Proposed Approach to Downstream Planning for Nearshore Response and Sensitive Areas Protection Outside Prince William Sound

Report to
Prince William Sound Regional Citizens' Advisory Council

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Executive Summary

The need for downstream planning in the Prince William Sound/Gulf of Alaska region is clear. As demonstrated during the Exxon Valdez oil spill, a major oil spill in Prince William Sound has the potential to impact coastlines and communities in "downstream communities" in the Cook Inlet and Kodiak regions, or subareas. Yet, the oil spill planning system that has evolved in the State of Alaska does not sufficiently plan for an oil spill that originates in one Subarea of the state but impacts other subareas in the downstream spill path.

Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) has raised the issue of downstream response planning during past public review cycles for the Prince William Sound Tanker Plan. However, major gaps still exist in the public and industry plans that define how an oil spill response would proceed in the event that a Prince William Sound tanker spill once again spread beyond the geographic bounds of the Sound. This report focuses on the obvious planning gaps in the current system, recommends a process for developing a Downstream Response Plan to fill those gaps, and includes as an appendix a draft Downstream Response Plan.

This report includes a model downstream Response Plan to facilitate discussion of how such a plan might be developed for the Prince William Sound/Gulf of Alaska region. The Gulf of Alaska downstream scenario is based on realistic assumptions, and it factors in the realities and constraints that would impact a spill response of this scale. For example, the scenario calls for implementation of approximately 40% of the Geographic Response Strategies (GRS) in the downstream spill trajectory. This is meant to reflect the real-world decision-making that might occur during a response. Similarly, the downstream scenario does not factor in prolonged response needs, such as the prolonged needs of a massive shoreline cleanup effort for the potentially impacted shorelines outside of Prince William Sound. The response activities described in the scenario would also need additional support to maintain operations over the stated time periods.

PWSRCAC developed the model Downstream Plan to foster discussion among stakeholders, state and federal agencies, responders, planholders, and other interested parties. PWSRCAC hopes that the final Downstream Planning document format, contents, and scope will reflect the broad input of all interested parties. The final plan should be incorporated into the existing Subarea Contingency Plans for Prince William Sound, Cook Inlet, and Kodiak.

The model downstream plan highlights several issues that should be considered in the context of overall response readiness in Prince William Sound and downstream communities. The plan shows that overall, sufficient response equipment exists in out-of-region inventories to support downstream response operations concurrent with a Prince William Sound response, with the exception of secondary storage. In some cases, equipment inventories need updating to ensure that sufficient quantities of specialized equipment, such as tidal seal boom, exist. Even though most types of response equipment is available in

sufficient quantities, issues such as contractual access, transportation, and mobilization logistics may slow down the process of deploying equipment from out of region in time to meet response needs. And, once deployed, it is unclear whether sufficient numbers of trained personnel will be available to operate equipment during a response of this scale. Finally, significant numbers of vessels of opportunity will be required to support both the downstream and Prince William Sound components of a major spill like the one in the downstream scenario. Efforts should be made to accurately inventory the availability of vessels of opportunity and to train additional crewmembers as needed. A database of tug and barge operators should also be developed as a means to track availability of these critical support vessels.

The downstream plan and scenario are not meant to condemn the current response system. In fact, they illustrate the fact that equipment inventories, for example, are more than sufficient, with the exception of secondary storage. By working through the exercise of planning for response needs outside of Prince William Sound, the downstream plan and scenario give us an opportunity to take response planning to the next level.

The overriding goal of the project is to ensure adequate protection of coastlines and communities threatened by the trajectory of a worst-case oil spill from a Trans-Alaska Pipeline System (TAPS) tanker in Prince William Sound. In order to meet this goal, we must focus our planning efforts where they are most needed. In this case, the downstream plan points to the need for increased secondary storage and vessels of opportunity and continuous training of local response personnel.

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Introduction

The 1989 *Exxon Valdez* oil spill provided a vivid example of a worst-case scenario oil spill from a Trans-Alaska Pipeline System (TAPS) tanker in Prince William Sound. Before the event was over, oil from the stricken tanker had traveled nearly 500 miles, spreading from the grounding point at Bligh Reef along the eastern coastline of the Kenai Peninsula, following the currents northwest into Cook Inlet and southwest to contaminate the western beaches of Kodiak Island and the eastern shoreline of the Alaska Peninsula.[1]

The *Exxon Valdez* spill yielded many important lessons that have since shaped the oil spill prevention and response structure nationwide. Within the state of Alaska, the message was clear: a major oil spill from a Prince William Sound tanker has the potential to impact sensitive coastlines well beyond the geographic bounds of the Prince William Sound planning region. Yet, despite the clear implications of this touchstone event, the oil spill planning model that has evolved in the State of Alaska largely ignores the potential for an oil spill in one region, or Subarea of the state, to impact other subareas in the downstream spill path.

Numerous oil spill trajectory models confirm what the *Exxon Valdez* spill demonstrated; prevailing weather and current conditions in Prince William Sound are such that a major oil spill from a TAPS tanker is almost assured to migrate outside the bounds of the Sound and impact downstream coastlines and communities. It makes sense, then, that the oil spill planning system in place for Prince William Sound should take into account the potential impacts to these at-risk "downstream" communities. Yet, there are no adequate plans in place to guide a large-scale spill response outside Prince William Sound for a spill originating from Prince William Sound. This report describes the need to undertake such planning and proposes a model for developing a downstream response plan that focuses on nearshore response and sensitive areas protection for coastlines and communities threatened by the trajectory of a worst-case oil spill from a TAPS tanker.

[1] http://www.oilspill.state.ak.us/facts/spillmap.html

Purpose and Scope

The purpose of this report is to assess the need for oil spill response planning in downstream communities that may potentially be affected by a major oil spill from a Prince William Sound tanker. This report will identify and analyze the "gaps" that exist in the current response planning systems in the Prince William Sound, Cook Inlet, and Kodiak Subareas, and propose methods to improve existing response plans so that responders are better prepared to manage the challenges posed by a cross-boundary oil spill originating in Prince William Sound. A draft Downstream Response Plan, which was developing using the methods proposed herein, is included as an attachment to this report.

In a major spill with potential downstream impacts, the response system must be able to simultaneously contain and control the oil spill at its source, mount an effective open water, nearshore, shoreline protection and wildlife response in Prince William Sound, while mobilizing and implementing a parallel response in downstream areas. This creates major challenges in the following areas:

- Coordinating spill logistics,
- Organizing the Incident Command,
- Ordering and allocating response equipment, and
- Assigning trained responders to staff the response.

Therefore, a major focus of this report is to assess the availability of local, regional, statewide, and out-of-region resources to support simultaneous response efforts in Prince William Sound and downstream communities. Worse case spill scenarios will be developed for the Cook Inlet and Kodiak Subareas to identify the downstream resource needs.

Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) will use this report, together with the model Downstream Response Plan, to engage representatives of downstream communities, state and federal agencies, and the public, in an effort to fine tune the Downstream Response Plan and incorporate it into the Prince William Sound, Cook Inlet and Kodiak Subarea Contingency Plans. The final Downstream Plan will be a valuable spill response tool that may be used by any responsible party as well as state and federal agencies to organize and mount an effective downstream response during a major Prince William Sound tanker spill.

Gap Analysis

PWSRCAC has long recognized the need for downstream response planning to address the likelihood that a major Prince William Sound tanker spill would impact communities in Cook Inlet and Kodiak.[2] The current oil spill contingency

[2] PWSRCAC has raised this issue in Request for Additional Information comment letters to the Alaska Department of Environmental Conservation during both the 1998 and 2002 Prince William Sound Tanker Plan renewal processes.

planning system in place in Prince William Sound, Cook Inlet, and the Kodiak region contains minimal information to guide this process.

Prince William Sound Tanker Plan

The 2002 Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan (PWS Tanker Plan) outlines the response procedures in place for the tanker companies that service the Valdez Marine Terminal. The PWS Tanker Plan includes scenarios that describe, in narrative form, the way in which a spill response might proceed under various conditions based on a variety of assumptions about spill size, location, weather, environmental conditions, and other details.

The Tanker Plan scenarios indicate that the planholders will wait until the trajectory analysis or aerial surveillance indicate that the oil is going to leave PWS before taking any actions outside of PWS. PWSRCAC maintains that it is highly probable that oil will spread beyond PWS, under the worst-case scenario conditions in the Tanker Plan (Part 3, SID 4). If the average rate of spreading from the *Exxon Valdez* spill were applied to PWS Tanker plan scenarios, oil could spread outside PWS within 4 or 5 days, reach the mouth of Resurrection Bay in 6 or 7 days, and reach the lower Kenai Peninsula in 10 to 12 days.[3] The scenario narratives indicate that field command posts would be established in Seward, Homer, and Kodiak, but provide no additional details regarding specific response activities in these areas, such as how response resources would be allocated as the downstream response progresses.

Without a more operational level of detail, either in the Tanker Plan scenarios or in other applicable planning documents (such as Subarea Plans, which are discussed below), it is difficult to determine whether sufficient resources are available to ensure that source control and cleanup operations in Prince William Sound can proceed simultaneous with nearshore response and shoreline protection activities in threatened downstream communities.

Subarea Plans and Unified Plan

For oil spill planning purposes, the state of Alaska has been divided into ten sub-regions, known as Subareas. Rather than using one Area Contingency Plan for the entire state, as is done in the Lower 48, Alaska has ten Subarea Contingency Plans (SCP) that provide the "guideline[s] for establishing operations in the event of a major response effort to an oil spill or hazardous material release."[4] These Subarea plans include scenarios that describe how a regional spill response might proceed, as well as a description of response actions to be taken during a major oil spill. However, each Subarea plan focuses specifically on response actions within the geographic bounds of the Subarea region. Downstream response issues are not addressed with sufficient detail to provide useful planning guidance.

[3] The *Exxon Valdez* oil spill spread at an average rate of 12.8 miles per day and a maximum rate of 25 miles per day.
[4] Paragraph 1, Letter of Promulgation for PWS SCP, July 1997.

The Prince William Sound SCP includes a worst-case coastal oil spill scenario where a TAPS trade tanker grounds on the eastern tip of Naked Island and releases 92.4 million gallons of Alaska North Slope crude, and approximately over 500,000 gallons of bunker C fuel oil. The scenario narrative describes the downstream response to this event as follows:

> "The magnitude of this spill would cause it to transcend beyond the Prince William Sound area. Similar to the 1989 Exxon Valdez oil spill, predominant ocean currents and weather conditions would move the oil towards the southwest, threatening the Kenai Peninsula, Kodiak and surrounding areas. CISPRI resources would more than likely be committed to cleanup and shoreline protection operations in their area of operation (primarily Cook Inlet). The ADEC (through a response action contractor) maintains a response barge at Seldovia for nearshore collection of product. The Captain of the Port, Western Alaska would likewise be heavily involved in overseeing product recovery and cleanup operations in his/her area of operation."[5]

The scenario provides no additional details regarding which CISPRI resources would be assigned to Cook Inlet response operations, and whether the allocation of those resources to downstream operations might impact the Prince William Sound response. Beyond the response barge in Seldovia, which as of January 2004 is no longer response-ready, there is no discussion of resource allocation or response decisionmaking to protect threatened coastlines along the Kenai Peninsula and in the Kodiak region.

The Cook Inlet SCP scenarios do not include a scenario where the spill originates outside the Subarea. However, the Kodiak SCP worst-case spill scenario involves a crude oil tanker spill at the entrance to Cook Inlet.[6] The scenario narrative concentrates on the formation of a Unified Command and a MAC group, to demonstrate how local Kodiak government and response personnel will integrate into a large spill response when the spill occurs outside the Kodiak Subarea. In this respect, the Kodiak worst-case scenario represents "downstream" planning. However, the scenario does not consider resource allocation or other logistical issues.[7]

The Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substance Discharges/Releases (Unified Plan) provides statewide guidelines for oil spill response, however it does not contain scenarios or response guidelines

[5] PWS SCP Page F-4, 1997.
[6] This scenario is based on the Perl Rock scenario developed by Cook Inlet Spill Prevention and Response, Inc. (CISPRI) for their Technical Manual.
[7] On page G-20 of the Kodiak SCP, the scenario states that
"Because in this case the Responsible Party has access to significant response resources, equipment and personnel through CISPRI, the Incident Commander is a representative of the Responsible Party. Federal, state and local agencies serve primarily in an oversight capacity, monitoring the response and clean up and providing input and direction regarding wildlife, sensitive areas, and nearshore protection. For this reason, this scenario describes physical response actions (mobilization, boom deployment, etc .) in less detail than Scenario 1."

that address how resource allocation and response coordination would proceed in the event of an oil spill that originates in one Subarea and spreads to others. Appendix VII of Annex B of the Unified Plan explains in general terms how an Area Command would be established for a multi-region oil spill, but offers no specific guidance regarding response decisionmaking or allocation of resources during such an event. For example, in the event of a major Prince William Sound spill with a downstream response, it is unclear how information would flow from multiple command posts in downstream communities to the Unified Command at the Valdez Emergency Operations Center (VEOC). Do communications channels and equipment exist to support a multi-region response with a Unified Command in Valdez and multiple command posts in downstream communities? How would regional priorities be established? How would competing resource needs be reconciled?

The Alaska Incident Management System (AIMS) Guide published by the Alaska Regional Response Team identifies 3 levels of organization for an oil spill response: Field Response Team (FRT), Incident Management Team (IMT), and Crisis Management Team (CMT). In this organization scheme, the FRT manages on-scene response, the IMT is the Unified Command level, and the CMT is established to address broad, regional policy issues. Using this hierarchy, a downstream response scenario would involve multiple FRTs operating from two or more Field Command Posts (FCP) but feeding into the same IMT and CMT. However, the AIMS Guide does not specifically address how multiple FRTs would be coordinated in this context. Also, the Unified Plan and Subarea Plans do not currently mirror the organizational concepts outlined in the AIMS Guide.

The US Coast Guard has published an Incident Management Handbook[8] (IMH) that describes a process for managing regional and national incident commands. In situations where a "senior executive level response coordination" is necessary, a Regional or National Incident Command (RIC/NIC) may be formed to oversee the overall incident management. The purpose of the RIC/NIC isn't to replace the Incident Commander (s), but to provide "strategic assistance and direction and resolving competition for scarce response resources." This type of command structure, which is focused on prioritization of resource needs and other strategic issues, may be useful to apply in a multi-Subarea response. Under such a model, each Subarea may have its own Incident Commander, who would be focused on tactical response issues, while the Regional IC could address competing resource needs and other big-picture concerns. However, it would be useful to include guidance on this level of coordination in the Unified Plan, the Subarea plans, or both.

Other Models for Trans-boundary Spill Response

As discussed above, Alaska's Subarea Contingency Plan model for statewide oil spill response planning differs from other US states, which generally use one Area

[8] "2001 Incident Management Handbook, available online at http://www.uscg.mil/hq/g-m/mor/page2index.htm.

Contingency Plan to guide response operations throughout the state. In other states, then, oil spill response scenarios are not limited to confined geographic sub regions, as they are in Alaska; however, they are usually confined to state waters. But just like an oil spill in Prince William Sound may migrate into other subareas without regard for planning boundaries, so may oil spills in other states migrate beyond state waters into additional state and federal jurisdictions. In this way, a parallel may be drawn between downstream planning in Alaska and other trans-boundary spill planning response regimes throughout the United States.

A number of trans-boundary contingency plans and spill response regimes have been established both within the US and between the US and Canada. The Canada-US Joint Marine Pollution Contingency Plan (JCP)[9] provides a framework for inter-jurisdictional coordination during an oil spill that affects both US and Canadian territorial waters. The JCP includes five geographical annexes that focus on specific regions: CANUSLAK (Great Lakes region), CANUSLANT (Atlantic region), CANUSPAC (Pacific region), CANUSNORTH (Beaufort Sea region), and CANUSDIX (Dixon region). The JCP and Geographic Annexes include trans-boundary oil spill response guidance on a number of issues, including:

- Organizational concepts that describe how two or more response systems would come together during a trans-boundary response;
- Operational concepts that define how response actions will be coordinated among jurisdictions;
- An exercise program that calls for periodic drills to test the trans-boundary response system; and
- A discussion of trans-boundary movement of response resources.

Organizational and operational considerations are important in any trans-boundary spill response. However, in this respect the situation in Alaska is not directly analogous to the US-Canadian boundary issues, since a multi-Subarea spill in Alaska would not require international coordination of multiple agencies. Nonetheless, an Alaskan oil spill that impacted multiple Subareas would require some level of coordination among municipalities, as well as a system to identify and prioritize local response needs across two or more Subareas.

Drills and exercises provide an excellent forum for working through many such coordination issues, and major Alaska exercises such as the 1998 SONS drills and the 2003 Tesoro drill have provided a forum for working through many of these considerations. For example, the after-action report from the 1998 Spill of National Significance (SONS) drill noted that the Unified Command was generally effective in coordinating multiple Captain of the Port (COTP) zones, although some major problems arose with respect to incorporating downstream response issues into the Incident Action Plan and establishing downstream command posts.[10] Unfortunately, the lessons learned through such exercises are seldom captured in the Subarea Contingency Plans or Unified Plan, therefore no written

[9] 2003. Available online at http://www.uscg.mil/d1/staff/m/jrt/documents/CANUS.JCP.2003Rev.pdf.

guidance exists to direct responders and incident management teams during an actual oil spill where trans-boundary coordination issues may arise.

The final issue listed above, that of trans-boundary resource allocation, is one of primary concern to PWSRCAC in addressing the gaps in trans-Subarea spill response planning within Alaska. There is a general need to improve coordination, in both planning and response, among adjacent Subareas in Alaska. The 1998 SONS drill report noted a number of problems with resource ordering in general, and specifically with activating mutual aid agreements between Alaska co-ops and western OSROs.[11] Resource allocation issues, such as where equipment will come from and how equipment will be cascaded into a downstream response, must be considered as part of the planning process to develop effective downstream planning in the Prince William Sound and Gulf of Alaska region.

Resource Allocation for Downstream Response Planning

Each Subarea Contingency Plan contains a section entitled "Resources" that identifies local, regional, and out-of-region resources that would be available to support a major spill response. For planning purposes, response equipment is designated to be in-region or out-of-region, based upon the distance of the storage location from the planholder's area of operations. In-region resource pools differ for the Prince William Sound, Kodiak, and Cook Inlet regions, based on the oil spill response contractors and government resources in each subarea. However, for a major spill response in any of these subareas, response resources from neighboring resources would be utilized.

In a scenario where a spill originates in Prince William Sound and subsequently spreads to Cook Inlet and Kodiak, initial resource allocation would likely be focused on containing and controlling the spill at its source. Resources from both in-region and out-of-region would likely be assigned to Prince William Sound. These assignments will include many response resources from within the Cook Inlet and Kodiak subareas. However, as the oil spill spread to threaten or impact downstream communities, additional response resources would be needed in these locations. Resource shortfalls will likely occur as competing resource needs arise.[12]

Because there are no cross-Subarea spill response scenarios or action plans that specifically consider how downstream response needs would be met in a large multi-region response, it is unclear whether resource shortfalls will be addressed. A downstream response scenario and plan will address this planning gap by considering how out-of-region resources would be cascaded into the response to address the simultaneous need for resources at the spill source and in downstream communities.

[10] SONS Drill Final Report, pages 20-23 and 27-28.
[11] SONS Drill Final Report, page 34.
[12] During the *Exxon Valdez* spill response, once resources were allocated to the PWS portion of the response it was difficult to get them re-assigned to downstream areas.

The need to simultaneously implement multiple geographic response strategies (GRS) across more than one Subarea may also create competing resource needs, since GRS do not require pre-positioning and maintenance of equipment caches. There is also a great deal of overlap in the types of resources required to implement many GRS, which further exacerbates the potential for competing resource needs.

