



ARCTIC ALASKA

Oil Spill Prevention & Response Requirements Primer



This is not a response plan.

Anyone witnessing an oil spill, chemical release or maritime security incident should call the *National Response Center hotline at 1-800-424-8802.*

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Many thanks for all the thoughtful comments on the draft version from:

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TABLE OF CONTENTS

1. Background	4
Purpose of this primer.....	5
What size spills are possible.....	6
Potential spill sources.....	7
State and federal jurisdictions related to spill prevention and response	8
What is 400 gross tons?	10
What happens when oil spills to water?.....	12
2. Prevention	14
Prevention regulations applicable in Arctic Alaska	15
Location-specific requirements and recommendations	16
3. Response	18
Oil spill response strategies	19
Response planning framework.....	20
Government response plans	21
Operator response plan requirements – Vessels.....	22
Operator response plan requirements – Facilities	23
How is a response organized?	24
How might communities get involved in a response?	25
4. Recovery	27
Who pays for a response?.....	28
How are losses determined and compensated?.....	29
5. Acronyms & References.....	30

BACKGROUND

We use “Arctic Alaska” to refer to the marine and coastal areas from the Aleutian Islands north to the Canadian border. Arctic Alaska is a large and diverse region with strong connections to its millions of acres of ocean. The Bering Sea and U.S. portions of the Chukchi and Beaufort Seas are integral parts of Arctic Alaska’s culture and economy, representing some of the most productive ocean ecosystems in the world. These areas feed communities and host valuable commercial fisheries and sensitive ecosystems.

A marine oil spill in the region may be difficult to respond to effectively, and may have significant impacts to resources of importance both locally and nationally.

This section focuses on basic information and context useful for understanding how the state and federal requirements discussed in later sections work, including:

- *Purpose of this primer*
- *What spills are possible*
- *Potential spill sources*
- *State and federal jurisdiction related to spill prevention and response*
- *What is 400 gross tons?*
- *What happens when oil spills to water?*

