

G. COOK INLET SUBAREA CONTINGENCY PLAN

GEOGRAPHIC RESPONSE STRATEGIES **SECTION**

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The Cook Inlet Subarea GRS homepage is available on the ADEC website at
<http://dec.alaska.gov/spar/ppr/grs/ci/home.htm>

GEOGRAPHIC RESPONSE STRATEGIES: PART ONE – INTRODUCTION

A. PURPOSE AND SCOPE

These Geographic Response Strategies (GRS) are designed to be an actual field supplement to the Cook Inlet Subarea Contingency Plan for Oil and Hazardous Substances Spills and Releases, commonly referred to as the Cook Inlet Subarea Contingency Plan (SCP). The GRS provide unified (public, responders, and agencies) priorities and response tactics for the protection of selected sensitive areas for assisting 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 identified sensitive areas. Because the Alaska Department of Environmental Conservation, the Environmental Protection Agency, and the U.S. Coast Guard already have approved the GRS, they can serve as pre-approved strategies for 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 affects sensitive environments. If phases one and two are not fully successful, phase three is to protect sensitive areas in the path of the oil. Phase three efforts endeavor 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 oil 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. Sensitive areas include not only locations of environmental concern, but those of cultural or human use value, as well.

These GRS are intended to be flexible to allow 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. 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 specified tactics are effective in protecting the resources at risk at the site. Revisions will be made to the GRS that appear in this document, if changes are indicated by site visits, drills, or actual use during spill responses. In the future, strategies may be developed for additional sensitive areas.

B. HOW TO USE THESE GRS

The information provided here supplements information provided in the Cook Inlet 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.

The GRS contain basic protection and recovery strategies with directions for implementation in the field. Each 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 the Cook Inlet Subarea. The strategies are taken from the State of Alaska’s oil spill response tactics guide, *Spill Tactics for Alaska Responders (STAR Manual)*. Responders should use refer to the STAR Manual for more detailed information about the GRS tactics. The STAR manual, published by ADEC, is available online at: <http://dec.alaska.gov/spar/ppr/star/docs.htm>.

Part 3 contains a link to the website that contains the site-specific response strategies available to download. An index map on of each sub-section on the webpage shows the location of the selected GRS 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 any special considerations.

C. 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, Western Alaska
Sector Anchorage
PO Box 5800
JBER, AK 99505

D. HOW THE GRS WERE DEVELOPED

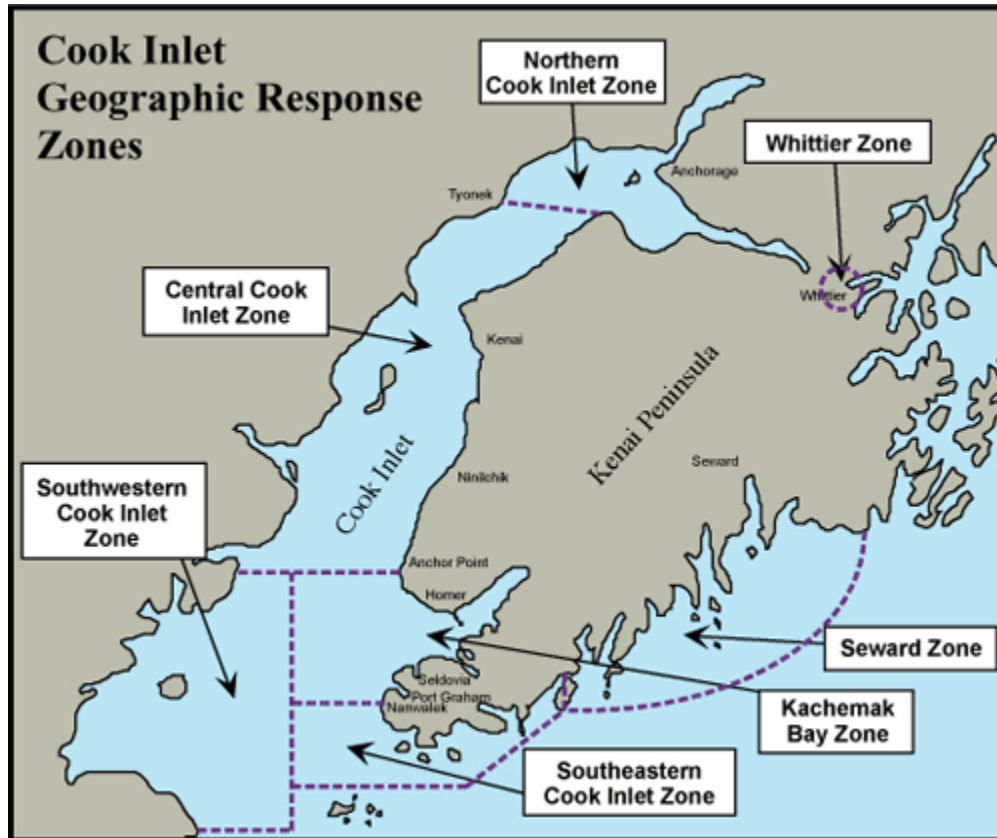
These GRS were developed through a cooperative, workgroup process involving federal, state, and local spill response experts working with representatives from the oil production and transportation industry, citizens’ groups, and natural resource agencies, as well as multiple local stakeholders (see below for a list of invited participants). The Subarea Committee divided the Cook Inlet Subarea into seven geographic response zones in order to better facilitate the organization and development of the GRS (see figure G-1). A separate workgroup formed for each of the seven zones.