Training Downstream Responders

The availability of locally available, trained spill responders is often problematic during major spill responses, especially in Alaska due to the large geographic area and remoteness of many coastal communities. The after-action report from the 1998 Spill of National Significance (SONS) drill held in Prince William Sound noted that conducting consistent training at multiple locations might be problematic during a major spill.[13] Therefore, programs that train community-based responders on a regular basis are necessary to ensure that trained individuals are locally available during a spill response.

The hazardous materials response training requirements required by federal regulation[14] provide several different training levels for oil spill responders. The most basic level of hazmat training, the Awareness Level responder, can be completed in 4 hours but limits a responder primarily to notification and other administrative/planning functions. An Operations Level responder completes an 8-hour course that includes the Awareness Level curriculum as well as defensive measures that may be used to control and contain a spill. In order to carry out the types of spill response duties associated with implementing a geographic response strategy (GRS) or other shoreline protection strategy, a spill responder must be trained to the Hazmat Technician level, which requires a 24-hour training course. The highest level of training, Hazardous Waste Clean-up, requires a 40-hour course. All training certifications are good for one year and may be renewed with refresher courses, which range in length up to eight hours.

For the purpose of implementing a downstream response, responders would require, at a minimum, Hazmat Technician level training. Because this type of training requires 24 hours of classroom learning, it is unrealistic to plan to train responders on the fly after a spill has occurred. Therefore, it is important that sufficient numbers of trained individuals are available to staff the downstream response operations.

The SERVS Tier II/III Fishing Vessel program includes a Hazmat Technician training component for community-based responders both within Prince William Sound and in downstream communities. Training programs were delivered to contracted fishing vessel crews in the downstream communities of Kodiak, Seldovia, Homer, and Seward in the spring of 2003.

[13] SONS Drill Final Report, Page 17.
[14] OSHA 29 CFR 1910.120.

In October 2003, Tesoro Alaska held a tabletop drill to test, among other objectives, the SERVS fishing vessel response program in Kodiak in the event of a major Prince William Sound oil spill. The day prior to the exercise, the Kodiak fishing vessel administrator performed a tabletop callout of contracted Tier II vessels. Of the 65 contracted vessels, 45 had received training the previous spring. Of those 45, 21 were available to respond. On the day of the exercise, the fishing vessel administrator made 61 calls but was only able to contact 11 vessel owners. Therefore, during this particular exercise there was a fairly large pool of trained responders available locally, however the call out process was not highly efficient.[15]

In the context of downstream planning, it would be useful to organize future drills that test whether fishing vessel crews available through the Tier II/III program are properly trained and sufficient in number to implement the GRS and shoreline protection strategies that would be implemented during a major spill.

The Downstream Plan

Purpose and Scope

The model Downstream Plan is based on the likelihood that a worst-case scenario tanker spill in Prince William Sound will impact downstream communities in the Cook Inlet and Kodiak Subareas by identifying and working through planning and logistical issues associated with a multi-region response before an actual spill.

The purpose of the Downstream Plan is to describe, using a scenario format, how a spill response could be conducted for a worst-case scenario, Response Planning Standard (RPS) size spill from a tanker in Prince William Sound, and to provide planning and logistical information that could be referenced during an actual spill response that impacts downstream communities. The scope of the Downstream Plan includes the communities and shorelines that could be impacted from an RPS spill in Prince William Sound, as well as existing GRS that have been developed for these locations.

Once a final Downstream Plan is completed, it may be incorporated into the Prince William Sound, Kodiak, and Cook Inlet Subarea Plans, as the information it includes will help to integrate a response that includes 2 or more of these subareas. The Downstream Plan may also provide a model that could be used elsewhere in the state to facilitate planning for multi-region responses.

Downstream Plan Format and Contents

The model Downstream Plan includes an oil spill scenario and reference information. The information will be useful both for planning purposes and as a hands-on response tool that may be referenced during an actual oil spill.

[15] While PWSRCAC observers of the drill speculated that during a real spill, word would have passed through the vessel fleet more quickly, one of the recommendations that came from the Tesoro drill was that the current system of calling out Tier III vessels is inefficient.

The downstream planning scenario builds on the scenarios described in the Prince William Sound Tanker Plan and the scenarios included in the Prince William Sound, Kodiak, and Cook Inlet Subarea Plans. Response equipment identified by the Prince William Sound Tanker Planholders will be assumed to be assigned at the incident location and within Prince William Sound. The downstream scenario uses similar task forces as those described in the Tanker Plan but with a focus on development of these task forces from resources located outside of Prince William Sound or out of region.

The model Downstream Plan includes the following reference information:

- Command structure for multi-region responses,
- Response equipment availability,
- Logistical issues in coordinating a multi-region response,
- Response personnel issues, and
- Communications needs for multi-region coordination.

These reference sections include recommendations for how to manage these issues for an oil spill that impacts downstream communities. Wherever possible, the reference sections identify potential sources for response resources and identify key logistical concerns regarding their access, mobilization, and deployment.

Planning Process

Because the Downstream Plan addresses issues that impact three different subareas and numerous coastal communities, it is important that the final plan be developed with broad participation from local, state and federal government agencies, spill responders, the oil industry, stakeholder organizations, members of the public, and existing planning bodies such as the Subarea Committees and Local Emergency Planning Committees (LEPC).

PWSRCAC has initiated the downstream planning process and has committed resources to developing a model Downstream Plan and scenario, however the project intent includes broad participation, which may be achieved through one or more of the following processes:

- Hold workshops in downstream communities to solicit information and encourage local input into the planning process. Use this report and the draft downstream scenario/plan as the basis for discussion at community meetings.
- Establish a workgroup to include agency, industry, responder, stakeholder, and public participants.
- Coordinate Downstream Plan development with LEPCs and Subarea Committees as needed.
- Foster communications between LEPCs and Subarea Committees in Prince William Sound, Cook Inlet, and Kodiak to promote buy-in before plan is finalized.

- Secure commitment from Subarea Committees to incorporate Downstream Plan into existing SCPs and/or Unified Plan.

The Downstream Plan Scenario

The proposed downstream planning scenario is based on a 300,000 bbl Alaska North Slope Crude oil spill from a tanker near Cape Hinchinbrook. Despite the Responsible Party's best efforts to contain and control the spill, steady southeast winds and an ebbing tide push 100,000 bbl of oil northwest along Montague Island and into the Gulf of Alaska toward the Kenai Peninsula and Kodiak Islands. As the tide turns, the remaining 200,000 bbl of oil begins moving into Prince William Sound. As plans are made to move the damaged tanker into the more protected waters in Port Etches, the oil in the Gulf of Alaska could initially become a lower priority than the ship and the oil entering Prince William Sound.

This scenario uses the descriptions in the reference sections of the Downstream Plan to address issues such as resource prioritization, environmentally sensitive area protection and prioritization, GRS implementation, command structure for a multi-regional "Spill of National Significance" response, availability of trained response personnel, and logistical capabilities of accessing spill equipment from outside of Prince William Sound.

Reference Sections

The model Downstream Plan follows the format utilized for the Subarea Contingency Plans to facilitate incorporation into those plans. Reference sections may be adopted as an annex to each Subarea Plan or may be incorporated into appropriate sections of the Subarea Plan (Response, Resources, etc.).

Command Structure for Multi-Regional Responses

The Downstream Plan includes a summary of the structure likely to be established for command and control of the spill response based on the AIMS system, the National Contingency Plan, SONS drill procedures, and the RIC/NIC system described in the Coast Guard's Incident Management Handbook. This section identifies how downstream communities will input into the decision-making process, and how response priorities will be coordinated between the primary Incident Management Team in Valdez, activated Crisis Management Teams, the Coast Guard's RIC/NIC, and outlying command posts.

This section of the plan also considers the methods that could be used to determine the prioritization of sensitive resources, allocation of personnel and equipment, and inclusion of downstream response needs and issues in the incident objectives.

Response Resources

The section on response resources is one of the most critical portions of the Downstream Plan. This section includes a summary of various Division, Group, and Task Force functions and requirements used in the scenario. Each of these

various entities has specific functions and needs associated with them. These functions include open-water recovery, near-shore recovery, onshore recovery, sensitive area protection, wastes disposal, shoreline cleanup, Shoreline Cleanup Assessment Teams (SCAT), interim storage for recovered oil and water, decontamination for equipment and personnel, wildlife rescue and rehabilitation, and alternative technologies such as dispersants and in-situ burning.

This section looks at the types of equipment needed for the operations listed above and identifies potential sources for this type of equipment. This section of the model Downstream Plan also identifies how the necessary equipment can be accessed through mutual aid agreements, U.S. Coast Guard basic ordering agreements, non-member agreements with the various oil spill cooperatives, or direct contracts. In working through these equipment access issues, this section points out potential hurdles that may create problems in accessing certain response equipment, such as regulatory requirements, customs, and logistical limitations for the affected areas. This section also identifies the types and approximate quantities of resources available within the region, and identifies the gaps that need to be filled with out of region resources.

In addition to equipment issues, the resources section also addresses personnel needs. A major oil spill response requires significant personnel resources. Meeting these needs can often be problematic. Response personnel must have the appropriate level of safety training and certifications to meet state and federal requirements. Special training is needed to operate many of the equipment types used to clean up oil. In addition to training requirements, the sheer volume of personnel necessary to perform all of the roles that are needed during a spill response can be substantial. Meeting these personnel needs, especially in small, isolated coastal communities, can have dramatic impacts. Coastal communities faced with staffing a large spill response effort can be affected by the loss of personnel within their communities as they leave their normal jobs to go work on the spill. The communities may also be affected by the influx of a large number of people from outside the community coming into the area looking for work.

To address many of these issues, the model Downstream Plan includes a discussion of how best to identify and meet the personnel needs for a spill response in downstream communities. The personnel section reviews the availability of trained personnel within Alaska, and identify gaps in the needs and availability of trained personnel. This section also recommends methods for training personnel in remote communities at the time of the spill, outlining a strategy for setting up community-based training programs.[16] The plan will include reference information, such as a listing of organizations that can provide the required training within Alaska.

[16] For a more detailed discussion of training community responders, see Nuka Research and Planning Group, LLC and MAC Leadership Consulting Services, "Combining the Firehouse Model and Community-based Response Teams for an improved Regional Oil Spill Response System in Alaska," report to PWS RCAC, October 2004.

Logistics

The logistical requirements for a large spill response in the Gulf of Alaska region will present many challenges. All of the response functions listed above must be assembled and then supported, over a large geographic region. The personnel involved in these operations will have to be housed and fed. The equipment will need staging areas, maintenance, and fuel. This section of the Downstream Plan will consider such logistical needs and challenges.

The logistics section also provides a cross-reference table that identifies the location of key logistical information in the PWS, Kodiak and Cook Inlet Subarea Plans, such as recommended locations for command posts or forward command posts within the downstream communities.

Communications issues are a major focus of the logistics section, since communications are critical during any oil spill response, especially when the response covers a broad geographic area. A good communication network is required not only for effective field operations but also for the information exchange needs between the affected communities and command and control functions of the multi-regional spill response. However, in many of Alaska's more remote regions, effective communications are difficult at best.

The communications section in the model Downstream Plan identifies the existing communication capabilities within the Gulf of Alaska region. Methods of communications are reviewed and potential gaps identified. This section also reviews the contact points listed in the Subarea Contingency Plans within the coastal communities to determine if gaps exist in terms of both spill notifications and the ability to exchange information between the local communities and the Unified Command.

The communications section also considers whether there are any communication protocols in place to ensure effective information exchange between the Unified Command and the forward command post and affected communities. A sample communications plan is provided to illustrate how the various response components might communicate during a multi-Subarea spill.

Model Downstream Plan

A draft Downstream Planning Supplement is included as Appendix A to this report. The draft Downstream Planning Supplement, which is so named because it is meant to supplement the Unified Plan and the Prince William Sound, Kodiak, and Cook Inlet Subarea Plans, is comprised of six sections. Each of these sections could be incorporated into corresponding sections in individual Subarea Plans.

The model downstream plan follows the basic format outlined above. The first section provides background information regarding the gaps identified in the existing oil spill response system and the process that led to the development of the Downstream Plan. The second section uses a narrative Scenario to describe

how a spill response to catastrophic size spill that originates in PWS and spreads to the Kodiak and Cook Inlet Subareas could be conducted. The third section describes the Command Structure used for Multi-Subarea Responses.

The fourth section is the Response Resources Section, which addresses equipment and personnel issues. The fifth section addresses Response Logistics, including communications needs. The final section is the References Section that provides a bibliography of documents used to develop the Downstream Plan. The draft Downstream Plan has been developed to foster discussion among stakeholders, state and federal agencies, responders, planholders, and other interested parties. PWSRCAC hopes that the final Downstream Planning document format, contents, and scope will reflect the broad input of all interested parties.

Recommendations

The need for downstream planning in the Prince William Sound/Gulf of Alaska region is clear. A major tanker-source oil spill in Prince William Sound has the potential to impact coastlines and communities in the Cook Inlet and Kodiak Subarea, yet there is no plan in place to outline how a downstream response would be integrated.

Planning Process

The draft downstream plan included with this report is an example that should foster discussion. The following issues should be considered as the planning process moves forward.

- The Downstream Plan should be developed with maximum participation and input from downstream communities, regional spill response organizations, state and federal government agencies, LEPCs, Prince William Sound Tanker Planholders, and stakeholder organizations.
- The Downstream Plan should be developed in a format that can be integrated into the Prince William Sound, Cook Inlet, and Kodiak Subarea Contingency Plans, either as a stand-alone section or as a supplement to relevant sections of each plan.
- The Downstream Plan should build on lessons learned during past drills and exercises and should incorporate planning information generated through existing trans-boundary oil spill plans and programs.
- The Downstream Plan should be tested and refined through drills and exercises.

Issues Identified in the Downstream Plan Scenario

Part Two of the Downstream Planning Supplement, which is Appendix A to this report, includes a scenario for how the downstream response may proceed to a worse case scenario oil spill at Hinchinbrook Entrance. The scenario focuses on the unique response needs for the nearshore response in downstream communities that would be impacted by the spill as it migrates beyond Prince William Sound.

The Gulf of Alaska downstream scenario is based on realistic assumptions, and it factors in the realities and constraints that would impact a spill response of this scale. For example, the scenario calls for implementation of approximately 40% of the Geographic Response Strategies (GRS) in the downstream spill trajectory. This is meant to reflect the real-world decision-making that might occur during a response. Similarly, the downstream scenario does not factor in prolonged response needs, such as the prolonged needs of a massive shoreline cleanup effort for the potentially impacted shorelines outside of Prince William Sound. The response activities described in the scenario would also need additional support to maintain operations over the stated time periods.

When considered as a planning tool, the downstream scenario yields several important lessons that should be considered in the context of overall response readiness in Prince William Sound and downstream communities.

- Secondary storage will likely be a limiting factor for both the PWS response and the downstream response.
- Information about available equipment inventories is incomplete, and should be updated given the identified equipment needs in scenarios such as the PWS Tanker Plan Scenario 809 and the downstream scenario.
- Logistical support may be a limiting factor. Future planning efforts should consider whether logistical and contractual arrangements are in place to ensure that available out-of-region equipment can be transported to the spill scene and deployed in the time frames necessary to mount a successful response.
- The availability of properly trained response personnel may not be sufficient to support downstream response operations concurrent with a major PWS oil spill response. Efforts should be made to inventory available response personnel and develop innovative training and readiness programs, including community-based responder training.
- A major PWS oil spill that impacts downstream communities will create the need for at least 1,000 vessels of opportunity with properly trained crews. Fishing vessels from downstream

communities may initially be called to respond to the PWS portion of the spill, and then later be required to support operations in their own communities. Efforts should be made to accurately inventory the availability of vessels of opportunity and to train additional crewmembers.

- The number of the tugs and barges available to support a spill response is highly variable. A database of tug and barge operators should be developed as a means to track availability at the time of an incident.

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Appendix A: Draft Downstream Plan

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DOWNSTREAM PLANNING SUPPLEMENT:
INTRODUCTION

The Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substances Discharge/Releases (commonly referred to as the Unified Plan) is divided into ten Subareas for planning purposes. This Downstream Plan addresses the coordination of response efforts when an oil spill originates in one Subarea but threatens to impact one or more additional Subareas. The Downstream Plan is intended to supplement the information in the Unified Plan and the Prince William Sound, Cook Inlet, and Kodiak Subarea Contingency Plans (SCP). For planning purposes, this Downstream Plan focuses on a scenario where a catastrophic tanker spill occurs at the Hinchinbrook Entrance, Prince William Sound. The prevailing winds and currents in this area will likely carry the spilled oil in a southwest trajectory, along the Gulf of Alaska coastline, threatening to impact the "downstream" communities in the spill path. The downstream areas threatened by a major Prince William Sound discharge include communities in the Kodiak and Cook Inlet Subareas. The planning principals and response strategies included in this Downstream Plan may be applicable to spills in other Subareas of the State.

This Downstream Planning Supplement is comprised of six sections. The first section provides background information regarding the gaps identified in the existing oil spill response system and the process that led to the development of the Downstream Plan. The second section uses a narrative Scenario to describe how a spill response to catastrophic size spill that originates in PWS and spreads to the Kodiak and Cook Inlet Subareas could be conducted. The third section describes the Command Structure used for Multi-Subarea Responses. The fourth section of this plan is the Response Resources Section, which addresses equipment and personnel issues. The fifth section addresses Response Logistics, including communications needs. The final section will be the References Section that provides a bibliography of documents used to develop this Downstream Plan. Each of these sections could be incorporated into corresponding sections in individual SCPs.

DOWNSTREAM PLAN: PART ONE – BACKGROUND

The need for a Downstream planning model was first proposed by Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) in recognition of gaps in the existing response plans for Prince William Sound and downstream communities. Specifically, there were concerns that the existing oil spill planning system in Prince William Sound (PWS) and adjacent Subareas lacked sufficient information to guide a response to a major oil spill originating in the PWS Subarea and affecting Cook Inlet and Kodiak.

PWSRCAC developed a concept paper, entitled "Proposed Approach to Downstream Planning for Nearshore Response and Sensitive Areas Protection Outside Prince William Sound," which identified gaps in the existing response system and proposed a model for planning across Subareas to address some of these shortfalls.

This Downstream Plan is meant to address those gaps by working through the resource, logistical, and command structure challenges that may be encountered during a catastrophic spill that spreads from one Subarea (Prince William Sound) into others (Cook Inlet and Kodiak). While the scenario, resource, and logistical information in this plan is specific to a Prince William Sound spill that spreads into other Gulf of Alaska Subareas, the basic model could be applied in other areas of the state where a large spill threatens to impact more than one Subarea.

DOWNSTREAM PLAN: PART TWO – PRINCE WILLIAM SOUND DOWNSTREAM RESPONSE SCENARIO

Scenario Introduction: This scenario is written as a demonstration of how an oil spill in or near Prince William Sound could become a multi-Subarea spill response with impacts to both the Kodiak and Cook Inlet Subareas. The following guidelines will be used to frame this downstream scenario.

- The scenario will focus on the response activities that occur once the oil has spread outside of Prince William Sound and will not provide detailed description of the Prince William Sound response operations.
- Although this scenario reflects a worse case situation, the scenario assumptions are meant to be as realistic as possible. For example, the scenario calls for implementation of roughly 40% of the Geographic Response Strategies (GRS) within the oil spill trajectory, since it is likely in a real situation that GRS would be implemented strategically." Add another bullet somewhere in the middle of the list - "This scenario accounts for initial shoreline cleanup assessment activities but does not factor in the resource or equipment needs for long-term beach cleanup operations. Significant additional resources may be required to support beach cleanup crews.
- All of the Alyeska/SERVS oil spill response equipment identified in the Prince William Sound tanker plan will be assumed to be employed responding to the oil in Prince William Sound.
- Because state and federal regulations require contingency plans to be based on mechanical recovery, no alternative response technologies will be factored into the scenario.
- Resources coming from Cook Inlet, Kodiak, and out of region are available to be assigned to the out of PWS response operations.
- The oil will move along the coast in a generally southwestern direction at a rate of 1 knot. This assumption is based on the Alaska Costal Current and a prevailing easterly wind.
- ADEC and USCG will allow movement of response resources out of their region.

