

GEOGRAPHIC RESPONSE STRATEGIES: PART ONE – INTRODUCTION

Purpose and Scope

These Geographic Response Strategies (GRS) are designed to be a supplement to the Prince William Sound (PWS) Subarea Contingency Plan for Oil and Hazardous Substances Spills and Releases, commonly referred to as the PWS Subarea Contingency Plan (SCP). GRS provide response strategies for the protection of selected sensitive areas to aid first responders to an oil spill. The strategies here serve as the federal and state on-scene coordinators' "orders" during an oil spill in the area covered by this GRS. As such, they have been approved by the U.S. Coast Guard Marine Safety Office and the Alaska Department of Environmental Conservation.

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, leaving as small a footprint as possible to support the response operations. Equipment deployment strategies were developed that will not cause more damage than the spilled oil. To test these GRS, each site will be visited and equipment may be 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 PWS Subarea has been divided into five Geographic Response Zones (Figure G-1-1). The Copper River Delta Flats Zone strategies were developed through a separate Work Group process and are not included in this document. The Copper River Delta Flats GRS are considered a separate annex to the PWS Subarea Contingency Plan at this time.

How to Use These Geographic Response Strategies

The information provided here supplements information provided in the Prince William Sound SCP and the Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substances Discharge/Releases (commonly referred to as the Unified Plan). Information provided in either of those plans is not duplicated herein. 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 tactic objective, deployment depictions, resource sets required to implement the tactic, and deployment considerations and limitations. These general tactics may be adapted to produce a protection scheme for any site in Prince William Sound.

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 matrix giving the location description, response strategy, response resources, staging area, site access, natural resources being protected and special considerations.



Figure G-1-1. Prince William Sound 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, Valdez, Alaska
Marine Safety Office Valdez
PO Box 486
Valdez, AK 99686

How the Document Was Developed

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 production and transportation industry, citizens' groups, and natural resource agencies. The Prince William Sound GRS Work Group developed the GRS for the Northwest, Northeast, Southeast, and Southwest Zones. The Copper River Delta Flats zone GRS were developed by a separate work group.

Work Group participants identified sensitive areas with potential to be classified as "Areas of Major Concern" under the criteria established in the PWS Subarea Plan. 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 work group selected a preliminary list of sites that was released for public input. Feedback on site selection was solicited from tribal representatives, user groups, environmental organizations and the general public. Based on the feedback received, the work group made the final site selections for the zone. Additional sites may be selected in the future.

A PWS Tactics committee, composed of spill response professionals, was formed to develop draft strategies for each site selected. The draft strategies were reviewed and approved by the entire Work Group and the final draft was forwarded to the PWS Subarea Committee with the recommendation that it be adopted as part of the Prince William Sound SCP.

A. PRINCE WILLIAM SOUND GRS WORKGROUP

The Prince William Sound GRS Work Group developed GRSs for the Northwest (NW), Northeast (NE), Southeast (SE), and Southwest (SW) GRS zones. The work group consisted of representatives from the following organizations:

Alaska Chadux Corporation	National Marine Fisheries Service
*Alaska Department of Environmental Conservation	Polar Tanker Company
Alaska Department of Fish and Game	Prince William Sound Regional Citizens' Advisory Council
Alaska Department of Natural Resources	SeaRiver Maritime
Alaska Tanker Company	Tatitlek Village IRA Council
Alyeska Pipeline Service Company – Ship Escort and Vessel Response Service	*Tesoro Alaska Company
British Petroleum	United States Coast Guard
Conoco/Phillips	United States Environmental Protection Agency
Cook Inlet Spill Prevention and Response, Inc.	United States Department of the Interior
Chenega Village IRA Council	United States Fish and Wildlife Service
ChevronTexaco	United States Forest Service
Crowley Marine Services	
National Oceanic and Atmospheric Administration	* = co-chairs

The work group developed the site selection matrix key, page G-1-5, to aid in the selection of sites from within the four PWS GRS Zones. The resulting tables, tables G-1-1, G-1-2, G-1-3, and G-1-4, consist of identified sites in each row, with information about resources at each site that could qualify the site as an area of major concern detailed in the columns.

Figures G-1-2 through G-1-5 show the location of GRS sites in the Northwest, Northeast, Southeast, and Southwest zones. GRS for the Copper River Delta Flats are contained in the Copper River Delta Flats GRS document.

NORTHWEST ZONE April 23, 2003

Prince William Sound, Alaska

SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES

NW01 – Little Axil Lind Island	NW05 – Outside Bay	NW08 – South Bay
NW02 – Fool Island	NW06 – Agnes Island	NW09 – Point Pellew
NW03 – Storey Island	NW07 – Lone Island	NW10 – Fairmont Island
NW04 – Cabin Bay		

