-02	Sand flat full of historical pilings (navigation hazard). Prevailing wind from south. Choppy waters common. Vessel masters should have local knowledge. Taiya River is within National Park. Title 41 permit may be necessary. Contact ADNR.
SE08-02-02	Taiya River Lat. 59° 28.9 N Lon. 135° 21.3 W	Diversion / Recovery Divert oil to east side of bay for shoreside recovery.	Transport equipment by truck. class 6 river skiffs to set boom and anchors. Place 4600 ft. of protected-water boom, with tidal-seal on the end, to divert oil to shoreside recovery site on east side of bay. Deploy at high tide. Tend on flood tide.	Deployment Equipment 4600 ft. protected-water boom 48 ea. anchor systems (~40 lbs.) 50 ft. tidal-seal boom 2 ea. anchor stakes 1 ea. shoreside recovery unit Vessels/Vehicles 3 ea. 4 wheeler 2 ea. 4x4 truck 1 ea. transport truck 2 ea. class 6 Personnel / Shift 11 ea. crew Tending Vessels/Vehicles 2 ea. 4x4 truck 3 ea. 4 wheeler 2 ea. class 6 Personnel / Shift 6 ea. crew	Skagway and along road	May be able to access road from Skagway. Dirt road along middle of Taiya River flat (sand). Dirt road across delta on sand bar.	Marine mammals-harbor seal concentration, high concentration Steller sea lion feeding (spring-eulachon runs) Fish-eulachon spawning, intertidal salmon/tidal spawning (coho, chum, pink, king, Dolly Varden) Birds-waterfowl and shorebird concentration (spring & fall) Habitat-marsh, sheltered tidal flats, sheltered rocky shore Human use-high recreational use Land management-National Park	If deployed from water, 2 ea. class 3/4 vessels will be needed. FOSC Historic Properties Specialist should MONITOR on-site operations. See Figure G-3-16 for equipment locations. Tested: not yet
SE08-02-03	Taiya River Lat. 59° 29.4 N Lon. 135° 20.9 W	Diversion / Recovery Divert oil to east side of bay for shoreside recovery.	Place 1600 ft. of protected-water boom, in a cascade array, with eight 200 ft. sections, and tidal-seal on the end, to divert oil to shoreside recovery site on east side of bay.	Deployment Equipment 1600 ft. protected-water boom 17 ea. anchor systems (~40 lbs.) 50 ft. tidal-seal boom 2 ea. anchor stakes 1 ea. shoreside recovery unit Vessels / Personnel / Tending Same as SE08-02-02	Skagway and along road	Same as SE08-02-02	Same as SE08-02-02	Same as SE08-02-02 Consider reversing angle and recovering from west bank of river. Tested: not yet
SE08-02-04	Taiya River Lat. 59° 29.8 N Lon. 135° 20.9 W	Diversion / Recovery Divert oil to east side of bay for shoreside recovery.	Place 1000 ft. of protected-water boom, in a cascade array, with five 200 ft. sections, and tidal-seal on the end, to divert oil to shoreside recovery site on east side of bay.	Deployment Equipment 1000 ft. protected-water boom 12 ea. anchor systems (~40 lbs.) 50 ft. tidal-seal boom 2 ea. anchor stakes 1 ea. shoreside recovery unit Vessels / Personnel / Tending Same as SE08-02-02	Skagway and along road	Same as SE08-02-02	Same as SE08-02-02	Same as 0SE08-02-02 Consider reversing angle and recovering from west bank of river. Tested: not yet

Map & Photo Legend



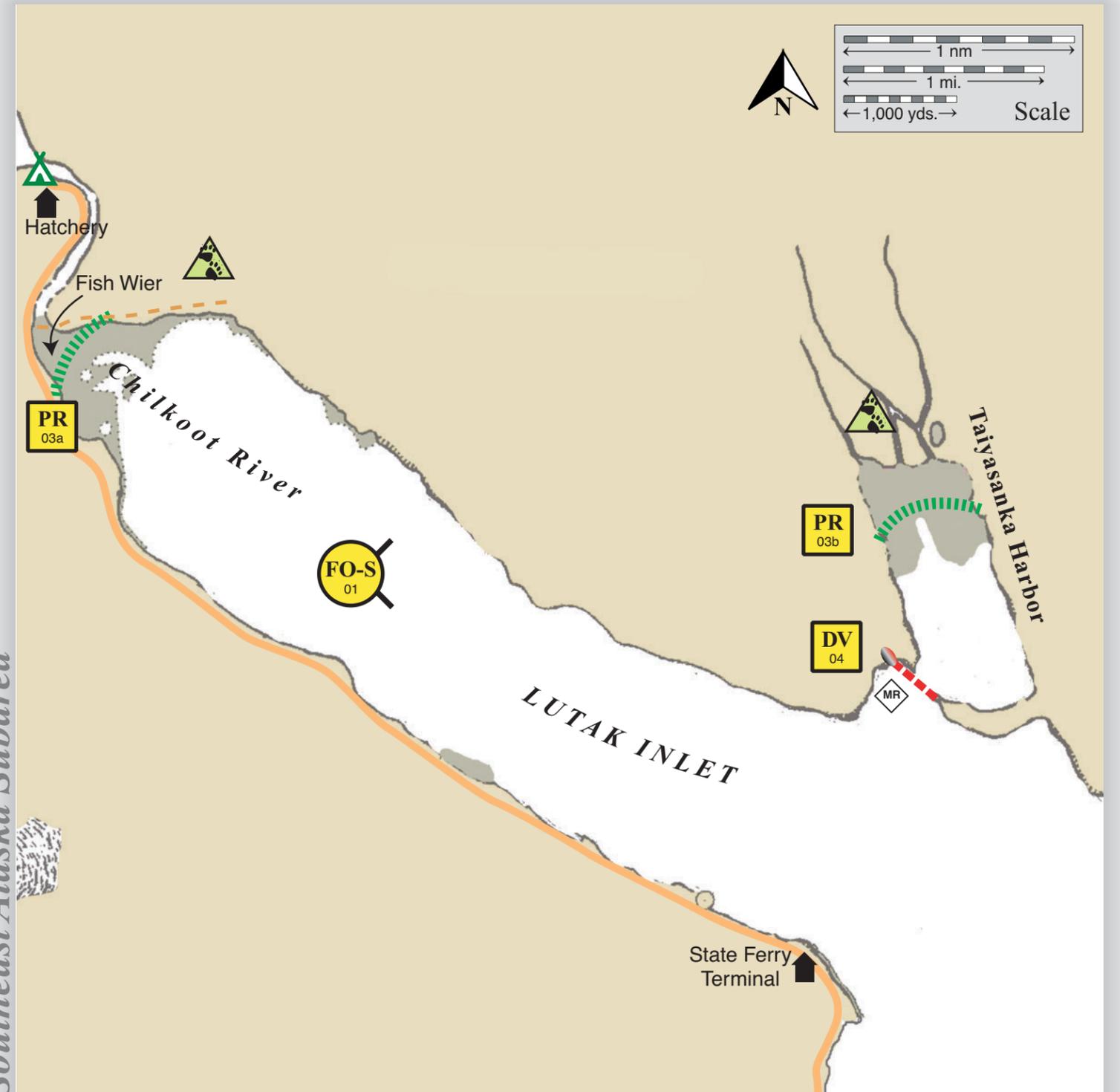
SE08-03-03a Chilkoote River looking towards the northwest.