Size of Discharge: Initial spill of 300,000 bbls of Alaska North Slope crude oil with potential to release 2,200,000 bbls of cargo and 11,000 bbls of bunkers.

Event Description: A 210, 000 DWT fully laden tanker leaving Prince William Sound breaches two tanks near Seal Rocks, initially losing approximately 150,000 bbls of the oil from two starboard tanks. The tanker is able to maintain stability and with the help of the escort tugs goes to Port Etches to check vessel stability, determine the cause of the spill, secure the source of the oil spill, and await lightering operations.

The tide was beginning to ebb when the initial spill occurred. The tanker continues to spill another 150, 000 bbls of oil as it is moved to Port Etches.

Location: Initial spill near Seal Rock but source of spill moves to protected waters in Port Etches.

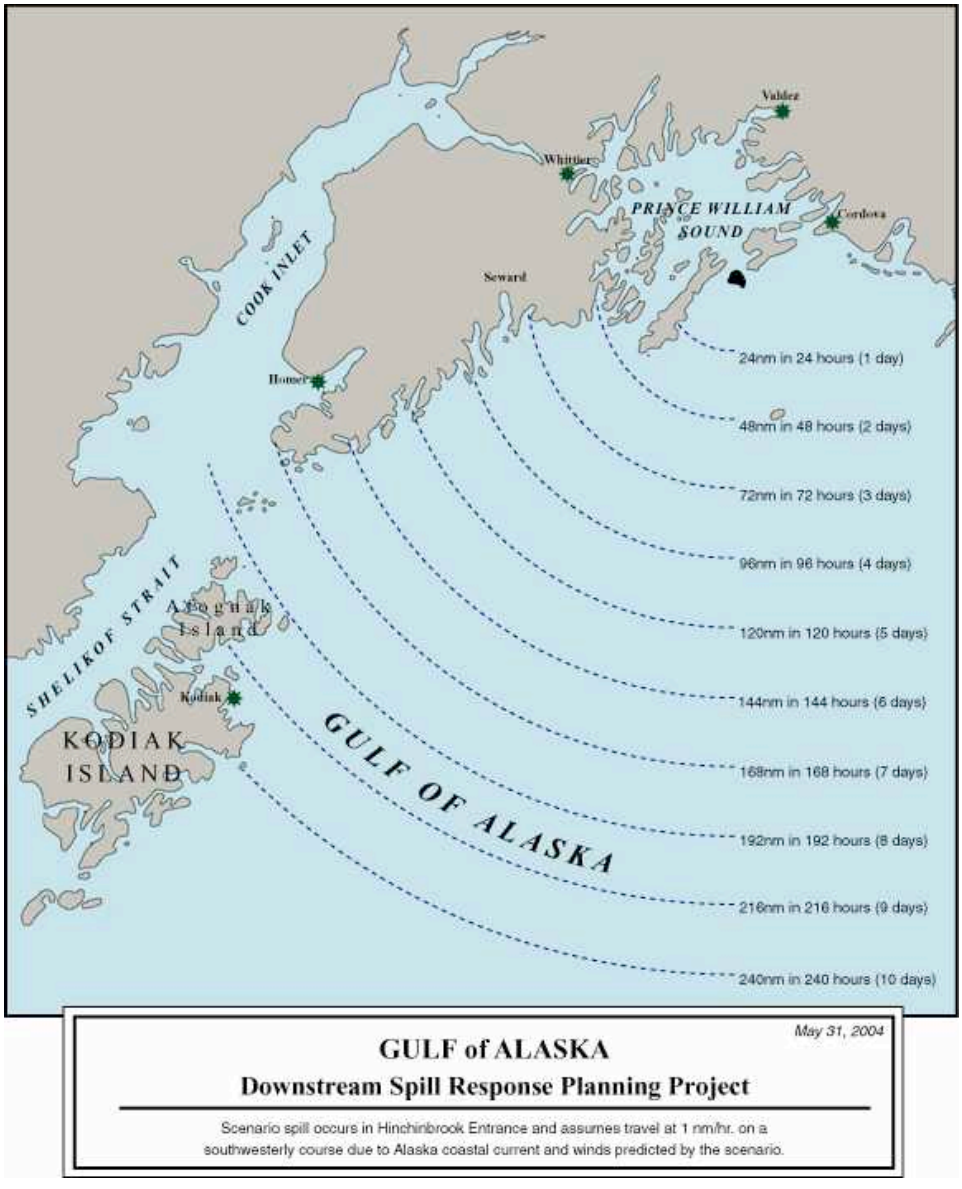
Spill: The discharge of 300,000 bbls of Alaska North Slope (ANS) crude is confirmed by initial soundings when the tanker is anchored in Port Etches. Remaining cargos in the two breached tanks reaches a static balance.

Cargo Salvage: The SERVS lightering barge is mobilized to Port Etches from Valdez. A tanker of opportunity is available within 24 hours to receive the lighter cargo.

Date and Time: Initial spill occurs at 1230 on April 1.

On-Scene Weather: Winds NE at 23 Knots, Seas are 6 feet and surface current is 0.7 knots and tide is -1.5 at Port Etches at 1805. Sky is overcast.

Map: The following map shows the basic spreading pattern for the spill over the first 10 days of the response.



Initial Action Descriptions:

Short Day 1 (0930 April 1 to 0600 April 2)

Oil Trajectory	The ebbing tide, wind, and surface current are pushing the oil slick southwest from Seal Rock. Oil is also entering Prince William Sound (PWS) due to the continual discharge from the two compromised tanks as the tanker move to Port Etches. As the tide floods after 1405, 2/3 (200,000 bbls) of the oil moves north into PWS. The remaining 100,000 bbls of oil moves into the Gulf of Alaska paralleling the outside coast of Montague Island.
Notifications	Tanker crew complete notifications within one hour as described in their vessel response plan. Notifications go out for a full response to the spill.
Incident Management	The Alyeska /SERVS ICS organization is activated and a Unified Command is established at the Valdez Emergency Operations Center (VEOC). The Responsible Party (RP) arranges to bring their company incident management team to Valdez. RP Team begins arriving within 24 hours. The following Overall Incident Objectives are released by the Unified Command (UC): • Ensure the safety of citizens and response personnel • Control the source of the spill • Manage a coordinated response effort • Maximize protection of environmentally sensitive areas • Maximize the containment and recovery of oil • Recover and rehabilitate injured wildlife • Remove oil from impacted areas • Keep stakeholders and public informed of the response activities • Minimize economic impacts The UC releases the following Objectives for the Specific Operational Period: • Develop site safety plan and monitor field operations to ensure safety of response personnel and conduct safety briefings as necessary • Develop lightering plan for tanker and begin lightering as soon as safely possible. • Focus containment and recovery operations at the leading edge of the oil coming into PWS. • Mobilize all possible oil spill response resources • Begin development of an Incident Action Plan • Develop wildlife plan FOSC closes Hinchinbrook Entrance and restricts vessel traffic in spill area to response vessels only. FOSC requests FAA to restrict air space for the spill area. 24 hour operational periods are set to begin and end at 0600.

Source Control	Tanker alters course for Port Etches. The recently released escort tug arrives to assist tanker as necessary. Tanker arrives in Port Etches and anchors. SERVS lightering barge is dispatched to Port Etches from Valdez. Soundings are conducted on all tanks.
Discharge Tracking and Surveillance	Responders on-scene report that oil is entering PWS and they will continue to issue periodic status reports. NOAA provides extended trajectories indicating oil becoming two main bodies of oil, the large body (200,000 bbls) entering PWS and the smaller body (100,000 bbls) remaining in the Gulf of Alaska moving northwest and impacting the southwest part of Montague Island. SERVS deploys tracking buoys and begins over-flights on a two hour basis during daylight hours.
Containment and Recovery	SERVS deploys all of its open-water task forces and they work the heaviest concentrations of the oil slick as it enters PWS. SERVS nearshore task forces are activated. Out of region equipment is ordered.
Recovered Oil Storage and Waste Management	SERVS uses its barges to offload skimmers. A tanker of opportunity will be used when one is available.
Wildlife Protection and Response	Wildlife Rehabilitation Unit is activated. Wildlife task forces are requested. Bird hazing requested in the spill area.
Sensitive Area Protection	Appropriate Geographic Response Strategies (GRS) to be deployed.
Shoreline Cleanup	Shoreline Cleanup Assessment Teams (SCAT) plan is being developed. Personnel for SCAT are ordered. Shoreline Cleanup crews are requested.

Day 2 (06:00 April 2 to 06:00 April 3)
This scenario focuses on the response to oil as it spreads in the Gulf of Alaska. For more information regarding potential response actions in PWS, see Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan.

Scenario Update	**Weather:** Wind is E at18 to 20 knots changing to SE 15 knots later in the day. Seas are 4 to 6 feet. Sky is overcast. **Oil:** The oil has separated into two main bodies. The smaller of the two slicks is in the Gulf of Alaska (GOA) south of Wooded Island off of Montague Island. Size of slick estimated at 100,000 bbls.
Incident Management	The Commandant of the USCG declares this a Spill of National Significance (SONS) The USCG established a National Incident Command (NIC). The NIC will be setup in Anchorage. It is agreed that a second ICS organization will be established to focus on the GOA oil slick. The current ICS Organization in Valdez will focus on oil in PWS. The GOA Oil Slick's ICS organization will be established Command Post in Kenai. All activities will be managed out of Valdez until the Command Post in Kenai is setup and ready to operate on Day 3. Overall Incident Objectives remain the same as Day 1. The GOA UC releases the following Objectives for the Specific Operational Period: • Monitor field operations to ensure safety of response personnel and conduct safety briefings as necessary • Implement lightering plan for tanker • Maximize containment and recovery operations at the leading edge of the oil coming into PWS • Begin containment and recovery operations for the GOA slick as soon as possible with cascading equipment • Maintain regular surveillance over-flights for both slick bodies • Mobilize all possible oil spill response resources • Establish second Command Post in Kenai • Implement wildlife plan Staging Areas are established in Seward, Kodiak, and Homer.
Source Control	Ongoing in PWS
Discharge Tracking and Surveillance	Response crews continue to report on-scene movement of oil. NOAA Trajectory models indicated GOA Slick would begin moving NW impacting Cape Cleare on Montague on Day 2. 72-hour trajectory indicates potential impacts in the Aialik Bay area on Day 4. Fixed wing over-flights are conducted every three hours during daylight hours.

Containment and Recovery	No open-water recovery occurring on GOA Day2. CISPRI OSRV and CISPRI MONARCH are underway with an ETA to Resurrection Bay at 0100 Day 2. CISPRI M/V PIONEER SERVICE with CISPRI BARGE RESPONER in tow is underway with an ETA to Resurrection Bay of 1100 Day 3. Contracted tug is underway with CISPRI BARGE 151 in tow with an ETA to Resurrection Bay 1900 Day 3. Other CISPRI resources are mobilized to Seward with the small equipment going by road. 2 USCG MSO Anchorage VOSS systems are mobilized to Seward. Response equipment and personnel begins arriving in Anchorage from Alaska Clean Seas, OSRL, MSRC and NRC. Other resources from the USCG, US Navy, and response contractors from the west coast and Canada are requested and are being mobilized. All of this equipment is then transported to Valdez, Whittier, Kodiak, Seward and Homer to be installed on vessels of opportunity. Additional vessels of opportunity from all of the coastal communities are requested.
Recovered Oil Storage and Waste Management	CISPRI barges underway from Cook Inlet to Seward. Additional tank barges are requested as far south as Puget Sound. Portable storage systems such a towable bladders are delivered with other response equipment being cascaded into the spill area.
Wildlife Protection and Response	Wildlife Plan in development in Valdez.
Sensitive Area Protection	Equipment ordered for staging in Seward for CI GRS deployment. Vessels of Opportunity are requested for GRS deployment.
Shoreline Cleanup	Initial SCAT Plan in development for PWS and will be modified for GOA when Command Post is running. Shoreline Cleanup crews are put on standby for GOA. Safety training centers for shoreline responders and vessels crews are established in Cordova, Valdez, Homer, Kodiak and Seward.

Day 3

Scenario Update	**Weather:** Wind is SE 10 to 15 knots. Seas are 4 feet. Sky is partly cloudy. Forecast is winds SE at 10 knots and clearing skies. **Oil:** The GOA slick has broken up into large patches of oil and become emulsified. The NOAA trajectories are still projected shoreline impacts in the Aialik Bay area within 24 hours. 72-hour trajectories for oil continue to move along the Kenai Peninsula with possible impact down to Nuka Bay.
Incident Management	The CISPRI Command Center in Nikiski is setup and functioning for the GOA spill response activities. The GOA Unified Command releases the following Overall Incident Objectives: • Ensure the safety of citizens and response personnel • Manage a coordinated response effort • Maximize protection of environmentally sensitive areas • Maximize the containment and recovery of oil • Recover and rehabilitate injured wildlife • Remove oil from impacted areas • Keep stakeholders and public informed of the response activities • Minimize economic impacts The UC releases the following Objectives for the Specific Operational Period: • Implement site safety plan and monitor field operations to ensure safety of response personnel and conduct safety briefings as necessary • Maximize open-water and nearshore containment and recovery • Protect sensitive areas • Establish SCAT team • Implement wildlife plan • Prepare for shoreline cleanup operations • Ensure best available communications for response operations • Establish training centers in Kodiak, Seward and Homer The NIC in Anchorage is established at the Alaska State Emergency Operations Center at Fort Richardson.
Discharge Tracking and Surveillance	Surveillance flights are conducted every three hours during daylight. Response crews on scene with the open water task forces report on movement of oil on a regular schedule.

Containment and Recovery	The CISPRI vessels and barges are assigned into Open-Water Task Forces (OW-TF) # 1, #2, and # 3. The USCG's two VOSS Systems are mounted on to 2 100' crabbing vessels and become OW-TF # 4 and #5. Fishing vessels capable of towing the ocean boom in the open water complete these 5 open-water task forces. Helicopters are assigned to guide the OW-TFs to the heaviest concentrations of the oil slicks. Six nearshore free oil recovery task forces (NS FO-TF) are also being assembled in Seward to recover oil as it enters coastal bays and before it impacts sensitive areas. These NS FO-TFs will implement the oil recovery needs of Geographic Response Strategies (GRS) SZ-11, SZ-12, SZ-13, SZ-14, SZ-15 and SZ-16. These NS FO-TFs will work the leading edges of the oil and fall back into protection of the sensitive areas as needed.
Recovered Oil Storage and Waste Management	CISPRI's Barges will be used to store recovered oil from the OW-TF s along with portable storage such as the USCG's Lancer Barges. Nearshore Oil Recovery Task Forces (NS FO-TF) will use small barges and portable storage such as towable bladders. Large barges are requested for offloading the smaller storage units.
Wildlife Protection and Response	Five wildlife hazing strike teams are assembled and prepare to be in place to start hazing on Day 4. Three wildlife capture strike teams are in the field and are beginning to recovered oiled birds. Oiled wildlife is transported to the rehabilitation centers being established in Seward and Anchorage.
Sensitive Area Protection	Three shoreline protection task forces (SP-TF #, #2, & #3) are assembled and dispatched to deploy the following CI GRSs: SZ-11, SZ-12, SZ-15, SZ-16, SZ-17, and SZ-18.
Shoreline Cleanup	Four Shoreline Cleanup Assessment Teams (SCAT #1, #2, #3, & #4) are assembled and are deployed to the beach segments near Aialik Bay for Beach assessment. Shoreline cleanup strike teams (SC-ST- #1, #2, and #3) each consisting pf 15 responders per strike team are requested to provide a quick strike capability to either boom or place oil snare lines on sand and gravel beaches that are heavily oiled to keep the oil from re-floating off the beaches with the tide.

Day 4

Scenario Update	**Weather:** Wind is SE 10 knots. Seas are 3 to 4 feet. Sky is clear. Forecast is for winds to remain SE at 10 knots and clear skies. **Oil:** The GOA slick has broken up into many slicks of oil and is emulsified. Oil begins hitting the shorelines of Harbor Island, Natoa Island, and Chiswell Island. 24-hour trajectories for oil continue to move along the Kenai Peninsula with possible impacts down to Nuka Bay. 48-hour trajectory is for the oil to reach Gore Point. 72-hours trajectory projects oil could reach as far northwest as the Chugach Islands.
Incident Management	The resource requirements for the two spill response areas have the NIC busy allocating response resources. On-water storage is becoming an issue as the requested tank barges from outside of Alaska have yet to arrive on scene. Skimmers, booms and portable storage are being sent to Homer, Kodiak, and Seward to be used with vessels of opportunity. The UC for the GOA Response Area releases the following Objectives for the Specific Operational Period: • Maximize protection of environmentally sensitive areas • Maximize nearshore and shoreline containment and recovery • Continue Open-water recovery where effective • Increase SCAT team • Ensure appropriate wildlife operations • Plan shoreline cleanup operations • Plan for extended operations for the Kenai Peninsula • Maximize use of resources from Kodiak and Cook Inlet • Ensure support of field operations
Discharge Tracking and Surveillance	Spill over-flights continue every three hours during daylight using fixed wing aircraft because helicopters are needed for other response operations. Response crews report regularly on oil locations.
Containment and Recovery	Open-water response operations are becoming ineffective due to the scattered emulsified oil slicks. OW-TFs 1 to 5 are working the heavier concentrated slicks off of Seal Rocks. Open-water taskforces will be downsized with some equipment reassigned to nearshore recovery operations. The NS-FO TFs # 1 thru #6 are assigned to operate at the entrance to Aialik Bay and in Dora Passage. These NS-FO TFs will fall back as needed to protect environmentally sensitive areas at the entrances to the various bays. Six more NS-FO TFs are requested and are being assembled in Kodiak (#7, #8, & #9) and Homer (#10, #11, & #12). ETAs are 24 hours for Kodiak to 36 hours for Homer.
Recovered Oil	CISPRI's barges are taking product from the VOSS systems in OW-TF #

Storage and Waste Management	5 and #6. Two additional Large barges arrive from Cook Inlet and Southeast Alaska. NS-FO-TFs are using smaller barges and towable bladders tanks. When large barges are full they will be sent to Cook Inlet facilities to offload.
Wildlife Protection and Response	The five wildlife hazing strike teams are hazing birds in areas where oil is approaching Three wildlife capture strike teams continue picking up oiled wildlife. Oiled wildlife is transported to the rehabilitation centers being established in Seward and Anchorage. Wildlife impacts are expected to increase as the oil moves toward the shore. Ten additional hazing strike teams and wildlife capture strike teams are requested.
Sensitive Area Protection	SP-TF #1 thru #3 complete the deployments of CI GRSs: SZ-11, SZ-12, SZ-15, SZ-16, SZ-17, and SZ-18 by early Day 4. The three SP-TFs are re-supplied with boom and anchoring systems and assigned GRSs SZ-19, SZ-22, SZ-24, SZ-25, SZ-28, & SZ-29. 6 additional boom tending vessel are ordered. Five additional SP-TFs are requested from Kodiak (#4 &#5) and Homer (#6, #7, & #8). ETA to the Gore Point area is 24 hours from Kodiak vessels and 30 hours for the Homer vessels.
Shoreline Cleanup	SCAT #1 and #2 are assessing the oiling of beaches in the Aialik Cape and Harbor Island areas. SCAT #3 is pre-assessing beaches at the tip of the Harris Peninsula and Granite Island. SCAT # 4 is pre-assessing beaches in Aialik Bay. Two more SCAT teams are requested SC-ST- #1, #2, and #3 are assigned the Aialik Bay area to coordinate with the SCAT #1 and #2 and either boom or place oil snare lines on sand and gravel beaches that are heavily oiled to keep the oil from re-floating off the beaches with the tide. Four additional SC-STs are requested.