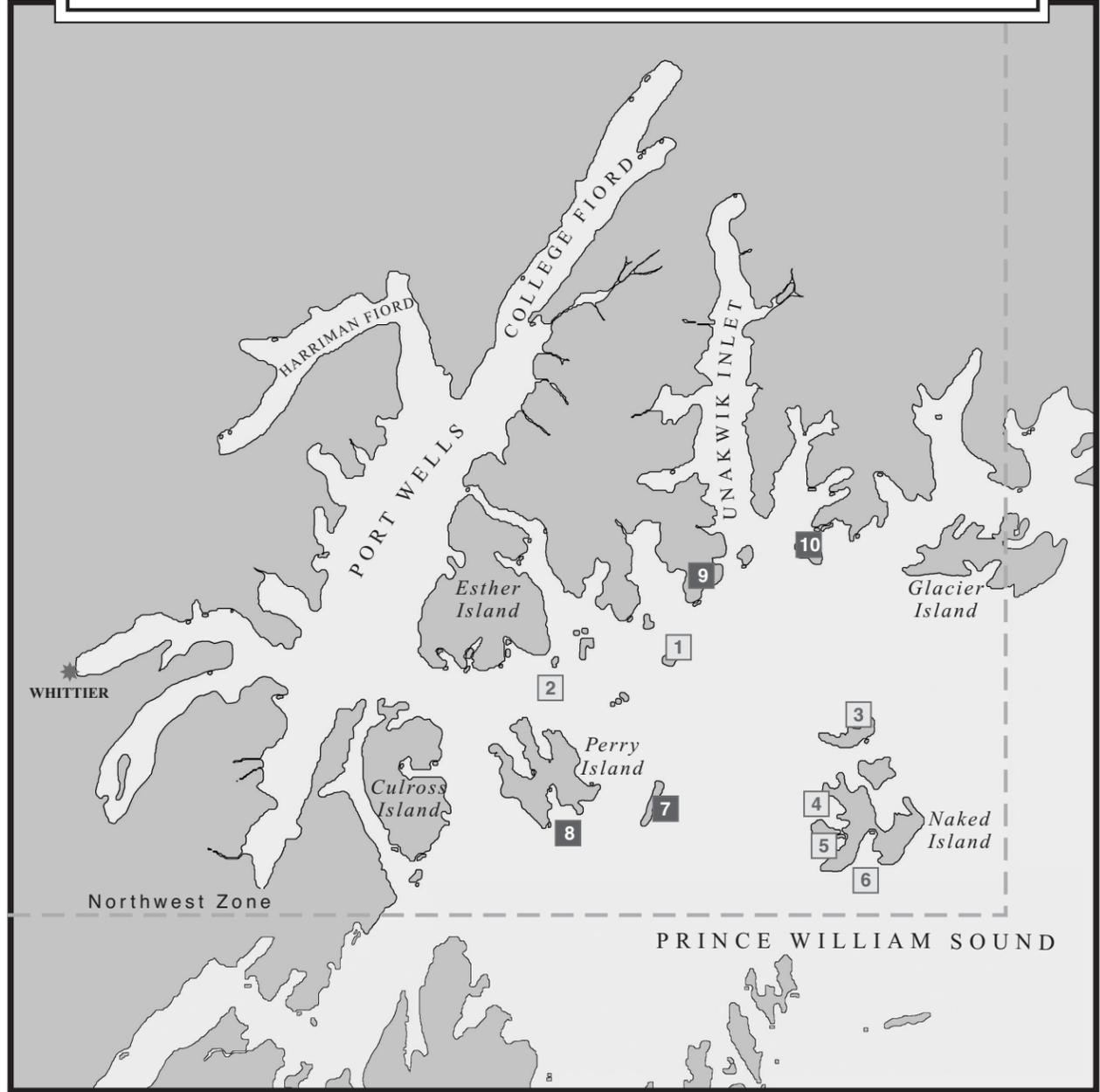


Figure G-1-2. Northwest Prince William Sound GRS Index Map.

NORTHEAST ZONE April 23, 2003

Prince William Sound, Alaska

SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES

NE01 – Tatitlek Harbor	NE05 – Head of Boulder Bay	NE09 – Hells Hole
NE02 – West Boulder Bay	NE06 – Cloudman Bay-Bligh Island	NE10 – Olsen Bay
NE03 – West Tatitlek Narrows	NE07 – West Bay-Bligh Island	NE11 – Upper Sheep Bay
NE04 – Virgin Bay	NE08 – Jack Bay	NE12 – Sawmill Bay