	Free-oil Containment and Recovery, Shallow Water
	Passive Recovery and Debris Removal
	Diversion Booming
	Protected-water Boom
	Tidal-seal Boom
	Snare Line
	Marine Recovery
	Bears in Area, Guards Needed
	Road
	ATV Trail
	Campground

Geographic Response Strategies for Southeast Alaska Subarea

Chilkoote River, SE08-03

Center of map at 59° 17.8' N Lat., 135° 28.6' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE08-03-01	Lutak Inlet Nearshore waters in the general area of: Lat. 59° 17.8 N Lon. 135° 28.6 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of Chilkoot River depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of Chilkoot River. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Haines Ferry Terminal	Via marine waters Chart 17317	Same as SE08-03-02	Vessel master should have local knowledge. Tested: not yet
SE08-03-02	Chilkoot River a. Chilkoot River Lat. 59° 19.27 N Lon. 135° 33.32 W b. Taiyasanka Harbor Lat. 59° 18.64 N Lon. 135° 25.94 W	Passive Recovery Minimize impact to the tidal flats through use of passive recovery of oil.	Place snare line or sorbent boom, depending on oil types, across the entrance to the tidal flats at both locations. Anchor with stakes. Replace as necessary to maximize recovery of oil. <u>Boom Lengths</u> a. 2000 ft. b. 2400 ft.	Deployment Equipment 4400 ft of snare line or sorbent boom. 50 anchor stakes. Vessels, Tending, Personnel Same as SE08-03-02	Vessel platform Campground on river	Via marine waters Chart 17317	Fish-eulachon spawning, salmon/trout spawning (coho, pink, chum, sockeye, Dolly Varden, cutthroat) Birds-waterfowl concentration, particularly along lower southern shore of Lutak Inlet (year-round) Human use-subsistence (fish and intertidal invertebrates), commercial fishing (salmon), high recreational use Terrestrial mammals-bears	Use snare line for persistent oils and sorbent boom for non-persistent oils. FOSC Historic Properties Specialist should MONITOR on-site operations. Title 41 permit may be necessary. Contact ADNR. See Figure G-3-16 for equipment locations. Fish weirs may be present. Bears in area. Tested: not yet
SE08-03-03	Taiyasanka Harbor Lat. 59 ° 17.86 N Lon. 135° 25.81 W	Divert and Recover Divert oil to shoreside recovery points determined by spill source and course.	Deploy anchors and boom with fishing vessels and skiffs (class 3/4/6). Place protected-water boom across the entrance to the harbor at the proper angle to divert oil to recovery site. Set-up recovery unit and tend throughout the tide.	Deployment Equipment 600 ft. protected-water boom 1 ea. ≥50 ft. section tidal-seal boom 6 ea. anchor systems (~30 lbs.) 6 ea. anchor stakes 1 ea. shoreside or marine recovery unit Vessels/ Personnel Same as SE08-03-02 Tending Vessel Same as SE08-03-02 Personnel / Shift 2 ea. Response techs.	Vessel platform	Via marine waters Chart 17317	Same as SE08-03-02	Take appropriate measures as outlined in Part 2 of this document to protect the beach at the recovery site. Tested: not yet

I. SOUTHEAST ALASKA RESPONSE ZONE 9

Figure G-3-17 provides an overview of the Southeast Alaska response zone 9, identifying the location of each GRS site. Each GRS site has been assigned an identifying number, which has no relevance to the site's protection priority. This section contains geographic response strategies for each numbered site, in numerical order, beginning with SE09-01. Figure G-3-18 shows the location of oil spill response equipment throughout zone 9.