Day 5

Scenario Update	**Weather:** Wind is SE 5 to 10 knots and seas are 3 feet. Sky is clear. Forecast is light winds S and partly cloudy skies. **Oil:** The GOA slick has broken up into many slicks of oil and is emulsified. Slicks are sighted up to 10 miles offshore. Oil has impacted Granite Island and the beaches along Dora Passage. Oil is entering Harris Bay and is expected to reach Mc Arthur Pass by the end of the day. 24-hour trajectories for oil continue to move along the Kenai Peninsula with possible impacts to Gore Point. 48-hour trajectory is for the oil to reach Chugach Passage and the Chugach Islands. 72-hours trajectory projects oil could reach the Barren Islands and potentially English Bay.
Incident Management	The UC for the GOA Response Area releases the following Objectives for the Specific Operational Period: • Maximize protection of environmentally sensitive areas • Maximize nearshore and shoreline containment and recovery • Ensure adequate interim storage • Minimize re-floated oil • Ensure appropriate wildlife operations • Implement shoreline cleanup plan • Plan for extended operations for the Kenai Peninsula • Maximize use of resources from Kodiak and Cook Inlet • Ensure support of field operations
Discharge Tracking and Surveillance	Spill over-flights continue every three hours during daylight using fixed wing aircraft because helicopters are needed for other response operations. Response crews report regularly on oil locations.
Containment and Recovery	Open water recovery has become ineffective and OW- TFs #1, #2, #3, #4 and #5 are reassigned to support the NS-FO-TFs. The CISPRI Barge 141 tops off its tanks from the other barges and is towed to Cook Inlet to off-load. The remaining OW-TFs will setup to intercept oil as it arrives at McArthur Pass and Ragged Island NS-FO-TFs # #1, #2 and #3 continue to work in the Aialik and Harris Bays and Granite Passage. NS-FO-TFs #4 is assigned to protect Taroka Arm. NS-FO- TF #5 is assigned to protect Thunder Bay. NS-FO-TF # 6 is assigned to intercept oil at Surok Point. NS-FO TFs #7, #8, and # 9 from Kodiak are expected to arrive in Nuka Bay late Day 5. NS-FO-TFs # 10, #11, and #12 from Homer are expected to arrive Port Dick early morning Day 6.

Recovered Oil Storage and Waste Management	Barge 141 is underway to Cook Inlet. The two additional barges arriving from Cook Inlet and Southeast lighter the smaller barges assigned to the NS-FO-TFs. Some of the towable bladders are unable to be offloaded and more small barges are requested. As the difficult bladders are filled they are anchored in protected water until the appropriate support vessels arrive to tow them to Cook Inlet.
Wildlife Protection and Response	Wildlife hazing continues as the number of captured oiled birds and sea otters increase. Captured wildlife are taken to Seward for stabilization.
Sensitive Area Protection	SP-TF #1 thru #3 complete the deployments of CI GRSs SZ-19, SZ-22, SZ-24, SZ-25, SZ-28, & SZ-29. The three SP-TFs remain at the GRS sites to tend the boom and wait for additional boom, anchors and boom monitoring vessels. The Kodiak SP-TFs #4 & #5 are expected in Nuka Passage by end of Day 5 and are assigned GRS SE-1, SE-3, SE-4, and SE-5. The Homer SP-TFs #6, #7, and #8 are underway and expected to arrive Port Chatham, Picnic Harbor, and Port Dick by morning on Day 6. These three SP-TFs are assigned CI GRS SE-1, SE-3, SE-4, SE-5, SE-7, SE-9. Eight additional boom-tending vessels are requested.
Shoreline Cleanup	SCAT #1 and #2 are assessing the oiling of beaches in the Aialik Cape and Harbor Island areas. SCAT #3 is pre-assessing beaches at the tip of the Harris Peninsula and Granite Island. SCAT # 4 is pre-assessing beaches in Aialik Bay. Two more SCAT teams are requested SC-ST- #1, #2, and #3 are assigned the Aialik Bay area to coordinate with the SCAT #1 and #2 and either boom or place oil snare lines on sand and gravel beaches that are heavily oiled to keep the oil from re-floating off the beaches with the tide. Four additional SC-STs are ordered.

Day 6

Scenario Update	**Weather:** Wind is E 5 to 8 knots and seas are 3 feet. Sky is partly cloudy. Forecast is NE for winds increasing to 15 to 20 knots with rain. **Oil:** Slicks are sighted up to 8 miles offshore. Oil has reached Steep Point with shoreline impacts in Sandy Bay, Taroka Arm, and Black Bay. The oil is expected to reach Front Point by the end of the day. 24-hour trajectories for the oil closest to shore will reach Gore Point with the oil moving along the southern tip of the Kenai Peninsula possibly reaching the Chugach Islands. Offshore oil slicks will move southwest. 48-hour trajectory indicates the oil could reach the Barren Island and Flat Islands. 72-hours trajectory projects oil could reach Afognak Island, Shuyak Island, Shelikof Strait, Kamishak Bay, and Kachemak Bay.
Incident Management	The UC for the GOA Response Area releases the following Objectives for the Specific Operational Period: • Maximize protection of environmentally sensitive areas. • Maximize nearshore and shoreline containment and recovery • Ensure adequate interim storage. • Minimize re-floated oil • Ensure appropriate wildlife operations • Implement shoreline cleanup plan • Plan for extended operations for the Kenai Peninsula • Maximize use of resources from Kodiak and Cook Inlet • Ensure support of field operations
Discharge Tracking and Surveillance	Over-flights are conducted twice a day. Response crews communicate oil locations regularly.
Containment and Recovery	The OW-TFs are setup to intercept oil as it arrives at McArthur Pass and Ragged Island. NS-FO-TFs #1 and #2 are assigned to work in Harris Bays and Granite Passage. NS-FOTF #3 is assigned to McCarty Fjord to intercept oil as it comes out of McArthur Pass. NS-FO-TFs #4 is assigned to protect Taroka Arm. NS-FO- TF #5 is assigned to protect Thunder Bay. NS-FO-TF # 6 is assigned to intercept oil at Surok Point. NS-FO TFs #7, #8, and # 9 from Kodiak have arrived in Nuka Bay and are assigned as follows; NS-FO-TF # 7 is assigned to protect Yalik Bay. NS-FO-TF # 8 is assigned West Arm. NS-FO-TF # 9 will set up at the northern entrance to Nuka Passage. NS-FO-TFs # 10, #11, and #12 from Homer arrive at Nuka Passage by midday and are assigned as follows: NS-FO-TF #10 will protect the entrance to Tonsina Bay. NS-FO-TF #11 and #12 will setup at the NW point of Nuka Island.

Recovered Oil Storage and Waste Management	Additional barges requested from Day 2 begin arriving from Puget Sound. Two of these barges are assigned to lighter the barges working along the Kenai Peninsula. As the lightering barges are filled they will be towed to Cook Inlet to off-load. Vicious fluid pumps are required to transfer recovered oil, Deck barges and landing craft will be used to remove oily debris and response crew wastes as the shoreline cleanup operations moves into production.
Wildlife Protection and Response	Wildlife hazing continues as the number of captured oiled birds and sea otters increase. Captured wildlife are taken to Seward for stabilization.
Sensitive Area Protection	SP-TF #1 thru #3 are tending the boom in CI GRSs SZ-19, SZ-22, SZ-24, SZ-25, SZ-28, & SZ-29. Three additional boom monitoring vessels arrive along with a supply vessel with additional boom and anchoring equipment. SP-TFs #1 thru #3 will remain in the Nuka Bay area and deploy additional protection boom as needed. The Kodiak SP-TFs #4 & #5 arrive in Nuka Passage and are assigned CI GRS SE-1, SE-3, SE-4, and SE-5. The Homer SP-TFs #6, #7, and #8 arrive Port Chatham, Picnic Harbor, and Port Dick by morning on Day 6. These three SP-TFs are assigned CI GRS SE-7, SE-9, SE-14, SE-15, SE-17, SE-18, and SE-19. The eight boom tending vessels requested on Day 5 are expected midday on Day 7.
Shoreline Cleanup	SCAT #1 and #2 are assigned the beaches is in Two Arm Bay and Thunder Bay. SCAT #3 is assessing beaches at the tip of the Harris Peninsula and Granite Island. SCAT # 4 is assigned Black Bay and Ragged Island. SCAT # 5 and #6 will pre-assess beaches in the Nuka Bay area SC-STs continue to coordinate with the SCAT teams to keep the oil from re-floating off the heavily oiled beaches with the tide. Shoreline Cleanup operations begin in the Aialik and Harris Bay areas based on the SCAT assessments.

Day 7

Scenario Update	**Weather:** Wind is NE 15 to 18 knots and seas are 3 to 4. Raining. Forecast is for a small craft warning with NE winds increasing from 20 to 25 knots. **Oil:** Slicks are sighted up to 8 miles offshore. Oil has reached Front Point with heavy shoreline impacts in McArthur Pass, Ragged Island, Yalik Bay, West Arm, Nuka Island and the beaches in Nuka Passages. The oil is expected to reach Rocky Bay by the end of the day. 24-hour trajectories for the oil closest to shore may reach the Barren Islands. Offshore oil slicks will move southwest. 48-hour trajectory indicates the oil could reach the Afognak Island, Shuyak Island, and Shelikof Strait. 72-hours trajectory projects oil could reach Kodiak Island.
Incident Management	The UC for the GOA Response Area releases the following Objectives for the Specific Operational Period: • Ensure safety of all response personnel as predicted storm arrives. • Maximize protection of environmentally sensitive areas. • Maximize nearshore and shoreline containment and recovery • Minimize re-floated oil • Ensure appropriate wildlife operations • Implement shoreline cleanup plan • Plan for operations in Kodiak area • Maximize use of resources from Kodiak and Cook Inlet • Ensure support of field operations Small vessels will need to find shelter if winds reach 20 knots. Barge 141 will remain in Kenai area for oil spill coverage, as it appears to be adequate storage capacity at this time.
Discharge Tracking and Surveillance	Over-flights are conducted twice a day. Response crews communicate oil locations regularly.
Containment and Recovery	The OW-TFs setup to intercept oil as it arrives at Gore Point. NS-FO-TFs #1 will continue to work in Harris Bay and Granite Passage area recovering oil as it re-floats from the beaches. NS-FOTF #3 is assigned to McCarty Fjord to recovery free-floating oil. NS-FO-TFs #4 is assigned to protect Taroka Arm. NS-FO- TF #2 and #5 are assigned to Port Dick. NS-FO TFs #7, #8, and # 9 from Kodiak have arrived in Nuka Bay and are assigned as follows; NS-FO-TF # 7 is assigned to protect Yalik Bay. NS-FO-TF # 8 and # 6 are assigned the West Arm. NS-FO-TF # 9, and # 11 are assigned to protect Rocky Bay. NS-FO-TFs # 10, #11, and #12 from Homer arrive at Nuka Passage by midday and are assigned as follows: NS-FO-TF #10 will protect the entrance to Tonsina Bay, NS-FO-TF #12 will recover free-oil on Nuka Passage. Three additional NS-FO-TFs are ordered for Kodiak area.
Recovered Oil	Two barges are assigned to the lighter the barges working along the

Storage and Waste Management	Kenai Peninsula. As the lightering barges are filled they will be towed to Cook Inlet to off-load. Vicious fluids pumps are required to transfer recovered oil. Deck barges and landing craft will be used to remove oily debris and response crew wastes as the shoreline cleanup operations moves into production.
Wildlife Protection and Response	Wildlife hazing continues as the number of captured oiled birds and sea otters increase. Captured wildlife are taken to Seward for stabilization. Additional wildlife hazing and capture strike teams are ordered for Kodiak area.
Sensitive Area Protection	SP-TF #1 thru #3 are tending the boom in CI GRSs SZ-19, SZ-22, SZ-24, SZ-25, SZ-28, & SZ-29. SP-TFs #1 thru #3 will remain in the Nuka Bay area and deploy additional protection boom as needed. SP-TFs #4 and one additional boom-tending vessel are tending CI GRS SE-1, SE-3, SE-4, and SE-5. SP-TF #5 is assigned to Port Dick. SP-TFs #6, #7, and #8 complete deployment of CI GRSs SE-7, SE-9, SE-14, SE-15, SE-17, SE-18, and SE-19. The eight boom tending vessel requested on Day 5 arrives and are assigned to Nuka Bay, Nuka Passage, Port Dick, and Rocky Bay. Three additional SP-TFs are ordered for Kodiak and Afognak Islands.
Shoreline Cleanup	SCAT #1 is assigned to the beaches in Nuka Passage. SCAT #2 is assigned the beaches in McCarthy Fjord. SCAT #3 is assessing beaches in Harris Bay. SCAT # 4 is assigned McArthur Pass, Ragged Island, Rabbit Island, and Outer Island. SCAT # 5 will assess beaches in the west Arm and Yalik Bay. SCAT #6 will assess Port Dick. SC-STs continue to coordinate with the SCAT teams to keep the oil from re-floating off the heavily oiled beaches with the tide. Shoreline Cleanup operations are being started in Taroka Bay, Granite Passage, and Black Bay. Additional shoreline cleanup task forces are ordered based on the SCAT assessments.

Day 8

Scenario Update	**Weather:** Wind is NE 25 and gust to 35 knots and seas are 6 feet. Sky is partly cloudy. Forecast is NE winds decreasing to 15knots and clearing skies. **Oil:** The oil has reached Windy Bay with shoreline impacts in Port Dick, Touglaalek Bay, Qikutulig Bay, Rocky Bay, Badger Cove, and Windy Bay. The oil is expected to reach the Chugach and Barren Island by the end of the day. 24-hour trajectories for the oil reach Shelikof Strait, Shuyak Island, and Tonki Cape on Afognak Island. 48-hour trajectory indicates the oil could reach Spruce Island and the Outer Cape on Kodiak Island. 72-hours trajectory projects oil could reach as far as Ugak Island.
Incident Management	The UC for the GOA Response Area releases the following Objectives for the Specific Operational Period: • Maximize protection of environmentally sensitive areas • Maximize nearshore and shoreline containment and recovery • Minimize re-floated oil • Ensure appropriate wildlife operations • Implement shoreline cleanup plan • Implement for operations in Kodiak area • Ensure support of field operations Small vessels will need to find shelter if winds reach 20 knots.
Discharge Tracking and Surveillance	Over-flights are suspended due to winds.
Containment and Recovery	Recovery operations are suspended due to weather. Two NS-FO-TFs, #13 and #14, are ordered for Kodiak area.
Recovered Oil Storage and Waste Management	Operations on hold due to weather.
Wildlife Protection and Response	Operations on hold due to weather.
Sensitive Area Protection	GRS boom tending is continuing in the sheltered bays. SP-TFs #9, #10, and #11 are assembled and ready to get underway for Marmot Bay as soon as weather breaks.
Shoreline Cleanup	Shoreline cleanup continues only in the most sheltered areas.

Day 9

Scenario Update	**Weather:** Wind is NE 10 to 15 knots and seas are 5 feet. Sky is clearing. Forecast is for NE winds decreasing to 8 knots and clear skies. **Oil:** The oil has reached Shuyak Island. The oil is expected to reach Marmot Island by the end of the day. 24-hour trajectories for the oil reach Spruce Island and the Outer Cape on Kodiak Island. 48-hour trajectory indicates the oil could reach Ugak Island. 72-hours trajectory projects oil could reach as far as Sitkalidak Island.
Incident Management	The UC for the GOA Response Area releases the following Objectives for the Specific Operational Period: • Maximize protection of environmentally sensitive areas • Maximize nearshore and shoreline containment and recovery where possible. • Minimize re-floated oil • Ensure appropriate wildlife operations • Implement shoreline cleanup plan • Implement for operations in Kodiak area • Ensure support of field operations
Discharge Tracking and Surveillance	Over-flights are being conducted along the Kenai Peninsula and Kodiak Areas. These flights will continue throughout the day. Response crews are reporting from their work locations.
Containment and Recovery	Some nearshore recovery opportunities still exist but the primary focus for the remaining recovery operations is the protection of sensitive areas. NS-FO-TF #13 and #14 from Kodiak are assigned to Marmot Bay to help with sensitive area protection. NS-FO-TFs #1 will continue to work in Harris Bay and Granite Passage area recovering oil as it re-floats from the beaches. NS-FOTF #3 is assigned to McCarty Fjord to recover free-floating oil. NS-FO-TFs #4 is assigned to protect Taroka Arm. NS-FO- TF #2 is assigned to Port Dick to recover free-floating oil. NS-FO-TF # 5 and #8 are assigned to Marmot Bay in Kodiak. NS-FO-TF # 7 is assigned to protect Yalik Bay and help protect sensitive areas. NS-FO-TF # 6 is assigned the West Arm of Nuka Bay to recovery any free-floating oil. NS-FO-TF # 9 and # 11 are assigned to protect Rocky Bay and Windy Bay. NS-FO-TF #10 will protect the entrance to Tonsina Bay. NS-FO-TF #12 will recover free-oil on Nuka Passage. The vessels that were assigned to the OW-TFs will support nearshore operations as needed,

Recovered Oil Storage and Waste Management	Two barges are assigned to the lighter the barges working along the Kenai Peninsula. As the lightering barges are filled they will be towed to Cook Inlet to off-load. Vicious oil pumps are required to transfer recovered oil, Deck barges and landing craft will be used to remove oily debris and response crew wastes as the shoreline cleanup operations moves into production. One additional barge is ordered to support the Kodiak NS-FO-TFs.
Wildlife Protection and Response	Wildlife hazing continues as the number of captured oiled birds and sea otters increase. Captured wildlife are taken to Seward for stabilization. The wildlife hazing and capture strike teams from Kodiak begin operations.
Sensitive Area Protection	SP-TFs #9, #10, and #11 from Kodiak are assigned the following KI GRSs KI-17, KI-18, KI-20, KI-19, KI-16, KI-15, KI-1, KI-2, and KI-3. Previously deployed GRS are still being maintained. SP-TFs #2, #3, #5 and #8 are demobilized and assigned to shoreline cleanup operations.
Shoreline Cleanup	The focus of the GOA response becomes shoreline cleanup operations along the Kenai Peninsula. SCAT teams will assess impacted beaches and determine the appropriate cleanup methods to be used. Three SCATs are assembled for the Kodiak area. SP-ST# 1 thru 4 are assign to Kodiak to coordinate with the SCAT teams to keep the oil from re-floating off the heavily oiled beaches with the tide.

Scenario Equipment Totals

The following tables illustrate the type, scale and amount of equipment called for in the Downstream Scenario. These equipment totals are included not as a definitive list of resource needs to mount a downstream response, but as a planning tool to illustrate the general resource needs generated by the downstream component of a major PWS oil spill. In subsequent sections of this Downstream Plan, out-of-region equipment inventories are assessed to determine whether sufficient equipment is available to simultaneously mount response operations within PWS and in the downstream Gulf of Alaska communities that may also be impacted.

Downstream Scenario Equipment - Open Water Equipment Totals

Division/ Group	Work Assignment	Boom (Feet and 42" or Larger)	Skimmer(s) (bbls)	Primary Storage (bbls)	Secondary Storage (bbls)* (Tug and Barge)	Workboats (40' or Larger)	Aircraft (Helo or Fixed-Wing)**	Support Vessel for VOSS Skimmers (80' or Larger)
Open Water Recovery Group (OWRG) Taskforce (TF) #1	Recovery of Free Floating Oil	2,000	7,500	15,000	60,000	2	1	
OWRG - TF #2	Recovery of Free Floating Oil	2,000	7,500	15,000	0	2	0	
OWRG - TF #3	Recovery of Free Floating Oil	2,000	7,500	15,000	60,000	2	1	
OWRG - TF #4	Recovery of Free Floating Oil	2,000	7,500	15,000	0	2	0	1
OWRG - TF #5	Recovery of Free Floating Oil	2,000	7,500	15,000	60,000	2	1	1
Total Open Water Equipment Required		10,000	37,500	75,000	180,000	10	3	2

Notes - Remarks: * Two Open Water Task Forces can share Secondary Storage
** Two Open Water Task Forces can share Aircraft.