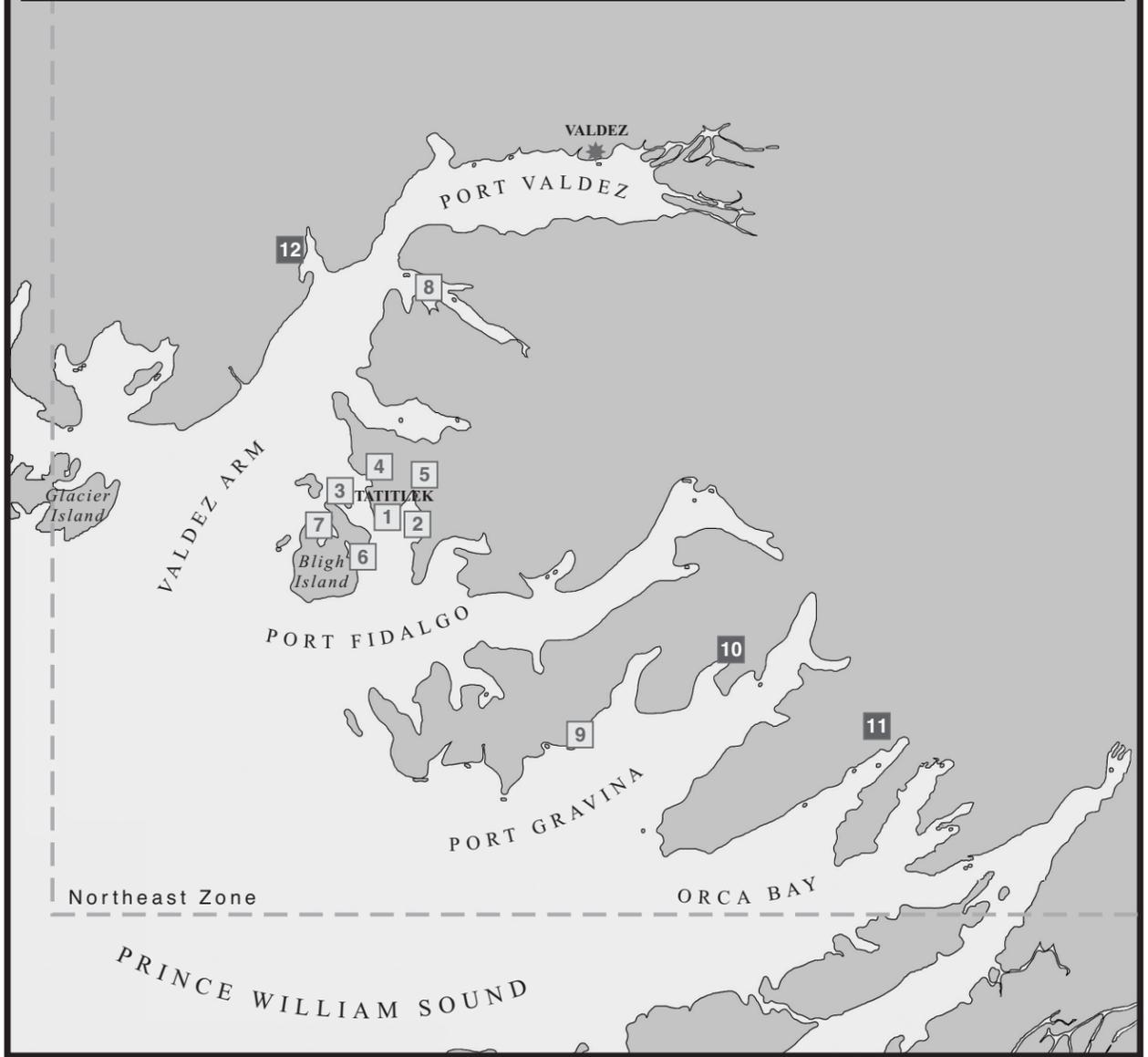


Figure G-1-3. Northeast Prince William Sound GRS Index Map.

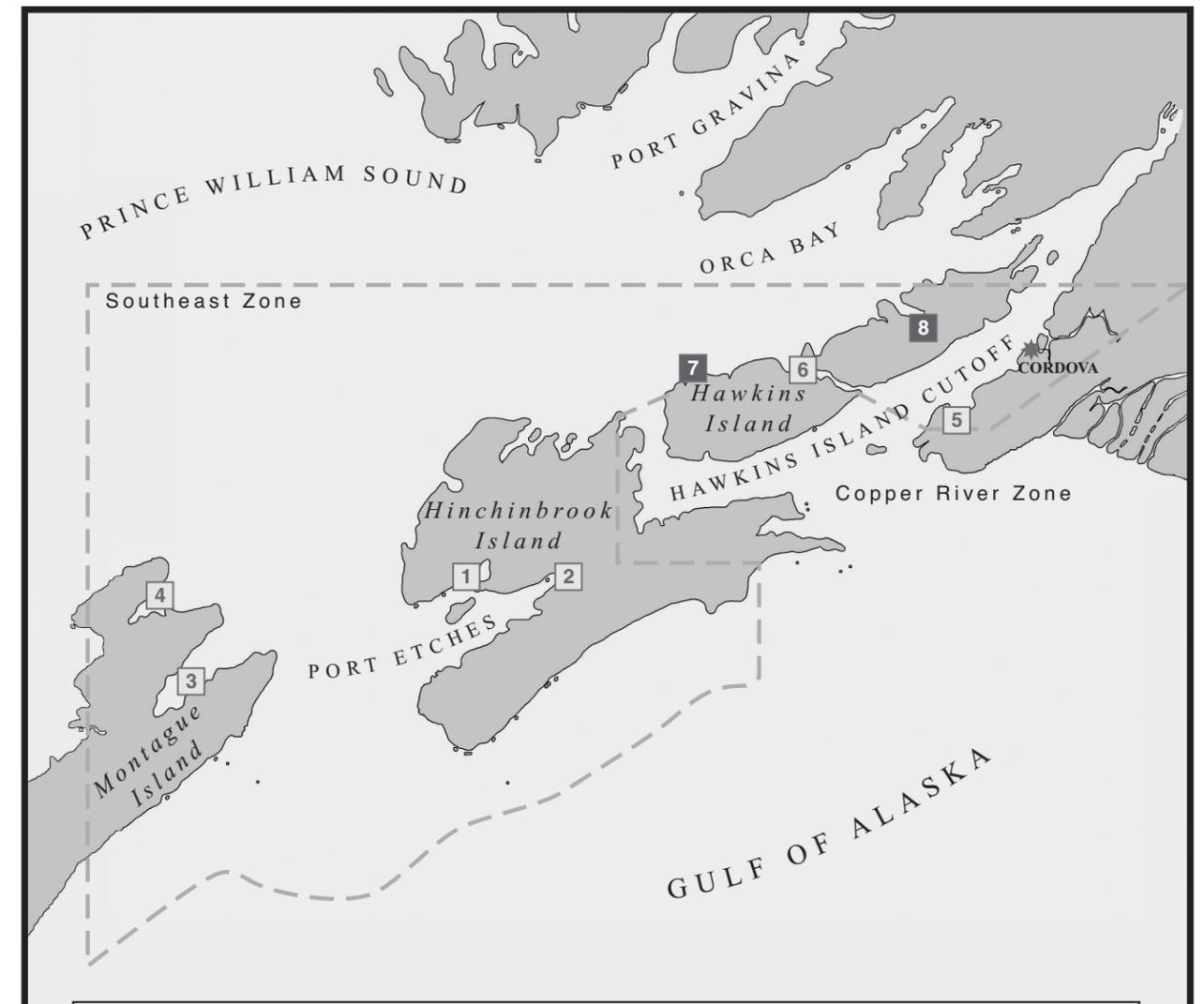


April 23, 2003

SOUTHWEST ZONE
Prince William Sound, Alaska
SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES

SW01 – Seal Island	SW05 – Horseshoe Bay	SW09 – Eshamy Bay	SW13 – MacLeod Harbor
SW02 – Green Island	SW06 – Unnamed Bay	SW10 – Bay of Isle - West	SW14 – Point Elrington
SW03 – Port Chalmers	SW07 – Pleiades Islands	SW11 – Bay of Isle - South	
SW04 – Iktua Bay	SW08 – Chenega Cove	SW12 – Stockdale Harbor	

Figure G-1-4. Southwest Prince William Sound GRS Index Map.



April 23, 2003

SOUTHEAST ZONE
Prince William Sound, Alaska
SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES

SE01 – Constantine Harbor	SE03 – Zaikof Bay	SE05 – Hartney Bay	SE07 – Makarka Creek
SE02 – Nuchek Creek	SE04 – Rocky Bay	SE06 – Canoe Passage	SE08 – Windy Bay

Figure G-1-5. Southeast Prince William Sound GRS Index Map.

Key to Site Selection Matrix tables G-1-1, G-1-2, G-1-3, and G-1-4.

Priority	Marine Mammals	Anadromous Fish	Birds	Subsistence	Cultural Resources	Heavy Recreation Use	Commercial Fishing/Aquaculture	Land Mgt.	Coastal Habitat	Comments
H = High priority environmentally sensitive area	S = Harbor seal; S>10 = more than 10 individuals	> 25 K = More than 25,000 pink or chum spawners	<100 = Colony (less than 100 sea birds)	F = Fishing	R = Report any cultural resources found during operations to the FOSC Historic Properties Specialist.	PC = Public use cabin	X = Commercial fishing & aquaculture	SCH = State critical habitat	M = Marsh	
P = Area of public concern	SSLR = Steller Sea Lion rookery	> 5K = 5,000 coho spawners	<1K = Less than 1000 sea birds	B = Birds	I = FOSC Historic Properties Specialist should inspect site prior to operation.	A = Mooring buoy		* = Designated critical habitat (ESA)	STF = Sheltered tidal flat	
	SSLH = Steller Sea Lion haulout	>1K = 1,000 sockeye spawners	>1K = More than 1,000 sea birds	I = Intertidal	M = FOSC Historic Properties Specialist should monitor on-site operation.	O = Other (campsite, hiking trail, etc.)+K1			SRS = Sheltered rocky shore	
	GW = Possible grey whale migration route	I = Salmon index stream		O = Otters		SF = Sportfishing				
	B = Humpback whales		>10K = More than 10,000 sea birds	M = Marine mammals						
	O = Orcas	S = Salmon stream	N = Nesting	TM = Terrestrial mammals						
	U = Historical harbor seal use, or current use unknown	H = Herring spawning	F = Sea bird foraging (Sandlance summer habitat)							
	X = Sea otter concentration area		E = Eagle nests present							
			C = Waterfowl concentration area							
			S = Special concentration area (per GRD)							
	Primary sources = PWS SCP, NOAA ESI maps, GRD (w/ base data from ADFG & NMFS)	Primary sources = PWS SCP, NOAA ESI maps & GRD (w/ base data source from ADF&G)	Primary sources = PWS SCP, NOAA ESI maps and NOAA base data, GRD (w/ USFWS database base data & ADF&G base data)	Primary sources = ADF&G, GRD and ADF&G technical reports	Primary source = ADNR	Note: data not available for all sites.	Primary source = GRD (with ADNR source data)	Primary source = GRD (with ADFG source data)	ADNR, NPS, ADF&G	Primary source = NOAA ESI maps & GRD

NOTES: * site-specific response strategy in PWS Crude Oil Tanker Plan
 ** site-specific response strategy in Valdez Marine Terminal Plan

Table G-1-1. Prince William Sound, Northeast Zone Geographic Response Strategies Site Selection Matrix (see key).