Figure G-3-17. Southeast Alaska Response Zone 9.

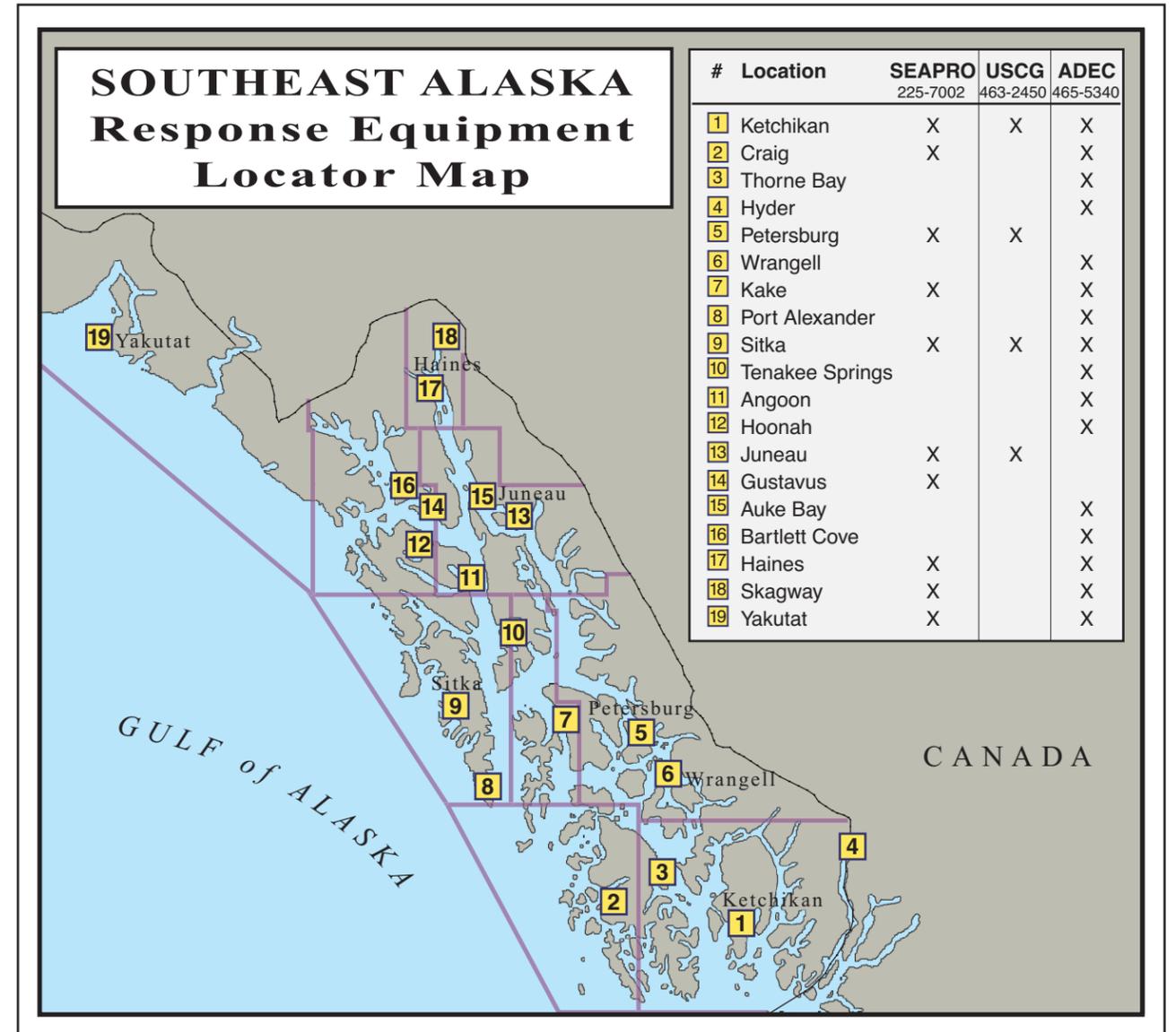


Figure G-3-18. Southeast Alaska Response Equipment Locator Map.

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Map
& Photo

Legend



SE09-01-02 Looking southwest into Ankau Lagoon.

	Free-oil Containment and Recovery, Shallow Water		Shoreside Recovery, Marine Access
	Exclusion Booming		Marsh
	Diversion Booming		Arctic and Aleutian Terns Nesting
	Protected-water Boom		Tidal-seal Boom