RUSSIA

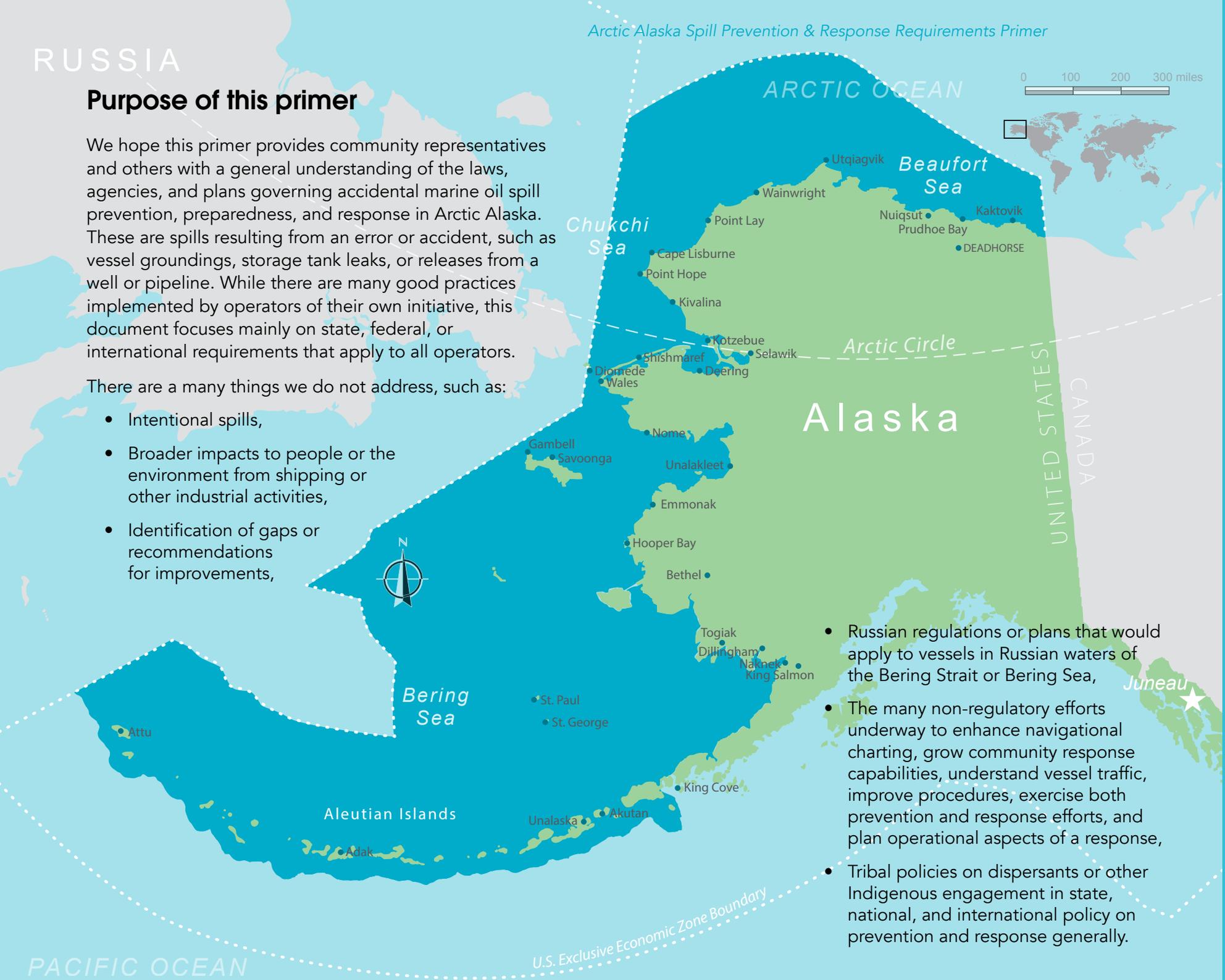
Purpose of this primer

We hope this primer provides community representatives and others with a general understanding of the laws, agencies, and plans governing accidental marine oil spill prevention, preparedness, and response in Arctic Alaska. These are spills resulting from an error or accident, such as vessel groundings, storage tank leaks, or releases from a well or pipeline. While there are many good practices implemented by operators of their own initiative, this document focuses mainly on state, federal, or international requirements that apply to all operators.

There are a many things we do not address, such as:

- Intentional spills,
- Broader impacts to people or the environment from shipping or other industrial activities,
- Identification of gaps or recommendations for improvements,

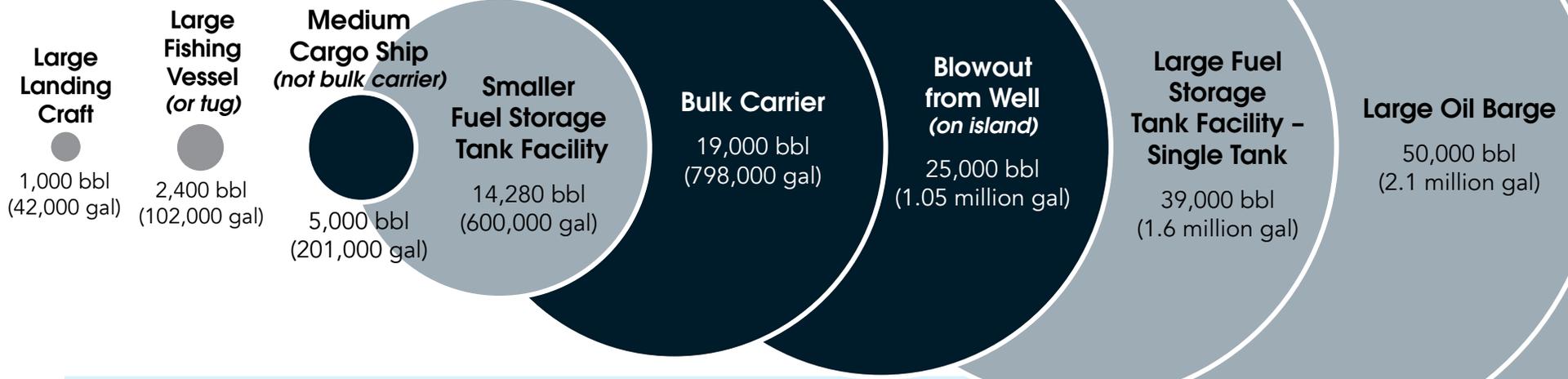
- Russian regulations or plans that would apply to vessels in Russian waters of the Bering Strait or Bering Sea,
- The many non-regulatory efforts underway to enhance navigational charting, grow community response capabilities, understand vessel traffic, improve procedures, exercise both prevention and response efforts, and plan operational aspects of a response,
- Tribal policies on dispersants or other Indigenous engagement in state, national, and international policy on prevention and response generally.



PACIFIC OCEAN

What size spills are possible?