Location Name	Zone	GRS #	Priority	Surveyed	Deployed	Latitude (N)	Longitude (W)	Marine Mammals	Anadromous Fish	Birds	Subsistence	Cultural Resources	Heavy Recreation Use	Commercial Fishing/Aquaculture	Land Mgt.	Coastal Habitat
Tatitlek Harbor	NE	NE01	H		06/2000	60° 51.80'	146° 40.92'			EN	I, HIGH	R				
W. Boulder Bay	NE	NE02	H		06/2000	60° 52.01'	146° 39.74'	X	S,H	C	FI, HIGH	R	SF	X		M
West Tatitlek Narrows	NE	NE03	H		06/2000	60° 51.87'	146° 42.97'	X	S, H	C, S, E	F, I, HIGH	M	O	X		M
Virgin Bay	NE	NE04			06/2000	60° 53.42'	146° 42.30'			<1K, C		R				M, STF
Head of Boulder Bay	NE	NE05			06/2000	60° 52.47'	146° 38.06'	X	S, H	C	FI, HIGH	R	SF	X		M, STF
Cloudman Bay-Bligh Island	NE	NE06			06/2000	60° 50.23'	146° 43.73'		S	E, C		I		X		
West Bay	NE	NE07			06/2000	60° 51.70'	146° 45.80'	S, X	S,H,I	EN, C		I	O			M
Jack Bay	NE	NE08	H		Not yet	61° 02.18'	146° 37.60'	S>10	S, I, >25K, H	<100, E	F, S, TM, HIGH	I	A, SF, PC	X		M, STF
Hells Hole	NE	NE09	H	07/2002	07/2002	60° 42.00'	146° 23.12'	S>10, X	S, I, H	<1K, F, C, E	F, HIGH	I	A, O, SF	X		M, SRS
Olsen Bay	NE	NE10		07/2003	Not yet	60° 43.42'	146° 10.48'	S>10, X	S, I, >25K, H	C, N, E	S HIGH			X		STF, M
Upper Sheep Bay	NE	NE11		07/2003	Not yet	60° 41.12'	145° 56.54'	X	S, >25K, H	C, N, E	S					M, SRS
Sawmill Bay	NE	NE12		07/2003	Not yet	61° 02.75'	146° 47.19'	X		E, C, F						M
Gull Island (by Goose Island)	NE							X		C,N						
Beartrap Bay	NE					60° 45.20'	146° 04.00'	X	S, I, >25K	E	S, TM HIGH		SF	X		M, STF
Bligh Island	NE					60° 52.53'	146° 45.15'	X	S, H	C, E	TM, HIGH		O	X		M
Columbia Bay	NE					61° 00.00'	147° 04.00'	S>10	S, I	C, S, E	S, HIGH		O	X		STF
Galena Bay	NE					60° 57.53'	146° 43.17'	B, O, X	S, I, >25K, H	<100, C, S, E	F, S, MOD		PC	X		
Glacier Island	NE					60° 51.14'	147° 08.29'	SSLH	S, H	E			O	X		STF
Gold Creek/ Mineral Flats	NE					61° 08.10'	146° 27.03'	S>10, X	H	<1K, C			O, SF			STF, M
Gravina Island	NE					60° 38.24'	146° 17.30'	S>10, X	H	<100, E	S, F HIGH			X		M
Gravina Rocks	NE					60° 39.48'	146° 15.54'	S>10, X	H	>100	S HIGH			X		
Gull Island/Paul Island	NE					60° 43.28'	146° 12.11'	X	S, I	F, C, E			SF	X		M
Landlocked Bay	NE					60° 49.31'	146° 34.56'	X	S, I, H	S, E	F, S, TM, HIGH		O	X		M
Lower Jack Bay	NE					61° 01.38'	146° 38.30'	S>10, B, O	S, I, H	<100	F		A, SF	X		
Mineral Creek	NE					61° 07.56'	146° 24.21'		S		I, HIGH		SF			STF, M
Port Fidalgo 1	NE					60° 50.24'	146° 15.12'		S, I, H	E	S, TM, B, HIGH		SF, A, O	X		M
Port Fidalgo 2 (near Irish Co<100e)	NE					60° 47.11'	146° 21.02'		S, I, H	N, C, E	S, TM, B HIGH		A	X		M
Rock Bay/Creek	NE					60° 49.51'	146° 24.34'	S>10, X	H	<100, C, E						
Sheep Bay	NE					60° 40.55'	145° 57.33'	S>10, X	S, H	<1K, N, C, E	S, F MOD			X		SRS
Shoup Glacier/ Shoup Bay	NE					61° 09.12'	146° 36.49'		S	>13K, E			O			
Simpson Bay	NE					60° 38.25'	145° 52.59'	S<10, X	S, I, H	C			O, SF, PC	X		M, SRS, STF
Snug Corner Cove	NE					60° 44.31'	146° 39.41'	S, B, O, X	S, H	F, E	F, MOD			X		
Solomon Gulch Hatchery	NE					61° 05.06'	146° 17.54'	S>10	S, I	<100, S, E			SF	X		STF, M

Table G-1-2. Prince William Sound, Northwest Zone Geographic Response Strategies Site Selection Matrix (see key).