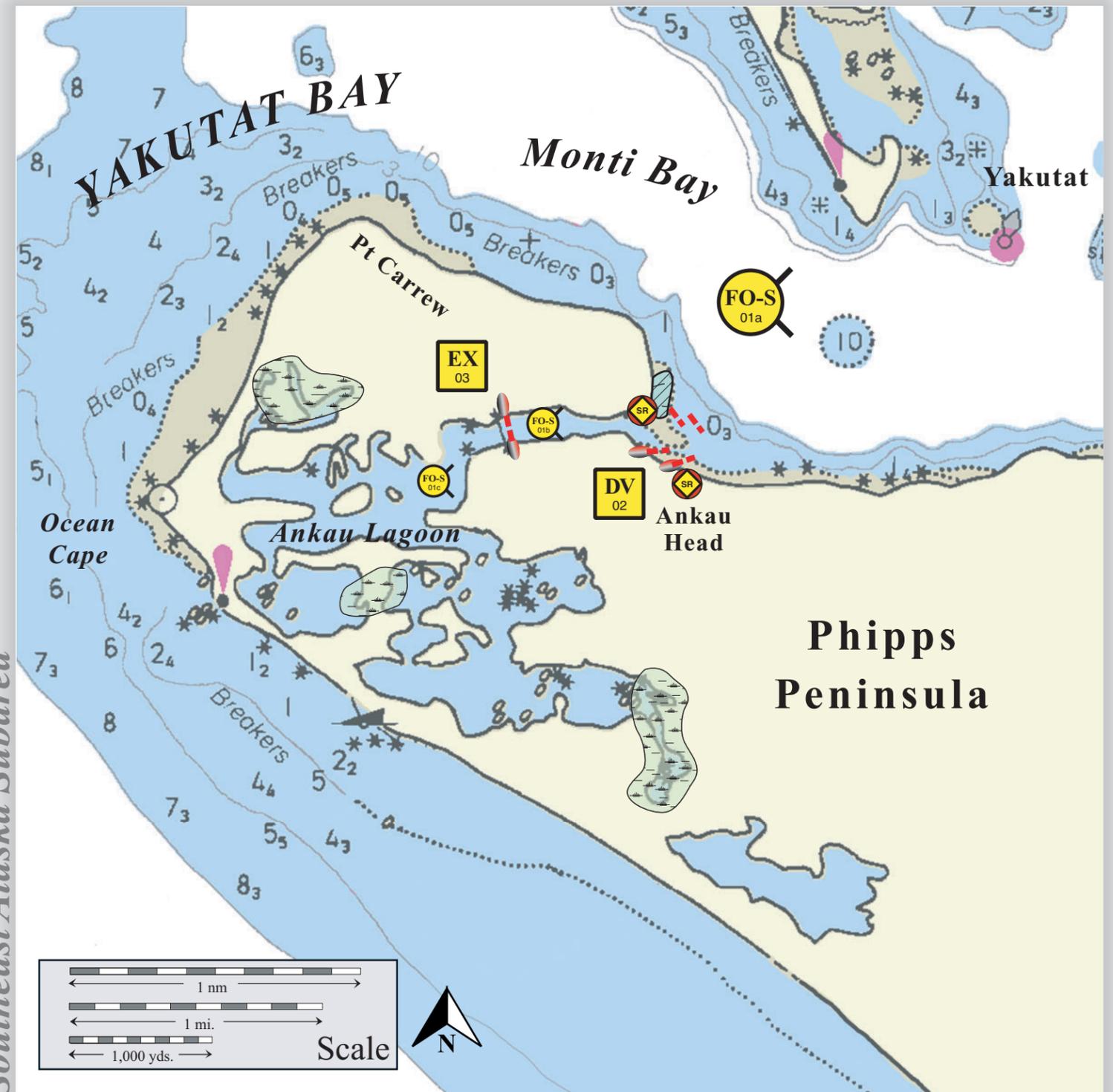


SE09-01-03 Looking east out of the Ankau Lagoon entrance.

Ankau Lagoon, SE09-01

Center of map at 59° 34.4' N Lat., 139° 44.4' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE09-01-01	Ankau Lagoon Nearshore waters in the general area of: a. Lat. 59° 32.90 N Lon. 139° 47.51 W b. Lat. 59° 32.74 N Lon. 139° 49.17 W c. Lat. 59° 32.53 N Lon. 139° 49.92 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of Ankau Lagoon.	Deploy free-oil recovery strike teams near Ankau Lagoon. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Yakutat harbor	Via marine waters Chart 16761-1	Same as SE09-01-02	Vessel masters should have local knowledge
SE09-01-02	Ankau Lagoon Lat. 59° 32.64 N Lon. 139° 48.36 W	Divert and Recover Divert oil to shoreside recovery points determined by spill source and course.	Transport equipment by vessel (class 3/4). Deploy anchors and boom with fishing vessels and skiffs(class 6). Place protected-water boom in 2 arrays of four 200 ft. boom strings deployed as indicated on chart on the north shore to divert oil to recovery site on beach. Place 2 arrays on south shore as indicated to recovery point. Set up recovery unit and tend throughout the tide.	Deployment Equipment 1200 ft. protected-water boom 2 sections ≥50 ft. tidal-seal boom 12 ea. anchor systems (~20 lbs.) 8 ea. anchor systems (~40 lbs.) 2 ea. shoreside recovery units. Vessels 2 ea. class 3/4 2 ea. class 3/4 Personnel/Shift 10 ea. vessel crew 3 ea. response techs. Tending Vessels 1 ea. class 3/4 1 ea. class 6 Personnel/Shift 5 ea. vessel crew 2 ea. response techs.	Yakutat harbor Vessel platform	Via marine waters Chart 16761-1	Marine mammals-harbor seals Fish-intertidal salmon/trout spawning (coho, sockeye, steelhead, Dolly Varden, cutthroat), herring spawning Birds-waterfowl and shorebird concentration, Arctic & Aleutian tern colony (~200) Habitat-kelp beds, sheltered rocky shores, salt chuck, marsh Human use-high recreational use, commercial fishing herring and salmon, subsistence use fish and invertebrates	Take appropriate measures as outlined in Part 2 of this document to protect the beach at the recovery site. Title 41 permit may be necessary. Contact ADNR. FOSC Historic Properties Specialist should INSPECT site prior to operations. See Figure G-3-18 for equipment locations. Recovery of recovered oil must be by vessel. Tested: 7/11/02 SEAPRO Surveyed: 7/11/02 SEAPRO, ADEC, TLR
SE09-01-03	Ankau Lagoon Lat. 59° 34.0 N Lon. 139° 46.7 W	Exclusion Exclude oil from entering Ankau Lagoon.	Use class 3/4 vessels with deck space to transport equipment. Place 600 ft. of protected-water boom, with tidal-seal on each end, across the entrance to Ankau Lagoon to exclude oil. Tend throughout the tide.	Deployment Equipment 600 ft. protected-water boom 2 sections ≥50 ft. tidal-seal boom 6 ea. anchor systems (~40 lbs.) 4 ea. anchor stakes Vessels/Personnel/Shift Same as SE09-01-02 Tending Vessels/Personnel/Shift Same as SE09-01-02	Yakutat harbor Vessel platform	Via marine waters Chart 16761-1	Same as SE09-01-02	Vessel masters should have local knowledge Tested: 7/11/02 SEAPRO Surveyed: 7/11/02 SEAPRO, ADEC, TLR