Nobody can predict the size of an oil spill, nor the conditions in which it may happen. Generally in response planning, though, it is prudent – and often required – to consider the largest possible spill even if it is highly unlikely. The term “worst case discharge” is used in some of the regulations described in this document. A few examples are provided here simply to illustrate the differences among different types of operations. These do not necessarily represent the largest – or smallest! – possible spills in Arctic Alaska, nor anything about how likely they are to occur. The amount that may reach water will also depend on what is actually released or, for a land-based facility, what the conditions are and the extent of additional containment barriers. Potential spill volumes may also change if activities in the area change.



What type of oil?

There are many different types of oil, all of which will behave differently if spilled. The effects will be different as well. Two general categories reflected in the types of oil or fuel that could spill in Arctic Alaska are shown here:

- **Persistent oil** – such as heavy fuel oil used in large ships or crude oil produced on the North Slope – is most likely to last longest in its recognizable form in the environment
- **Non-persistent oil** – such as diesel, jet fuel, gasoline or any other refined product distributed throughout the region – tends to evaporate or dissolve more quickly

Approximate volumes are used for simplicity. Volumes for specific operations are used as examples based on government databases or documents.

Potential spill sources

Spills to marine waters could come from a variety of operations in Arctic Alaska. Understanding spill prevention or response planning starts with considering the potential sources.

Some activities occur throughout Arctic Alaska, such as delivering fuel and goods to communities, while other activities vary widely, such as oil and gas exploration and production on the North Slope.

Spill sources and the type of oil or other cargo in them may change over time. For example, vessel fuels may change, as can the mix of products delivered to communities.

Potential Spill Source	Potential Incidents	Potential Products Spilled
Vessels	<ul style="list-style-type: none"> Tanker or tank barge groundings, collisions, or allisions that result in partial or complete loss of cargo. Fuel oil spills from non-tank vessels. Spills that occur during vessel refueling/bunkering operations. Small fuel oil or lubricant oil spills from fishing vessels. 	Fuel oil (bunkers), diesel fuel, gasoline or aviation fuel, hazardous cargoes
Oil and Gas Exploration or Production	<ul style="list-style-type: none"> Spills resulting from exploration (coastal/offshore) or production (coastal/onshore). Pipelines (both subsea and on a causeway) on the North Slope. 	Crude oil, vessel fuels, oil/gas/water mixture (Crude oil or oil/gas/water mixture in pipelines)
Oil Storage Facilities	<ul style="list-style-type: none"> Tank leak or rupture that reaches marine waters. Spill or leak while transferring oil to vessels. Spill or leak from facility piping that reaches marine waters. 	Diesel, gasoline, aviation fuel
Other Facilities	<ul style="list-style-type: none"> Small or abandoned tanks or infrastructure. Fuel truck release that travels to water. Spills from smaller fuel tanks or bladders that travel to water. 	Diesel, gas, heating oil, hazardous materials

Tanker Delivering Fuel in Region

350,000 bbl
14.7 million gal

(based on cargo volume,
not including vessel fuel)

State and federal jurisdictions related to spill prevention and response

Most oil spill prevention and response requirements stem from the State of Alaska or U.S. government laws and regulations. Generally, the state waters of Alaska extend to 3 nautical miles (NM) from shore. Operations on land or within this area are subject to state oil spill prevention and response requirements.



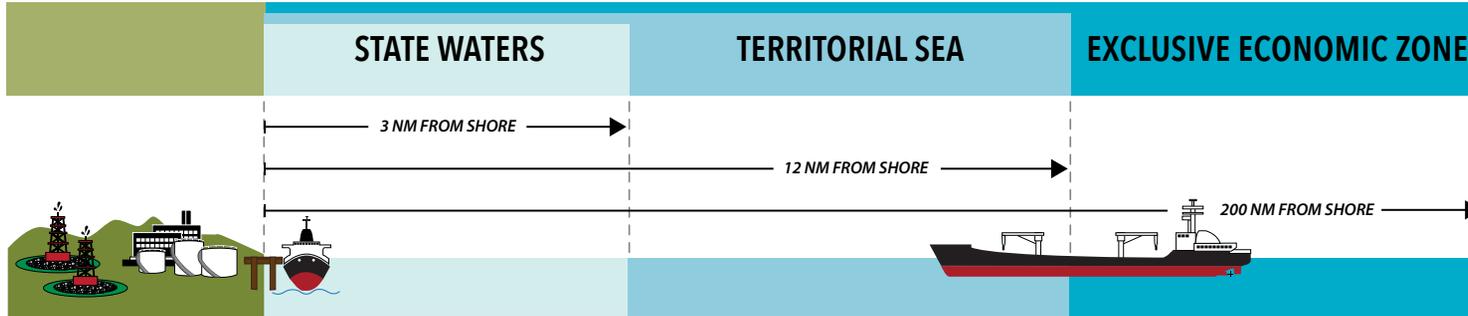
Federal requirements can apply on land or in state waters, too, but also extend to the territorial sea (out to 12 NM from shore) or the U.S. Exclusive Economic Zone, or EEZ (out to 200 NM from shore).