Downstream Scenario Equipment - Nearshore Recovery Group Equipment Totals

Division/ Group	Work Assignment	Boom (Feet and 42" or Larger)	Skimmer(s) (bbls)	Primary Storage (bbls)	Secondary Storage (bbls)*	Workboats (30' or Larger)	Aircraft (Helo or Fixed-Wing)**	Support Vessel for VOSS Skimmers (50' or Larger)	Command/ Safety Vessel (50' or Larger)
Nearshore Recovery Group (NRG) Taskforce (TF) #1	Recovery of Free Floating Oil	5,400	4,400	500	22,000	6	1	2	1
NRG - TF #2	Recovery of Free Floating Oil	5,400	4,400	500	0	6	0	2	1
NRG - TF #3	Recovery of Free Floating Oil	5,400	4,400	500	22,000	6	1	2	1
NRG - TF #4	Recovery of Free Floating Oil	5,400	4,400	500	0	6	0	2	1
NRG - TF #5	Recovery of Free Floating Oil	5,400	4,400	500	22,000	6	1	2	1
NRG - TF #6	Recovery of Free Floating Oil	5,400	4,400	500	0	6	0	2	1
NRG - TF #7	Recovery of Free Floating Oil	5,400	4,400	500	22,000	6	1	2	1
NRG - TF #8	Recovery of Free Floating Oil	5,400	4,400	500	0	6	0	2	1
NRG - TF #9	Recovery of Free Floating Oil	5,400	4,400	500	22,000	6	1	2	1
NRG - TF #10	Recovery of Free Floating Oil	5,400	4,400	500	0	6	0	2	1
NRG - TF #11	Recovery of Free Floating Oil	5,400	4,400	500	22,000	6	1	2	1
NRG - TF #12	Recovery of Free Floating Oil	5,400	4,400	500	0	6	0	2	1
NRG - TF #13	Recovery of Free Floating Oil	5,400	4,400	500	22,000	6	1	2	1
NRG- TF #14	Recovery of Free Floating Oil	5,400	4,400	500	0	6	0	2	1
Total Nearshore Recovery Equipment Required		75,600	61,600	7,000	154,000	84	7	28	14

Notes - Remarks: * Two Open Water Task Forces can share Secondary Storage
** Two Nearshore Task Forces can share Aircraft.

Downstream Scenario Equipment - Shoreline Protection Group Totals

Division/ Group	Work Assignment	Boom (Feet and 12" or Larger)*	Landing Craft or other vessel capable of carrying 5,000 feet of boom	Skiff (18' or larger)	Workboats for boom deployment (30' or Larger)	Workboat with skiff for tending boom (30' or Larger)**
Shoreline Protection Group (SPG) Taskforce (TF) #1	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #2	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #3	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #4	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #5	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #6	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #7	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #8	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #9	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #10	Sensitive Area Protection and GRS Deployment		1	4	4	
SPG - TF #11	Sensitive Area Protection and GRS Deployment		1	4	4	
Total Shoreline Protection Equipment Required			11	44	44	0

Notes - Remarks: * See GRS listing for boom totals require for GRS.
** See GRS Listing for workboats total for tending GRS boom.

Downstream Scenario Equipment - GRS Totals

Division/ Group	Work Assignment	Ocean Boom (feet)	Protected Water Boom (Feet)	Calm Water Boom (Feet)	Tidal-Seal Boom (feet)	Oil Snare Line or Sorbent Boom (Feet)	Workboat with skiff for tending boom (30' or Larger)*	Notes - Remarks
Geographic Response Strategies (GRS)	SZ-11		600				1	* Workboat can be shared with other GRS Site.
	SZ-12		1,800				1	
	SZ-15		2,600				1	
	SZ-16			8,400			1	
	SZ-17		1,500				1	
	SZ-18		1,600				1	
	SZ-19		1,500	600			1	GRS SZ 19 & 22 Share Boom Tenders
	SZ-22		2,800			3,500		
	SZ-24		2,700			1,200	1	GRS SZ 24 & 25 Share Boom Tenders
	SZ-25	1,200						
	SZ-28		1,500		400		1	
	SZ-29		2,700		450	1,000	1	
	SE-1			2,370	120			GRS SE 1 & 3 Share Boom Tenders
	SE-3			2700			1	
	SE-4		900					GRS SE 4 & 5 Share Boom Tenders
	SE-5			1500			1	
	SE-7		1,200					GRS SE 7 & 9 Share Boom Tenders
	SE-9		2700				1	
	SE-14					3400		GRS 14 & 15 Share Boom Tender
	SE-15			800		1500	1	
	SE-17				500	300		GRS SE 17, 18 & 19 Share Boom Tenders
	SE-18			200		300	1	
	SE-19				200	300		
	KI-1		2,000				1	
	KI-2		2,000	400			1	GRS KI 2 & 3 Share Boom Tender
	KI-3		2,000	600				
	KI-15		1,400				1	
	KI-16		2,800				1	
	KI-17		5,300				1	
	KI-18		4,000				1	
	KI-19		600				1	GRS KI 19 & 20 Share Boom Tender
	KI-20		1,200					
Total GRS Equipment Required		1,200	45,400	17,570	1,670	11,500	22	

Downstream Scenario Equipment - Wildlife Group Totals

Division/ Group	Work Assignment	Command Support Vessel (50 Feet or Larger)	Large Workboat (30 feet or Larger)	Skiff (18' or larger)	Aircraft (Helo or Fixed Wing)
Wildlife Group WG - Hazing Strike Teams (HST) #1- #15	Haze wildlife away from oil.	15	0	30	0
Wildlife Group WG - Capture Strike Teams (CST) #1- #13	Capture Oiled Wildlife	7	13	26	0
Wildlife Group WG - Transport Strike Teams (CST) #1- #3	Transport Captured Wildlife	0	3	0	1
Total Wildlife Group Equipment Required		22	16	56	1

Notes - Remarks: 1 Command Support Vessel per two WG-CST

Downstream Scenario Equipment - Shoreline Cleanup Totals

Division/Group	Work Assignment	Command Support Vessel (50 Feet or Larger)	Large Workboat (30 feet or Larger)	Skiff (18' or larger)	Aircraft (Helo or Fixed Wing)
Shoreline Cleanup Assessment Teams #1 - #6	Assess Shoreline Impacts	6	0	6	1
Shoreline Cleanup Strike Teams #1-#3	Quick strike team to minimize refloating oil	3	6	12	0
Total Initial Shoreline Cleanup Equipment		9	6	18	1

Notes - Remarks: Aircraft as needed

Note that this table does not factor in the resource needs for beach cleanup operations beyond initial shoreline assessment. Signiticant additional numbers of trained personnel and support equipment would be required to conduct beach cleanup.

Downstream Scenario Equipment - Cumulative Totals for All Divisions/Groups

Division/ Group	Ocean Boom (Feet of 42" or Larger)	Protected Water Boom (Feet of 18" - 42")	Calm Water Boom (Feet of <18")	Tidal Seal Boom (Feet)	Skimmer (EDRC) (Minimum Number of Systems)	Primary Storage (bbls) (Minimum Number of Systems)	Secondary Storage (bbls) (Number of Barges)	Support Vessel (80' of Larger)	Support Vessel (50' or Larger)	Workboat (40' or Larger)	Workboat (30' or Larger)	Skiff (18' or Larger)	Aircraft (Helo or Fixed Wing)	Landing Craft or Other Cargo Vessel	Oil Snare Lines or Sorbent Boom (feet)
Open Water Recovery Group	10,000				37,500 (5)	75,000 (5)	180,000 (3)	2		10			3		
Nearshore Recovery Group	75,600				61,600 (28)	7,000 (28)	154,000 (7)		42		84		7		
Shoreline Protection Group											44	44		11	
Geographic Response Strategies	1,200	45,400	17,570	1,670							22				11,500
Wildlife Group									22		16	56	1		
Shoreline Cleanup Group									9		6	18	1		
Cumulative Totals	**86,800**	**45,400**	**17,570**	**1,670**	**99,100 (33)**	**82,000 (33)**	**334,000 (10)**	**2**	**73**	**10**	**172**	**118**	**12**	**11**	**11,500**

Notes - Remarks: Boom associated with GRS Implementation. Each of the 11 SPG-Task Forces would have 5,000 feet of boom.

DOWNSTREAM PLAN: PART THREE – COMMAND STRUCTURE FOR MULTI-SUBAREA RESPONSES

A. ADAPTING THE INCIDENT COMMAND SYSTEM TO A MULTI-SUBAREA RESPONSE

A large multi-Subarea response, an additional layer of organization may be required above the Incident Command level. There are several different models for a multi-region spill response that can be found in state and federal guidance documents. Depending on the preference of the Unified Command, any one of these models, or a variation thereof, can be used to coordinate a multi-Subarea response.

In a multi-Subarea response, there may be more than one Local On-Scene Coordinator assigned to the Unified Command by the affected community. Local On-Scene Coordinators (LOSC) are designated by local governments with jurisdiction to direct and coordinate local responses to incidents. Local On-Scene Coordinators are part of the Unified Command as long as there is an immediate threat to public safety, or as pre-identified in the applicable Subarea Contingency Plan.

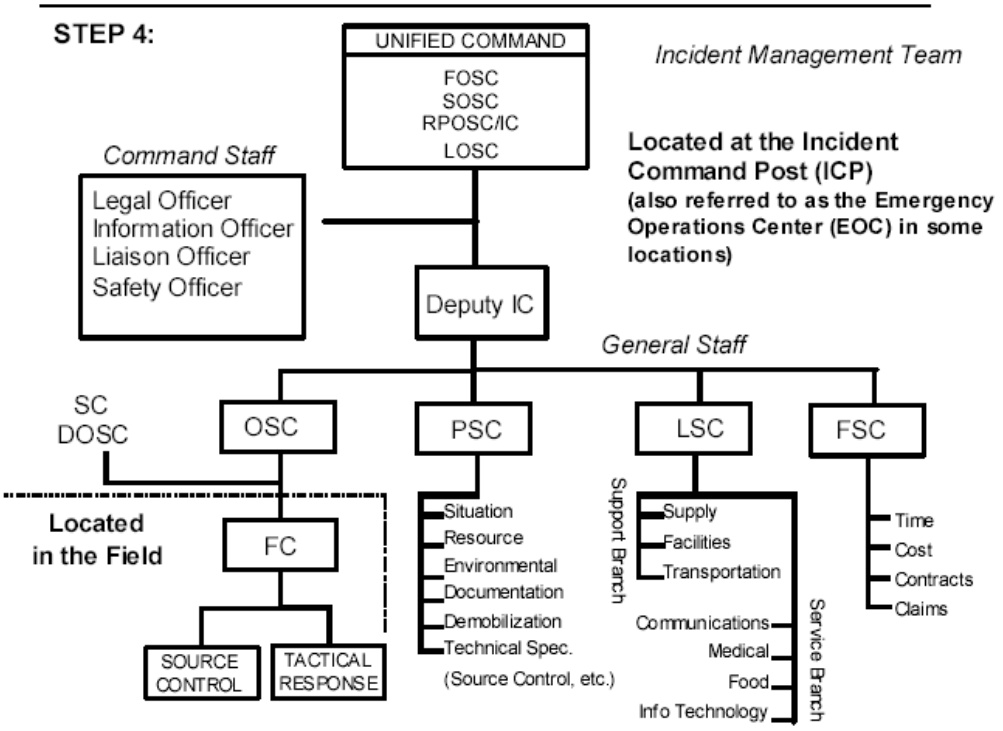
In an Incident like the scenario In Part Two, the response may be elevated to the status of a Spill of National Significance (SONS). For a SONS or other major spill that requires "senior executive level response coordination," the US Coast Guard's Incident Management Handbook (IMH) describes the formation of a Regional or National Incident Command (RIC/NIC) to oversee the overall incident management.

The Alaska Incident Management System (AIMS) Guide also provides for multi- region incidents where there is a need to coordinate and share recourses, through the formation of Multi-Agency Coordination Committee (MAC) groups. The Unified Command and the MAC group must work closely together on all issues in the spill response.

The AIMS Guide identifies 3 levels of organization for a multi-region response: Field Response Teams (FRT), an Incident Management Team (IMT), and a Crisis Management Team (CMT). For a spill involving oil moving outside the PWS, there will be several FRTs comprised of personnel and equipment working from several Field Command Posts (FCP) located in either Cook Inlet and/or Kodiak Subareas. These FRTs will feed into their respective FCP.

The following diagrams show the command structure recommended in the AIMS Guide:

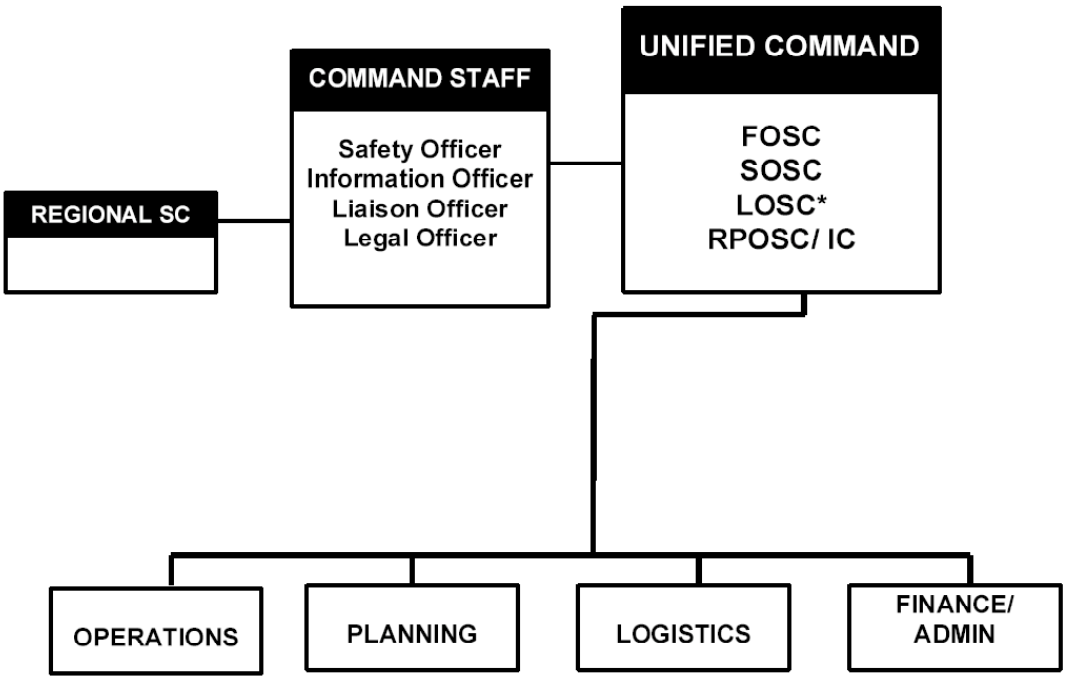
HYPOTHETICAL RESPONSE ESCALATION (STEP 4)



NOTES:

1. IC = Incident Commander
2. Deputy IC = Deputy Incident Commander
3. OSC = Operations Section Chief
4. PSC = Planning Section Chief
5. LSC = Logistics Section Chief
6. FSC = Finance/Admin Section Chief
7. FC = Field Command
8. SCDOSC = Source Control Deputy Operations Section Chief

Figure 2-7: INCIDENT COMMANDER



FOSC: Federal On-Scene Coordinator (US Coast Guard/EPA)
SOSC: State On-Scene Coordinator (ADEC)
*LOSC: Local On-Scene Coordinator (while immediate threat to public safety exists, or as specified in subarea contingency plans)
RPOSC/ IC: Responsible Party On-Scene Coordinator (Spiller Designee)

B. THE REGIONAL/NATIONAL INCIDENT COMMAND MODEL

This Regional/National Incident (RIC/NIC) command structure used by the US Coast Guard, which is focused on prioritization of resource needs and other strategic issues, may be useful to apply in a multi-Subarea response. The purpose of the RIC/NIC isn't to replace the Incident Commander(s), but to provide "strategic assistance and direction, and resolving competition for scarce federal response resources."

Under such a model, each Subarea may have its own Incident Commander, who would be focused on tactical response issues, while the Regional IC could address competing resource needs and other big-picture concerns.

When the Coast Guard is the lead federal agency with primary response authority, the RIC/NIC will have responsibility for overall strategic management of the incident and will coordinate acquisition of off-incident, unassigned resources. This could include federal, state, local, and

international resources as appropriate. When the Coast Guard is an assisting agency operating under the Federal Response Plan (FRP), the RIC/NIC will have the responsibility for overall strategic management of Coast Guard assets in support of the Federal Coordinating Officer (FCO).

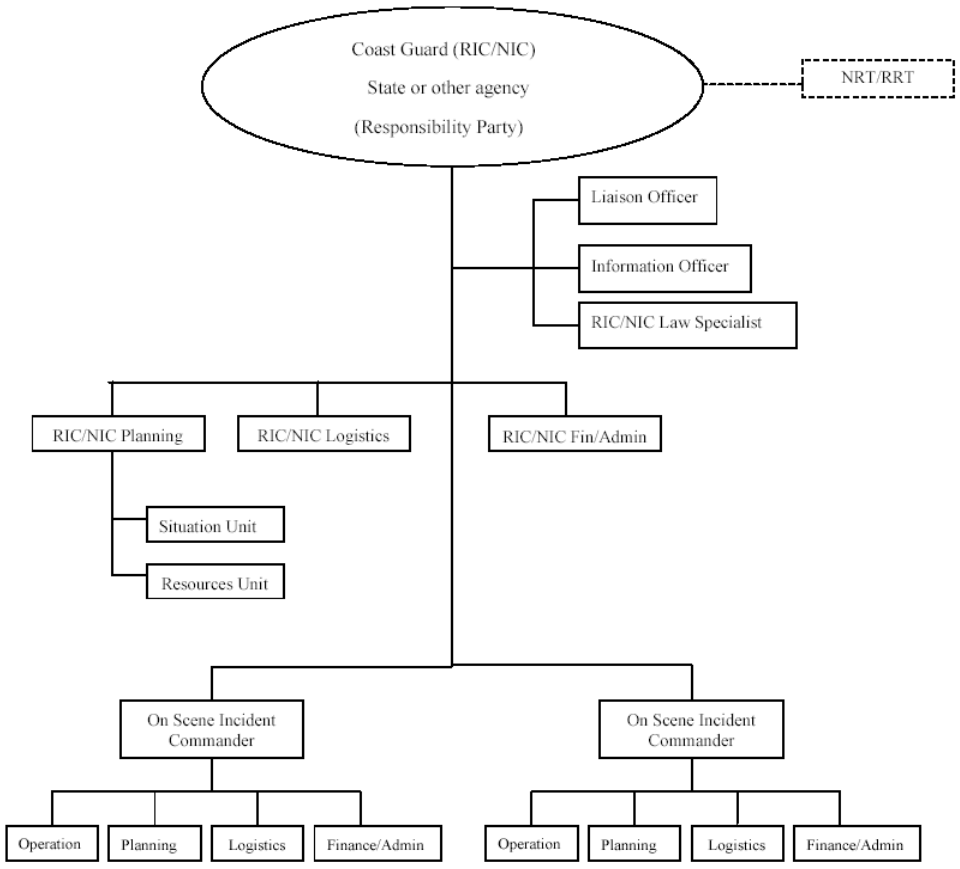
The Regional/National Incident Command does not, in any way, replace the on-scene incident ICS organizations or functions. Tactical operations continue to be directed at the on-scene IC/UC level and the RIC/NIC offers support by:

- Balancing and allocating critical resources based on FEMA set priorities;
- Ensuring that the Coast Guard's participation and support is properly managed;
- Ensuring that FCO objectives are met with minimal disruption to Coast Guard statutory responsibilities;
- In concert with the FCO and the Regional Emergency Transportation Coordinator (RETCO), communicating with affected parties, stakeholders, and the public; and
- Facilitating the coordination and support of local and state resources, as appropriate.

