ALEUTIANS SUBAREA CONTINGENCY PLAN

RESPONSE SECTION

DO NOT DELETE CODE A

RESPONSE: PART ONE - NOTIFICATION

A. EMERGENCY RESPONSE NOTIFICATION LIST

In the case of a *reportable* oil or hazardous substance spill (as defined in State and federal regulations), the Responsible Party (RP) or initial responder to the spill incident will immediately notify the following agencies. Once these initial notifications have been made, the Federal On-Scene Coordinator (FOSC), State On-Scene Coordinator (SOSC) and Local On-Scene Coordinator (LOSC) respectively, will be responsible for the notification of appropriate federal, state, and local agencies and organizations according to the contact lists contained on the following pages.

The area code for all phone and fax numbers is ***907***, unless otherwise indicated.

Initial Emergency Contact Checklist

Federal	
National Response Center (24 hr)	1-800-424-8802
FOSC for Coastal Zone – USCG – Sector Anchorage	428-4100 or 1-866-396-1361
FOSC for Inland Zone – EPA, Region X Alaska Operation – Anchorage Office	271-5083/271-3424 (fax)
EPA FOSC Carr (cell)	227-9936
EPA FOSC Whittier (cell)	830-7236
EPA Seattle Office (24 hr)	206-553-1263
State	
SOSC – ADEC, Centeral Alaska Response Team (business hours)	269-3063/269-7648 (fax)
After Hours Spill Number	1-800-478-9300

B. FEDERAL AGENCY CONTACTS

It is the responsibility of the FOSC to initiate contact, as appropriate, with the following agencies, organizations, and entities once emergency notifications have been made. This is not an exhaustive list of federal contacts, and the FOSC may notify additional parties. Phone numbers are not listed in order of importance, and contacts will be made at the discretion of the FOSC. Initial notifications will be made by telephone, with concurrent transmission of any available documents (e.g., POLREPs or other information) by fax or e-mail whenever possible. Additional federal agency contacts are listed in the *Resources Section* of this plan.

FOSC Historic Properties Specialists: The Sector Anchorage Response Department maintains a listing of BOA contractors approved to provide historical properties consultation to the FOSC.

Threatened and Endangered Species Consultation Contacts

Agency	Phone (business hour)	Emergency (24-hr) Contact	Fax
Department of Interior	271-5011	227-3783 / 227-3781	271-4102
Department of Commerce/NOAA	586-7235 / 271-5006	586-7639 / 248-4211	586-7012 / 271-3030

Agency	Phone	Alt. Phone	Fax
National Response Center	800-424-8802	202-267-2675	202-267-2165
National Pollution Funds Center	202-493-6700		202-493-4900
USCG District 17 Command Center	463-2000		463-2340
USCG – Sector Anchorage	428-4100		271-6751

USCG District 17 Public Affairs	463-2071		463-2072
USCG Pacific Strike Team	415-883-3311		415-883-7814
National Strike Force	252-331-6000		252-331-6012
Environmental Protection Agency – Anchorage	271-5083		271-3424
Seattle (24 hr)	206-553-1263		
U.S. Department of the Interior	271-5011	227-3783	271-4102
National Oceanic & Atmospheric Admin. SSC	271-3593		271-3139
U.S. Forest Service	586-7876	586-8806	586-7892
U.S. Army Corps of Engineers (Security Office)	753-2515		753-2513
U.S. Navy SUPSALV	384-2968		384-2969
Federal Aviation Administration (Ops Center)	271-5936		276-7261
National Marine Fisheries	271-5006		271-3030
National Weather Service	271-3886	271-5088	266-5105

Native Organizations and Federally-Recognized Tribes: See the *Resources Section, Part Three, Subsection N* for a complete listing and contact information.

C. ALASKA STATE AGENCY CONTACTS

It is the responsibility of the SOSC to initiate contact, as appropriate, with the following agencies and organizations once emergency notifications have been made. This is not an exhaustive list of State contacts, and the SOSC may notify additional parties. Phone numbers are not listed in order of importance and contacts will be made at the discretion of the SOSC. Initial notifications will be made by telephone, with concurrent transmission of any available documents (e.g., a sitrep or other information) by fax or e-mail whenever possible. Additional state agency contacts are listed in the Resources Section of this plan and in the *Unified Plan, Annex A*.

State Agency	Phone	Alt. Phone	Fax
Department of Environmental Conservation, Anchorage	269-3063		269-7648
After Hour Spill Number	1-800-478-9300		
Department of Fish and Game	267-2338		267-2461
Department of Military & Veteran Affairs	428-7000		428-7009
Division of Emergency Services (24 hr)	1-800-478-2337		
Department of Labor, Occupational Safety & Health	1-800-770-4940	269-4940	465-6012
Department of Law	269-5100	269-5274	276-3697
Department of Natural Resources	269-8815	269-5274	269-8913
Division of Oil and Gas	762-2580	269-8815	269-8938
Division of Mining, Land and Water	451-2740	451-2678	
State Historic Preservation Office	269-8721	269-8723	269-8908
Department of Public Safety – Dispatch	428-7200		428-7204
Department of Transportation & Public Facilities	269-0770		248-1573
Department of Health and Social Services	465-3027	561-4406	465-4101
University of Alaska	474-7330		

D. LOCAL CONTACTS

It is the responsibility of both the LOSC and SOSC to initiate contact with the appropriate local government agencies and organizations once initial emergency notifications have been made. Local plans may designate who will serve as the LOSC, who has responsibility for making any necessary contacts, and who should be contacted. Each distinct town, village, or community within larger jurisdictions, such as boroughs, may have their own emergency response plan, and all applicable local plans should be consulted during an emergency situation.

This list of local contacts is not exhaustive, and the LOSC may notify additional parties. Phone numbers are not listed in order of importance and contacts will be made at the discretion of the LOSC/SOSC. Initial notifications will be made by telephone, with concurrent transmission of any available documents (e.g., sitreps or other information) by fax or e-mail whenever possible. The *Resources Section, Part One* contains additional information and contacts for specific locales.

Local Emergency Planning Committees

Committee	Phone	Fax
Aleutians & Pribilof Islands	581-1233	581-5024

Boroughs

Borough	Organization	Phone	Fax
Aleutians East Borough	Borough Main Office - Anchorage	274-7555	276-7569
	Borough Sand Point Office	383-2699	383-3496
	Borough King Cove Office	497-2396	497-2386
	State Troopers (Cold Bay)	532-2440	532-2724
	State Troopers (Dutch Harbor)	581-1432	581-1407

Communities

Cities/Villages	Contacts	Phone
Adak	City Hall	592-4513
	State Troopers (Dutch Harbor)	581-1432
	Police (Unalaska Public Safety)	581-1233
	Fire/EMS	592-4145
	Clinic	592-8383
Akutan	City Hall	698-2228
	Village Council	698-2300
	State Troopers (Cold Bay)	532-2440
	Police	698-2227
	VPSO	698-2315
	Fire	698-2227
	EMS/Ambulance	698-2315
	Clinic	698-2208
Atka	City Hall	839-2233
	Village Council	839-2229
	State Troopers (Dutch Harbor)	581-1432
	VPSO	839-2214
	Fire/EMS (City of Atka VFD)	839-2214
	Clinic	839-2232
Belkofski	Village Council	497-3122
	State Troopers (Dutch Harbor)	581-1432
Cold Bay	City Hall	532-2401
	State Troopers (Cold Bay)	532-2440
	Police	383-3535
	Fire	532-2416
	EMS/Ambulance	532-2585 or 522-2772
	Clinic	532-2000
False Pass	City Hall	548-2319
	Village Council	548-2227
	State Troopers (Cold Bay)	532-2440
	VPSO	548-2345
	Fire	548-2319
	EMS/Ambulance	548-2241
	Clinic	548-2742

Cities/Villages	Contacts	Phone
King Cove	City Hall	497-2340
	Village Council	497-2648
	State Troopers (Cold Bay)	532-2440
	Police	497-2210
	VPSO	497-2555
	Fire/EMS	497-2553
	Clinic	497-3211
Nelson Lagoon	Village Council	989-2204
	State Troopers (Cold Bay)	532-2440
	Police	246-3464
	Fire/EMS	989-2202
	Clinic	989-2207
Nikolski	Village Council	576-2225
	State Troopers (Dutch Harbor)	581-1432
	Police	581-1432
	Fire/EMS	576-2223
	Clinic	576-2204
Pauloff Harbor	Village Council	383-6075
	State Troopers (Cold Bay Post)	532-2440
Sand Point	City Hall	383-2696
	Village Council	383-6075
	State Troopers (Cold Bay Post)	532-2440
	Police/EMS	383-3700
	Clinic	383-3151
St. George	City Hall	859-2263
	Village Council	859-2205
	State Troopers (Dillingham)	842-5641
	VPSO	859-2415
	Fire	859-2255
	Clinic	859-2254
St. Paul	City Hall	546-2331
	Village Council	546-2211
	State Troopers (Dillingham)	842-5641
	Police	546-3130
	Fire	546-2311 ext. 123
	EMS/Ambulance	546-3130
	Clinic	546-8300
Shemya	Eareckson Air Force Station (Command Post)	392-3505
	State Troopers (Dutch Harbor)	581-1432
Unalaska/ Dutch Harbor	City Hall	581-1251
	Village Council	581-2920
	State Troopers (Dutch Harbor)	581-1432
	Police	581-1233
	Fire/EMS	581-1233
	Clinic (Iliuliuk Family & Health Services)	581-1202
	Clinic (Oonalaska Clinic)	581-2742
Unga	Village Council	383-5215
	State Troopers (Cold Bay)	532-2440

E. OTHER POINTS OF CONTACT

Alaska Regional Response Team (ARRT)

Organization	Phone	Alt. Phone	Fax
U.S. Coast Guard, District 17	463-2226	463-2000	463-2216
Environmental Protection Agency, Region 10	553-1674	553-1263	553-0175
Alaska Department of Environmental Conservation	465-5255	262-5210	465-5262
Alaska Department of Defense, Alaskan Command	522-7235	552-3013	522-8136
General Services Administration	271-5028		271-3086
Department of the Interior	271-5011	227-3783	271-4102
Department of Commerce – NOAA	526-6949	271-3886	526-6329
Department of Homeland Security – FEMA	271-4301	271-4303	
Department of Health & Human Services	271-4073		271-4073
Department of Justice	271-3456		271-5827
Department of Agriculture – US Forest Service	586-8789	586-8882	586-7555
Department of Labor – OSHA	271-5152	271-3593	
Department of Energy	376-8519	376-8519	376-1272
Department of Transportation	271-5230	271-5149	271-5230

Federal and State Natural Resource Trustees Contacts: A complete listing of the Natural Resource Trustees contact information, including e-mail, is available through a link at the ARRT website: www.alaskarrt.org/, under "Members and Contacts." A listing of agency trustees appears in the *Resources Section, Part Three, Subsection T*.

Cultural Resources Advisors

Agency	Phone
State Historic Preservation Office (ADNR)	269-8721
FOSC Historic Properties Specialists	Contact the FOSC for appropriate BOA contractor
Regional Environmental Officer (USDOI)	271-5011

Hatcheries/Aquaculture Sites: Refer to the *Sensitive Areas Section* of this plan

Industry/Spill Response Organizations

Organization	Phone	Alt. Phone	Fax
Alaska Chadux Corporation	348-2365	1-888-831-3438	348-2330
Reslove Magone Marine Services	581-1400		

CHEMTREC: 1-800-424-9300 (24 hr) Hazardous substances information provided by the Chemical Manufacturers Association

RESPONSE: PART TWO – EMERGENCY RESPONSE

A. UNIFIED COMMAND STRUCTURE AND ICS

The oil and hazardous substance discharge response Incident Command System (ICS) as described in the *Unified Plan, Annex B* will be used during a spill response in the Aleutians Subarea. In the event of an actual or potential oil or hazardous materials release, an ICS response will be activated. The ICS is based on the National Incident Management System (NIMS), which was developed to coordinate multiple agency actions and provide a command structure for use during emergency response events. In the State of Alaska, the Unified Command (UC) application of the ICS is used for response to oil and hazardous material spills. This system of ICS differs somewhat from the standard NIMS ICS format.

ICS allows for federal, state, and local governments to participate in the spill response both in an oversight capacity and as participants in the containment, control, and cleanup of the spill. ICS is organized around five major functions: Command, Planning, Operations, Logistics, and Finance/Administration. The basic ICS structure remains the same in all incidents, but the magnitude and complexity of the spill emergency will dictate which functional areas will be activated and to what level. ICS can be expanded or contracted to suit the size and scale of the spill.

ICS is led by the UC, which directs all aspects of incident response (including oversight, monitoring, cleanup, etc.), and includes an Incident Commander (IC), who is in command of the control, containment, removal, and disposal of the spill. For the Aleutians Subarea, the UC is typically comprised of the FOSC and, the SOSC, the LOSC [when applicable], and the Responsible Party On-Scene Coordinator (RPOSC). The UC is implemented in situations where more than one agency has jurisdiction. When the RP is identified, the RPOSC, usually a senior representative of the RP, is the IC. When there is no RP, or the RP is unable to satisfactorily respond to a spill, the spill response will be directed by an IC designated by the agency with jurisdictional authority (federal, state, or local.)

Below the command level, positions within the ICS can be filled by employees of the RP or its independent contractors. The exact size and composition of an ICS will vary according to the needs of the response and the experience level of the personnel involved. Government agency personnel may supplement ICS staffing as necessary.

By integrating response management early in the response, consensus, and mobilization can be more quickly achieved and limited resources combined to reduce duplication of effort and enhance response effectiveness.

B. ROLES OF THE OSCS, RP, RAC/OSRO, AND RSC

Federal On-Scene Coordinator (FOSC): USCG is the lead agency for coastal oil and hazardous materials spill responses and shall serve as the FOSC in the UC. For oil spills on inland waters (more than 1000 yards inland from the tide line), the EPA will be the FOSC. The role of the USCG or EPA in the UC will vary according to spill type and size. The USCG has adopted the Incident Management Handbook (COMDTPUB P3120.17A) for use in guiding their major spill response efforts. The EPA has also developed their own Incident Management Handbook. The guides provides detailed guidance for each ICS position identified for emergency response operations.

State On-Scene Coordinator (SOSC): ADEC is the lead agency for the State of Alaska in oil and hazardous

materials spill response. ADEC serves as the SOSC in the UC. The Alaska Incident Management System Workgroup (consisting of ADEC, industry, spill cooperatives, and federal agencies) has published the Alaska Incident Management System (AIMS) for Oil & Hazardous Substance Response. The AIMS Guide provides ADEC personnel and other response personnel with the detailed guidance necessary to properly respond to a major spill incident.

Local On-Scene Coordinator (LOSC): In the event of an oil spill or hazardous substance release in the Aleutians Subarea, a senior member of the local community with jurisdiction, unless otherwise specified by local plans, may serve as the LOSC in the UC. For all spills in the Aleutians Subarea in which the ICS is implemented, the LOSC will sit in the UC with the FOSC, SOSC, and RPOSC, sharing decision-making and oversight responsibilities with the other OSCs. For spills that affect or threaten to affect multiple jurisdictions in the Aleutians Subarea, or outside of the subarea, appropriate officials from the affected communities will integrate into the command structure either through a LOSC liaison representing the affected communities or through a Regional Stakeholder Committee (see below).