Workgroup participants identified all sensitive areas with potential to be classified as “Areas of Major Concern” under the criteria established in the Cook Inlet Subarea Plan. These potential sites were evaluated by the additional criteria of 1) the risk of being impacted from a water-borne spill; and 2) the feasibility of successfully protecting the site with existing technology. Using this process, the workgroup selected a preliminary list of sites that was released for public input. Feedback on the site selection was solicited from local inhabitants (if applicable), tribal representatives, user groups, environmental organizations, and the general public. Based on the feedback received, the workgroup made the final site selections for each zone within the subarea. Additional sites may be selected in the future.

A Cook Inlet Tactics Committee, composed of spill response professionals and personnel from natural resource agencies, formed to develop draft strategies for each selected site. The entire workgroup

reviewed each draft strategy and then gave approval to the final draft, before it was then forwarded to the Cook Inlet Subarea Committee with the recommendation that it be adopted as part of the Cook Inlet SCP.

Figure G-1: Cook Inlet Subarea Geographic Response Zones



E. COOK INLET GRS WORKGROUP

The following agencies and groups provided representation in the workgroups:

Alaska Chadux Corporation
Alaska Department of Environmental Conservation
Alaska Department of Fish and Game
Alaska Department of Natural Resources
Anadarko Petroleum
Bureau of Ocean Energy Management, Regulation and Enforcement
(BOEMRE; formerly Minerals Management Service)
Chevron
Conoco Phillips
Cook Inlet Keeper
Cook Inlet Pipeline Company
Cook Inlet Regional Citizens Advisory Council
Cook Inlet Spill Prevention and Response, Inc.
Crowley Marine Services
Environmental Protection Agency
Kenai Peninsula Borough
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
National Park Service
Prince William Sound Regional Citizens' Advisory Council
Tesoro Alaska Company
United States Coast Guard
United States Department of the Interior
United States Fish and Wildlife Service
United States Forest Service
Unocal
Williams Alaska Petroleum

GEOGRAPHIC RESPONSE STRATEGIES: PART TWO – GENERAL PROTECTION/RECOVERY TACTICS

The GRS General Protection/Recovery Tactics are available on the
ADEC Website at
<http://dec.alaska.gov/spar/ppr/star/docs.htm>.

GEOGRAPHIC RESPONSE STRATEGIES: PART THREE – SITE SPECIFIC GEOGRAPHIC RESPONSE STRATEGIES

The GRS Site Specific Response Strategies Introductory Text and Index Maps are available on the ADEC Website at <http://dec.alaska.gov/spar/ppr/grs/ci/home.htm>.

A. CENTRAL COOK INLET RESPONSE ZONE

| <u>Name.....</u> | <u>Site #</u> |
|-------------------------------|---------------|
| Anchor River..... | CCI-01 |
| Stariski Creek..... | CCI-02 |
| Deep Creek..... | CCI-03 |
| Ninilchik River | CCI-04 |
| Clam Gulch | CCI-05 |
| Kasilof River..... | CCI-06 |
| Kenai River | CCI-07 |
| East Foreland | CCI-08 |
| Gull Island | CCI-09 |
| West Glacier Creek..... | CCI-10 |
| Crescent River | CCI-11 |
| Tuxedni River | CCI-12 |
| Polly Creek | CCI-13 |
| Little Jack Slough..... | CCI-14 |
| Drift River..... | CCI-15 |
| Big River | CCI-16 |
| Kustatan River..... | CCI-17 |
| McArthur River..... | CCI-18 |
| Chuitna River..... | CCI-19 |
| Swamp Creek | CCI-20 |
| Middle River..... | CCI-21 |
| Swanson River..... | CCI-22 |
| Shelter Creek..... | CCI-23 |
| Silver Salmon Creek | CCI-24 |
| Johnson River..... | CCI-25 |
| Tuxedni Bay..... | CCI-26 |
| Swanson River Mile 1.5..... | CCI-27 |
| Swanson River Mile 6.8..... | CCI-28 |
| Swanson River Mile 18.5..... | CCI-29 |
| Swanson River Mile 19.2..... | CCI-30 |
| Swanson River Mile 21.85..... | CCI-31 |
| Swanson River Mile 22.7..... | CCI-32 |

The Central Cook Inlet Response Zone GRS are available on the ADEC Website at <http://dec.alaska.gov/spar/PPR/grs/ci/cic/home.htm>.