The following diagram shows the RIC/NIC organizational chart from the IMH.

REGIONAL INCIDENT COMMAND/NATIONAL INCIDENT COMMAND ORGANIZATION

An organization chart showing the basic RIC/NIC is:



Note: NIIMS Area Command includes an Aviation Coordinator position. This position was intentionally left out. The RIC/NIC can add the position anytime they determine a need for special aviation coordination.

C. UNIFIED COMMAND AND MAC/RSC GROUP COORDINATION FOR DOWNSTREAM RESPONSE PLANNING

A Multi-Agency Coordinating (MAC) Group consists of designated individuals who support or are directly involved with an incident and have authority (direct or delegated) to establish spill response priorities and commit resources from their areas. Emergency Services Council (ESC) or Community Emergency Coordinators (CECs) are designated in Local Emergency Response Plans and may serve as the LOSC or on the Regional Stakeholder Committee (RSC) or Multi-agency Committee (MAC) as outlined in the Subarea Contingency Plans. Because the state and federal models for incorporating community input vary, the Unified Command will determine whether an RSC or MAC model is utilized.

For as long as there is an immediate threat to public safety within his/her jurisdiction, the LOSC serves as the ultimate command authority if the FOSC or SOSC does not assume the lead role for response, or unless the LOSC requests a higher authority to assume that responsibility. Once the immediate threats to public safety are abated, Local representation to the Unified Command may then be through the CEC on the RSC.

The OSCs represent all agencies from their respective federal, State, local, and industry organizations as Unified Commanders in the Unified Command. They are responsible for coordinating their organization's activities with the activities of other response organizations.

Each area's ESC will be in contact with their MAC representative regarding the possible need to establish a forward command post and deploy resources. Timely activation of a MAC group as soon as it is determined that oil may escape the spill area is essential for making key decisions about the sharing and use of critical resources.

The MAC group does not get involved in establishing clean-up strategies; this is the domain of the Unified Command. The purposes of the MAC Group are to:

- Make timely decisions for resource allocations so appropriate actions can be taken;
- Improve the information flow and interface among involved agencies when numerous incidents occur at one time or when large incidents are rapidly depleting resources; and
- Develop a single, collective approach to establishing priorities regardless of functional or geographic responsibilities.

To ensure its ability to make necessary decisions in a timely manner, the MAC Group must have access to the Unified Command.

D. COORDINATING A RESPONSE WITH MULTIPLE FIELD RESPONSE TEAMS

If the Unified Command uses the command structure where each Subarea has its own Incident Commander, the Field Response Teams (FRT) in the Subarea would report to and take direction from their regional Incident Commander through the ICS system. The Regional Incident Command will have an Operations Branch Director. Span of control must be accounted for with enough people manning the regional command post to handle operations, planning, and logistics. Under this system, the Regional IC could address competing resource needs and other big-picture concerns and make assignments to the Subarea Incident Commanders who would coordinate with the FRTs.

When the MAC groups are activated, the Subareas may have Forward Command Posts (FCP) to manage area FRTs. The FCP will be directed by an Operations Branch Director. This Branch Director will report to an Operations Section Chief in the IMT. For a spill of this size, attention will need to be paid to span of control issues due to the large number of people who will be

working both inside the Command Center, on beach cleanup, on GRS deployment, and on-water recovery. The Incident Command System should be set up with an Operations Branch Director specifically for oil spill clean up outside the Subarea where the spill originates.

DOWNSTREAM PLAN: PART FOUR – RESPONSE RESOURCES

A. SPILL RESPONSE FUNCTIONAL REQUIREMENTS

The response to a multi-Subarea oil spill requires many different types of equipment that can be organized into task forces and strike teams to provide specific response functions. These functions, described below, include the basic response needs for a major oil spill. Additional needs or tasks may still be required, based on incident specifics and the best professional judgment of the Unified Command.

The equipment requirements for these task forces and strike teams were developed using the U.S, Coast Guard Field Operations Guide and the Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan as a model because the responsible party for the scenario would be a organization associated with that planholder.

1. Spill Source Control

The first step in responding to an oil spill is to stop and secure the source of the spill. The actions that must be taken to complete this task vary depending on the spill source, environmental conditions, and location of the spill. For a tanker spill as presented in the scenario section of this Downstream Plan, the following tasks and equipment could be needed.

Task Requirements:

Oil remaining in the damaged tanks needs to be transferred into other available tank space onboard the tanker, if the space is available and the transfers will not adversely affect the stability of the ship. The lightering of the ship to other ships or tank barges would be necessary to complete the source control operation. Oil around the vessel would need to be contained with oil booms as soon as possible given safety considerations and availability of equipment.

Minimum/Recommended Equipment Requirements:

- Lightering Vessel Tanker of Opportunity or Additional Barges
- 58,000 bbl Lightering Barge
- 4 Salvage/Lightering Pumps Oil Transfer Pumps
- 500’ of 8” Transfer Hoses
- Tug(s)
- 4 Ship Fenders
- 2 Large Workboats
- 4,000’ Boom

2. Open Water Recovery

Effective open water recovery can minimize or eliminate shoreline impacts.. The key to open water recovery is getting to the spill quickly and having enough recovery capacity to take advantage of the higher encounter rates that are possible during the initial response.

Task Requirements:

The primary task of the open water recovery task force is to attack the highest concentrations of oil to recover as much of the oil before it can reach the shoreline. The Open Water Task Force should use boom to enhance oil encounter rates for the skimming vessels and include both primary and secondary storage to ensure continual operation.

Open water recovery operations require larger vessels to safely operate offshore. Boom configurations are "V", "U", or "J" depending on skimmer and vessel types.

Equipment Requirements:

- Skimming Vessel with High Capacity Ocean Rated Weir or Oleophilic Skimmer (7,500 bbls + EDRC)
- 15,000 bbls + Storage Capacity (2 times EDRC)
- Large Secondary Storage Barge with Tug (60,000 bbls 5 Times EDRC)
- 2 Workboats (40' or Lager Workboats for Towing Boom)
- 2,000' Boom (Ocean 42 Inches or Larger)
- Helicopter or Fixed Wing (Direction of Recovery Operations)

3. Nearshore Recovery

Nearshore recovery operations will be necessary to recovery oil that has escaped the open water recovery operations. Nearshore recovery will become the primary means of recovery as the oil spreads into a thinner sheen and breaks up into isolated patches over the first few days.

Task requirements:

The primary goal of the nearshore recovery task force is to intercept and recover as much oil as possible before it impacts the shoreline. The equipment used in the nearshore recovery task forces is generally smaller than the equipment used in the open water recovery operations. Vessels typically have shallower drafts and are more maneuverable than the ones used for open water operations. The boom can also be smaller which makes it easier for smaller vessels to tow.

Equipment Requirements:

- 2 Skimming Vessels with Ocean Rated Weir or Oleophilic Skimmer (2,200 bbls + EDRC)
- 2 Primary Storage (Onboard or Towed 250 bbls Capacity)
- Secondary Storage Barge (22,000 bbls + 5 Times EDRC)
- Tug or Other Vessel (for Secondary Storage Barge)
- 6 Workboats (30'+ for Towing Boom)
- Command/Safety Vessel
- 3 1,800' Booms (42" Inches or Larger)
- Helicopter or Fixed Wing (Direction of Recovery Operations)

4. Sensitive Areas Protection and GRS Deployment

Sensitive areas protection is a critical element in environmental protection during an oil spill. Certain environmentally sensitive areas are much more important ecologically than others and special efforts need to be taken to protect these sites. Not all sensitive areas can be protected during a spill because of limitations of equipment, which makes protection of the sites that can be protected even more important.

Task Requirements:

The primary method of sensitive areas protection is booming to either exclude oil or deflect the oil away from a sensitive site. The key to being able to protect these sensitive areas is having the equipment in place before the oil arrives. Once a shoreline protection task force has deployed boom that boom must be tended to ensure it maintains the proper configuration as tides and weather change.

Other methods could be used to protect some sensitive areas. These other protection methods could include Beach Berms, Inlet Dams, Sorbent Barriers, and use of Geotextiles to protect beaches.

Equipment Requirements:

- Boom (Depends on site requirements -12" or Larger)
- Landing craft, deck barge or other large vessel capable of carrying 5,000 feet of boom or more.
- 4 Workboats to deploy boom (30' or Larger)
- 4 Skiffs to help workboats with deploying boom (18' or Larger)
- Workboats to tend boom (30' or Larger)
- Anchoring Equipment

Equipment for Other Shoreline Protection Methods

- Excavators
- Hand tools
- Piping
- Sorbents
- Anchoring Equipment (Sand Bags, Stakes, Rope, etc.)
- Geotextile Material

5. Onshore Recovery

Onshore recovery operations may be used in locations that have currents that carry the oil to the recovery location or where oil can be trapped in coves and held in place until recovered. Onshore recovery works best in areas that have good road access.

Task Requirements:

The use of onshore recovery operations will be required as oil begins to impact the shore or as oil is refloated from shoreline areas by the tides or through shoreline cleanup operations. The goal of onshore recovery is to capture the oil while it is still on the water and is easier to recover. Vacuum Trucks work well for skimmers and storage for these operations if there is road access. Other recovery devices can be used with portable tanks for storage. Oleophilic skimmers such as rope mops work very well for onshore recovery operations because they reduce the amount of water that is recovered and has to be stored. If there is no road access for the recovery site the storage tanks will have to be offloaded to a barge or other vessels with secondary storage tanks, such as a landing craft with a vacuum truck.

Equipment Requirements:

- Skimmer
- Storage Tanks
- Boom (18 Inches or Larger)
- Skiff for Tending Boom (18' or Larger)
- Vacuum Truck, Barge, or Landing Craft with Tanks for Secondary Storage

6. Shoreline Cleanup

The methods used for shoreline cleanup will be determined by the beach type, oil type, and environmental sensitivity. Shoreline Cleanup Assessment Teams (SCAT) will determine what methods of cleanup would be best for each beach segment. These methods may vary from doing nothing to passively placing oil snares to aggressively removing material with heavy machinery or power washing the oil off the rocks.

Task Requirements:

While the methods vary greatly, the goal of shoreline cleanup is to remove as much of the stranded oil while causing the least possible environmental damage. Short of doing nothing, shoreline cleanup operations are labor-intensive, requiring work crews numbering in the hundreds for a large spill response. Shoreline cleanup methods used in a large spill could include but are not limited to the following:

- No Action
- Manual Removal of Oil
- Passive Collection of Oil with Oil Snares and Sorbents
- Oiled Debris Removal
- Trenching/ Recovery Wells
- Oiled Sediment Removal
- Ambient Water flooding
- Ambient Water Low or High Pressure Washing
- Warm (< 90°) or Hot (>90°) Pressure Washing
- Vacuum Removal of Oil
- Sediment Reworking
- Sediment Removal, Cleaning, and Replacement
- Removal of Oiled Vegetation
- In-situ Burning on Shoreline
- Chemical Treatments
- Nutrient Enhancement
- Microbial Additions

Equipment Requirements:

The equipment requirements for shoreline cleanup are as varied as the methods to be used. Some of the needed equipment would include:

- Sorbents
- Oil Snares
- Boom
- Heavy Equipment
- Hand Tools
- Skiffs
- Landing Crafts
- ATV's
- Pumps

7. Shoreline Cleanup Assessment Teams (SCAT)

These teams are generally made up of specially trained state, federal, and responsible party representatives. Multiple teams will be required during a large spill response in order to cover potentially many miles of shoreline in a timely manner.

Task Requirements:
SCAT teams are used during oil spills to assess the amount of oiling on beaches, determine the appropriate cleanup method, and prioritize the order of beach cleanup. The goal of this function is for the team members to agree on which cleanup method(s) should be used for each beach segment and to prioritize beach cleaning operations given limited resources.

Equipment Requirements:
- Transportation (Workboats, Skiffs, Vehicles, ATV, and Helicopters)

8. Wildlife Protection, Capture, and Rehabilitation

Dealing with oiled or potentially oiled wildlife is a very important part of a large spill response and particularly important to public perception. The manner in which oiled wildlife are handled is often viewed by the media and the public as a benchmark for the success or failure of the spill response as a whole.

Task Requirements:
There are four basic components to wildlife operations. The first is prevention tactics, such as hazing to keep wildlife out of the oil in the first place. Hazing strike teams will be established to chase birds and other wildlife away from oiled areas. The second component is the capture of wildlife that has been oiled. Wildlife capture strike teams will be used to capture oil wildlife. Once the animals have been captured, they are ready for the third component, which is to be transported to a designated triage site to be inspected by qualified wildlife personnel who will determine whether rehabilitation is feasible and will recommend euthanasia if the animal cannot be saved.. The fourth component is the setup and operation of wildlife rehabilitation centers. These rehabilitation centers must have plenty of room, heat, adequate air exchanges, and access to large volumes of water.

Equipment Requirements:
Hazing Strike Team
- Command/Support Vessel (40' +)
- 2 Skiffs (18' +)
- Hazing Equipment (Propane Canons, Cracker Shells, Mylar Balloons, Etc.)

Capture Strike Team
- Command/Support Vessel (40' +)
- Large Work Boat (30' +)
- 2 skiffs (18' +)
- Nets

Transport of Captured Oiled Wildlife
- Large work Boat (30' +)
- Aircraft
- Vehicles

Wildlife Rehabilitation Centers
- Large Building
- Heat
- Large Quantity of Water

- Good Air Exchanges
- Tanks

9. Recovered Oil and Waste Management

Waste Management includes handling recovered oil, oily debris, and the associated wastes generated in large-scale spill responses. The waste management operations are one of the biggest issues that must be handled appropriately for a successful response to an oil spill.

Task Requirements:

As mentioned above, there are three main components to waste management in an oil spill. The recovered oil must be handled to ensure recovery operations do not become delayed due to lack of storage for the recovered oil. The oil recovered and stored in the skimmer primary storage tanks or bladders must be regularly transferred to secondary tanks and then taken to the appropriate recycling or disposal facilities. Oily debris includes oiled flotsam and jetsam, oiled seaweed, oiled driftwood, or oiled snares and sorbents. All oily debris must be managed to ensure it is classified and disposed of properly. Additionally, all non-oily wastes associated with the spill response must be collected and recycled or disposed of properly.

Equipment Requirements:

Recovered Oil Management Task Force

Open Water and Nearshore

- Large Barge (100, 000 bbls +)
- Tug for Large Barge
- 3 Viscous Oil Transfer Pumps

Shoreline

- Barge (10,000 bbls +)
- Tow Vessel for Barge
- Landing Craft (with Vacuum Truck or Tanks)
- Viscous Oil Pumps and Hoses

Oily Debris Management Task Force

- Landing Craft or Deck Barge and Tow Vessel
- ATV's and Trailers
- Bags for Recovered Oily Debris

Non-Oily Wastes

- Landing Craft or Deck Barge and Tow Vessel
- ATV's and Trailers
- Bags for Non-oily Materials

B. ALASKA RESPONSE EQUIPMENT OUTSIDE OF PRINCE WILLIAM SOUND

The following organizations provide oil spill response equipment and response services within Alaska. This list is limited to the major spill response organizations in Alaska.

Organization	Types of Resources	Access Options*
Alaska Clean Seas (ACS) 4220 B Street, Suite 201 Anchorage, AK 99503 (907) 743-8989 (907) 743-8988 Fax	Boom Recovery Equipment Storage Transfer Equipment Communication Equipment Wildlife Equipment In-situ Burning Equipment Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – Yes with SERVS and CISPRI USCG BOA – No ADEC Contract - Possible
Cook Inlet Spill Prevention and Response Inc. (CISPRI) P.O. Box 7314 Nikiski, Alaska 99635 (907) 776-5129 (907) 776-2190 (fax)	Boom Recovery Equipment Storage Dispersants Communication Equipment Transfer Equipment Vessels Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – Yes with SERVS and ACS USCG BOA – Not at the time of this report. ADEC Contract - Possible
Alaska Chadux Corporation 2347 Azurite Court Anchorage, AK 99507 (907) 348-2365	Boom Recovery Equipment Storage Wildlife Equipment Vessels Transfer Equipment Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – No USCG BOA – Yes ADEC Contract - Yes
Southeast Alaska Petroleum Resource Organization, Inc. 540 Water St., Suite 201 Ketchikan AK 99901 888-225-7676 (907) 225-7002 (907) 247-1117 (fax)	Boom Recovery Equipment Storage Transfer Equipment Dispersants Communication Equipment Wildlife Equipment Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – Not at the time of this report. USCG BOA – Yes, but only for Southeast Alaska. ADEC Contract - No

Organization	Types of Resources	Access Options*
U.S. Coast Guard, Alaska Marine Safety Office 510 L. Street, Suite 100 Anchorage, AK 99501 (907) 271-6700 (907) 271-6751 (fax)	Boom Recovery Equipment Storage Vessels Transfer Equipment Personnel	The U.S. Coast Guard's Federal On-Scene Coordinator can provide access to the U.S. Coast Guard equipment.
U.S. Navy Supervisor of Salvage, ESSM Base Anchorage Box 5685 Fort Richardson, AK 99635 (907) 384-2968 (907) 384-2969 (fax)	Boom Recovery Equipment Storage Communication Equipment Transfer Equipment Personnel	The U.S. Coast Guard's Federal On-Scene Coordinator can provide access to the U.S. Navy equipment.

* Access assumes regulatory agency cooperation.

C. OIL SPILL RESPONSE EQUIPMENT OUTSIDE OF ALASKA

The following major west coast, national, and international organizations provide oil spill response equipment and response services. This list is not meant to be all inclusive of the spill equipment sources located in other US states or internationally. Additional spill resources can be found from spill contractors in the Gulf and east coast states, internationally, and from spill equipment manufacturers.