As long as an immediate threat to public safety exists, the LOSC serves as the ultimate command authority for the public safety issue, while the FOSC, SOSC, and RPOSC work with the LOSC to ensure mitigation of the situation. So long as the threat to public safety remains, the LOSC will be guided by the applicable Local Emergency Response Plan developed by the local emergency services staff. If the FOSC, SOSC, or RPOSC does not assume the lead role for response, the LOSC may request higher authority to assume that responsibility. (See the *Unified Plan, Annex B*.)

Responsible Party (RP): Under federal and State law, the RP is responsible to contain, control, and clean up any oil or hazardous substance spilled. The RP must notify the federal, state, and local authorities of the spill incident and initiate an effective response. The RP is expected to respond to an incident using their own resources and securing additional contractual expertise and equipment when necessary. The FOSC and SOSC have the authority to oversee the RP's activities, and both are authorized to take over or supplement the RP's response activities if they determine those activities to be inadequate. During an RP-driven response, if the vessel or facility has a contingency plan (C-plan), it will serve as the primary guidance document for the spill response, and the RP will designate the IC. If there is no RP, or if the RP does not have a government-approved contingency plan, the *Unified Plan* and the Aleutians Subarea Contingency Plan will become the guiding documents during the spill response.

Primary Response Actions Contractors (RAC) and Oil Spill Response Organizations (OSRO): Primary Response Action Contractors (RAC) and Oil Spill Response Organizations (OSROs) may play an important role in a spill response. Primary RACs and OSROs are organizations that may enter into a contractual agreement with an RP (vessel or facility owner/operator), assisting the RP in spill cleanup operations. RACs/OSROs can provide equipment, trained personnel, and additional resources. The Operations/Technical Manuals maintained by the RACs/OSROs may be referenced in vessel or facility contingency plans and serve as supplementary reference documents during a response. OSROs generally have access to large inventories of spill equipment and personnel resources. The FOSC or SOSC may contract these assets for use. Select equipment located within the Aleutians Subarea is referenced in the Resources Section of this plan. Complete equipment inventories are listed in the respective Operations or Technical Manuals of the RACs and OSROs.

Regional Stakeholder Committee (RSC): A Regional Stakeholder Committee may be activated for significant incidents to advise the UC on incident objectives and community concerns. The RSC will not play a direct role in setting incident priorities or allocating resources, however the RSC can provide the

UC (usually through the Liaison Officer) with recommendations or comments on incident priorities, objectives, and the incident action plan. The RSC is not directly involved in tactical operations, though some of its members may be. Each RSC will be facilitated by a chairperson elected by the RSC members. RSC composition may vary from incident-to-incident and may include community emergency coordinators, local or tribal government representatives, local or private landowners and leaseholders, Native organizations, non-profit and volunteer organizations, and other stakeholder groups affected by the spill.

RESPONSE: PART THREE – RESPONSE PROCEDURES

This part identifies the initial response objectives and actions that shall be taken for an oil or hazardous substance spill in the Aleutians Subarea, including the "ramp up" procedures and processes necessary to address an emerging incident.

NOTE: ***"General Emergency Response Procedures,"*** *which are applicable throughout the State, are contained in the Introductory Section of the* ***Unified Plan****.*

A. RESPONSE OBJECTIVES

Regardless of the nature or location of a spill, the following objectives shall guide all response actions:

1. Ensure safety of responders and the public.
2. Stop the source of the spill.
3. Deploy equipment to contain and recover the spilled product.
4. Protect sensitive areas (environmental, historic properties, and human use).
5. Track the extent of the spill and identify affected areas.
6. Cleanup contaminated areas and properly dispose of wastes.
7. Notify and update the public. Provide avenues for community involvement where appropriate.

B. SCOPE OF ACTIVITIES

This list assists the IC, either government or RP, and staff in completing the initial response actions associated with a medium to large-sized oil spill. This list is not exhaustive and should be used at the discretion of the IC and the UC.

1. Define Nature of Incident
    a. Determine facts of spill.
        - Responsible Party (name and phone #)
        - Location and time of incident
        - Type of incident (explosion, grounding, operational, etc.)
        - Type of product
        - Movement of spilled product
        - Environmental resources, sensitive areas, and historic properties at risk
    b. Determine whether RP is willing/able to respond.
    c. Classify size of spill.
    d. Notify natural resource trustees
    e. The FOSC (or authorized representative) needs to perform the following:
        i. Consult with natural resource trustees on potential resources at risk, including (but not limited to) wildlife on rat-free islands;
        ii. Conduct Endangered Species Act consultation (contact DOI and DOC to determine the presence of, and potential impacts to, threatened and endangered species and their critical habitat); and
        iii. Determine whether incident is categorically excluded under the Programmatic

Agreement to protect historic properties and, if not, activate an FOSC Historic Properties Specialist.

2. Evaluate Hazards to Human Health/Safety
   a. Determine threat to public health.
   b. Assess fire/explosion hazard.
   c. Assess personnel safety based on potential/existing hazards.
   d. Determine appropriate level of personnel protective equipment for responders.
3. Evaluate Severity of Incident and the Need for Additional Resources
   a. Estimate amount of spilled product and total potential amount.
   b. Estimate duration of spill response efforts.
   c. Assess weather/sea conditions.
   d. Determine the presence (or suspected presence) of invasive species (e.g., rats).
4. Initiate Response Strategy
   a. Protect responders and the public.
   b. Secure or isolate the source of spill.
   c. Protect sensitive areas:
      i. Consult with natural resource trustees on the protection of sensitive areas (including rat-free islands) and resources and on potential response options to be taken;
      ii. Develop priorities consistent with environmental sensitivity and protection priorities identified in *Sensitive Areas Section* of this plan.
   d. Initiate containment and recovery of spilled product.
   e. Initiate spill tracking.
   f. If ballast water discharge is considered as an option for vessel stability or other concerns, the threat of invasive species needs to be addressed by responders.
5. Inform Local Residents, Communities, & Stakeholders
   a. Prepare Press Statement.
      - Report the extent that USCG, EPA, ADEC, RP and local emergency response personnel are responding to discharge event.
      - Give brief details of the discharge.
      - Describe actions taken by the UC.
      - Announce that formal press release will be issued as more information is received.
   b. Contact Local Media. (Local radio, newspaper and television contact information available in the *Resources Section, Part Three*, *Subsection M*)
   c. Be forthcoming, and provide as much information as quickly as possible. If no information is available, say so but ensure that information is provided to the media as soon as it is available.
   d. Conduct appropriate briefings via the ICS Liaison Officer.

C. RAMP UP PROCEDURES

A spill response progresses through a series of steps where the number of personnel and amount of equipment is increased (or decreased) as necessary to meet the demands of the situation. This increase of

resources to address response needs is called a "ramp up." USCG and EPA will rely on their respective agency's Incident Management Handbooks and State of Alaska personnel will employ the Alaska Incident Management System (AIMS) Guide and well as the Spill Tactics for Alaska Responders (STAR) to direct their staffing of emergency response teams.

The ramp up begins when the spill is first reported and progresses with the sequential and prioritized activation of the response resources of the RP and the local, state and federal responders. Each spill response will differ according to spill size and severity, location, season, and a variety of other factors. Personnel needs will vary accordingly.

The ramp up procedures and personnel requirements presented below are provided as guidance for the UC during the initial staffing of the ICS. The ICS can expand and contract to meet the needs of an emergency response without any loss of effectiveness or control. The goal for any major spill is to have the personnel in place to staff a complete ICS within the first 96 hours of a response. In addition to federal and state responders, various have significant numbers of trained personnel available to help staff an ICS. Contact the local emergency management organizations listed in Part One of this section to recruit local, trained personnel to assist in the response effort.

The ramp up to a full oil spill response generally moves through three staffing levels. The **Initial Response Team** (Hours 0-6) will consist primarily of first responders who will carry out initial response actions. The **Transitional Response Team** (Hours 6-96) will form as additional personnel arrive on-scene and ICS functions are added. The **Full Response Team** (by Hour 96) will be complete when full ICS staffing levels have been reached. Qualified personnel within the ICS will identify resources and equipment necessary for an effective response.

This ramp up guidance outlines the response of federal and State personnel. RP personnel will initiate a concurrent ramp up according to the procedures described in their contingency plan. In those incidents where there is imminent threat to life and property, the appropriate local Fire Chief, State Trooper, or Emergency Manager will be the IC. The LOSC will follow the guidance of their local emergency response plan.

Hour 0-6: Initial Response Team

The Initial Response Team will consist primarily of the FOSC and SOSC response officers, natural resource trustees (if available), and local emergency response and RP personnel. The Initial Response Team will carry out initial response efforts, which include notification and equipment mobilization. Depending on the size of the spill, a UC may begin to form as the Initial Response Team carries out these response actions.

Notifications: The RP is ultimately responsible for making notifications to local, state and federal agencies. Notifications will include local officials, police, and fire departments. USCG or EPA will notify the appropriate federal agencies listed as agency contacts on page A-2 and other points of contact, as necessary. The FOSC will notify appropriate natural resource trustees to begin the consultation process on resources at risk (including threatened and endangered species and their critical habitats), response actions that may affect trust resources, and response actions to protect or reduce the injury of trust resources, including (but not limited to) actions to ensure as appropriate (1) incident related vessels/aircraft are rat-free, and (2) a rat response plan is implemented for the stricken vessel. ADEC will notify the appropriate State agencies as noted on the contact list on page A-3. Each agency will activate appropriate staff and equipment to respond to an event in the Aleutians Subarea.

Initial Response Action**:** Following these notifications, the initial responders will assess the chemical characteristics of the spilled material and establish a safe level of Personnel Protective Equipment (PPE) prior to dispatching a response team to the scene. Upon arrival, the response team will conduct a site characterization to evaluate environmental hazards. Upon ensuring a safe operating environment, they will attempt to determine the source of the spill, identify the RP, secure the source of discharge, and begin to gather data for the ICS to use to formulate a response strategy or validate the RP's strategies. This initial response team will normally have no containment or product removal means with them at this time, unless provided by the RP. If local authorities or federal/state responders identify an immediate threat to public health and safety, appropriate action shall be initiated. If the situation warrants, an evacuation may be implemented according to the procedures described in the local emergency response plan.

The response team will contact the FOSC and/or SOSC, report the details of the spill, and initiate a preliminary investigation into the cause of the spill. The FOSC/SOSC or other response team personnel will advise the RP regarding the legal requirement to initiate containment and recovery actions. The FOSC will be advised of the severity of the spill and will activate the ICS. The FOSC and/or SOSC will brief the federal, state and local government agencies regarding the spill status and ramp up procedures. The FOSC will continue to consult with natural resource trustees on actions to be taken that may affect trust resources. The FOSC will activate an FOSC Historic Properties Specialist unless the FOSC determines that the incident is categorically excluded from the National Programmatic Agreement to protect historic properties.

ADEC will select any available State resource agency personnel to serve as a local contact until ADEC responders arrive on-scene. ADEC will request that ADNR and ADFG identify environmental priorities for protection. ADNR and ADFG will use the environmental sensitivities information in this plan as a primary source for this information. NOAA may also be contacted for initial environmental sensitivity and wildlife concentration information. ADEC will forward these priorities to the IC and the UC.

The RP is responsible for deploying appropriate privately-owned pollution response equipment as quickly as possible, regardless of whether federal/state equipment has been deployed in the interim. The FOSC/SOSC may assist the RP and arrange for initial delivery of pollution response gear via the most expedient mode of transportation.

Command Center Establishment: A field command post will be assembled to coordinate efforts until the FOSC, SOSC, LOSC and RP can establish the command center. The location of this field command post will depend upon the location and severity of spill, time of year, weather, and other considerations. Details on potential field command post locations, staging areas and potential command center locations throughout the Aleutians Subarea are included in the *Resources Section* of this plan.

State, federal, and local personnel arriving on-scene should realize that workspace, telephone lines, and other office resources may be quite limited during the initial response. Individuals are encouraged to bring cellular phones to communicate with their respective home offices (realizing that cellular phone capabilities also may be severely limited or non-existent at the incident location).

Staging Areas: In community profiles contained in the *Resources Section* of this plan, potential staging areas may be identified for a specific community.

Hour 6-96: Transitional Response Team

The Transitional Response Team forms as additional federal, state and local response personnel arrive on-scene. After the initial response, the scope and size of the spill can be gauged, and the UC will convene and

ICS staffing will increase. In a government-led spill response, the UC will designate an IC. In a RP-led response, the IC will be a representative of the RP. The IC will designate appropriately trained personnel as Section Chiefs for the Operations, Planning, Logistics, and Finance/Administration Sections of the ICS. As the response develops, appropriate ICS functions will be added until a full response team is in place.

Hour 96: Full Response Team
A full ICS response team should be assembled by Hour 96 of the spill response. Staffing-depths and positions-filled will vary with the response, as will the order in which these positions are filled. The Full Response Team will follow the command structure described in the Alaska Incident Management System (AIMS) Guide and/or the USCG Incident Management Handbook or EPA Incident Management Handbook. Response personnel may include federal, state and local agency personnel, employees of the RP, and independent contractors, or other organizations' personnel, as appropriate.

D. ADDITIONAL RESPONSE POLICIES

1. Health and Safety

For most spills, a Safety Officer will be designated by the IC. The Safety Officer will be responsible for ensuring that the spill site is properly characterized, the hazards identified, and personnel properly equipped and adequately briefed prior to allowing entry into the spill area. The Safety Officer will also be responsible for ensuring site security and establishing emergency procedures for decontamination and evacuation in the event of injury or change in conditions. The Safety Officer answers directly to the IC and will have the authority to suspend any operation deemed unsafe or in violation of safety regulations.

The *Unified Plan, Annex H, Appendix I* provides a Standard Site Safety Plan for Emergency/ Post-Emergency Phase Coastal Oil Spills developed by the USCG. The plan is generic in nature and must be expanded to provide specific safety procedures for each incident. The *Unified Plan, Annex H, Appendix II* provides the Training Guidelines for Local Emergency Planning Committees for Planners/Responders/Managers of Responses to Hazardous Materials Emergencies.

Once the emergency response is under way, the Safety Officer will develop a Site Specific Health and Safety Plan that will address all the required elements in OSHA's Hazardous Waste Operations and Emergency Response Regulations (29 CFR 1910.120), including but not limited to:

- Organizational Structure
- Training Requirements
- Risk and hazard analysis for each planned cleanup activity
- Personnel Protective Equipment (PPE)
- Site Security and Control
- Air Monitoring, Medical Surveillance
- Decontamination
- Emergency Response Plan
- Emergency Communications
- Sanitation and Lighting

2. In Situ Burning, Dispersants and Other Chemical Countermeasures

Decisions regarding the use of *in situ* burning and/or dispersants or any other chemical response tactic in the Aleutians Subarea will be made according to the guidelines presented in the *Unified Plan, Annex F*.