Location Name	Zone	GRS #	Priority	Surveyed	Deployed	Latitude (N)	Longitude (W)	Marine Mammals	Anadromous Fish	Birds	Subsistence	Cultural Resources	Heavy Recreation Use	Commercial Fishing/ Aquaculture	Land Mgt.	Coastal Habitat
Little Axel Lind Island	NW	NW01	H	07/2003	Not yet	60° 48.53'	147° 40.08'	S>10, B, O, X		<1K, C		I	O			
Fool Island	NW	NW02	H	07/2003	Not yet	60° 45.76'	147° 54.94'	X		<100		R				
Storey Island	NW	NW03	H		Not yet	60° 44.40'	147° 25.07'	S<10, B, O, X	H	<1K, F, C, S, E		I	O	X		
Cabin Bay	NW	NW04	H	07/2002	07/2002	60° 40.03'	147° 28.00'	B, O	S, H	<100, F, E		R	A, O			
Outside Bay	NW	NW05	H	07/2002	07/2002	60° 38.30'	147° 28.30'					R				
Agnes Island	NW	NW06	H	07/2002	Not yet	60° 36.90'	147° 23.20'	S>10, GW	H	<1K, F		I		X		
Lone Island	NW	NW07	H	07/2003	Not yet	60° 41.42'	147° 44.42'	U, X, S	S, I	E, C, N		I	A	X		SRS
South Bay, Perry Island	NW	NW08	H	07/2003	Not yet	60° 40.00'	147° 54.48'	S>10, SSLH, B, O, X	S	<100, C, N, E		I	O	X		STF, SRS
Point Pellew	NW	NW09	H	07/2003	Not yet	60° 50.24'	147° 39.30'	S>10, X	H	C, F, N		I		X		M, SRS
Fairmount Isl.	NW	NW10	H	07/2003	Not yet	60° 53.41'	147° 26.23'	S, X	S, I, H	C, F, N		M	SF, O	X		STF, M
Bald Head Chris Island	NW					60° 47.30'	147° 50.42'	X		<100			A	X		
Blackstone Bay	NW					60° 40.56'	148° 38.36'	S>10, X	S	>3K			O	X		
Cannery Creek Hatchery	NW					61° 01.04'	147° 30.42'		S	<100, C, S				X		M, SRS, STF
Carlsen Creek	NW					60° 57.13'	147° 40.51'		S	<100, C			O	X		STF, M
Cochrane Bay	NW					60° 44.52'	148° 19.34'		S, I	<100, E			SF	X		STF, M
Coghill River (College Fjord)	NW					61° 04.25'	147° 54.28'	B, O	S, I>25K, >1K	<100, C, E			A, O, SF	X		SRS, STF, M
College Fjord #1/Harvard Arm	NW					61° 16.30'	147° 42.30'	S>10, B, O		<1K C				X		
College Fjord #2/Yale Arm	NW					61° 12.48'	147° 41.07'	S>10	S	<2K, C, E				X		M
Culross Island	NW					60° 40.12'	148° 05.00'		S	E			A, PC	X		STF, M
Dutch Group	NW					60° 45.30'	147° 48.30'	S, B, O		<1K, C, S, E			O			
Eaglek Bay	NW					60° 50.73'	147° 45.05'	S>10, X	S, I	<100, E			A, O, SF	X		STF, M, SRS
Ester Island	NW					60° 52.45'	148° 06.19'	X	S, I	<1K, C, E			A			M, STF
Ester Passage -S. Entrance	NW					60° 49.66'	147° 53.83'	X	S, I					X		M
Esther Rock	NW					60° 39.14'	142 02.00'	S>10, X	H	C						SRS
Harriman Fjord 1	NW					60° 58.30'	148° 26.00'	B, O, S>10, X	S	<1K, S			A, O			STF
Harriman Fjord 2 (Barry Arm)	NW					61° 07.30'	148° 09.00'	X	S	C, E				X		STF, M
Head Wells Bay	NW					60° 59.97'	147° 26.93'	X	S, I>25K	<100, C						M, STF
Hummer Creek/ Bay	NW					60° 53.43'	148° 17.98'	B, O	S, I	C			A, SF	X		STF, M
Jonah Bay	NW					61° 00.44'	147° 40.28'			<100, C, E			O			STF, M
Little Axel Lind	NW					60° 48.24'	147° 40.18'	S>10, X					O	X		SRS
Little Fairmount Islands/ Outpost Isl.	NW					60° 51.25'	147° 27.54'	S>10, X						X		
Long Bay	NW					60° 57.50'	147° 16.00'	B, O	S, I	<100, E			O	X		M, STF
Miners River/ Lake	NW					61° 04.07'	147° 28.51'	S	S, >1K, H	E			A	X		STF, M
Naked Island	NW					60° 39.00'	147° 23.30'	H, B, O, S>10	H	<100, C, E			A	X		STF
Olsen Island	NW					60° 51.42'	147° 34.24'	S>10, B, O, X	H							

Table G-1-2, continued. Prince William Sound, Northwest Zone Geographic Response Strategies Site Selection Matrix (see key).

Location Name	Zone	GRS #	Priority	Surveyed	Deployed	Latitude (N)	Longitude (W)	Marine Mammals	Anadromous Fish	Birds	Subsistence	Cultural Resources	Heavy Recreation Use	Commercial Fishing/Aquaculture	Land Mgt.	Coastal Habitat
Passage Canal	NW					60° 48.20'	148° 30.00'	X	S, I	>5K, C, E			A	X		M, SRS, STF
Payday/ Wells Bay	NW					60° 54.18'	147° 30.00'		S, I, H	S, E				X		M, SRS
Pigot Bay	NW					60° 50.54'	148° 22.48'	B	S, I	<1K, C				X		STF, M
S. Ester Isl.	NW					60° 47.21'	148° 03.74'		S				A, O	X		M
S. Wells Bay	NW					60° 55.70'	147° 28.78'	S>10, X		<100, S, E				X		
Unakwik Inlet	NW					61° 09.00'	147° 31.30'		S, I, H	C, E				X		STF, M
Wally Norenberg Hatchery	NW					60° 48.02'	148° 05.07'	S>10, X	S	>1K				X		M, SRS
Wells Bay	NW					60° 55.42'	147° 28.48'	X	S, I, H	<100, C, S, E			A	X		M, SRS
Wells Passage, NW of Ragged Pt.	NW					60° 48.57'	147° 47.34'	X	S	S, E			A			
West Twin Bay, Perry Island	NW					60° 43.00' to 60° 43.32'	147° 58.24' to 147° 53.15'	B, O	S	<100, E			O			STF

Table G-1-3. Prince William Sound, Southeast Zone Geographic Response Strategies Site Selection Matrix (see key).