Map & Photo Legend



SE09-02 Blizhni Point looking southwest.

-  Free-oil Containment and Recovery, Shallow Water
-  Exclusion Booming
-  Diversion Booming
-  Protected-water Boom
-  Shoreside Recovery, Marine Access

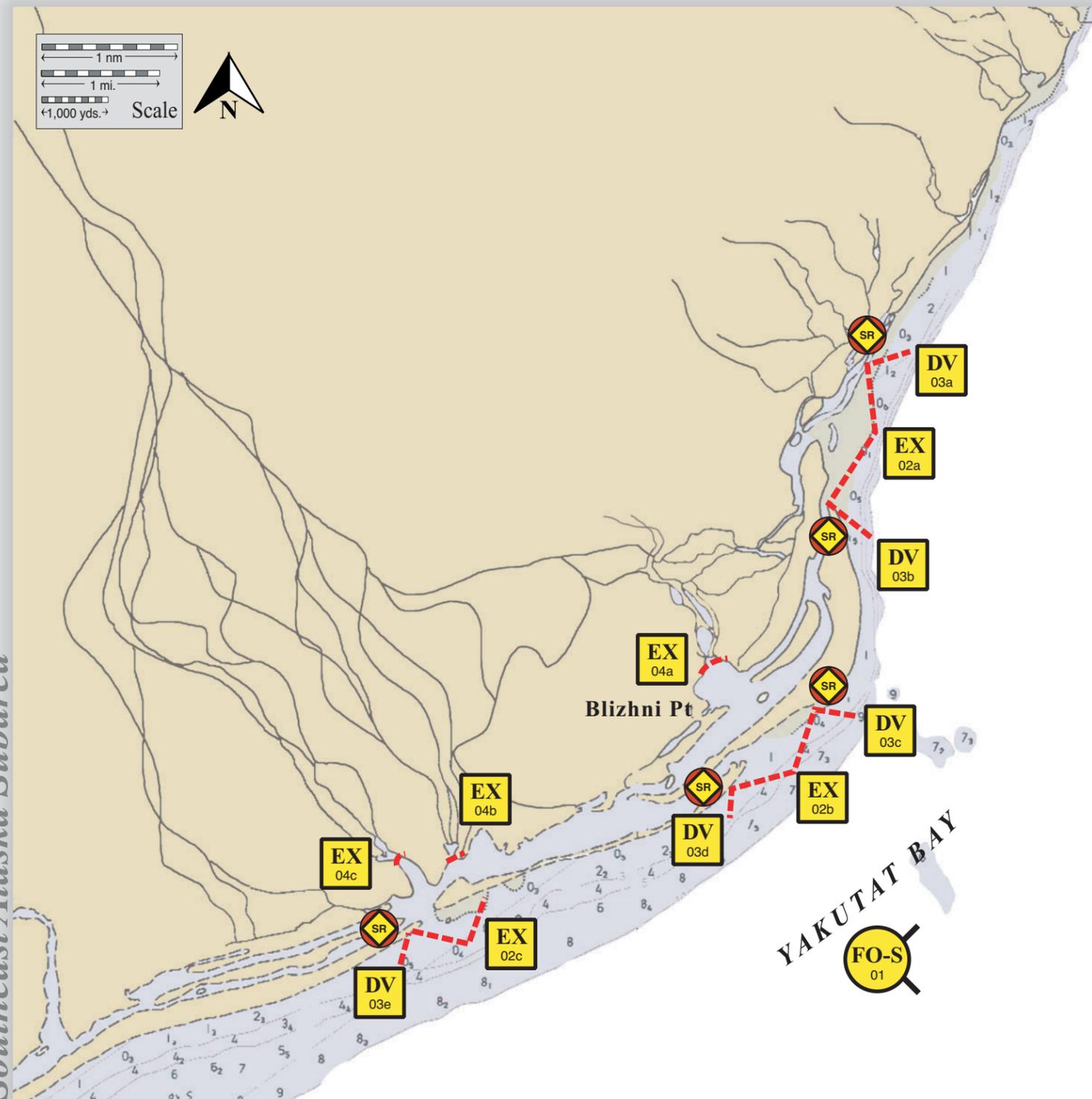


SE09-02 Blizhni Point Looking west.

Blizhni Point, SE09-02

Center of map at 59° 50.2' N Lat., 139° 47.2' W Lon.