3. Waste Removal and Disposal

The ICS Planning Section Chief will be responsible for developing a waste removal and disposal plan that provides the necessary logistical and procedural information to ensure a fast and efficient transfer of wastes to disposal facilities. The disposal plan must be in compliance with existing laws and regulations.

Oversight of the waste disposal plan will normally be the responsibility of the State of Alaska. Alaska law (18 AAC 75.319 & 18 AAC 75.327) requires that cleanup and waste disposal plans for hazardous substances, including oil, be approved by ADEC. For information and guidelines on procedures for transporting, storage, and disposal of wastes and a listing of disposal related permits, refer to the *Unified Plan, Annex E, Appendix VI*.

Note: *Within the Aleutians Subarea there are limitations on the amount of temporary storage available for waste products and recovered product resulting from an oil spill.*

4. Cost Recovery/Documentation

Refer to the *Unified Plan, Annex C, Appendix I* (Federal Spill Funding Procedures), and *Appendix III* (State Administrative Guidelines).

5. Public Affairs

The IC/UC will direct all media inquiries to the Public Information Officer(s). The Public Information Officer position may be filled jointly by regulatory agency and RP representatives. A Joint Information Center (JIC) may be established. For local media contacts, consult the *Resources Section, Part Three* of this plan. Refer to *Unified Plan, Annex I* for statewide guidance on Public Affairs inquiries.

E. POTENTIAL PLACES OF REFUGE

Refer to the Potential Places of Refuge (PPOR) (Section H) in this plan for specific information on PPOR sites pre-identified for the Aleutians Subarea.

Leaking or disabled vessels may require a sheltered location with adequate water depth to lighter or repair the vessel. Leaking vessels need to be repaired to limit the amount of spilled product. If leaking vessels are not repaired, a spilled product, such as oil, can negatively affect downstream environmental resources and shoreline. Vessels need to be anchored or moored in protected waters to safely make repairs and stop the loss of oil or other hazardous products.

Each vessel incident presents unique circumstances that the UC must address. The goal is to safely repair or salvage a damaged vessel while avoiding or minimizing impacts to local resources. Prior to bringing a vessel into an anchoring or mooring location, the UC will need to consider:

- Status of the vessel
- Public safety
- Environmental resources at risk
- Strategies to protect sensitive areas
- Prevailing winds
- Navigational approach to the mooring site
- Anchoring ground
- Vessel traffic
- Available dock and support facilities

- Available skilled and spill response labor

The USCG Captain of the Port (COTP) – Western Alaska has jurisdiction over approving temporary mooring or anchoring locations for leaking or damaged vessels within this area. The COTP will consult with natural resource trustees and other appropriate stakeholders (e.g., tribal, State, and local government representatives) when deciding where and when to move a stricken vessel.

In October 2004, the Alaska RRT approved the *Guidelines for Places of Refuge Decision-Making*. These guidelines were developed by the ARRT Places of Refuge Subcommittee composed of representatives from the USCG, EPA, U.S. Department of the Interior, U.S. Department of Commerce, U.S. Department of Justice, ADEC, Alaska Department of Fish and Game, Alaska Department of Natural Resources, oil spill cooperatives, industry production and transportation interests, Alaska marine pilot representatives, salvage operators, and regional citizens advisory councils. Refer to *Unified Plan, Annex O* for the complete guidelines.

F. GEOGRAPHIC RESPONSE STRATEGIES

See Section G of this plan for Geographic Response Strategies (GRS) developed thus far for portions of the Aleutians Subarea

G. SEAFOOD PROCESSOR PROTECTION PLANS

See Section G of this plan for Seafood Processor Protection Plan (PPP) developed specifically for protecting seafood process water intakes at Dutch Harbor and Akutan.

H. ALASKA COMMERCIAL FISHERIES WATER QUALITY SAMPLING METHODS AND PROCEDURES

See the following website for detailed information on water quality sampling methods and procedures to determine the presence/absence of oil contamination that could potentially impact the commercial fisheries of Alaska. www.dec.state.ak.us/spar/perp/wq/wq_manual.htm

I. MARINE RESPONSE AND SALVAGE RECOVERY

1. BACKGROUND

This part of the SCP is intended to provide relevant findings from the Aleutian Islands Risk Assessment technical reports to support decisions for the prevention, planning and preparedness to oil and hazardous substance incidents within the region. References to each of the technical reports developed can be found in Annex 2 of this part of the SCP.

2. WEATHER CHARACTERIZATION IN THE ALEUTIAN ISLANDS

This section presents the data collected and collated from each airport shore station and buoy. The data is presented by parameter so that the conditions (for each parameter) at the different locations can be compared. The completeness of the data is also shown as percentage of total possible records that were available for each parameter and each station. Full datasets are available on request from Nuka Research.

Wind

Wind data are presented in terms of both wind speed and wind direction. The Beaufort Scale, used to describe wind speeds and their associated sea states is shown in Table 1.

Table 1. Beaufort Scale of wind speed, ocean conditions, and probable sea state (Environment Canada, 1996)

Beaufort Scale	Wind Speed (Knots)	Probable Sea State (Feet)	Effects of Sea
0	< 1	Calm	Sea is mirror- like
1	1 to 3	< .25	Scale –like ripples form. No crests
2	4 to 6	.5 to 1	Small wavelets: short but more pronounced. Crests are glassy and do not break
3	7 to 10	2 to 3	Large wavelets: crests begin to break. Foam is glassy, Scattered white horses possible.
4	11 to 16	3.5 to 5	Waves small but lengthening. More frequent white horses.
5	17 to 21	6 to 8.5	Moderate waves take longer form. Many white horses.
6	22 to 27	9.5 to 13	Large waves. White foam crests are more extensive and there is possible spray
7	28 to 33	13.5 to 19	Sea heaps up. White foam from breaking waves begins to be blown in streaks.
8	34 to 40	18 to 25	Moderately high waves. Breaking crests form spindrift. Streaks of foam appear
9	41 to 47	23 to 32	High waves. Dense streaks of foam along the direction of the wind. Crests unstable. Spray may affect visibility.
10	48 to 55	29 to 41	Very high waves with long over-hanging crests. Foam blown in dense, white streaks along the direction of the wind. Sea looks white. Sea tumbling becomes heavy and shock-like. Visibility affected.
11	55 to 63	37 to 52	Exceptionally high waves. Sea completely covered with long, white patches of foam lying along the direction of the wind. Edges of wave crests blown into froth. Visibility affected.

Wind Speed

Figure 1 summarizes this information, showing the median wind speed for each month and wind speeds that are 25%, 75%, 95%, and 98% of maximum. The figure also shows the maximum and minimum readings for each month.

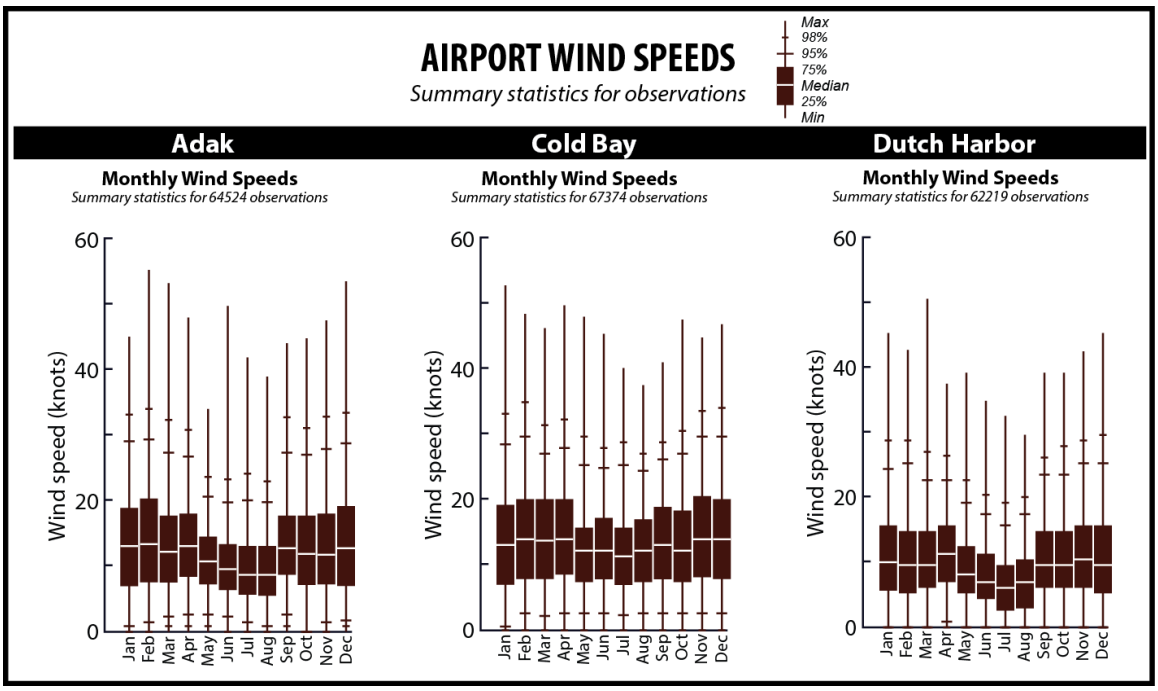


Figure 1. Wind speeds recorded at airport shore stations.

Figure 2 shows the monthly wind speeds and gusts for the buoy stations.

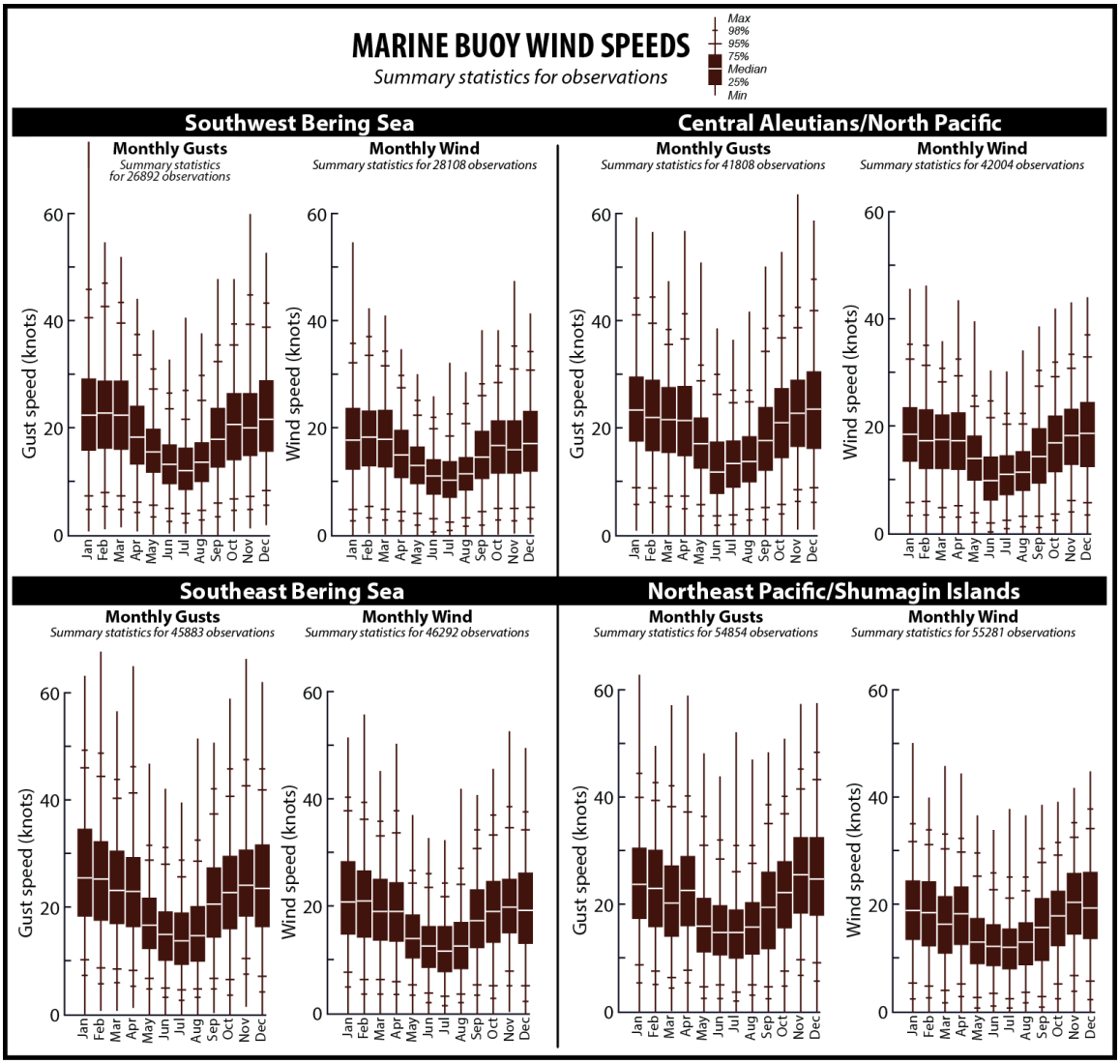


Figure 2 Wind speeds and gusts at buoy stations.

Wind Direction

Figures 3-9 present the wind directions recorded at each station, along with the associated wind speeds, (and gusts, for the buoy locations), which are presented to highlight the strong, gale force, and storm winds recorded there. The tables shown with each figure indicated the completeness of the records.

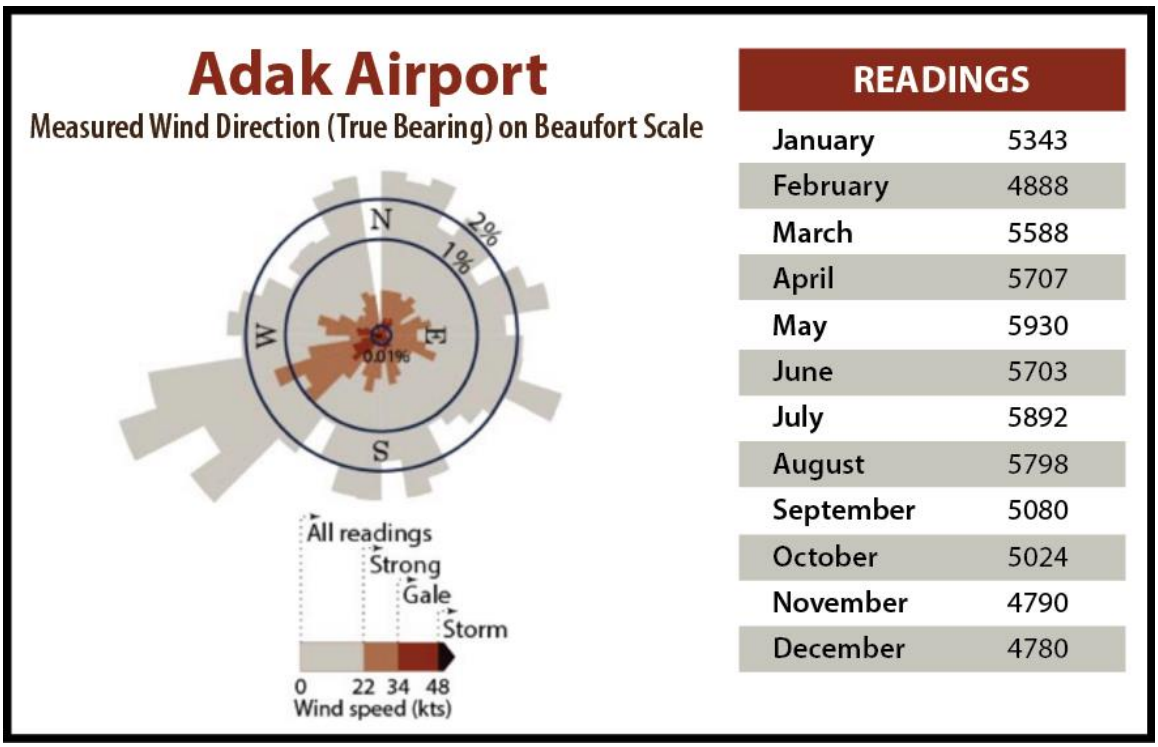


Figure 3. Wind direction, wind speed, and number of readings at Adak Airport.