B. KACHEMAK BAY RESPONSE ZONE

| <u>Name.....</u> | <u>Site #</u> |
|-----------------------------|---------------|
| Beluga Slough..... | KB-01 |
| Humpy Creek..... | KB-02 |
| Halibut Cove..... | KB-03 |
| Peterson Bay..... | KB-04 |
| China Poot Bay..... | KB-05 |
| Neptune Bay..... | KB-06 |
| Sadie Cove..... | KB-07 |
| Yukon Island West..... | KB-08 |
| Tutka Bay Lagoon..... | KB-09 |
| Little Tutka Bay..... | KB-10 |
| Jakolof Bay..... | KB-11 |
| Kasitsna Bay..... | KB-12 |
| Barabara Creek..... | KB-13 |
| Seldovia Outside Beach..... | KB-14 |
| Seldovia Slough..... | KB-15 |
| Seldovia River..... | KB-16 |
| Hoen's Lagoon..... | KB-17 |
| Fourth of July Creek..... | KB-18 |
| Johnson Slough..... | KB-19 |
| Port Graham..... | KB-20 |
| English Bay..... | KB-21 |

The Kachemak Bay Response Zone GRS are available on the ADEC Website at
<http://dec.alaska.gov/spar/PPR/grs/ci/cikb/home.htm>

C. NORTHERN COOK INLET RESPONSE ZONE

| Name..... | Site # |
|----------------------------|--------|
| Fish Creek..... | NCI-01 |
| Ship Creek | NCI-02 |
| Three Mile Creek..... | NCI-03 |
| Beluga River | NCI-04 |
| Theodore River..... | NCI-05 |
| Lewis River | NCI-06 |
| Ivan River | NCI-07 |
| Little Susitna River | NCI-08 |
| Goose Bay/Creek..... | NCI-09 |
| Fish Creek –N | NCI-10 |
| Wasilla Creek..... | NCI-11 |
| Spring Creek – RR..... | NCI-12 |
| Knik River | NCI-13 |
| Eagle River..... | NCI-14 |
| Campbell Creek..... | NCI-15 |
| Bird Creek..... | NCI-16 |
| Chickaloon River | NCI-17 |

The Northern Cook Inlet Response Zone GRS are available on the ADEC Website at
<http://dec.alaska.gov/spar/PPR/grs/ci/cin/home.htm>

D. SEWARD RESPONSE ZONE

| <u>Name.....</u> | <u>Site #</u> |
|---|---------------|
| Johnstone Bay | SZ-01 |
| Day Harbor | SZ-02 |
| Humpy Cove..... | SZ-03 |
| Thumb Cove | SZ-04 |
| Spring Creek..... | SZ-05 |
| Tonsina Creek..... | SZ-06 |
| Bulldog Cove | SZ-07 |
| Abra Cove..... | SZ-08 |
| Aialik Bay Spawning Streams | SZ-09 |
| Pedersen Glacier Lagoon | SZ-10 |
| Quicksand Cove Lagoon | SZ-11 |
| McMullen Cove | SZ-12 |
| Granite Passage | SZ-13 |
| Cataract Cove..... | SZ-14 |
| Harris Bay Lagoon | SZ-15 |
| Otter Cove..... | SZ-16 |
| Taroka Arm..... | SZ-17 |
| Thunder Bay..... | SZ-18 |
| Delight Lake Stream/ McCarty Lagoon | SZ-19 |
| Desire Creek | SZ-20 |
| Nuka East Arm Rookery | SZ-21 |
| James Lagoon..... | SZ-22 |
| Palisade Lagoon | SZ-23 |
| Ariadne Cove..... | SZ-24 |
| Beautiful Isle | SZ-25 |
| Pilot Harbor..... | SZ-26 |
| Nuka North Arm Spawning Streams | SZ-27 |
| Beauty Bay | SZ-28 |
| Yalik Bay | SZ-29 |
| Head of Puget Bay..... | SZ-30 |
| Whidbey Bay | SZ-31 |
| Horsehead Bay | SZ-32 |
| Head of Day Harbor | SZ-33 |
| Eldorado Narrow/ Cape Resurrection..... | SZ-34 |
| Resurrection Bay/ Seward Lagoon..... | SZ-35 |
| Bear Glacier Lagoon | SZ-36 |
| Porcupine Cove | SZ-37 |
| Chiswell Island..... | SZ-38 |
| Holgate Arm | SZ-39 |
| Sandy Bay & Cup Cove | SZ-40 |
| Head of Paguna Arm | SZ-41 |
| Delusion Creek | SZ-42 |
| Nuka N. Arm Spawning Stream 2..... | SZ-43 |