Geographic Response Strategies for Southeast Alaska Subarea



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE09-02-01	Blizhni Point Nearshore waters in the general area of: Lat. 59° 50.2 N Lon. 139° 47.2 W	Free-oil Recovery- Shallow Water Maximize free-oil recovery in the offshore & nearshore environment of Blizhni Point depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of Blizhni Point. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Yakutat Harbor	Via marine waters Chart 16760-1	Same as SE-09-02-02	Vessel master should have local knowledge.
SE09-02-02	Blizhni Point a. Lat. 59° 51.79 N Lon. 139° 46.55 W b. Lat. 59° 49.46N Lon. 139° 48.07 W c. Lat. 59° 48.14 N Lon. 139° 53.04 W <i>Note: This area is extremely dynamic. Charts are not accurate. Tactics cannot be proscribed in detail. Site surveys must be conducted immediately before equipment deployment.</i>	Exclusion Exclude oil from entering the identified area behind the islands in the area of Blizhni Point.	Transport equipment by vessel (class 2/3/4) from Yakutat. Deploy protected-water boom across identified sites around Blizhni Point. Tend throughout the tide. <u>Boom lengths</u> a. 5000 ft. b. 5000 ft. c. 3200 ft.	Deployment Equipment 13200 ft. protected-water boom 18 ea. anchor stakes 3 ea. apex anchor (~60 lbs) 130 anchor systems (~30 lbs) Vessels 2 ea. class 2 4 ea. class 3/4 4 ea. class 6 Personnel / Shift 28 ea. vessel crew Tending Vessels 3 ea. class 3/4 3 ea. class 6 Personnel / Shift 12 ea. vessel crew	Vessel platform	Via marine waters Chart 16760-1	Marine mammals-harbor seals Birds-marbled murrelet nearshore feeding concentrations, kittlitz murrelet feeding habitat, sea ducks (scoters) Habitat-marsh/estuary Human use-set-net fishery Land management-National Park	Vessel master should have local knowledge. Dynamic shoreline- sand bars are in the immediate area. Deployment locations should be verified by site survey. This site is in a National Park. REPORT any cultural resources found during operations to FOSC Historic Properties Specialist. See Figure G-3-18 for equipment locations. Floating/grounded icebergs (winter & spring) Tested: not yet
SE09-02-03	Blizhni Point a. Lat. 59° 52.48 N Lon. 139° 46.48 W b. Lat. 59° 51.34 N Lon. 139° 47.05W c. Lat. 59° 49.81 N Lon. 139° 47.29 W d. Lat. 59° 49.10 N Lon. 139° 49.19 W e. Lat. 59° 47.89 N Lon. 139° 54.13 W	Divert and Recover Divert oil to shoreside recovery points determined by spill source and trajectory. At the base of each exclusion boom a diversion boom and shoreside recovery unit will be placed to maximize the recovery of oil. Select recovery points depending on the source and trajectory of oil.	Deploy anchors and boom in cascaded arrays with vessels (class 6). Place protected-water boom at the proper angle to divert oil to recovery site. Set-up recovery unit and tend throughout the tide. <u>Boom lengths</u> a. 1200 ft b. 1200 ft. c. 1200 ft. d. 1200 ft. e. 1200 ft.	Deployment Equipment 6000 ft. protected-water boom 50 ea. anchor systems (~30 lbs.) 5 ea. anchor systems (~40 lbs.) 5 ea shoreside recovery units. Vessels, Personnel/Shift SE-09-02-02 Tending Vessels SE-09-02-02 Personnel/Shift 10 ea. Response techs.	Vessel platform	Via marine waters Chart 16760-1	Same as SE-09-02-02	Vessel master should have local knowledge. Recovered oil must be removed by vessel. No road access. Tested: not yet
SE09-02-04	Blizhni Point Streams a. Lat. 59° 50.17 N Lon. 139° 47.92 W b. Lat. 59° 48.66 N Lon. 139° 52.75 W c. Lat. 59° 48.68 N Lon. 139° 52.75 W	Exclusion Exclude oil from entering the creeks in the immediate area of Blizhni Point.	Deploy protected-water boom across the mouth of each identified creek. Tend throughout the tide. <u>Boom lengths</u> a. 500 ft. b. 400 ft. c. 300 ft.	Deployment Equipment 1200 ft. protected-water boom 16 ea. anchor stakes 12 ea. anchor systems (~30 lbs.) Vessels, Personnel/Shift, Tending Same as SE-09-02-02	Vessel platform	Via marine waters Chart 16760-1	Same as SE-09-02-02	Vessel master should have local knowledge. Tested: not yet

Map & Photo Legend



SE09-03 Looking east across Blacksand Spit at Lost River and Situk River.

- | | | | |
|--|--|--|-----------------------------------|
| | Free-oil Containment and Recovery, Shallow Water | | Protected-water Boom |
| | Diversion Booming | | Snare Line |
| | Deflection Booming, Fixed | | Shoreside Recovery |
| | Passive Recovery and Debris Removal | | Shoreside Recovery, Marine Access |
| | | | Bears in Area, Guards Needed |