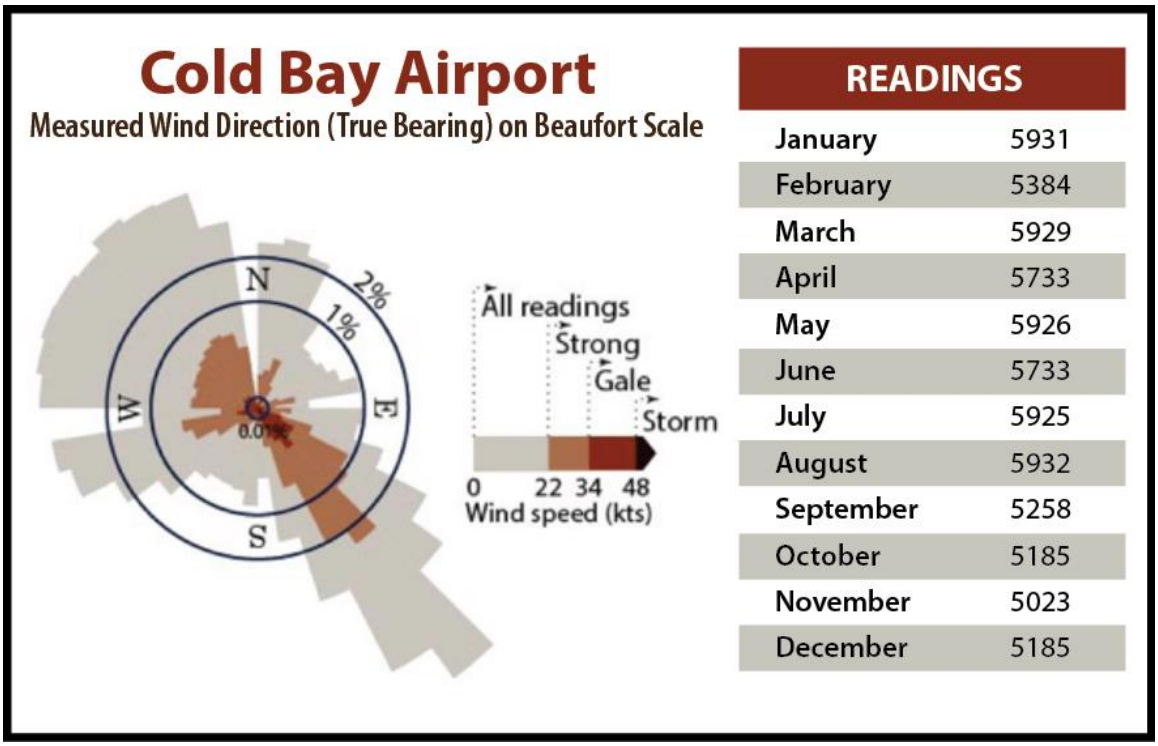


Figure 4. Wind direction, wind speed, and number of readings at Cold Bay Airport.

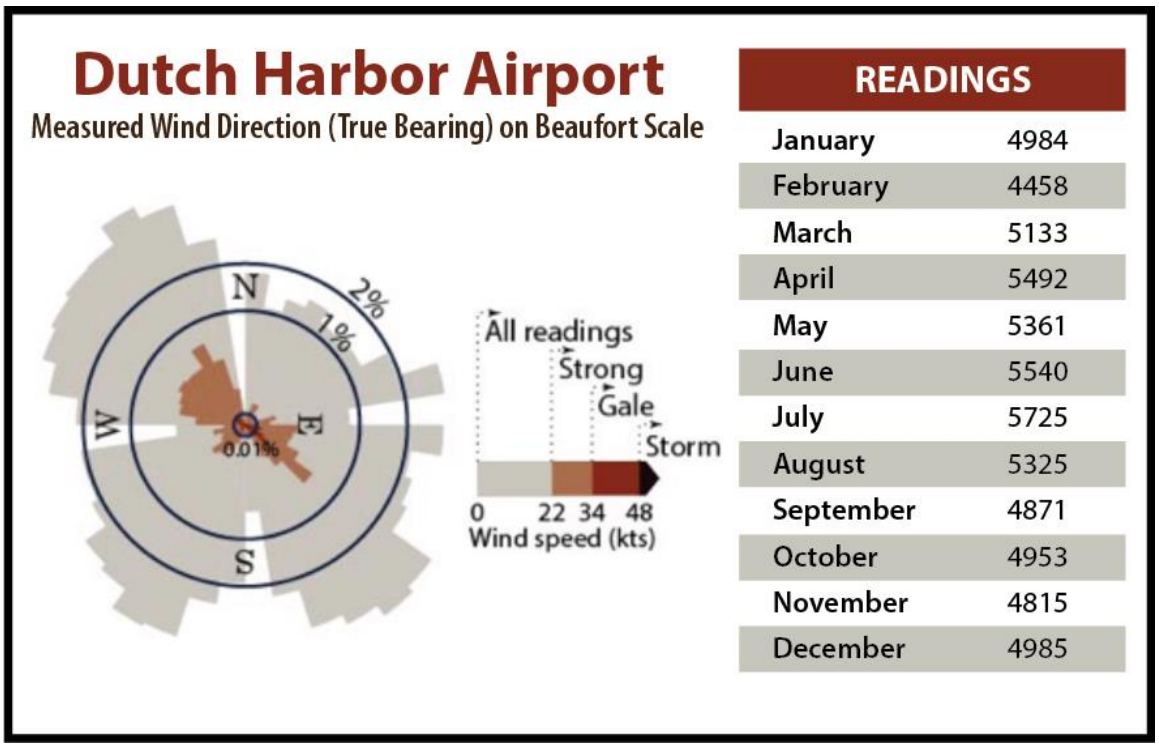


Figure 5. Wind direction, wind speed, and number of readings at Dutch Harbor Airport.

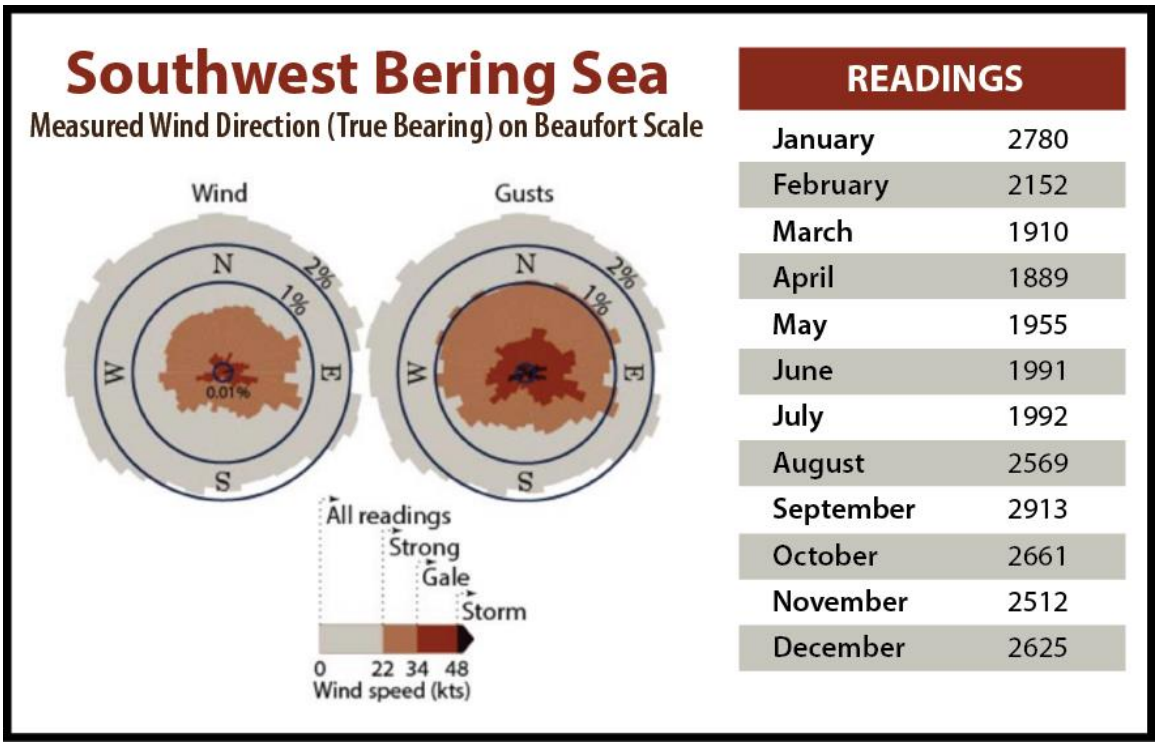


Figure 6. Wind direction, wind speed, and number of readings in the Southwest Bering Sea.

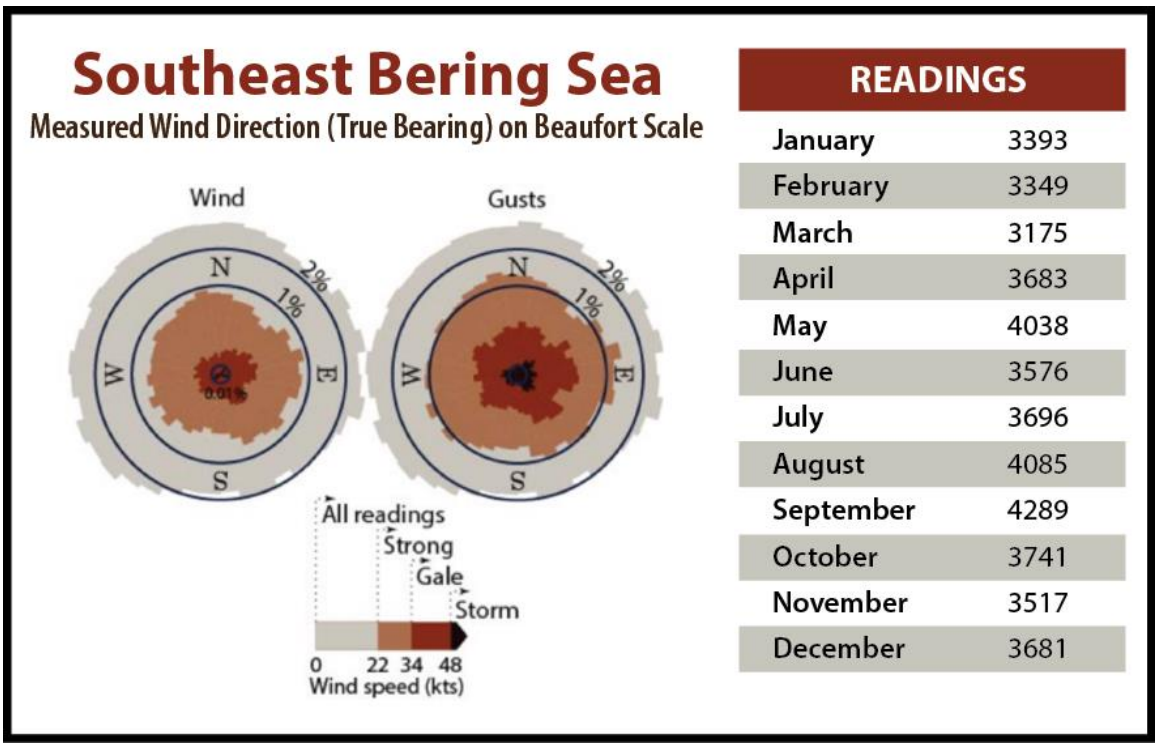


Figure 7. Wind direction, wind speed, and number of readings in the Southeast Bering Sea.

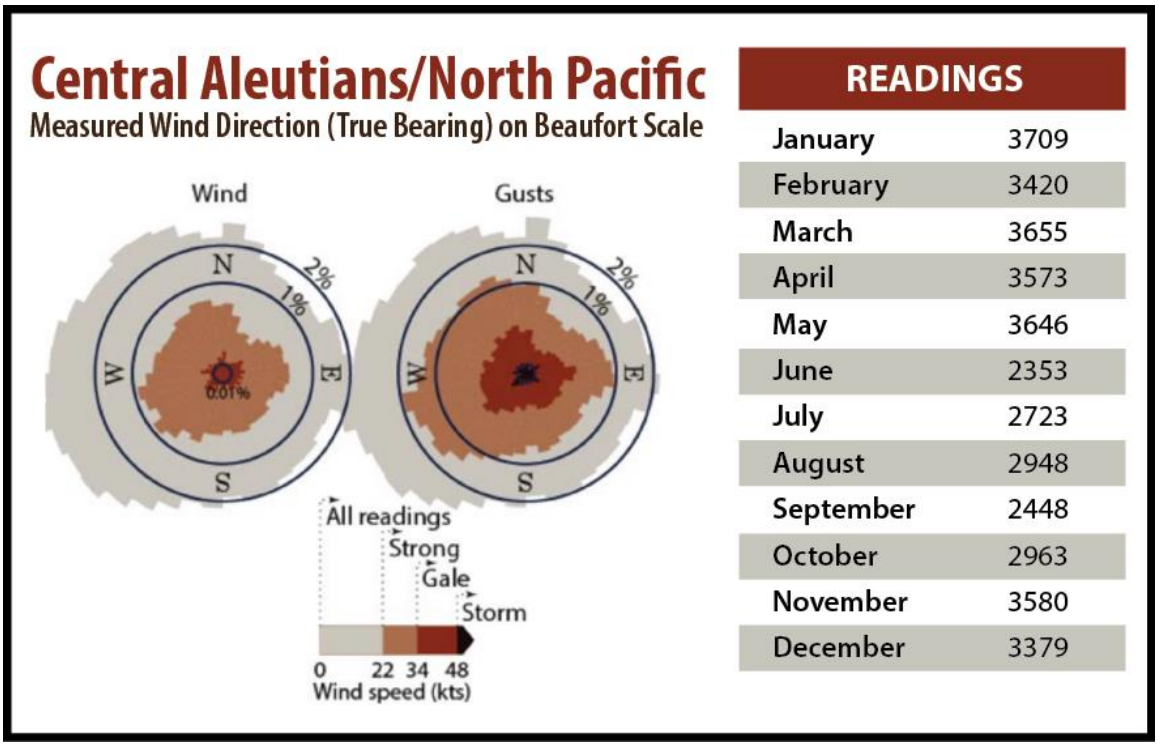


Figure 8. Wind direction, wind speed, and number of readings in the Central Aleutians/North Pacific