Organization	Types of Resources	Access to Resources*
Marine Spill Response Corporation (MSRC) 220 Spring Street, Suite 500 Herndon, VA 20170 (703) 326-5611 (703) 326-5660 (fax)	Boom Recovery Equipment Storage Transfer Equipment Communication Equipment Dispersants Vessels Shoreline Cleanup Equipment Personnel	Direct Contract – RP would have to become member of MPA if not already a member. Membership – Yes Mutual Aid Agreement – No USCG BOA – MSRC has a contract with USCG similar to a BOA ADEC Contract – No
National Response Corporation (NRC) 3500 Sunrise Highway Ste. T103 Great River, NY 11739 (800) 899-4692 Emergency (631) 224-9141 (631) 224-9086 (fax)	Boom Recovery Equipment Storage Communication Equipment Vessels Transfer Equipment Wildlife Equipment Shoreline Cleanup Equipment Personnel	Direct Contract – Yes Membership – Existing clients have access. Mutual Aid Agreement – No USCG BOA – Yes ADEC Contract - No

Organization	Types of Resources	Access to Resources*
Burrard Clean Operations PO Box 82070 Burnaby, BC V5C 5P2 (604) 294-6001 (604) 294- 6003	Boom Recovery Equipment Storage Communication Equipment Transfer Equipment Wildlife Equipment Vessels Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – Burrard Clean has Mutual Aid agreement with SEAPRO for Southeast Alaska and has signed the APICOM mutual aid agreement. USCG BOA – No ADEC Contract – No
Clean Sound Cooperative, Inc. 1105 13th Street, Suite 100 Everett, WA 98201-1679 (425) 783-0908 (425) 783-0939 (fax)	Boom Recovery Equipment Storage Communication Equipment Transfer Equipment Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – Clean Sound has Mutual Aid agreement with SERVS and has signed the APICOM mutual aid agreement. USCG BOA – Yes ADEC Contract – No
Global Salvage and Diving 3840 West Marginal Way SW Seattle, WA 98106 (800) 441-3483 (206) 932-9036 (fax)	Boom Recovery Equipment Transfer Equipment Shoreline Cleanup Equipment Personnel	Direct Contract – Yes Membership – Existing clients have access. Mutual Aid Agreement – No USCG BOA – Yes ADEC Contract – No
Clean River Cooperative, Inc. 200 S.W. Market Street, Suite 190 Portland, OR 97201 (503) 220-2040 (503) 295-3660 (fax)	Boom Recovery Equipment Storage Wildlife Equipment Communication Equipment Transfer Equipment Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – Clean River has signed the APICOM mutual aid agreement. USCG BOA – Yes ADEC Contract – No

Organization	Types of Resources	Access to Resources*
Cowlitz Clean Sweep 55 International Way Longview, WA 98632 (888) 423-6316	Boom Transfer Equipment Personnel	Direct Contract –Yes Membership – No Mutual Aid Agreement – No USCG BOA – Yes ADEC Contract – No
Clean Seas 1180 Eugenia Place, Suite 204 Carpinteria, CA 93013 (805) 684-3838	Boom Recovery Equipment Storage Transfer Equipment Dispersants Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – Clean Seas has signed the APICOM mutual aid agreement. USCG BOA – Yes ADEC Contract – No
U.S. Coast Guard **National Strike Force** 1416 North Road Street Elizabeth City, NC 27909 (252) 331-6000 (252) 331-6012	Boom Recovery Equipment Storage Communication Equipment Transfer Equipment Vessels Personnel	The U.S. Coast Guard's Federal On-Scene Coordinator can provide access to the U.S. Coast Guard equipment.
U.S. Navy Supervisor of Salvage 2531 Jefferson Davis Highway, Code 00C25 Arlington, VA 22242 (703) 607-2758 (703) 607-2757 (fax)	Boom Recovery Equipment Storage Communication Equipment Transfer Equipment Vessels Personnel	The U.S. Coast Guard's Federal On-Scene Coordinator can provide access to the U.S. Navy equipment.
Oil Spill Response, ltd. (OSRL) Lower William Street Hampshire SO14 5QE United Kingdom 011-44-23-8033-1551 011-44-23-8033-1972 (fax)	Boom Recovery Equipment Storage Transfer Equipment Dispersant Equipment Personnel	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – OSRL has signed the APICOM mutual aid agreement. USCG BOA – No ADEC Contract – No

Organization	Types of Resources	Access to Resources*
East Asia Response Limited (EARL) 2 Jalan Samulan Singapore 629120 011-65-266-1566 011-65-6266-2312 (fax)	Boom Recovery Equipment Storage Transfer Equipment Dispersant Equipment	Direct Contract – Yes Membership – Yes Mutual Aid Agreement – EARL has signed the APICOM mutual aid agreement. USCG BOA – No ADEC Contract – No

* Access assumes regulatory agencies cooperation.

D. ISSUES ASSOCIATED WITH GAINING ACCESS TO OUT OF REGION RESPONSE RESOURCES

Working out access details with equipment owners is only part of getting the oil spill equipment to the spill response. The following list of issues must also be worked out before the equipment can be put to use in an oil spill.

1. Regulatory Approvals

Almost all of the major caches of oil spill equipment in the United States are in place to meet federal and state regulatory requirements of the contractor's members or clients. Therefore, approvals from the various federal and state regulatory agencies will be required before the spill response equipment can be released from the region where it is located. During a major multi-Subarea oil spill response, the Alaska Department of Environmental Conservation (ADEC) and the local U.S. Coast Guard commands will likely support efforts to facilitate the movement of oil spill equipment within the state.

The spill equipment located in the U.S. outside of Alaska may be more difficult to mobilize. The members of the Pacific States/British Columbia Oil Spill Task Force have sign a mutual aid agreement that describes the processes required to gain access to spill equipment stationed to meet regulatory requirements. This agreement outlines the minimum amounts of equipment that must remain in place to cover potential spills in each state. Federal regulatory restrictions would still need to be addressed through the Federal On-Scene Coordinator.

Requests for spill equipment in states beyond those covered by the Pacific States/British Columbia Oil Spill Task Force need to clear the federal and state regulatory requirements on a case-by-case basis.

Spill equipment located outside of the U.S. will also have to clear regulatory restrictions established in the countries where the equipment is located.

2. Clearing U.S. Customs

All equipment and personnel traveling to the spill response from outside of the U.S. will have to clear U.S. Customs. The Federal On-Scene Coordinator may be able to facilitate the process of clearing Customs but there still may be some delay getting foreign equipment to the spill

response. Personnel sent from outside of the U.S. maybe required to obtain work visas from U.S. Department of Immigration.

3. Financial Assurances

Regardless of how the initial access to the spill response equipment is made, the Responsible Party (RP) will have to be able to assume contracts with the responding organizations and provide assurances that those organizations will be paid. This assurance may come from establishing a large spill response fund and/or providing P&I Club or other insurance funding.

E. PERSONNEL NEEDS FOR A MULTI-SUBAREA SPILL RESPONSE

The number of trained personnel that will be required for a response to a large multi-Subarea spill can easily number into the thousands. Three main categories of responders will meet the majority of the personnel needs. The first are the on-scene responders who are working in the field to cleanup the oil (Operations Section). The next group of people will be working in the Command and Field Posts managing the overall response (Command, Command Staff, and General Staff working in Command Posts and Field Posts), dealing with the media, and working with the affected communities to ensure their concerns are addressed. The last type of personnel are support personnel (Logistics).

A successful spill response requires the coordinated efforts of all personnel. Some ICS positions require individuals with extensive experience and training while other positions may be filled with untrained personnel. This varying degree of personnel qualifications will in part determine whom and where the all of the personnel for the spill response can be found.

In the Command Post, the key roles (Unified Command, Command Staff, General Staff, Branch Directors, Unit Leaders, and Technical Specialists) must have thorough knowledge of their assigned field and experience in working in an ICS organization. These individuals may be located locally, regionally, statewide, or from out of state.

The personnel leading the field operations (Division Supervisors, Group Supervisors, Task Force Leaders, Strike Team Leaders, and Staging Area Managers) must have a good working knowledge in ICS and be experienced with oil spill response equipment and tactics. These individual that are working in areas with oil must have the appropriate level of Hazardous Materials training (Hazmat Technician). These individuals would generally come from spill response contractors from within Alaska or out of state.

The field operations personnel do not need a high level of ICS knowledge but must be competent with the response equipment that they are assigned to operate. Some vessel crews and barge tankermen will be required to hold USCG licenses based on the size and type of vessels they are operating. This group of personnel will be required to have the appropriate level of Hazardous Materials training (Hazmat Technician). These individuals would primarily come from local, regional and in-state locations. However, there will be individuals from response contractors, U.S. Navy, and USCG included in this group of people from outside of Alaska.

The field logistical support personnel will not have to have a high level of ICS knowledge. This group will require an appropriate level of Hazardous Materials training (Awareness Level), which is less than those working in field operations. Some vessel crews will be required to hold USCG licenses based on the size and type of vessels they are operating. These field support personnel

must also be competent with the equipment (cranes, pumps, etc.) that they will be required to operate.

1. Response Personnel Impacts on Coastal Communities

The personnel needed for a multi-Subarea spill response will impact the coastal communities where they are assigned to respond. The people living and working in the coastal communities may join the response effort, leaving their normal jobs unfilled. There will be an influx of people from outside of the region coming to these coastal communities hoping to find work in the response. This influx of people will add increased pressures to these coastal communities for housing, food, and other services.

Local community members who are not involved with the spill response will still be impacted by the oil spill. These people mist deal with response issues such as the potential inability to fish, dealing with the influx of spill-related personnel, and potential loss of services and resources that have been channeled toward the spill response.

2. Personnel Training

All of the personnel associated with a multi-regional spill response will have to have certain levels of training in order to perform their assigned duties. The section identifies the types of training that can be associated with oil spill response activities, proposes a means of maintaining a base levels of training within the coastal communities, and describes how training may be conducted during a spill.

The following table identified various types of training that would be required or useful for personnel to have for oil spill response. This table identifies the types of training that may be useful for the three main groups of personnel discussed above but does not attempt to define the amount of training required for each position.

Types of Training	Command Post Personnel	Field Operations Personnel	Field Support Personnel
Incident Command System			
• Basic ICS	√	√	√
• ICS Planning Process	√		
• ICS Command	√		
• ICS Command Staff	√		
• ICS Operations Section	√	√	
• ICS Planning Section	√		
• ICS Logistical Section	√		√
• ICS Finance Section	√		
Hazardous Materials			
• Awareness Level (4 Hr.)	√		√
• Operations Level (8 Hr.)	√		√
• Hazmat Technician Level (24 Hr.)		√	
Types of Training	**Command Post**	**Field Operations**	**Field Support**

	Personnel	Personnel	Personnel
• Hazardous Waster Clean-Up level (40 Hr.)		√	
Safety			
• CPR/First Aid	√	√	√
• Bear Guard Training		√	
• Cold Water Survival	√	√	√
• Helicopter Safety	√	√	√
Spill Response			
• Basic Oil Spill Response Training	√	√	
• In-Situ Burning	√	√	
• Dispersant Application	√	√	
• Open Water Recovery		√	
• Nearshore Recovery		√	
• Booming		√	
• Onshore Recovery		√	
• Shoreline Cleanup		√	
• Oiled Wildlife Handling	√	√	
Vessel			
• Small Boat Handling		√	√
• Navigation		√	√
• Marine Fire Fighting		√	√

3. Coastal Community Responder Training

The two previous sections describe the personnel needs and types of training necessary to respond to a large multi-regional spill. There are two important reasons for maintaining spill responder readiness in the coastal communities of Alaska.

The first reason is the basic fact that oil spreads quickly on water and time is critical to effective spill clean-up. There will not be time to train the first wave of responders needed for the spill response.

The second reason is the fact that the citizens living in the coastal communities have the most to lose during a large oil spill. Most of the people living in these coastal communities depend on the coastal waters to provide food, a livelihood, and/or their way of life. A large oil spill is an emotional event with broad-based community impacts.

Alyeska provides operational, ICS and OSHA training to its Tier I and Tier II contracted vessels in Prince William Sound communities, Seward, Kodiak, and Kenai. Alyeska has developed training for the Tier III vessels that are not contracted and would need training after the spill

incident occurs. This training is designed to meet the OSHA requirements and would be incident specific. Alyeska maintains a contract to provide this training for fishing vessels. Additional training resources may be available from CISPRI and Alaska Clean Seas. This fishing vessel training will need to be expanded to include general response workers in a multi-Subarea spill response.

Having a trained pool of people in each community will provide industry and the state and federal agencies the ability to provide a quicker response. An additional benefit is that these local responders can provide local knowledge of the areas in which they are responding. The local response crews could provide the work force needed to deploy the booming of the Geographic Response Strategies ahead of the oil spill impacting these sensitive areas. This would allow the professional contractors to focus on mechanical recovery operation in the open water and nearshore environments. These local responders could also provide a response capability to small oil spills within the communities themselves that might not be otherwise contained and cleaned up.

4. Oil Spill Response Training During a Spill Response

Even with a good community-based spill training program and the readiness capability required of the oil industry and their response action contractors, once a large multi-Subarea crude oil spill starts to impact the many miles of shoreline in Alaska's Subareas, additional shoreline cleanup workers will be needed. Workers providing shoreline cleanup labor must have safety and hazardous materials training before they will be allowed near the oil.

Training centers will need to be established in key communities to allow a potentially large untrained labor pool to receive the necessary training to begin to work cleaning up the oil along the shoreline. Training contractors will need to be hired to deliver a standardized curriculum based on the hazardous present during the spill response. As time progresses, the amount of training required may become less as the oil weathers.

5. Sources for Trained Spill Response Personnel

The best sources for trained spill response personnel are the spill response contactors listed in the Equipment Section. These response contractor organizations will likely have additional labor pools to draw from within their normal areas of operations. Another potential source for trained spill responders is the U.S. Navy, U.S. Coast Guard, and oil spill programs from other states.

F. DOWNSTREAM PLAN SCENARIO EQUIPMENT ANALYSIS

1. Introduction

The following equipment analysis identifies the general response equipment needs outlined in the Downstream Plan's Scenario, Part Two of this Downstream Plan. The response equipment associated with the scenario should not be considered inclusive of all the equipment needs for a spill response of the size described in the scenario. The scenario does not include equipment needed for the Prince William Sound spill response associated with the scenario incident. The scenario also does not describe the large-scale shoreline cleanup efforts that would be required in such an event.

2. Scenario Equipment Requirements and Out-of-Region Response Equipment Survey Comparison

The following table shows the total amounts of response equipment called for in the Downstream Plan Scenario, and compares those totals with the equipment amounts in the Out-of-Region Equipment Survey conducted for Prince William Sound Regional Citizens' Advisory Council by E-Tech International in 2001. Although the 2001 survey is the most recent survey available, it is already outdated as response organizations have merged and equipment inventories have continued to grow and change. The 2001 equipment survey amounts are used here as a general guideline to illustrate areas where equipment availability may not match response needs. The table also factors in the equipment totals called for in Scenario 809, which is the worst case scenario in the Prince William Tanker plan.

Comparison of Gulf of Alaska Scenario, 2001 Out of Region Response Equipment Survey, and Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan's Scenario 809 Out of Region

Scenario/ Survey	Ocean Boom (Feet of 42" or Larger)	Nearshore Boom (Feet of 18" – 42")	Harbor/ River Boom (Feet of <18")	Tidal Seal Boom (Feet)	Skimmer (EDRC (Number of Systems))	Primary Storage (bbls (Number of Systems)	Secondary Storage (bbls (Number of Systems))
Gulf of Alaska Downstream Scenario Totals	86,800	45,400	17,570	1,670	99,100 (33)	82,000 (33)	334,000 (10)
Total available according to 2001 Out of Region Equipment Survey	145,996	319,666	403,697	Not Reported	1,117,815 (651)	156,268 (344)	312,847 (35)
Amount of Out of Region Equipment Available After Subtracting Downstream Scenario Needs	**59,196**	**274,266**	**386,127**	**N/A**	**1,018,715**	**74,268**	**(-21,153)**
Scenario 809 Nearshore Out of Region Equipment Totals		105,000*			177,408 (84)**	25,200 (168)***	315,000 (3)****
Available Out of Region Equipment Totals After the Two Scenario Totals are Subtracted from the 2001 Survey	**59,196**	**169,266**	**386,127**		**841,307**	**49,068**	**(-336,153)**

* Figure based on the Scenario 809 Equipment Tally Sheet and the Ro-Boom 1100 identified for Nearshore Task Force in Table 1-1 of SID #1 Section 1 Equipment of the Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan.

** Figure based on the Scenario 809 Equipment Tally Sheet and the DESMI 250 Skimmer identified for Nearshore Task Force in Table 1-1 of SID #1 Section 1 Equipment of the Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan.

*** Figure based on the Scenario 809 Equipment Tally Sheet and the 150 bbl storage units identified for Nearshore Task Force in Table 1-1 of SID #1 Section 1 Equipment of the Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan.

**** Figure based on the Scenario 809 Equipment Tally Sheet and the Nearshore Barge identified for Nearshore Task Force in SID #1 Section 1 Equipment of the Prince William Sound Tanker Oil Discharge Prevention and Contingency Plan.

G. ISSUES FOR FURTHER CONSIDERATION

The Gulf of Alaska downstream scenario presented in this plan is a "best guess approach" intended for planning purposes only. The scenario does not factor in the response needs for the oil that entered into Prince William Sound or the prolonged needs of a massive shoreline cleanup effort for the potentially impacted shorelines outside of Prince William Sound. The response activities described in the scenario would also need additional support to maintain operations over the stated time periods.

Given the parameters above, the following conclusions can be made regarding the response equipment needed for a multi-sub-area response as described in the scenario.

1. Availability of Oil Spill Equipment

As the table above illustrates, there appears to be sufficient response equipment available in out-of-region inventories to support most aspects of the downstream response. However, there does not appear to be sufficient secondary storage to support a downstream response like the scenario in this plan. These shortfalls are exacerbated when the response needs for the PWS portion of the spill are considered.

For certain equipment, such as tidal seal boom, the 2001 equipment survey did not provide information regarding inventory amounts. It would be useful to inventory available resources to ensure that this equipment exists and can be deployed in response of a spill like the one in the scenario.

2. Logistical Support

While the unique equipment necessary to mount the downstream response appears to be available, it is unclear whether sufficient logistical support is in place to transport the equipment to the scene in a timely manner. Logistical and contractual arrangements could potentially cause delays in getting the response equipment on scene. These issues bear further consideration and may be tested through drills and exercises.

3. Availability of Trained Personnel

The availability of trained operators is essential to operate the spill response equipment identified in the scenario. The scenario equipment tables do not factor in personnel needs, however past experience has shown that limitations in the number and availability of properly trained operators can hinder response operations. It would be useful to inventory the availability of trained responders to support both response operations in PWS and in downstream communities. Subsection E includes several recommendations for meeting personnel needs, including the development of locally trained response cadres and parameters for providing *ad hoc* training during an incident.

4. Vessels of Opportunity

The availability of sufficient types and quantities of support vessels is a concern during any spill response, and especially so in rural Alaska. The PWS Tanker plan scenario 809 calls for the use of vessels of opportunity from nearby communities, including the Downstream communities that are impacted in the downstream Gulf of Alaska scenario. This creates the possibility for major shortfalls in terms of available vessels. The PWS 809 scenario identifies the need for 568 fishing vessels. The Downstream Scenario calls for 257 fishing vessels and 118 large skiffs (18' or greater length). This brings the total number of fishing vessels needed for response to a major PWS oil spill that migrates out of the sound to 825, with at least an additonal 118 skiffs. This means that close to 1,000 vessels of opportunity would be needed, with properly trained crew

available to man them. Moreover, these fishing vessel totals do not include the additional support vessel requirements for shoreline cleanup operations and other incident support needs. It is difficult to quantify the number of vessels of opportunity available to meet these needs. Both the Cook Inlet Spill Prevention and Response Inc. (CISPRI) and Ship Escort and Response Vessel Service (SERVS) maintain databases for vessels of opportunity that can provide support to spill response operations, although it is unclear the extent to which the vessels included in each database may overlap. Most of the out-of-region equipment will require availability of vessels of opportunity as work platforms. Maintaining these vessel databases should be a high priority in each of the Subareas. Also, community responder training programs may provide an opportunity to improve the availability of vessels of opportunity with trained crews.

5. Availability of Oil Barges and Tugs

The one area where there appears to be a clear shortfall is in the availability secondary oil storage platforms, namely tugs and barges. The 2001 out-of-region equipment survey did not include most of the non-dedicated tug and barge operators in Alaska
and the west coast of Canada and the U.S. The number of the tugs and barges available for spill response will depend on the time of the incident. It would be helpful to have a better understanding of the quantity of tugs and barges that potentially may be available for oil spill response in Alaska. A database of tug and barge operators is recommended as a means to track this information.

DOWNSTREAM PLAN: PART FIVE – LOGISTICS

A. COMMUNICATIONS

The information in this section is intended to tie together communications procedures and equipments that are outlined in the Prince William Sound, Cook Inlet, and Kodiak Subarea plans. This section describes the telecommunications responsibilities, organization, and procedures required for day-to-day operations in a large multi-region sustained response. It also describes how telecommunication procedures will be Incorporated Into the ICS organization during a multi-Subarea spill, and specifically how downstream communities will be Integrated Into the communications plan. This section also describes the telecommunications equipment and facilities needed to support a multi-Subarea response, and includes a communications resource directory. Finally, this section identifies potential communications gaps that may occur during a multi-Subarea spill response.

For a coordinated multi-Subarea response, it is imperative to have a well thought out communications plan with adequate communications equipment to implement it. The communication center needs to be placed as close to the response action as feasible and requires telephones, fax machines, single side-band, and VHF-FM base stations with additional portable radios. For a large spill involving numerous vessels and operations in more than one Subarea, the installation of VHF repeater stations to allow communications with remote operations at greater distances will be required and satellite phone technology may be the only fast and efficient way to communicate directly with shoreline task forces.