Nuka Island Spawning Stream & Rookery..... SZ-44
Nuka Pass Spawning Stream SZ-45
Outer Cove SZ-46

The Seward Response Zone GRS are available on the ADEC Website at
<http://dec.alaska.gov/spar/PPR/grs/ci/cin/home.htm>

E. SOUTHEAST COOK INLET RESPONSE ZONE

| Name..... | Site # |
|---------------------------------|--------|
| Home Cove..... | SE-01 |
| Mike's Bay..... | SE-02 |
| Berger Bay..... | SE-03 |
| Brown Mt. Salmon Stream..... | SE-04 |
| Back of Tonsina Bay..... | SE-05 |
| Takoma Cove..... | SE-06 |
| Sunday Harbor..... | SE-07 |
| Taylor Bay..... | SE-08 |
| Island Creek..... | SE-09 |
| Middle Creek..... | SE-10 |
| Port Dick Creek..... | SE-11 |
| Shelter Cove..... | SE-12 |
| Outer Rocky Bay..... | SE-13 |
| East Rocky Bay..... | SE-14 |
| Picnic Harbor..... | SE-15 |
| Windy Bay..... | SE-16 |
| Anderson Beach..... | SE-17 |
| West Perl Island Stream..... | SE-18 |
| E. Elizabeth Island Stream..... | SE-19 |
| Port Chatham..... | SE-20 |
| Clam Cove/Chrome Bay..... | SE-21 |
| Dog Fish/Koyuktolik Bay..... | SE-22 |

The Southeast Cook Inlet Response Zone GRS are available on the ADEC Website at <http://dec.alaska.gov/spar/PPR/grs/ci/cise/home.htm>

F. SOUTHWEST COOK INLET RESPONSE ZONE

| <u>Name.....</u> | <u>Site #</u> |
|---------------------------------------|---------------|
| Sukoi Bay..... | SW-01 |
| Douglas River – N..... | SW-02 |
| Akumwarvik Bay/Kamishak River..... | SW-03 |
| Horseshoe Cove/Pinkidulia Cove..... | SW-04 |
| McNeil Cove..... | SW-05 |
| Amakdedulia Cove..... | SW-06 |
| Chenik..... | SW-07 |
| Bruin Bay..... | SW-08 |
| Augustine Island – W..... | SW-09 |
| Sunday Creek..... | SW-10 |
| Head of Ursus Cove..... | SW-11 |
| North/South Heads of Iliamna Bay..... | SW-12 |
| Iniskin River..... | SW-13 |
| Oil Bay..... | SW-14 |
| Dry Bay..... | SW-15 |
| Cottonwood Bay..... | SW-16 |
| Paint River..... | SW-17 |
| Amakdedori Creek..... | SW-18 |

GEOGRAPHIC RESPONSE STRATEGIES: PART FOUR - REFERENCES

A. SENSITIVE AREAS

Alaska Department of Environmental Conservation, U.S. Environmental Protection Agency and U.S. Coast Guard, The Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases, Unified Plan Volume 3, January 2010

Alaska Department of Fish & Game, State of Alaska Game Refuges, Critical Habitat Areas and Game Sanctuaries, 1991

National Oceanic & Atmospheric Administration, Cook Inlet and Kenai Peninsula, Alaska ESI, 2002

National Oceanic & Atmospheric Administration, Guidelines for Developing Digital Environmental Sensitivity Index Atlases and Databases, 1993

Alaska Department of Fish & Game, Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes

B. LAND OWNERSHIP

Alaska Department of Fish & Game, State of Alaska Game Refuges, Critical Habitat Areas and Game Sanctuaries, 1991

Alaska Department of Natural Resources, Land Ownership maps at <http://dnr.alaska.gov/MapAK/browser?set=map&id=1492>

C. EQUIPMENT & TECHNIQUES

National Oceanic & Atmospheric Administration, United States Coast Guard, Research Planning Inc. Mechanical Protection Guidelines, June 1994.

Alaska Department of Environmental Conservation. Alaska Spill Tactics for Alaska Responders (STAR) Manual. March 2014

United States Coast Guard. Oil Spill Response in Fast Currents, A Field Guide, Coast Guard Report #CG-D-01-02, 2001

D. GIS DATABASES

Alaska Department of Natural Resources. Alaska State Geo-Spatial Data Clearinghouse, <http://www.asgdc.state.ak.us/>