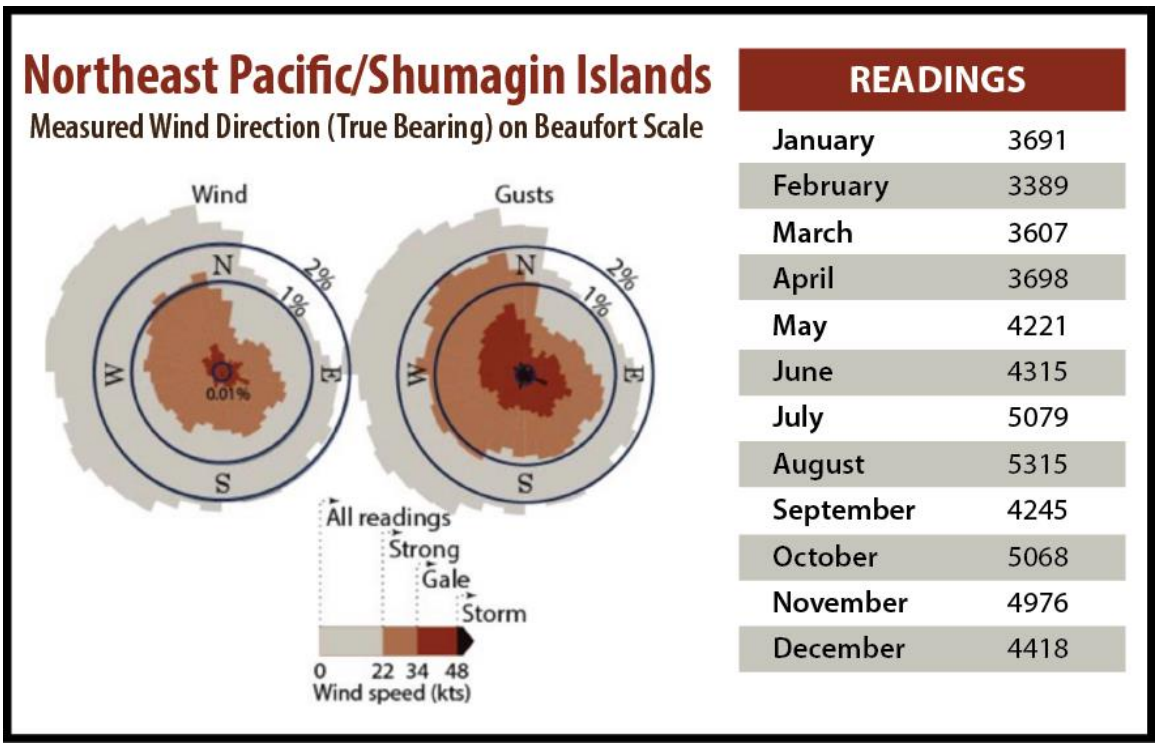


Figure 9. Wind direction, wind speed, and number of readings at Northeast Pacific/Shumagin Islands.

Sea State

As discussed above, the key parameters related to sea state are recorded at the four buoy stations. The data collected is summarized in Figure 10, which shows the distribution of wave height and wave period.

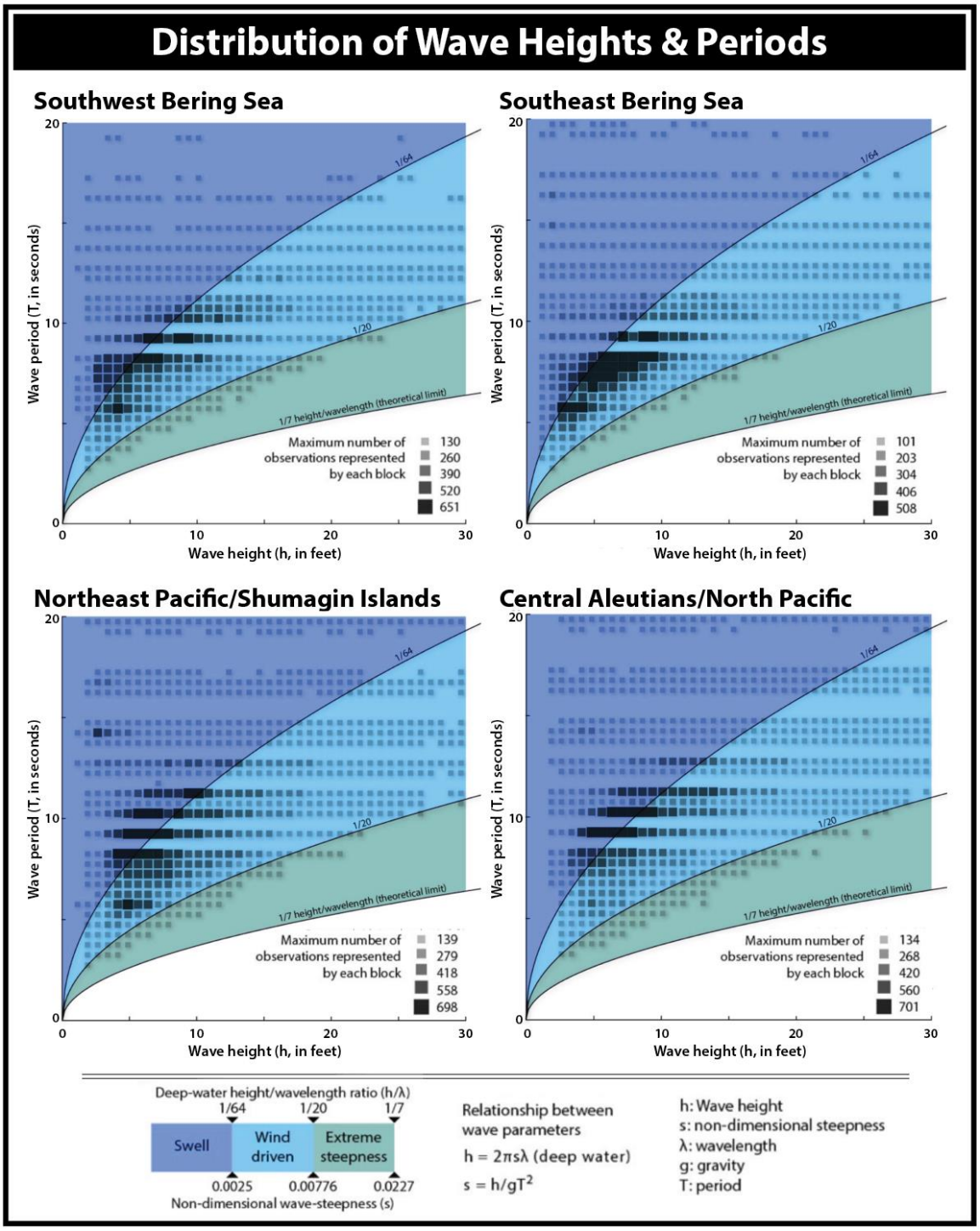


Figure 10 Distribution of wave heights and periods recorded at buoy stations. This figure omits very large, outlying wave heights above 30 feet (greater than 98th percentile for all buoys).

Temperature

Figure 11 shows the median, maximum, and minimum temperatures collated for each month at each location. It also shows the temperatures that represent 25% and 75% of the maximum.

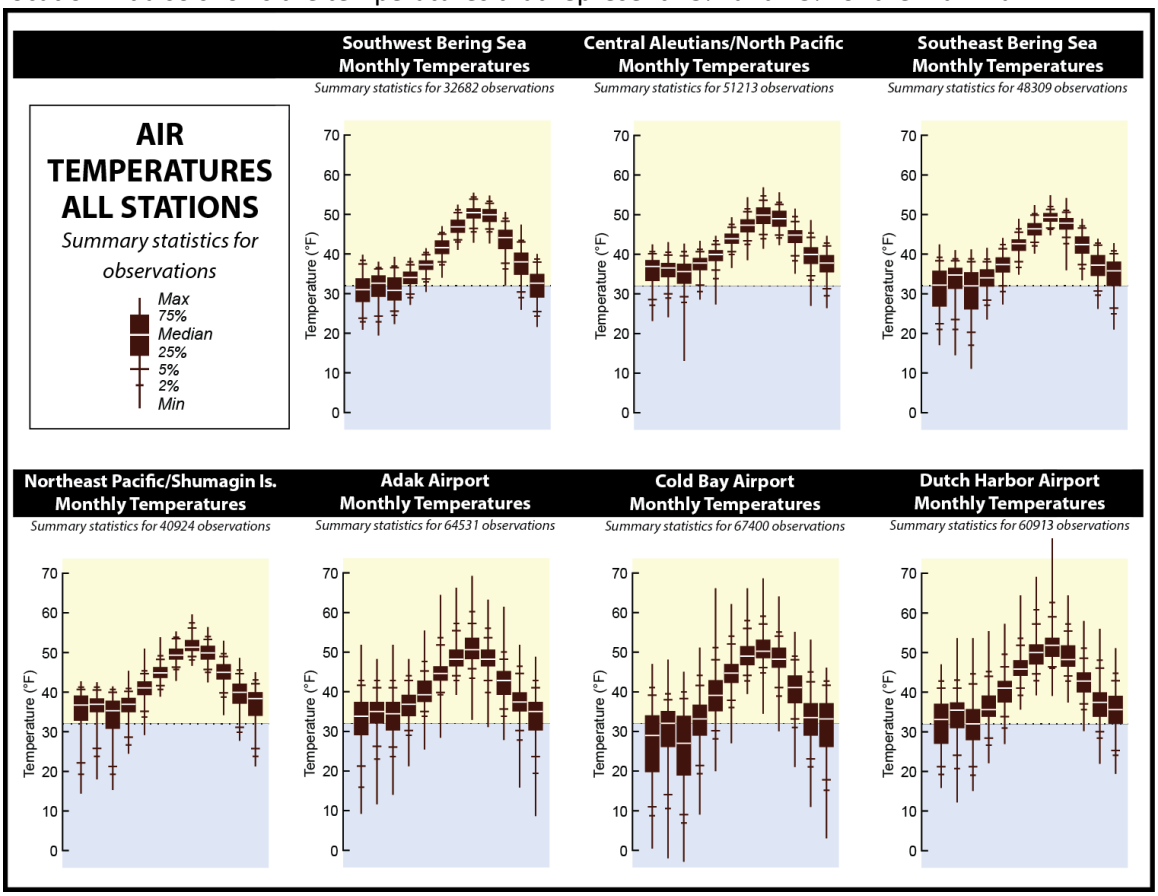


Figure11 Monthly temperature data for all seven stations

Visibility

Visibility is recorded at the airport stations based on the number of statute miles of horizontal visibility and height of cloud ceiling. Aside from weather conditions, the area experiences large seasonal variations in daylight, which will affect operations.

Prevailing Visibility at Airport Stations

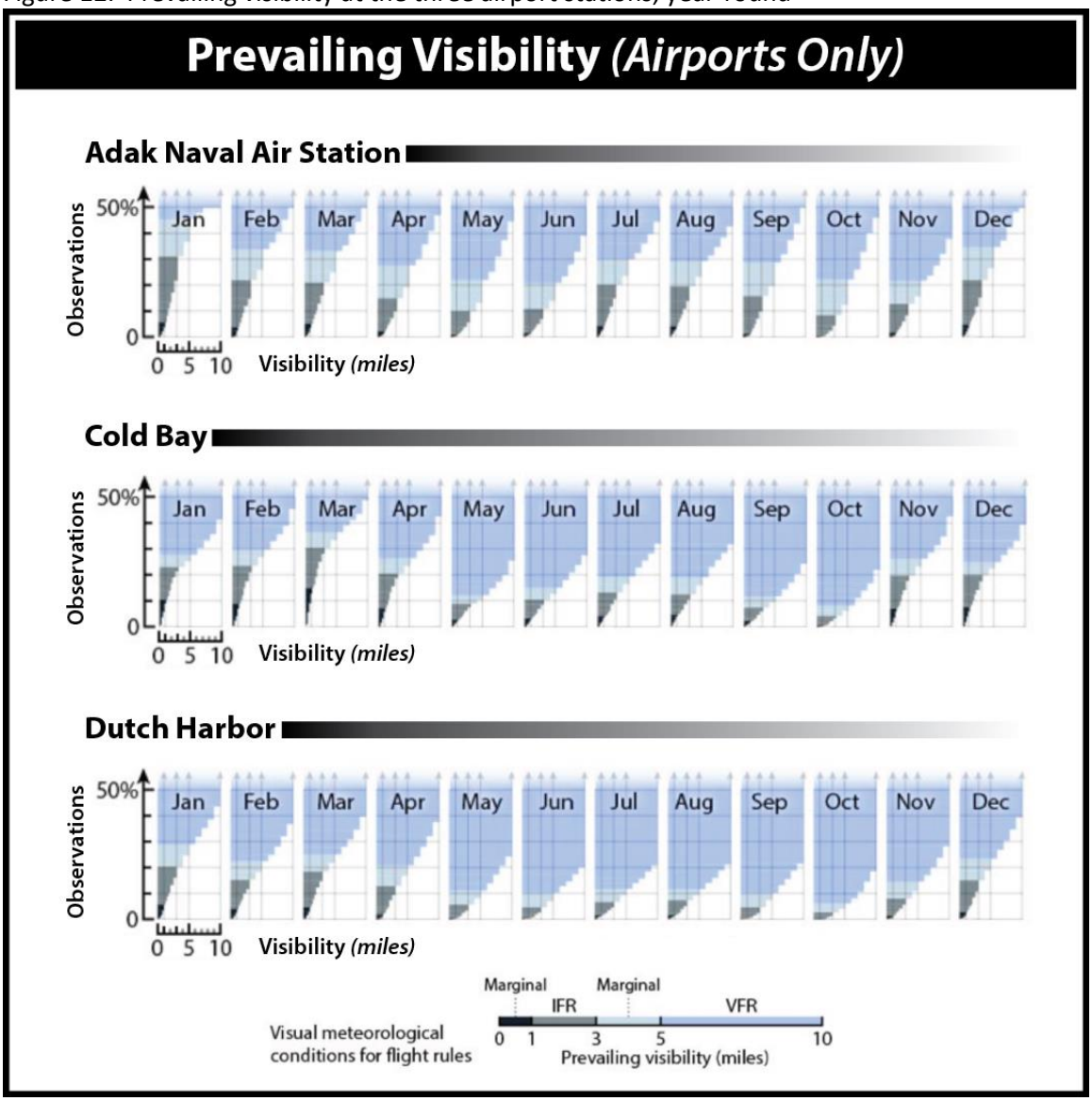
As Figure 12 shows, horizontal visibility varies among the three airports and throughout the year. This figure presents the horizontal visibility as it applies to Class E Airspace (general, unrestricted airspace) flight rules. In simplified form, Class E instrument flight rules (IFR) require a visibility of at least one mile, and visual flight rules (VFR) require a visibility of three miles or more (Federal Aviation Administration, 14 CFR 91)

FAA flight rules themselves are more complex; these simplified flight rules are used only to provide context for the visibility data, indicating the possible impact on operations. Marginal zones are identified at 3-5 miles of visibility (where VFR is possible by may be marginal), and at less than one-mile

visibility (where even instrument flight may no be recommended).