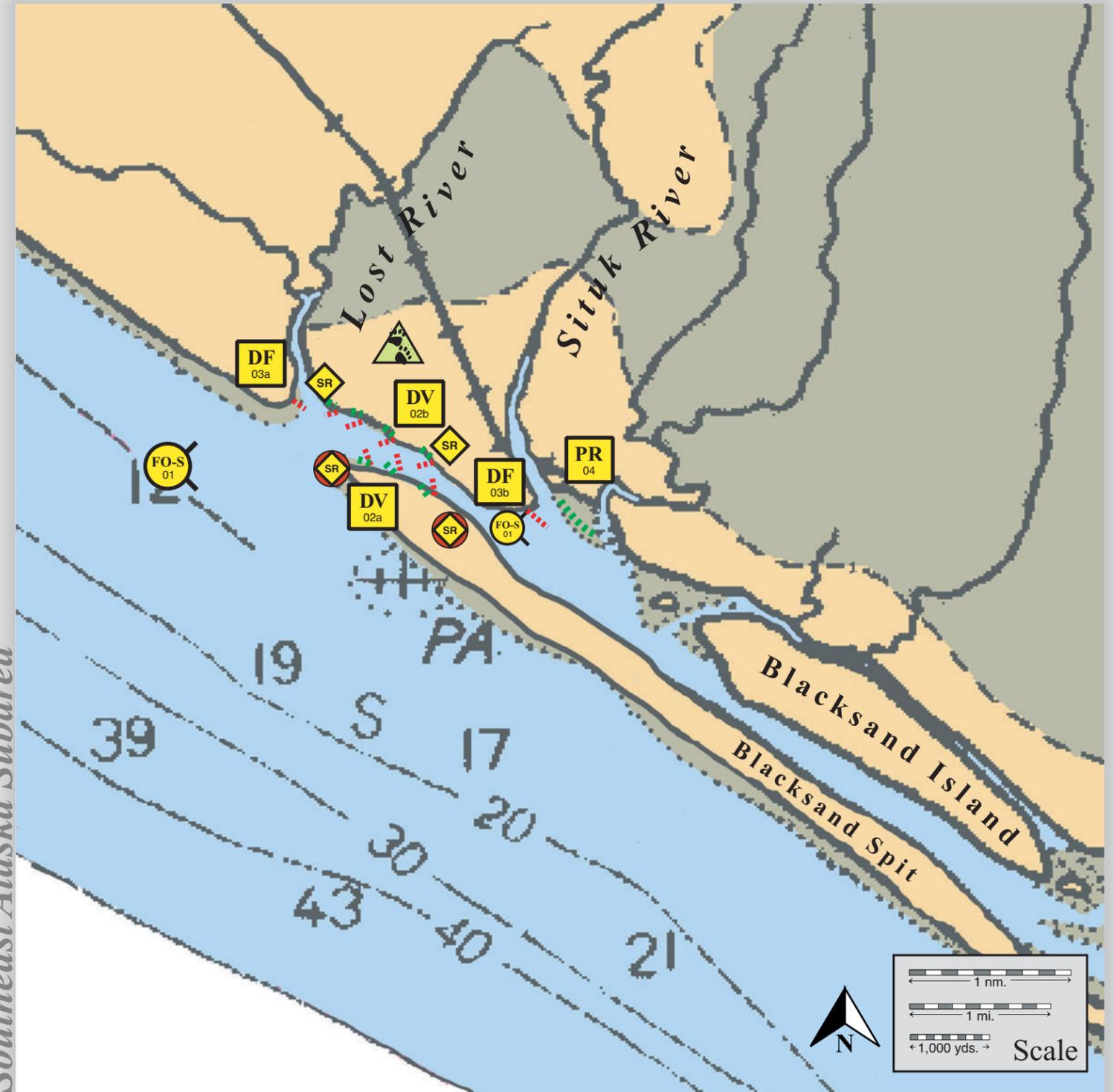


SE09-03 Looking northwest out of Situk River lagoon..

Geographic Response Strategies for Southeast Alaska Subarea

Situk River, SE09-03

Center of map at 59° 26' N Lat., 139° 32' W Lon.



This is not intended for navigational use.

Soundings in fathoms

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE09-03-01	Situk River Lat. 59° 26 N Lon. 139° 32 W (approximate location)	Free-oil Recovery Maximize recovery of oil at the Situk Inlet.	Deploy free-oil recovery strike team. Use aerial surveillance to locate areas of heavy slick concentrations.	One free-oil recovery strike team (or more) to intercept oil before it impacts sensitive areas.	Yakutat Situk River boat launch	Via marine waters	See SE09-03-02	Do not attempt open ocean recovery except during optimal weather conditions.
SE09-03-02	Situk River Lat. 59° 26 N Lon. 139° 32 W (approximate location)	Diversioin/Recovery Divert oil entering through inlet to sandy beaches enabling manual removal. Stagger boom strings of 500 ft each to divert oil to beach along channel back of barrier island.	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place total of 3500 ft of boom in 500 ft strings to divert oil to shoreside for manual recovery.	Deployment Equipment 3500 ft protected-water boom. 7 ea ~40 lbs anchor systems for securing each string. 7 ea. Anchor stakes. Manual or mechanical recovery equipment for moving oiled sand above tide line. Vessels 2 ea. class 2 or 3/4 2 ea. class 6 Personnel Shift 12 ea vessel crew Tending Vessels 1 ea. class 3/4 2 ea. class 6 Personnel/Shift 6 ea vessel crew	See SE09-03-01	See SE09-03-01	Marine mammals-harbor seals Fish-salmon and steelhead spawning, eulachon spawning Birds-waterfowl concentrations Habitat-tidal flats, marsh Human use-salmon fishery, sport fishing, subsistence (fish) Terrestrial mammals-bears	Bears in area. REPORT any cultural resources found during operations to FOSC Historic Properties Specialist. See Figure G-3-18 for equipment locations. Note: This area is extremely dynamic. Charts are not accurate. Tactics cannot be proscribed in detail. Site surveys must be conducted immediately before equipment deployment. Tested: not yet Surveyed: 7/11/02 TLR, ADEC
SE09-03-03	Situk River Lat. 59° 26 N Lon. 139° 32 W (approximate location)	Deflection Deflect oil away from Lost River and Situk River mouths	Use class 2 or class 3/4 vessels with deck space to transport equipment. Use class 6 skiffs to deploy boom and set anchors. Place total of 1000 ft of boom in 500 ft strings to deflect away from river mouths during incoming tides. a. 500 ft b. 500 ft	Deployment Equipment 1000 ft protected-water boom. 4 ea ~40 lbs anchor systems for securing each string. 2 ea. Anchor stakes. Vessels/Personnel/Tending Use resources listed in SE09-03-02	See SE09-03-01	See SE09-03-01	See SE09-03-02	See SE09-03-01 & 02 Tested: not yet Surveyed: 7/11/02 TLR, ADEC
SE09-03-04	Situk River Lat. 59° 26 N Lon. 139° 32 W (approximate location)	Minimize impact to intertidal marshes through passive recovery using snare line or sorbent boom.	Place up to 2000 ft. of snare line or sorbent boom across mudflats. Anchor with stakes. Replace oiled sections as needed. Use snare line for persistent oils and sorbent boom for non-persistent.	Deployment Equipment 2000 ft. snare line or sorbent boom 20 ea. anchor stakes. 1000 ft of line. Vessels/Personnel/Tending Use resources listed in SE09-03-02	See SE09-03-01	See SE09-03-01	See SE09-03-02	See SE09-03-01 & 02 Tested: not yet Surveyed: 7/11/02 TLR, ADEC