Location Name	Zone	GRS #	Priority	Surveyed	Deployed	Latitude (N)	Longitude (W)	Marine Mammals	Anadromous Fish	Birds	Subsistence	Cultural Resources	Heavy Recreation Use	Commercial Fishing/Aquaculture	Land Mgt.	Coastal Habitat
Constantine Harbor	SE	SE01	H	07/2003	06/1909	60° 20.49'	146° 35.79'	S>10, X	S, I>25K	<100, C, E	TM, M-MOD	M	O, A	X		STF, M
Nuchek Creek	SE	SE02	H	07/2003	Not yet	60° 21.57'	146° 30.64'	X	S, I>25K	C, E		M		X		M, STF
Zaikof Bay	SE	SE03	H	07/2002	Not yet	60° 18.79'	146° 59.79'	X	S, I, H	C, S, E		I	A	X		STF
Rocky Bay	SE	SE04	H	07/2002	07/2002	60° 21.59'	147 02.78'	S>10, U, H, B, X	S, I, H	<100, C, S, E	TM, M-HIGH	M	A	X		M, STF
Hartney Bay	SE	SE05	H		Not yet	60° 28.47'	145° 53.68'	X	S, I	C, S		I	O			M, STF
Canoe Passage	SE	SE06	H	07/2003	Not yet	60° 31.70'	146° 08.13'	S>10, U, X	S, I, H	<100, S, E	TM, M-HIGH	I	A, O	X		SRS, M
Makarka Creek	SE	SE07		07/2003	Not yet	60° 30.62'	146° 18.13'	X	S, I	S, E, C	TM	I	SF	X		
Windy Bay	SE	SE08		07/2003	Not yet	60° 34.36'	145° 58.85'	S>10, X	S, I	<100, S, E, C	TM-HIGH	I	A	X		M, STF, SRS
Bear Cape/Pt. Etches	SE					60° 21.12'	146° 43.54'	S<10, B, X		E	TM, M-HIGH			X		
Boswell Rocks/ Hinchin-brook Isl.	SE					60° 24.42'	146° 06.16'		S, I	C, E	M-HIGH		A	X		SRS
Cape Hinchinbrook	SE					60° 14.00'	146° 38.09'	R*					SF			
Cordova Harbor	SE					60° 32.87'	145° 46.11'	X		C, S	F		SF, O			
Deep Bay	SE					60° 35.96'	145° 46.11'	X	S	S, E	TM-HIGH		SF			M
Double Bay	SE					60° 28.34'	146° 29.07'	S>10, X	S, I	C, E			PC, A			M, STF
Egg Island	SE					60° 22.28'	145° 49.20'	U, X	S, I	<100, C, E			A, O	X		
Etches Creek	SE					60° 19.11'	146° 35.06'	U, X	S, I	C, E			A	X		STF
Fleming Spit	SE					60° 33.99'	145° 44.71'	X	S, I	S, E		I	SF, O			STF
Garden Cove	SE					60° 20.35'	146° 32.94'	X	S, I	C, E	TM-HIGH	I	A	X		M, STF
Hanks Island	SE					60° 36.42'	145° 58.48'	H*	S	>1K, E			A	X		
Hawkins Creek	SE					60° 31.08'	146° 13.80'	X	S	S, E	TM	I	O	X		M, STF
Hawkins Cutoff	SE					60° 26.12'	146° 19.30'	S>10, X	S, H	C, E	TM, B-HIGH			X		STF, M
Hawkins Island	SE															
Hook Point	SE					60° 20.12'	146° 15.29'	S, SSLR	S, I	E			PC	X		
Mud Bay	SE					60° 32.86'	145° 49.81'	X	S	C, S, E	TM-HIGH	I				M, STF
N. Hinchinbrook	SE					60° 28.30'	146° 30.00'	S>10	S, I	E	TM, B, M, F-GHIGH		A			
Northeast Hinchinbrook	SE					60° 28.44'	146° 24.56' to 146° 21.03'	H*, B		>1K						
Orca Inlet	SE					60° 32.30' to 60° 28.00'	141° 51.00' to 146° 06.00'	R*, B, X		>10K, C, S, E	F-HIGH					
Phipps Point Rocks	SE					60° 20.88'	146° 36.78'	X	S	<100, C				X		STF
Porpoise Rocks	SE					60° 19.14'	146° 41.39'	S>10, B, X		>5K		R		X		
Port Etches	SE					60° 19.05'	146° 35.00'	S>10, X	S, I>25K, H	>5K, C, E	TM-HIGH			X		STF, SRS, M
SE Hinchinbrook	SE					60° 17.12'	146° 30.34'	S>10	S	<1K, E	TM, B, M, F-GHIGH		A	X		
Seal Rocks	SE					60° 10.00'	146° 50.00'	SSLH, SSLR		<100			SF			
Sheep Point	SE					60° 36.54'	146° 00.24'	S>10	H	<100	B-HIGH			X		
Shelter Bay	SE					60° 25.94'	146° 39.82'		S, I	E		I	PC, SF, O	X		M

Table G-1-4. Prince William Sound, Southwest Zone Geographic Response Strategies Site Selection Matrix (see key).