As discussed above, visibility at the airports may be different than visibility on the water. For instance, conditions that permit flight from airports might still preclude effective search, rescue, or surveillance of spilled oil on the water.

Figure 12. Prevailing visibility at the three airport stations, year-round



Observed Ceiling at Airport Stations

Airport stations also record the observed ceiling (height of cloud cover above ground level), which are summarized in Table 2.

Some ceiling records, primarily at Adak, are of uncertain quality due to the possible conflation of very low ceilings with no recording. Zero ceilings are recorded for a full range of visibility conditions,

including horizontal visibility of up to 10 miles (the maximum measured), suggesting that many such records actually correspond to clear sky or no ceiling recording being taken, rather than foggy conditions. Ceiling requirements for flight vary; there is not one universal limit.

Table 2. Observed ceiling at Adak, Cold Bay, and Dutch Harbor airports

	PERCENTAGE OF TOTAL OBSERVATIONS		
	Ceilings of 1000 ft. or lower	*Ceilings of 200 ft. or lower*	*Zero or unrecorded ceiling*
Adak Airport	8%	1%	53%
Cold Bay Airport	18%	3%	< 1%
Dutch Harbor Airport	11%	1%	1%

Daylight

Daylight in the study area varies slightly from north to south among the weather stations, and substantially throughout the year at all stations. Civil daylight along the northern margin of the study area last approximately 9 to 19 hours per day, depending on the time of year. This includes daytime hours, from sunrise to sunset, as well as the half-hours before sunrise and after sunset (civil twilight).

Dutch Harbor, the logistical hub of the region, sees a similar range (Figure 13). The area has an east-west span of over 1,100 miles between the Shumagin Islands and Attu Island. As a result, actual local time-of-day varies by more than two hours, at the approximate latitude of Unalaska (54°N). The chain is divided between Alaska Standard Time (UTC-9) east of 169° 30 W and Hawaii-Aleutian Standard Time (UTC-10) to the west.

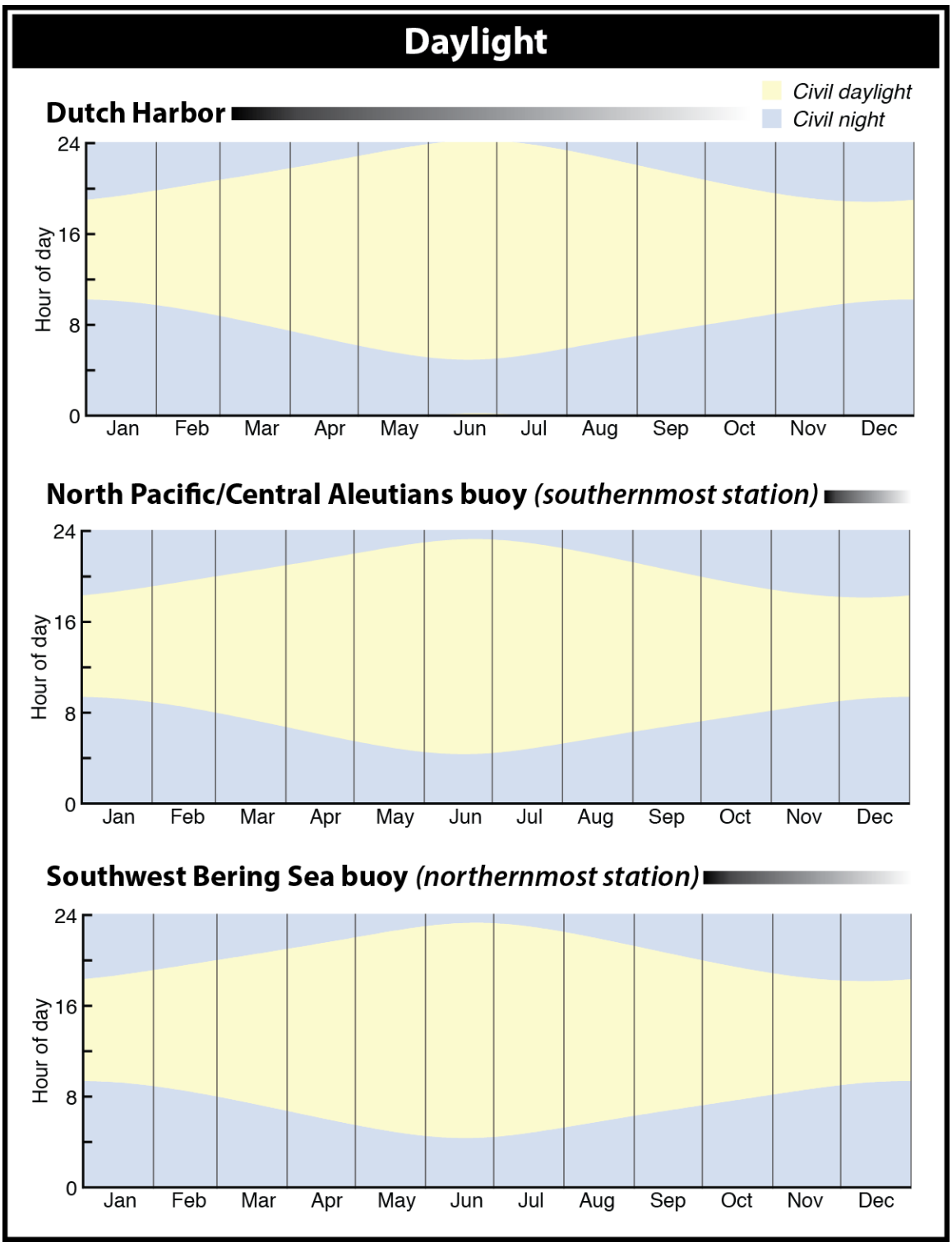


Figure 13. Annual daylight for Unalaska and the northernmost and southernmost weather stations.

3. 2012 VESSEL TRANSITS OF UNIMAK PASS

In 2012, a total of 1,961 deep-draft vessels made 4,615-recorded transits through Unimak Pass.

Transits by Direction

The data for Unimak Pass indicate that this route through the Pass is more commonly used for westbound voyages:

- 3,109 (67%) of the recorded transits through Unimak Pass were WESTBOUND
- 1,369 (30%) of recorded transits through Unimak Pass were EASTBOUND
- 137 (3%) transits were unknown

In addition to Unimak Pass, vessels may also use other passes or, more commonly, stay south of the islands. To provide a general illustration of the number of vessels that may be moving south of the Aleutian Islands, we assume that vessels identified as traveling twice in the same direction consecutively also made a trip in the opposite direction in between those recorded journeys through Unimak Pass. Based on this assumption, there were 963 eastbound voyages south of the Aleutian Islands and 87 westbound voyages in addition to the recorded transits reported above. This assumption may still miss some vessels, however, if they make a round trip between East Asia and Western North America without passing through Unimak Pass in either direction. It may also errantly include vessels that actually did travel elsewhere in the world before returning to North Pacific transit. It is therefore a rough estimate for illustrative purposes only. These vessels are not included in any estimate of the system costs developed for the project, as the numbers are rough estimates only.

Vessel Transits in Innocent Passage

For 2,462 (53%) of recorded transits through Unimak Pass, vessels were in innocent passage and would not be required to have a U.S. VRP or NTVRP plan that includes the Western Alaska Captain of the Port Zone. Another 2,016 transits would be subject to U.S. VRP or NTVRP (as of 2013) requirements for the area, because they traveling to or from a U.S. port (or were U.S. flagged vessels) for at least one recorded voyage through the region that year. Regulated status could not be determined for 137-recorded transits.

Unique Vessels in Innocent Passage

A total of 1,961 unique large vessels were recorded passing through Unimak Pass in 2012. Of these: 1,045 vessels would have been subject to VRP or NTVRP regulations for at least one transit during the year. (Vessels making multiple transits across the North Pacific may have different ports of departure and destinations.) There were 853 vessels that transited Unimak Pass only in innocent passage (i.e., never to or from a U.S. port when on this route). For 63 vessels, AIS data was not conclusive as whether they subject to VRP regulations or in innocent passage. This is summarized in Table 3.

Table 3. Summary of unique vessels transiting Unimak Pass in 2012

REGULATED STATUS	# of Unique Vessels
Vessels in U.S. trade only, subject to VRP regulations	684
Vessels in both U.S. trade and innocent passage, subject to VRP regulations for at least one voyage	361
Vessels that would be subject to U.S. regulations for at least one transit through Unimak Pass based on 2012 data	1045
Vessels in **innocent passage** only	853
Vessels for which regulated status is **unknown**	63
TOTAL unique vessels transiting Unimak Pass in 2012	1961

Vessel Type

Ninety-seven percent of the 1,961 vessels recorded were non-tank vessels (including bulkers, container ships, and others). There were also some tank vessels. The breakdown of vessels is summarized in Table 4.

Table 4. Summary of vessel types transiting Unimak Pass in 2012, both those that made at least one voyage where a U.S. VRP was required and those transiting ONLY in innocent passage that year.

Table 4: Summary of Vessel Types

REGULATED STATUS	TANK VESSELS	NON-TANK VESSELS		
		Bulker	Container	Other
Vessels in both U.S. trade and innocent passage, **subject to VRP regulation for at least one voyage**	15	1030	335	133
Vessels in **innocent passage only**	36	594	113	110
Vessels for which regulated status is **unknown**	1	26	31	5
TOTAL	52 (3%)	1182 (60%)	479 (28%)	248 (13%)

Table 5 shows the transits made by vessel type as reported in the AIS data, using a more detailed breakdown of the types of vessels that made 50 or more recorded transits through Unimak Pass in 2012.

Table 5. Vessel types making more than 50 transits through Unimak Pass in 2012.

Vessel Type	RECORDED TRANSITS
Bulk carrier	2,194
Container	1,780
Vehicle carrier	304
General cargo	164
Tankers	82
Other Vessels	94
TOTAL	**4,615**

Summary of 2012 Vessel Traffic Based on Unimak Pass Data

Figure 14 presents a summary of the vessel traffic recorded through Unimak Pass and traffic estimated to be traveling south of the inlands chain based on the Unimak Pass traffic.

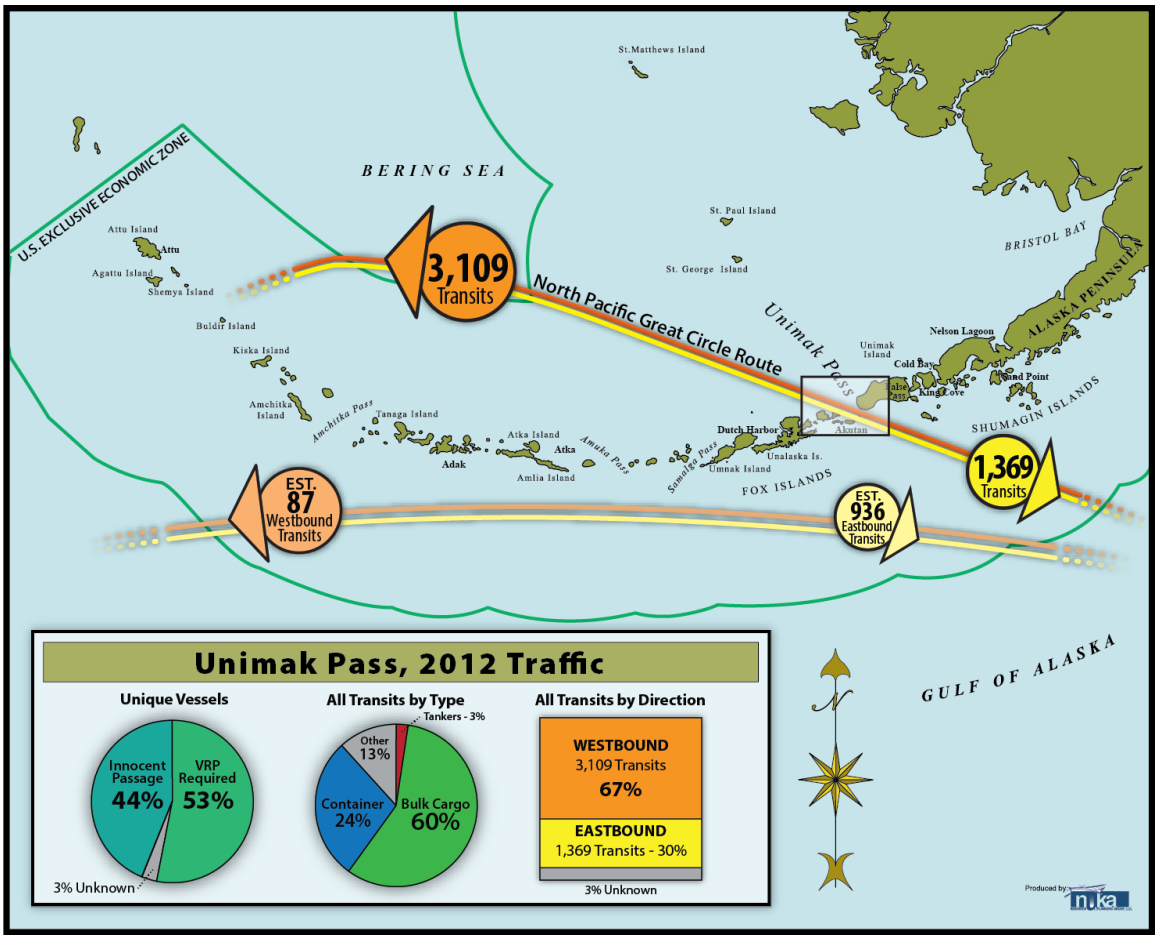


Figure 14. Summary of Unimak Pass traffic recorded in 2012, including percentage of vessels in innocent passage and the vessel type; also includes estimated transits south of the inland chain based on number of vessels going through Unimak Pass (routes are idealized; vessels may not follow these exact routes)

COMPARISON TO RECENT YEARS

There were more recorded transits through Unimak Pass in the calendar year of 2012 than those recorded in any of the fiscal years (October 1-September 30) 2006-2009 as reported in Phase A (DNV and ERM, 2010). Fiscal year 2007 came the closest to the current number of transits, indicating that traffic has returned to pre-recession levels, and continues to increase. Table 6 summarizes the recorded transits from that report and this update.

Table 6. Vessels recorded through Unimak Pass in 2006-2009 fiscal years (Oct 1-Sept 30) in DNV and ERM, 2010 and 2012 calendar year.

Table 6: Transits by Year

FISCAL YEAR, unless noted	**TRANSITS**		
	Westbound	Eastbound	Total
2006	2923	568	3491
2007	3851	890	4471
2008	3274	957	4231
2009	2886	1088	3974
2012(calendar year)1	3109	1369	4615

Almost 2,000 large commercial vessels made more than 4,000 trips through Unimak Pass in 2012, based on AIS data. Almost half of these vessels were in innocent passage because they were traveling between two foreign ports and were therefore exempt from U.S. Federal or State of Alaska requirements. Of the vessels using Unimak Pass, and therefore captured in that dataset, we estimate that more than 1,000 additional transits were made by vessels that stayed south of the islands, or possibly used an alternate pass to cross through the islands. The vessel traffic recorded in Unimak Pass represents an increase over traffic through the same area in recent years.