SYMBOLS USED ON THE TACTIC MAPS

Equipment Resource Information	
	Snare Line
	Sorbent Boom
	Harbor Boom
	Tidal-seal Boom
	Calm-water Boom
	Protected-water Boom
	Protected-water Boom, Flood Tide
	Open-water Boom
	Open-water Boom, Flood Tide
	Dam
	Gate
	Anchor

Access Information	
	Paved Road
	Improved Gravel Road
	Un-improved Gravel Road
	ATV Trail
	Hiking Trail
	Landing Strip
	Small Plane Strip
	Helicopter Landing Zone
	Staging Area
	Dock
	USGS Navigation Light Marker
	Direction True North
	Restricted Access, contact United Command before entering
	Buildings
	Water Depths, fathoms and tenths
	Rocks Awash at Low Tide
	Bears in Area, guards needed
	Campground
	Cabin
	Equipment
	Boat Launch Ramp

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PART FOUR – REFERENCES

Sensitive Areas

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- Alaska Habitat Management Guide Reference Maps, Southeast Region Alaska Department of Fish and Game (ADFG)
- State of Alaska Game Refuges, Critical Habitat Areas and Game Sanctuaries, 1991 ADFG
- Fish and Wildlife Habitat, Juneau Planning Area, Series of Maps, 1992 ADFG
- Fish and Wildlife Harvest Areas, Juneau Planning Area, Series of Maps. 1992 ADFG
- Guidelines for Developing Digital Environmental Sensitivity Index Atlases and Databases, 1993 National Oceanic Atmospheric Administration (NOAA)
- Environmental Sensitivity Mapping for Developing and Evaluating Spill Response Plans. A Working Paper for the Regional Workshop on Designing a Geographic Information System for Oil Spills, 1994 NOAA, EPA
- NOAA ESI Maps for Southeast Alaska (four seasonal summary maps – shoreline 1:62,000, human use 1:250,000) NOAA, Research Planning, Inc. (RPI)
- A Working Guide to the Sensitive Plants of the Alaska Region, 1994 US Forest Service
- Tidal Current Tables: Pacific Coast of North America and Asia (Current year’s edition) US Department of Commerce
- NPS Alaska Coastal Resources Industry & Monitoring Program, Glacier Bay National Park and Preserve Coastal Ecologist, Gustavus, AK, National Park Service (NPS)
- Wildlife Protection Guidelines for Alaska, January 1997 Alaska Regional Response Team

Land Ownership

- Juneau State Land Plan at <http://www.dnr.state.ak.us/mlw/planning/areaplans/juneau/index.cfm> Alaska Department of Natural Resources (ADNR)
- State of Alaska Land Ownership Maps at <http://www.dnr.state.ak.us/pic/maps.html> ADNR
- Inventory of Historic Sites and Structures, City and Borough of Juneau, Alaska, 1986 ADNR

Equipment & Techniques

- Mechanical Protection Guidelines, June 1994 NOAA, USCG
- Field Guide for Oil Spill Response in Arctic Waters, 1998, at <http://www.arctic-council.org/flguide/> Arctic Council
- International Oil Spill Control Directory, 19th Edition, 1999-2000 Cutter Information Corporation
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- Oil Spill Response in Fast Currents, A Field Guide, Coast Guard Report #CG-D-01-02, 2001 USCG

USCG Commandant (G-M) Letter 16465, Revised Guidelines for Conducting the USCG's OSRO Program, December 28, 1995 USCG

World Catalog of Oil Spill Response Products, 1998/1999 Robert Schulze

Southeast Alaska Petroleum Response Organization Technical Manual Southeast Alaska Petroleum Resource Organization (SEAPRO)

NOAA Oil Spill Tools at <http://response.restoration.noaa.gov/oilaid/spiltool/spiltool.html> NOAA

GIS Databases

Alaska Department of Natural Resources Alaska Geospatial Data Center, Anchorage

National Oceanic and Atmospheric Administration Scientific Support Coordinator, Anchorage

National Park Service GIS Program Manager, Anchorage

U.S. Fish and Wildlife Service Project Coordinator, Southeast Alaska GIS Library, Petersburg

U.S. Forest Service Region 7 Spill Response Coordinator, Anchorage