1. Communication Responsibilities

Communication is a vital component of a coordinated spill response effort. In the event of a large oil spill, there will be many layers of communication between the Incident Commander and the task force units. It is the Communication Unit's responsibility to move information from the field to the IC and back again in a timely and accurate manner, with emphasis on priority issues. The multi-regional task forces cleaning up oil outside the Subarea where the spill originates need to have equal access to the IC and should therefore have dedicated tactical and logistical nets to support them.

2. Communication Organization

In the event that spilled oil migrates outside the Subarea in which it originally spills (as shown In the Prince William Sound downstream scenario in Part Two), the Communications Unit Leader will set up telecommunications networks to communicate with the multi-Subarea task forces that will be responding to the oil spill and assign them dispatcher and technical support. Communication with the multi-Subarea task forces responding from downstream communities will be integrated into the IC organization under the Communication Unit, as demonstrated for the Cook Inlet and Kodiak task forces in the scenario in Part Two.

In addition, communication with the communities supplying the regional task forces will be important.

3. Communication Procedures

In the event of a large oil spill, initial response activities will use communications systems already in place to communicate in the vicinity of the spill source. (The system in place for Prince William Sound Is described In Part 3, SID #2 Operations Support information, Section 3.2.2 of the PWS Tanker Plan.) The Communications Unit Leader will set up telecommunication

networks as the spill response develops. It will be important for the command post to be able to communicate with the multi-region task forces and the equipment they will bring to the response. Consequently, the Central Electronics Bank (CEB) located at the Terminal Operations Control Center (OCC), must include the radio base stations designated in the Subarea plans for all other Subareas affected.

The PWS Tanker Plan designates VHF Marine Channels 7, 9, 10, and 19; VHF oil spill frequency pair 159.480/158.445 MHz; and air to ground frequency 122.9 MHz in place and immediately available for use in spill response support. The Kodiak sub-area plan designates VHF 81A, 69A, 66A, 63A, 14, 83A, 67 for communications between command post and unit leaders, offshore recovery, land logistics, salvage & lightering, and shoreline cleanup. The Cook Inlet sub-area plan refers to frequencies available to DEC, DNR, and DOF, but does not designate frequency use. Efforts to coordinate radio frequencies in advance should be made between sub-areas.

4. Multi-Subarea Integration Into the ICS

ICS is a flexible management system that can expand and shrink as needs are identified in the spill response. Integrating the multi-Subarea task forces working outside of the Subarea where the spill originates with the Communications Support Unit will necessitate additional staff. The Communications Support Unit Leader will be responsible for developing plans for the effective use of additional telecommunications equipment brought in from other Subareas, distribution of telecommunications equipment, and maintenance of the equipment. The Incident Radio Telecommunications Plan will be used to coordinate radio frequencies.

ICS Communications Support Unit Organization is managed under the ICS. The size and nature of the support staff in a spill of this significance will be large. At least one Dispatcher and one Communications Technical Supervisor will need to be assigned to the multi-regional task forces to coordinate communication between these groups and the groups working inside the Sound. Attention will need to be paid to the distance and the remote areas the outside groups will be working in

Communication between the ICS and the downstream communities affected by the spill must be maintained and prioritized.

In a spill that spreads beyond one Subarea, the impacted coastline may be extremely remote from the spill source, and attention will need to be paid to communications between field personnel and the command center. VHF radios will probably not be an effective link between field and command personnel, and satellite phone technology may need to be readily available to local responders. Under some circumstances, portable repeaters can also be used to facilitate communications between on-scene responders and the command center.

5. Sample Communications Plan

Telecommunications equipment and facilities available to support both a large spill response in Prince William Sound and a multi-Subarea response from the same spill source are detailed in the table below.

Subarea plans rely heavily on communication systems owned and run by the State of Alaska. The response teams outside of the PWS will use this communication system of phone lines and VHF repeaters. Vessels responding to the spill will have VHF radios onboard. Air support will need to be provided with marine radios to communicate with the spill response vessels as they

spot oil for them. Additional VHF repeaters and satellite phones may need to be procured for use in remote areas.

Purpose	Equipment	Channel or Phone number	Current Status	Comments
Communication Between Multi-Region Task Forces & Command Base				
Distress, Safety and Calling	Marine VHF	Channel 16	Available	Ship to ship and ship to shore.
Vessel Monitoring	Marine VHF	Channel 10	Receive only	Ship to ship communication.
Vessel Traffic Monitoring	Marine VHF	Channel 13	Receive only	USCG Vessel Traffic Communication.
International Distress and Call out	HF/SSB	2182 KHz	Available	SERVS Base
Long Range Communication	HF/SSB	4146.0 KHz	Available	SERVS Base -full time monitoring
Long Range Communication	HF/SSB	6227.0 KHZ	Available	SERVS Base
Long Range Communication	HF/SSB	8297.0 KHz	Available	SERVS Base
Radio/Telephone Communications	Marine VHF	Channels 24, 27 & 28	Available	Alaska Marine Radio/telephone service
Telephone/Telex/Fax Communication	INMARSAT	Sub-area Plans	Available	See Sub-area Plans
Multi-Region Task Forces Ships & Ships				
Bridge to Bridge Communication	Marine VHF	Channel 10	Operating	Ship to Ship
Distress, Safety and Calling	Marine VHF	Channel 16	Operating	Ship to ship and ship to shore.
Intership safety	Marine VHF	Channel 06	Available	USCG Search and Rescue/ship to ship only
International Distress, Urgency & Safety	HF/SSB	2182 KHz	Operating	USCG monitored in Juneau and Kodiak
Long Range Communication	HF/SSB	4146.0 KHz	Available	SERVS Base and Escort Vessels
Long Range Communication	HF/SSB	6227.0 KHZ	Available	SERVS Base and Escort Vessels
Long Range Communication	HF/SSB	8297.0 KHz	Available	SERVS Base and Escort Vessels
Telephone/Telex/Fax Communication	INMARSAT	See Sub-area Plans	Available	See Sub-area Plans
Liaison, USCG	Marine VHF	Channel 22	Available	Assigned for communications with USCG

Purpose	Equipment	Channel or Phone number	Current Status	Comments
Open-Water Response	Marine VHF	Channels 7,9,10,19	Available	Channel 9 not available at Reef Is. - only one channel can be used at a time
Multi-Regional Task Forces Air & Ships				
Air Operations	Marine VHF			
Aircraft Distress	Aviation VHF	121.5 MHz	Available	Some Escort Vessels equipped to monitor
Search and Rescue	Aviation VHF	123.1 MHz	Available	Some Escort Vessels equipped to monitor
Marine Distress, Safety & Calling	Marine VHF	Channel 16	Available	(156.800 MHz) Alyeska aircraft equipped to monitor
Intership Safety	Marine VHF	Channel 06	Available	USCG Search & Rescue
Aircraft to Escort Vessel Communication	Marine VHF	Channel 18	Available	Secondary Communication for SERVS Base
Aircraft to Escort Vessel Communication	Marine VHF	Channel 67	Available	Navigation Communication
Aircraft to Escort Vessel Communication	Marine VHF	Channel 07	Available	Channels for Emergency Response Operations
Aircraft to Escort Vessel Communication	Marine VHF	Channel 09	Available	Channels for Emergency Response Operations
Aircraft to Escort Vessel Communication	Marine VHF	Channel 68	Available	Non-commercial channel for ship to ship and ship to shore
Aircraft to Escort Vessel Communication	Marine VHF	Channel 72	Available	Non-commercial channel for ship to ship and ship to shore
Multi-Regional Task Forces Air & Ground				
VEOC to Aircraft	Aviation VHF	122.85 MHz	Available	Bases at Reef Island and VMT (secondary)
VEOC to Aircraft	Aviation VHF	122.900 MHz	Available	Bases at Reef Island and VMT (primary)
VEOC to Aircraft	Marine VHF	Channel 09	Available	Commercial channel for Response Operations (not available in PWS)
FAA to Aircraft	Aviation VHF	122.200 MHz	Available	Valdez Airport to Cordova Flight Service
FAA to Aircraft	Aviation VHF	122.400 MHz	Available	Potato Point to Cordova Flight Service

Purpose	Equipment	Channel or Phone number	Current Status	Comments
FAA to Aircraft	Aviation VHF	122.100 MHz	Available	Johnstone Point to Cordova Flight Service
Distress, Safety and Calling	Marine VHF	Channel 16	Available	(156.800 MHz) bases at Reef Island and Johnstone Point
SERVS Base Secondary	Marine VHF	Channel 18	Available	SERVS Base secondary operations
Air Logistics Comp Frequency	Aviation	129.700 MHz	Available	
Offshore Recovery	Marine VHF	Channel 69	Available	Kodiak - Helos to Task Forces
Multi-Regional Task Forces Ground & Ground				
Fire/Safety	Land Mobile	469.375/464.375 MHz	Operating	Terminal Fire and Safety Operations
Marine & Oil Spill	Land Mobile	469.625/464.625 MHz	Operating	Terminal Marine/Oil Spill Operations
Valdez Terminal Operations Berth 1	Land Mobile	469.325/464.325 MHZ	Operating	Tanker berthing and loading
Valdez Terminal Operations Berth 3	Land Mobile	469.525/464.525 MHz	Operating	Tanker berthing and loading
Valdez Terminal Operations Berth 4	Land Mobile	469.875/464.875 MHz	Operating	Tanker berthing and loading
Valdez Terminal Operations Berth 5	Land Mobile	469.925/464.925 MHz	Operating	Tanker berthing and loading
Valdez Terminal Operations	Land Mobile	456.575/451.575 MHz	Operating	Terminal Power and Vapor Operations
Projects Channel 01	Land Mobile	456.425/451.425 MHz	Operating	Terminal Projects Operations
Baseline Contractor (Price)	Land Mobile	456.275/451.375 MHz	Operating	Terminal Baseline Contractor Operations
Maintence & Paging	Land Mobile	469.275/464.275 MH	Operating	Terminal Maintenance and Paging
Projects Channel 02 (ANSC Project)	Land Mobile	469.725/464.725 MHz	Operating	Terminal ANSC Project Operations
Security Operations	Land Mobile	469.225/464.225 MHz	Operating	Terminal Security Operations (limited access)
National Oil Spill Response	Land Mobile	159.485/159.445 MHz	Available	Land Oil Spill Response (PCM)
Mobile Channel 04	Land Mobile	152.300 MHz	Operating	Mobile Channel 04

Purpose	Equipment	Channel or Phone number	Current Status	Comments
Security Mobile VHF	Land Mobile	152.360 MHz	Operating	Mobile Security Operations (limited access)
SERVS Base Operations	Land Mobile	158.430 MHz	Operating	SERVS Land Base Operations (Mobile Channel 03)
ARTS Channel 02	Land Mobile	153.20/158.335 MHz	Operating	Valdez Area ARTS Repeater (Mobile Channel 02)
VSAT	KU Band	14/11 GHz	Available	Transportable 24 Meter Earth Station
Video Teleconference	Picture Tel	192 Kb/s Channel	Available	Portable unit stored with VEOC equipment
MSD Kodiak	Marine VHF	Channel 81	Operating	Field to MSD Kodiak
City of Kodiak	Marine VHF	Channel 12	Operating	Harbormaster
Petro Marine	Marine VHF	Channel 10	Operating	Working Frequency
Kodiak Oil Sales	Marine VHF	Channel 11	Operating	Working Frequency
Forward Command Post to Unit Leaders	Marine VHF	Channel 81A	Available	Kodiak Sub-Area Plan, Field Operations Supervisors
Land Logistics	Marine VHF	Channel 14	Available	Kodiak Sub-Area Plan, vehicle to vehicle
Shoreline Cleanup	Marine VHF	Channel 67	Available	Kodiak Sub-Area Plan, additional channels as necessary
Communication Between VEOC & SHIP				
Distress, Safety & Calling	Marine VHF	Channel 16	Available	Bases at VMT, SERVS, Reef Island and Johnstone Point
On-Water Response	Marine VHF	Ch. 7, 18, 19	Available	Bases at Reef Island
On-Water Response	Marine VHF	158.775/151.070 MHz	Available	Mt. Susitna (DECMTSUE) Anchorage Repeater System
On-Water Response	Marine VHF	158.925/151.040 MHz	Available	Hope (RPTHOPE) Anchorage Repeater System
On-Water Response	Marine VHF	159.420/151.340 MHz	Available	Pipeline Hills (RPTPIPHL) Kenai Repeater System

Purpose	Equipment	Channel or Phone number	Current Status	Comments
On-Water Response	Marine VHF	159.390/151.370 MHz	Available	Mount Bede (RPTELLBD) Kenai Repeater System
On-Water Response	Marine VHF	154.755/159.255 MHz	Available	Gore Peak (DECJKGOR) Kenai Repeater System
On-Water Response	Marine VHF	154.830/159.315 MHz	Available	Rugged Island (RPTRUGED) Kenai Repeater System
On-Water Response/ Offshore Recovery	Marine VHF	Channel 63A, 66A	Available	Kodiak Sub-Area Plan, communications among task force members.
On-Water Response/Offshore Recovery	Marine VHF	Channel 69A	Available	Kodiak Sub-Area Plan, Unit Leaders to Task Forces
Radio/Telephone Communication	Marine VHF	Ch. 24, 26, 27, 28	Available	Alascom Marine Radio/Telephone Service
Telephone/Telex/Fax Communication	INMARSAT	See Sub-area Plans	Available	See Sub-area Plans
Salvage & Lightering	Marine VHF	Channel 83A	Available	Kodiak Sub-Area Plan

B. LOGISTICAL CONSIDERATIONS FOR MULTI-SUBAREA OIL SPILL RESPONSES

The logistical requirements for a multi-Subarea spill response are extremely complex. Logistical issues are a potentially complicating factor during all phases of a response, but during a multi-Subarea spill, these issues will be especially critical in remote areas. Pre-planning to meet logistical needs in downstream communities, particularly in remote areas, is critical.

The Subarea plans for Prince William Sound, Kodiak, and Cook Inlet provide a very good base for identifying equipment available regionally for meeting the logistical needs of a large multi-Subarea spill response. This section is meant to supplement those plans by comparing key logistical needs to the Subarea plans Resource Sections, identifying where the specific information is located in the SCPs, and discussing any additional logistical issues that may need to be addressed during a large multi-Subarea spill response.

Logistical Requirement	Subarea Plan Information	Additional Issues to Consider during Multi-Subarea Responses
Command Centers and Field Command Posts	PWS – Part 1 Section D and Table 1 of the Resource Section identify potential command posts in PWS. Kodiak – Table B-1 in Part 1A of the Resource Section identifies numerous potential locations for Command Center and Field Command Posts. Cook Inlet – Table 4 in the Part 2 of the Resources Section lists potential Command Centers. The Community Profile in Part 1 of the Resource Section also lists potential locations for Command Center and Field Command Posts for each community.	The PWS Subarea plan should identify locations for a field command post and staging area in Whittier. Whittier provides a good location for the movement of equipment and personnel from Anchorage to PWS.
Staging Areas	PWS – Potential staging areas are covered in Table 1 Part 1 of the Resource Section. Kodiak – The potential staging areas are well covered in Part 1 of the Resources Section in Section B Staging Areas and F Community Profiles. Cook Inlet - The potential staging areas are well covered in Table 3 of Part 2 of the Resources Section and in the Community Profiles in Part 1.	In the more rural areas, such as along the outside of the Kenai Peninsula, deck barges may be needed to stage equipment and supplies closer to Division and Group operations.

Logistical Requirement	Subarea Plan Information	Additional Issues to Consider during Multi-Subarea Responses
Airports and Landing Strips	PWS – Airports are identified in Part 4 Information on Specific Locals of the Resources Section. Annex F of the Unified Plan is referenced for C-130 capable airports. Kodiak – Airports and Landing Strips are identified in the Resource Section in Part 1 Section F Community Profiles and Part 3 Subsection J Airports and Landing Strips. Cook Inlet - Airports and Landing Strips are identified in the Resource Section in Part 1 Community Profiles and Part 4 Subsection J Aircraft Rental and Airports.	In addition to the airports and landing stripes identified in the Subarea Plans, helicopter landing areas (Helo Pads) will have to be established. These Helo Pads will need to be close to the spill response operations sites and the Command and Field Posts.
Fueling Facilities	PWS – The availability of fuel is address in the Resource Section Part 4 Information on Specific Locations. Kodiak – The availability of fuel is address in the Resource Section Part 1 Sections C Deployment and F Community Profiles. Cook Inlet – Fueling sites are addressed in Resources Part 2 Logistic A Equipment Considerations. Availability of fuel is identified in Part 1 Community Profiles.	Fueling needs in a large spill response can become a critical issue because most of the equipment used in the response needs fuel to operate. As the response operations become further away from the coastal communities, the need for mobile fueling stations (such as barges or landing crafts) will become more important. Additional fuel maybe needed at Helo Pads to allow the helicopters to remain closer to the on-water recovery operation they are directing.

Logistical Requirement	Subarea Plan Information	Additional Issues to Consider during Multi-Subarea Responses
Medical Facilities	PWS – Hospitals and clinics are identified in Resources Section Part 3 C and addressed in Part 4 Information on Specific Locals. Kodiak – Hospitals and clinics are identified in Resources Section Part 3 C and addressed in Part 1 F Community Profiles. Cook Inlet – Hospitals and clinics are identified in Resources Section Part 4 C and addressed in Part 1 Community Profiles.	Medical personnel and First Aid Stations should be established as the scope of the spill response progresses to shoreline recovery and cleanup operations.
Personnel Support • Food • Lodging • Restrooms	PWS – The PWS SCP addresses food, lodging and portable restrooms in Part 1 Section A and B of the Resource Section. Kodiak – The Kodiak SCP addresses the personnel support in the Resource Section Part 1 Sections C, D, and F. Cook Inlet – The Cook Inlet SCP addresses the personnel support in the Resource Section Part 2 Sections A, and B.	All of the SCPs address personnel support. Lodging for the personnel required for a large spill response will max out all of the identified facilities. Each of the SCPs identifies the need for on-water lodging. Finding vessels capable for berthing large numbers of personnel may be difficult in the first weeks of a large spill response.

Logistical Requirement	Subarea Plan Information	Additional Issues to Consider during Multi-Subarea Responses
Transportation • Air • Ground • Water	PWS – Transportation of personnel and equipment is addressed in Part 1 Section B and in the Part 4 of the Resource Section. Freight transportation options are also described in Part 3 Sections J and K of the Resource Section Kodiak – Transportation of personnel and equipment is addressed in Part 1 Section D and F of the Resource Section. Freight transportation options are also described in Part 3 Sections J and K of the Resource Section. Cook Inlet – Transportation of personnel and equipment is addressed in Part 1and Part 2 Section B of the Resource Section. Freight transportation options are also described in Part 3 Sections J and K of the Resource Section.	Timely transportation of freight and personnel is a key issue in a large spill response. Deck barges and landing crafts will be necessary to carry large and heavy equipment to response operations on the outer coast of the Kenai Peninsula, The volume of vessels necessary to support and transport the amount of equipment and personnel needed for response operations will taxes regional resource. Barges and larger vessel coming from the pacific west coast will take days or weeks to arrive. Large cargo aircraft will be necessary to cascade large spill equipment into the spill area from outside the region.
Support Equipment • Fork Lifts • Cranes • Loaders	PWS – Heavy support equipment is not discussed in the PWS SCP. Kodiak – The use of heavy support is not specifically addressed. However, this type of equipment is listed in Part 3 Section K of the Resource Section of the Kodiak SCP. Cook Inlet – Heavy support equipment is not addressed in the Cook Inlet SCP.	Heavy support equipment is required to load and unload trucks, large aircraft, and barges and other vessels. This equipment will be necessary to assemble the spill response systems that are cascaded in from other regions. The availability of heavy support equipment is a must for most staging areas.

DOWNSTREAM PLAN: PART SIX – REFERENCES

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