4. EMERGENCY TOWING

An Emergency Towing System (ETS) is a pre-staged package of equipment that may be deployed in the event a disabled vessel requires assistance in accessing a place of refuge. A manual that instructs responders on the operations of system as well as procedures for deployment accompanies the system. The system is designed to use vessels of opportunity to assist disabled vessels that are in Alaskan waters. It consists of a lightweight high performance towline, a messenger line used in deploying the towline, a lighted buoy, and chafing gear. These components may be configured to deploy to a disabled ship from the stern of a tugboat or airdropped to the ship's deck via helicopter.

Within the last decade, several distressed or stricken vessel incidents occurred in or near Alaska. In a few cases these have caused environmental and economic repercussions. In each situation, the vessel was large tramper or cargo type vessels, which generally carry fuel in bottom tanks, thus posing a significant pollution risk in grounding.

5. EMERGENCY TOWING SYSTEM (ETS) IN THE ALEUTIAN ISLANDS

The ETS program came into existence following the near grounding of the Salica Frigo on March 9, 2007 in Unalaska Bay. The Mayor of Unalaska convened a Disabled Vessel workgroup to address the possibility of future groundings and to discuss local emergency response solutions. This initial meeting prompted the Emergency Towing System (ETS) workgroup; whose goal was to develop emergency towing capabilities for disabled vessels in the Aleutian Subarea using locally available tugboats in conjunction with ETS equipment stationed in Unalaska.

The project continues with a mobilization and deployment exercise conducted annually in Unalaska. Currently, ETS packages are staged in the communities of Adak, Unalaska, Cold Bay and St. Paul Island. December of 2010 the ETS system was deployed from Unalaska in an emergency situation to assist the disable cargo vessel Golden Seas. This equipment, along with the availability of an appropriate sized

1 Vessel direction could not be determined for 137-recorded transits. This number included in the total number of transits for 2012, so the westbound and eastbound transit numbers do not sum correctly.

towing vessel helped avert a possible grounding.

More information on the ETS project is available at:
http://dec.alaska.gov/spar/perp/ets/index.htm

6. RESPONSE TIMES FOR TUGS OF OPPORTUNITY

Historically, there has not been a dedicated emergency tow vessel in the Aleutian Islands to assist a distressed ship. However, tugs of opportunity or tugs that are available in the region but not dedicated to rescue services may be able to aid a distressed ship if they were willing and able to diver their activities.

A study was conducted for the Aleutian Island Risk Assessment, which examined the amount of time it would take a potential tug of opportunity to reach six hypothetical incident locations and whether the tug would have sufficient bollard pull to control a large container ship once it reached the location (The Glosten Associates, 2013a and 2014). A supplemental study analyzed actual tug location data for a one-year time period and extrapolated the information to illustrate the availability and capability of towing vessels in service in the sub-area to arrive on-scene and assist disabled vessels at the six scenario locations. Travel time estimates were derived from actual towing vessel locations based on a weekly sampling of AIS data in 2012.

Eighty-six tugs were included in the analysis, plus two additional vessels, which were treated as special cases: the USCG cutter *Alex Haley* and the tug *Resolve Pioneer*. For all scenarios, the tug most likely to reach a distressed vessel in the Aleutian Islands are located in the eastern Aleutians (near Dutch Harbor), or even farther east, near Kodiak or in Bristol Bay. Of the 86 tugs identified in the AIS data, 23 of them were not useful in any scenario because for each incident site, sea state, and week it was present; a more capable tug would have arrived first. Of the remaining tugs, most of them were useful only a handful of weeks, with only one tug, the *James Dunlap* showing up as a potential responder in more than 12 weeks.

Tug availability was not consistent for the one-year period analyzed. A fully functional tug with greater than 80 MT bollard pull was present in about half the weeks of the analysis. More tugs were available in late-July and August 2012; tugs with bollard pull greater than 100 MT were most available in July-August and again in November-December, but were rare during the rest of the year.

Even in extreme weather, a tug of opportunity could usually be expected to reach a distressed vessel within 12 hours near Unimak Pass, but a distressed vessel in the western Aleutian Islands area would likely wait two or more days for a tug of opportunity rescue. Adequate emergency towing assistance could be delayed or impossible in very stormy weather, especially if relatively large tugs were not available.

7. CONSIDERATIONS FOR RESCUE TUGS

As part of the Aleutian Islands Risk Assessment, it was required to identify the towing performance capacity required of a tug to handle existing vessels in the prevailing weather conditions. Two vessels were identified as being the largest typically found on routes passing close to the Aleutians; a 600,000 bbl. crude oil tanker and a 68,000 DWT container ship. The evaluation was run for a range of conditions that might be found in the Aleutians. Winds from 20 to 60 knots with sea states to match were examined. A 40-knot wind speed and its associated sea state 6 were used for specifying the minimum required bollard pull.

At higher wind speeds the wind forces dominate the solution which makes the container ship the limiting case for turning and arresting drift. The three operations are:

- Arresting drift; the tug force required to prevent the vessel from drifting down wind when it is beam to the wind and waves
- Turning; the tug force required to turn a drifting vessel into the wind and waves without towing crosswind to develop forward speed
- Towing; the tug force required to tow the ship to windward at 1 knot.

Because the forces on the vessel are greatly reduced with the bow pointed into the weather, the strategy for this analysis was to turn the vessel while allowing drift to leeward. As such the required tug force would be the worst case of the turning or towing requirements. The simulations show less tug force required than the analysis. For scenario 1 this is due to using the worst case turning moments. These occur with the bow lying about 130-140 degrees off the wind. In the simulations the vessels start at about 100 degrees off the wind. The hydrodynamic hull forces due to the downwind drift are tending to turn the vessels more broadside than their worst-case positions. The analysis shows that the turning moment is very sensitive to the precise drift angle. Because the actual vessel will be unknown and because both the analysis and the simulation depend on a few representative parameters it was felt that the precise drift angle was unknown and therefore the worst case tuning moments were used for the tug requirements.

Similarly with scenario 2, the tug forces from simulation are even smaller than the analytic calculation. Starting the vessel moving allows its own hydrodynamic forces to generate a turning moment and is a good strategy for a smaller tug. The downwind drift allowed by the smaller tugs in the simulations while gaining control of the vessels ranged from 700 to 1100 meters.

The tug force required for turning either of the representative vessels in 40 knots of wind and sea state 6 is approximately 62 MT. The tug force required for towing either of the representative vessels against 40 knots of wind and sea state 6 at 1 knot is about 40 MT. A tug with a rated bollard pull of 81MT will be able to handle either of the representative vessels in these conditions.

An update to the study was conducted in 2014 to using updated vessel traffic data and environmental conditions data for the Aleutian Islands sub-area. There were two notable differences from the original study:

1. The container ship is larger than in the previous study. Since the wind forces tend to dominate the calculations and since the container ship has a very large windage area, the tug rating for the design conditions went from 81 MT to 108 MT.
2. The wave heights are larger in the Aleutians than the average conditions used in the original study. The increased wave heights affect both vessels but tend to be more noticeable for the tanker. The design condition for the tanker has almost doubled the tug rating from 24 MT to 41 MT.

Conclusion

The tug force required for turning either of the representative vessels in 41 knots of wind and 33 foot seas is approximately 80 MT. The tug force required for towing either of the representative vessels against 41 knots of wind and 33 foot seas at 1 knot is about 52 MT. A tug with a rated bollard pull of 109 MT will be able to produce these forces for either of the representative vessels in these conditions.

8. OIL SPILL RESPONSE AND SALVAGE

This section puts forth a quantitative analysis concerning various response and salvage operations under a wide range of environmental conditions. Safety is always the highest priority in any response and to the maximum extent possible we tried to include safety as the factor in response limitations.

Table 7 summarizes the Response Gap Index (RGI) for each tactic (averaged across all applicable locations), including both the percentage of time that the RGI is impossible and the corresponding amount of time when a response may be possible.

Table 7. Combined, average RGI for each tactic and percentage of time response may be possible.

RESPONSE TACTIC	RGI Year Round (Response Impossible)	Response may be possible
Emergency towing	2%	98%
Helicopter Lightering	20%	80%
Open-Water Mechanical Recovery	72%	28&
Near-shore Mechanical Recovery—Unalaska Bay (Daytime Only)	52%	48%
Aerial Application of Dispersants	72%	28%
Vessel Application of Dispersants	64%	36%
Air Observations—Fixed Wing (Daytime only)	18%	82%

Overall Observations

Overall, darkness and sea state appear to have the greatest effect on the ability to deploy the response operations.

While this analysis conveys overall that response in the Aleutian Islands region is likely to be precluded or significantly compromised by environmental conditions, the good news is the pollution prevention activities of emergency towing and lightering via helicopter are the most likely activities to be able to be implemented. The RGI for these operations is much lower than spill response activities, though mounting such operations requires that the necessary tow vessels, aircraft, and equipment be available (including adequate storage).

The RGI for aerial observations is also lower than for the response tactics. This at least means that in the event of an incident or accident, responders will be fairly likely to be able to get the information they need in order to plan for response activities when they can ensue, or understand and anticipate the spill trajectory and therefore the resources that may be affected.

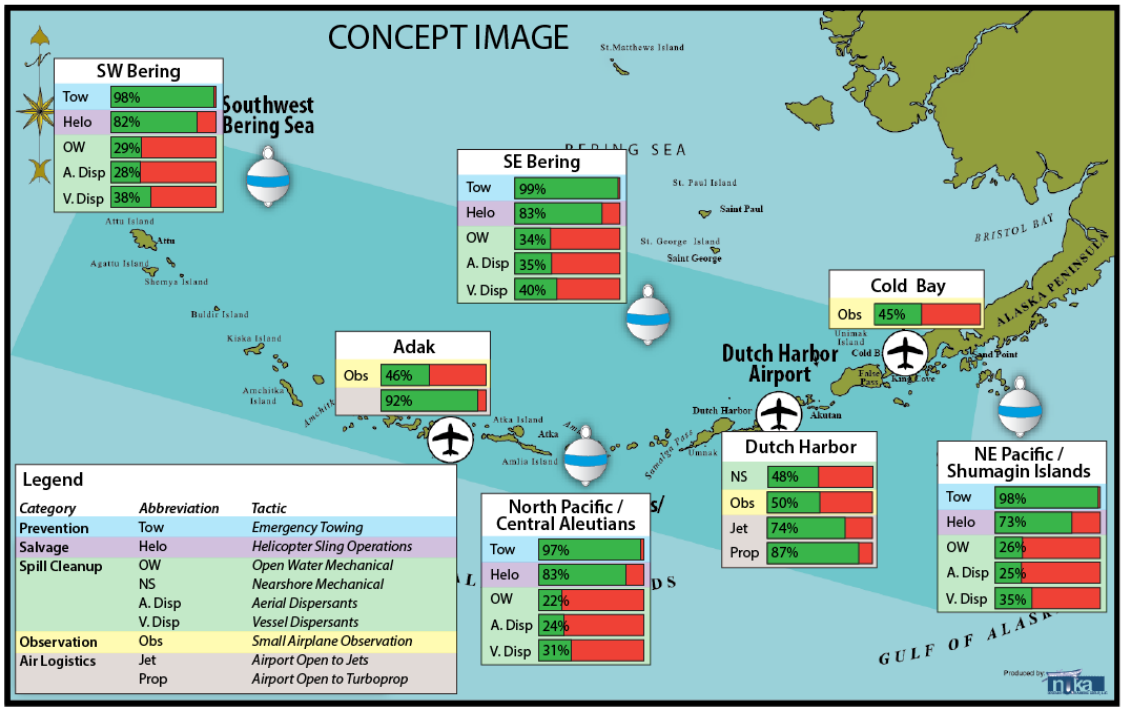
The average RGI are fairly similar for spill response operations, which can be expected to be very challenging if they can be implemented at all. All three open-water tactics have large seasonal variations in feasibility, with RGI's rising to 84% to 90% in the winter, meaning that any of these response operations would be, at best, possible less than 20% of the time. Of these, the application of vessel dispersant has the lowest RGI to a small degree.

For near-shore mechanical recovery, marine forecasts were used to represent sea state, which makes this number conservative when compared to the other RGI. At least some of the Aleutian Islands have

embayments that offer protection from the sea and these locations always have sensitive habitat and are used as a refuge for many sensitive species. Experience during the Selendang Ayu response proved that near-shore response, shoreline protection, and shoreline cleanup tactics could be successfully implemented, even through the winter months.

Figure 15 shows the results for different types of operations based on different locations within the Aleutian Islands sub-area. This figure also includes an indication of how often key airports are closed to jet and propeller planes based on weather. This provides one indication of the potential challenge to delivering equipment from other regions or moving it around within the region by air.

Figure 15



Current Marine Salvage Resources

Currently there are four companies certified for the Western Alaska Captain of the Port Zone as primary resource provider that can enable vessel operators to comply with the Salvage and Marine Firefighting regulations (33 CFR 155, Subpart 1).
These four companies are listed in the U.S. Coast Guard's Homeport page and are:

Marine Response Alliance
Donjon-Smit
Resolve Marine Group
T&T Salvage

There is also one resident salvage company based in Dutch Harbor. In 2013, the national Resolve Marine Group partnered with the 35 year-old Magone Marine Service, Inc.

Based on available subcontractor equipment and asset lists, the four primary resource providers draw from the same pool of subcontractors in Alaska and the Lower 48. For instance, the Dutch Harbor resident tugs operated by Dunlap Towing and Harley Marine Services are listed as subcontractors for towing service with both the Marine Response Alliance and Resolve Marine Group per those companies' websites. Although each company has their own salvage masters and some limited proprietary equipment in Alaska, a vast majority of their equipment is located in the continental United States. To provide the required capabilities in Alaska, the primary resource providers have established networks and contracts with other companies, as subcontractor support. This support ranges from a list of resident and transient tugs, fire suppression materials and pumps, commercial diving and other salvage equipment.

Storage Barge

Adequate oil storage (whether from cargo or bunkers) is necessary to support lightering operations as well as secondary storage for oil spill response. Resolve Marine has staged a 21,500 bbl. oil recovery barge in Dutch Harbor. This in-region barge represents a significant increase in storage for lightering and spill response and would be able to mobilize to support activities in different parts of the region.

Other in-region assets include tank trucks, vacuum trucks, drums and portable skid tanks, which are not will suited to lightering operations. There are two dedicated oil storage barges with a capacity of 249 bbl. each, which are owned by the Alaska Chadux. In addition, Alaska Chadux has two 59-bbl towable bladders and could cascade more oil storage devices if needed. There is also a heavy-lift barge based in Dutch Harbor2. Other dedicated response barges are based in Cook Inlet and Prince William Sound, and would take days to arrive even in Unalaska, or longer to reach the Western Aleutian Islands assuming that barges could be released from local obligations and the weather was conducive to transit:

Cook Inlet: CISPRI Barge 141 (operated by Ocean Marine Services) would take just over 3 days to travel at 9 knots3 the approximately 700 nm from Nikiski to Unalaska.4 It has a capacity of 69,411 bbl. (CISPRI, 2010)

Prince William Sound: SERVS keeps several barges, with capacities up to 104,791 bbl. in Valdez (APSC, 2013). A barge would take approximately 4 days to travel approximately 850 nm at 9 knots from Valdez to Unalaska.