Location Name	Zone	GRS #	Priority	Surveyed	Deployed	Latitude (N)	Longitude (W)	Marine Mammals	Anadromous Fish	Birds	Subsistence	Cultural Resources	Heavy Recreation Use	Commercial Fishing/Aquaculture	Land Mgt.	Coastal Habitat
Seal Island	SW	SW01	H		Not yet	60° 25.64'	147° 24.74'	S>10, X		<100, E		R				
Green Island-North side	SW	SW02	H		06/2001	60° 17.46'	147° 24.31'	S>10, X	S, I	<100, C, E		I	PC, O, A	X	RNA	M
Port Chalmers	SW	SW03	H	07/2002	07/2002	60° 14.42'	147° 14.67'	S>10, X	S, I, H	<1K, F, C, S, E	TM MOD/HIGH	M	A, O, PC	X		M, STF
Iktua Bay	SW	SW04	H	06/2001	06/2001	60° 07.62'	148° 00.67'	S>10	S	<1K, C, E	?	I	A, O			STF, SRS
Wilson Bay/Horseshoe Bay	SW	SW05	H		06/2001	60° 02.01'	147° 56.20'		S, I	C	?	R	O, A	X		
Unnamed Bay	SW	SW06		06/2001	06/2001	59° 59.78'	147° 59.20'		S,I		F-MOD?	R				
Pleiades Islands	SW	SW07		06/2001	06/2001	60° 13.92'	148° 00.77'	SSLH		<1K, S, E	M-HIGH	R	A	X		
Chenega Cove	SW	SW08	H	06/2001	06/2001	60° 16.84'	148° 04.91'				HIGH	M				
Eshamy Lagoon	SW	SW09		07/2003	Not yet	60° 27.52'	147° 42.23'	X	S, I, >1K	<100, C, E, N, F		R	SF	X		SRS, M
Bay of Isle	SW	SW10		07/2003	Not yet	60° 23.13'	147° 43.82'	S	S,I	C, F						SRS
Stockdale Harbor	SW	SW11	H	07/2003	Not yet	60° 18.12'	147° 12.30'	S>10, B, X	S, I, H	C, S, N, E	TM, M, B-HIGH	M	A	X		
McCleod Harbor	SW	SW12		07/2003	Not yet	59° 54.00'	147° 48.56'	X	S, I	<100, C, N, E, F	TM-MOD		A	X		STF, M
Point Elrington	SW	SW13	H	07/2003	Not yet	59° 56.00'	148° 13.30'	SSLH, X		<1K, N, F	F, M-MOD/HIGH		O, SF			STF
Applegate Rock	SW					60° 37.06'	148° 09.30'	S>10, X		<100, E	M-MOD	R		X		
Armin F. Koerning Hatchery	SW					60° 02.52'	148° 04.00'		S	S, E	F, I-HIGH			X		
Bainbridge Passage	SW					60° 07.50'	148° 11.24'	S>10	S, I	C, S, E	F, I, TM-MOD/HIGH					STF
Big Smith Island	SW					60° 31.35'	147° 19.30'	S>10, B		<1K, E	M-MOD/HIGH		A	X		
Crab Bay	SW					60° 03.57'	147° 59.51'		S, I	>1K, C, S, E			O	X		STF, M
Crafton Island	SW					60° 29.36'	147° 56.30'	S>10,GW		<100, E	F-MOD			X		
Danger Island	SW					59° 55.30'	148° 13.30'	H*, B, S>10		E	M-MOD/HIGH		O			
Delenia Island	SW					60° 20.31'	148° 07.57'	S>10, X		F, E			O			SRS
Evans Island	SW															
Flemming Island	SW					60° 09.48'	148° 00.35'	S>10	S, I	C, S, E	F-MOD/HIGH					STF
Fox Farm (Elrington Isl.)	SW											R				
Gage Island	SW					60° 11.24'	148° 01.00'	S>10		<1K, E			A, O	X		
Hogg Bay	SW					60° 04.12'	148° 12.24'	S<10	S, I	E	M, F, I-MOD/HIGH		A	X		
Icy Bay	SW					60° 11.00'	148° 26.30'	S>10, X	S	>1K, E	M-MOD	I		X		
Iktua Rocks	SW					60° 07.12'	148° 02.30'	S>10	S	C			A	X		
Jackpot Bay	SW								S	E		R		X		SRS
Junction Island	SW					60° 23.30'	147° 59.36'	S>10,B, O, X		E	F-MOD			X		
Kings Bay	SW					60° 31.36'	148° 36.12'	S	S	E	TM-MOD		O			M
Latouche Island	SW					60° 00.34'	147° 58.25'		S, I	<100, C, S, E	TM-MOD/HIGH		O			STF, M
Little Smith Isl.	SW					60° 31.06'	147° 25.36'	S>10	H	<1K	M-MOD	R		X		
Main Bay Hatchery	SW					60° 31.10'	148° 05.27'		S,I	E			O, SF	X		
North Chenega Island	SW							S>10, X		C	M					

Table G-1-4, continued. Prince William Sound, Southwest Zone Geographic Response Strategies Site Selection Matrix (see key).

Location Name	Zone	GRS #	Priority	Surveyed	Deployed	Latitude (N)	Longitude (W)	Marine Mammals	Anadromous Fish	Birds	Subsistence	Cultural Resources	Heavy Recreation Use	Commercial Fishing/Aquaculture	Land Mgt.	Coastal Habitat
Northwest Bay	SW					60° 33.42'	147° 35.54'	S>10, B, O, X	S	E				X		
Point Eleanor	SW					60° 35.00'	147° 34.00'	SSLH		E			A	X		STF
Port Nellie Juan	SW					60° 28.18'	148° 20.30'	S>10, B, O	S	E	F, M-MOD/HIGH					
Prince of Wales Passage	SW					60° 05.00'	148° 04.48'	S>10	S	C, E	F-HIGH		SF	X		
Procession Rocks	SW					60° 00.30'	148° 16.48'	S>10		<100, C, E	M-MOD			X		
Sawmill Bay	SW					60° 03.00'	148° 01.30'	B, O	S	C, E	F-MOD/HIGH			X		
SE Culross Passage	SW					60° 36.18'	148° 11.24'	S, B, O	S	E	F, TM-MOD/HIGH		PC	X		SRS
Squire Island	SW					60° 13.30'	147° 57.00'	S>10, X		C, S, E				X		
The Needle	SW					60° 06.41'	147° 36.03'	SSLH		<1K		R		X		
Wilson Bay	SW				06/2001											
Wooded Islands (Fish Isl.)	SW					59° 52.55'	147° 20.44'	SSLR, U, B, O, X	S	>5K, C, E						

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