2 http://www.resolvemarine.com/opa90/opa_90_coverage_table.php

3 An assumed speed of 9 knots is used as an assumed average speed for an empty barge traveling under calm conditions. This is a rough calculation for illustrative purposes only

4 The barge is located in Nikiski in the summer, and moved to the ice-free waters of Seldovia for the winter.

9. SPECIAL PROCEDURES

On June 1, 1998, in the wake of the November 1997 grounding of the Kuroshima at Summer Bay, the United States Coast Guard Captain of the Port for Western Alaska issued Severe Weather Guidelines for the Aleutian Islands enumerating operating rules for offloading and onloading procedures for vessels at anchor. These guidelines are triggered at the "gale force" level of wind strength.

In February of 1999, the freighter Hekifu, which was in the process of attempting to comply with the Severe Weather Guidelines and move away from a vulnerable anchorage, encountered a severe and unpredicted increase in wind force. Subsequently, the anchor broke free of the bottom and the ship grounded on Rocky Point, Iliuliuk Bay.

March and April of 1999 brought a series of hurricane force storms accompanied by unprecedented snowfall and low barometric pressures. In the week between March 17 and March 25, three such storms hit Unalaska Island.

The Hekifu grounding made it apparent that more guidelines were needed to proactively address Port safety, analyze the approaching weather systems and decide on an appropriate course of action before severe weather arrives. These guidelines are divided into four general practices: the severe weather plan, winter ground tackle standards, seasonal anchorage restrictions, and general anchoring guidelines.

10. MARINE CASUALTY PREVENTION

Port of Dutch Harbor Severe Storm Plan, Winter Rules and General Anchoring Guidelines.

Severe Weather Plan

Upon notification of a storm warning by NWS, the U.S. Coast Guard Marine Safety Detachment Unalaska (MSD Unalaska) will contact the Alaska Marine Pilots (AMP), and vessel agents or masters to apprise them of the approaching weather system. The storm system will be tracked by all means possible including satellite photographs available via the National Weather Service Alaska Region internet website http://pafc.arh.noaa.gov/marfcst.php. When MSD Unalaska, AMP, and vessel agents or masters agree that a severe storm is imminent, the Port of Dutch Harbor office will be notified by fax, and the following steps will be taken:

1. Taking into account the predicted storm strength and wind direction, an analysis will be done by MSD Unalaska and AMP assessing the number of large vessels in the Port, their location, and their vulnerability to the approaching weather.

2. Upon agreement that certain vessels are at risk from the approaching weather, or from sea states generated by the approaching weather, MSD Unalaska will issue a notice to the agent or master of the at-risk vessels. Any at risk vessel will be directed by MSD Unalaska to prepare for severe weather, weigh anchor and move to sea, or to move to a less vulnerable anchorage. **Notices will be faxed to the vessel agent, followed by a phone call to confirm receipt. Agents will relay the notice to the at-risk vessel's master immediately.** If the vessel agent cannot reach the vessel master, MSD Unalaska will be immediately apprised that notification to that vessel has not taken place. If a vessel agent cannot be reached, the notice will be relayed directly to the vessel master. The

Port of Dutch Harbor will be made aware of the notices by fax.

3. Upon notification to an at-risk vessel, AMP and the vessel agent or master will coordinate implementation of the notices issued by MSD Unalaska. When multiple vessel departures are necessary, AMP will decide the order of departures, with the most at-risk vessel first. A moored vessel will not normally be required to move unless the severity of the weather clearly poses an imminent danger if the vessel were to remain at the dock.

4. In the event of unpredicted and sudden weather, MSD Unalaska, AMP, and the vessel agent or master will agree on whether the vessel will be instructed to weigh anchor and put to sea, or be moved to another anchorage. The vessel(s) will make ready to depart before the wind increases to a point that would endanger the vessel, pilot vessel, or the pilot trying to embark or disembark the vessel. The Port of Dutch Harbor will be notified of the agreements by fax.

5. If the Port Director is not in Unalaska, or is otherwise unavailable, the Acting Port Director will make all decisions as pertains to this plan. The supervising officer, MSD Unalaska under the authority of the Captain of the Port, Western Alaska will issue Captain of the Port orders to enforce these provisions as necessary.

11. WINTER GROUND TACKLE STANDARDS FOR VESSELS ANCHORING IN THE PORT OF DUTCH HARBOR

Preface

The bathymetry of the Port limits the number of useable anchorages for single screw, non-bow thrusted, non-controllable pitch propeller (CPP) vessels of 85 meters and above. The problem of large vessels anchored in the Port and dragging anchor in severe weather is due to the depth of anchorage, bottom characteristics, the vessel's loaded condition, and insufficient length of useable anchor chain aboard. Vessels with insufficient anchor chain for their anchorage will, depending on wind direction, drag ashore or drag off the assigned anchorage usually into a greater depth of water, further reducing the scope of the anchor chain, suddenly and dramatically decreasing the anchors holding capability.

Given the magnitude of winter weather conditions in and around the Port of Dutch Harbor, vessels without certain equipment are at greater risk in severe weather. Bow thrusters capable of bi-directional thrust control greatly increases the ship's ability to hold position. Controllable pitch propellers (CPP) add a great deal of control by using a vessel's engines to help hold position in severe weather. Placing a second anchor will greatly reduce shear force against the vessel as wind forces the ship to yaw back and forth. The minimum vessel size reflects that larger vessels have greater wind sail area and are more subject to control problems in high winds.

The following ground tackle standards for the Port are strongly suggested. These standards are intended to ensure single screw, non-bow thrusted, non-CPP vessels meet or exceed the minimums to anchor in the area between the months of October 1st through April 30th.

1. A single screw, 85 meters and larger vessel(s) without a bow thruster, or controllable pitch propeller (CPP), will maintain 10 useable shackles/shots (275 meters) of chain to the waters edge for both port and starboard anchors

2. A single screw, 85 meters and larger vessel(s) without a bow thruster, or controllable pitch propeller (CPP) that is anchored in the Port that has less than the recommended lengths of anchor chain will make arrangements with a tug of sufficient horsepower and size to control the vessel at all times in all weather conditions for any weather prediction of 45 knots or greater by the NWS while that vessel is at anchor in the Port. A written request for a waiver may be submitted and agreed upon if AMP, the Port and MSD Unalaska agree that the vessel is unlikely to drag anchor in its present location, taking into account the quality and size of the vessel's ground tackle, known vessel characteristics, location of anchorage, water depth and holding characteristics of the bottom.

3. Vessels anchoring are to take great care in fixing the vessel's position by all means available. In selecting an anchor position, a vessel's loaded condition, depth of water, type of bottom, and the amount of shackle/shots in the water shall be considered. This information must be recorded in the ship's log book. An accurate swing and drag circle will be plotted on the vessels navigational chart. Those vessels equipped with a radar system capable of plotting this information should maintain a prudent and diligent plot at all times during severe weather conditions.

Seasonal Restrictions of Anchorages

Because of restricted maneuvering room and close lee shores in certain wind conditions, the South Iliuliuk anchorage described as south of a line from Rocky Point buoy east to the opposite shore on a bearing of 118 degrees true, and the Dutch Harbor anchorages, described as west of a line from Rocky Point buoy north to Dutch Harbor Spit Head light, will be utilized for anchorages between October 1st and April 30th by permission only. Permission **MUST** be obtained from MSD and the Port before anchoring any vessel in these restricted areas. Length of stay, reason for requesting anchorage in a restricted area, and present weather conditions and forecasts will be considered in granting permission to anchor in the restricted areas.

General Anchoring Guidelines

1. If a vessel at anchor intends to conduct any maintenance of their main propulsion systems that will affect in any way the vessel's ability to maneuver, the vessel agent or master **MUST** notify MSD Unalaska and the Port of Dutch Harbor and hire a standby tug "of suitable size and horsepower that can control the vessel in all weather conditions". Vessels that have become disabled through mechanical failure **MUST** notify MSD Unalaska and the Port of Dutch Harbor, and provide a detailed synopsis of the failure and an estimated time to affect repairs. A standby tug "of suitable size and horsepower that can control the vessel in all weather conditions" will be required for these vessels as well.

2. When a vessel has another vessel alongside while at anchor, and is planning to disable their Main Propulsion Systems for maintenance purposes, all of the vessels involved **MUST** notify

MSD Unalaska and the Port of Dutch Harbor prior to conducting any maintenance. The vessel with full maneuverability will assume full responsibility for the disabled vessel while alongside.

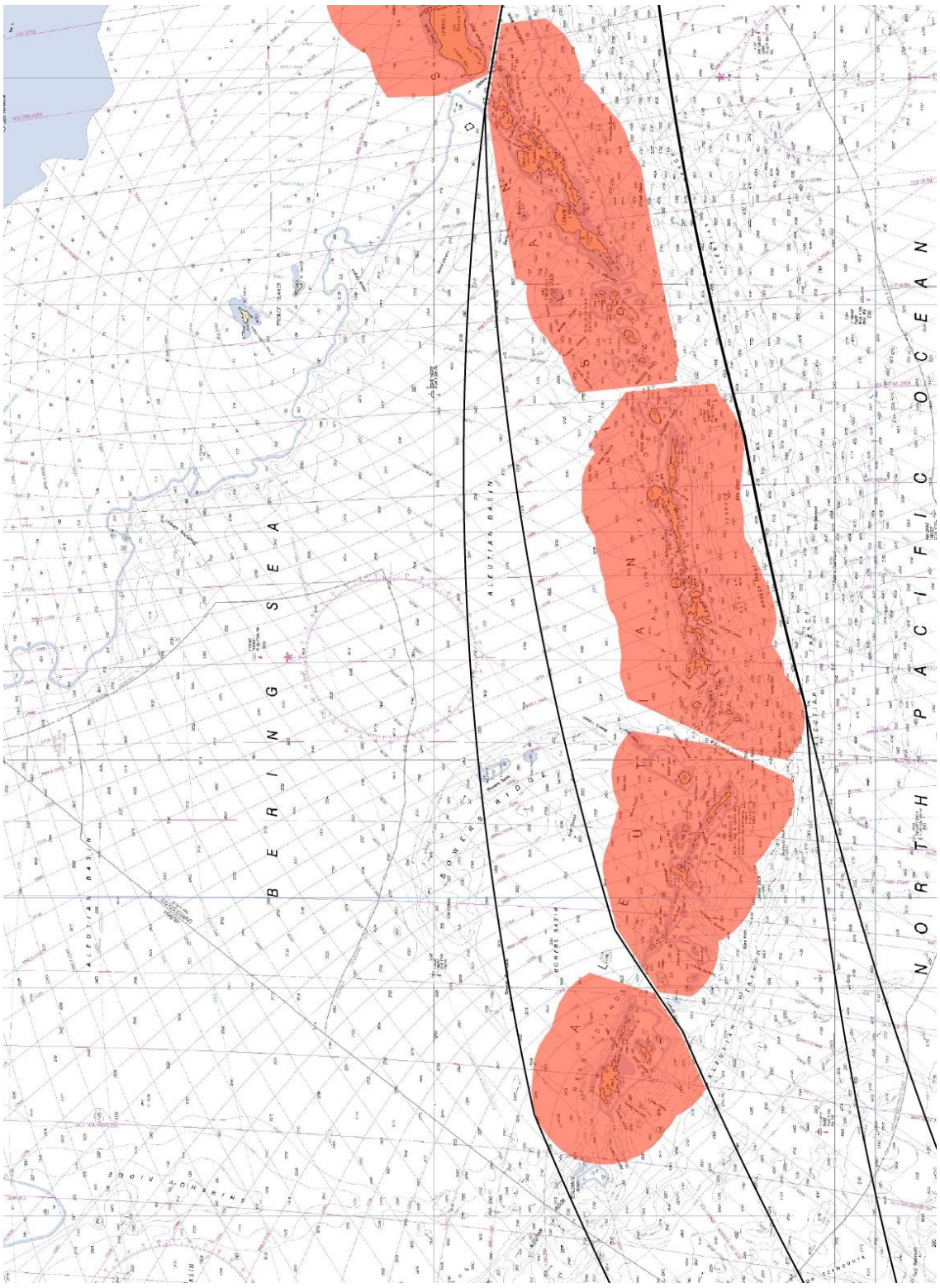
Summary

By documenting and enforcing prudent marine practices suitable for the geography and often-severe climate of the Port, marine casualties such as the Kuroshima and Hekifu can be avoided. These measures are not meant to cause unnecessary delays, or costs to ship owners and their agents. The intent of this plan is to ensure that vessels have the necessary equipment and knowledge suitable to anchor in the area, and to mitigate any potential hazardous weather conditions before the conditions deteriorate to the point that moving the vessel is no longer possible or the pilot is endangered trying to board. Ships will often delay departure, or will not call for a pilot until weather conditions force them to stop their current loading operations. By that time, attempting a departure has placed the vessel in extremis and will place the pilot in danger if he/she is needed to guide the vessel to safety. The Port of Dutch Harbor Severe Storm Plan is intended to safeguard the Port, City of Unalaska, vessel crews, and the environment from marine casualty and the potential pollution resulting from vessel groundings.

12. RECOMMENDED ROUTING MEASURES

Designating areas to be avoided near sensitive or hazardous shoreline and preferred passes for use in international transit assist to prevent a vessel that loses propulsion or steering from drifting onto shore before a rescue can take place. Vessel monitoring by Automated Identification System (AIS) will facilitate the prompt detection of a vessel deviating from these routes or seeming to drift or otherwise be in danger.

On December 4, 2014 the U.S. Coast Guard submitted a proposal to the International Maritime Organization Sub-Committee on Navigation, Communication and Search and Rescue. The proposal aims to establish five recommendatory areas to be avoided (ATBAs) in the region of the Alaska Aleutian Islands for vessels making transoceanic voyages through the Bering Sea and North Pacific Ocean adjacent to the islands. In most areas, the proposed ATBAs extend no further than 50 nautical miles from the shoreline of the islands, with a few areas of greater distance. The 50 nautical mile buffer allows time for repair or time to launch an emergency response effort to a foundering vessel before it runs aground and damages sensitive resources. It will also reduce the possibility of ships grounding on the shoreline due to negligent navigation. Course alternations due to the establishment of the ATBAs will be minimal. The proposed ATBAs will allow ships to follow existing traffic patterns. The establishment of an ATBA will add approximately ten (10) nautical miles to an average overall transoceanic voyage.


BERING SEA
NORTH PACIFIC OCEAN
ALEUTIAN BASIN
BOWERS RIDGE
BOWERS BASIN
ALEUTIAN BASIN
ALEUTIAN

ANNEX 1: ALTERNATIVE PLANNING CRITERIA

The Alternate Planning Criteria for the Aleutians subarea is a standalone document. It can be found at http://dec.alaska.gov/spar/perp/plans/scp_al/Aleutians%20APC%20Annex.pdf.

ANNEX 2: REFERENCES

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