There are also international requirements, which, in the U.S. and for U.S.-flagged vessels, are implemented through U.S. federal laws and regulations. In Arctic Alaska, these are most likely International Maritime Organization (IMO) agreements implemented through U.S. Coast Guard regulations.

Merchant or commercial vessels are registered to a particular country (or “flag”) and are subject to the rules of that country. Thus, vessels flying a U.S. flag must comply with U.S. requirements wherever they go. Vessels are also subject to “port state control,” meaning they must adhere to the rules of the countries where they make port calls. For instance, vessels calling at U.S. ports may be inspected by the U.S. Coast Guard.

Under international law, vessels registered to a foreign country have the right to pass peacefully through the waters of another country as long as they do not stop, fish, conduct surveys, or engage in any threatening activities. Vessels in such “innocent passage” are still required to comply with international safety standards as overseen by their flag state, but are not subject to U.S. oil spill response planning laws.

The figure on the following page provides a very general overview of how state and federal jurisdictions apply to oil spill prevention and response laws discussed in this guide. Fishing and other regulations may be different and are not addressed here. Also note that both the state and federal response plans referred to below include prevention elements as well (see Prevention section). →



Generally, the U.S. and Alaska oil spill prevention and response regulations apply as follows:

U.S.:

- U.S.-flagged vessels are always subject to U.S. laws related to safety, crewing, and navigation. This includes international requirements.
- Foreign-flagged vessels calling at U.S. ports may be inspected for compliance with international requirements.
- Vessels 400 GT or larger must have a U.S. approved vessel response plan if they are U.S.-flagged or are calling at a U.S. port on their voyage.

Foreign-flagged vessels must have a marine pilot in state waters (and some additional bays)

Alaska: Tankers and oil barges, and other vessels 400 GT or larger, must have state-approved response plans in state waters. *Cargo or other "non-tank" vessels are exempted if passing through state waters without stopping in Alaska.*

U.S. & Alaska: Oil and gas production, exploration, pipelines, and storage on land and in state waters are regulated.

Foreign-flagged vessels that are not calling at a U.S. port – e.g., if going between Canada and China – are in innocent passage and do not require a U.S.-approved response plan.

U.S.: Oil & gas operations outside state waters are subject to U.S. laws. This would include activities that extend past the EEZ on the U.S.'s continental shelf, if conducted.

What is 400 gross tons?

Many of the spill prevention and response measures described in this document apply to vessels 400 gross tons (GT) or larger.

Gross tonnage is one way of measuring the volume of a vessel itself – not necessarily its cargo capacity. Most people would call a 400 GT vessel a boat, not a ship. These pages provide some examples of vessels that have been active in Arctic Alaska and are around 400 GT – and a few examples of much larger vessels for contrast.

VESSEL TYPE:
LANDING CRAFT

FLAG: U.S.

GROSS TONNAGE (GT): 400

LENGTH: 104 feet

Many landing craft are smaller than 400 GT



VESSEL TYPE:
LARGE FISHING VESSEL

FLAG: U.S.

GROSS TONNAGE (GT): 412

LENGTH: 111 feet

Most fishing vessels are less than 400 GT – except the largest crabbers/trawlers and catcher/processors that stay at sea to process their catch



VESSEL TYPE:
OCEAN-GOING TUG

FLAG: U.S.

GROSS TONNAGE (GT): 424

LENGTH: 119 feet

Tugs that travel among larger ports are usually more than 400 GT. There are many smaller tugs in the region as well.



STI Donald C Trauscht



photo: © Krijn Hamelink

VESSEL TYPE:
TANKER (PRODUCT)
FLAG: Marshall Islands
GROSS TONNAGE (GT): 30,000
LENGTH: 601 feet

YM Navigator



photo: © Erwin Willemse

VESSEL TYPE:
BULK CARRIER
FLAG: Panama
GROSS TONNAGE (GT): 43,000
LENGTH: 750 feet

Crystal Serenity



photo: © Mick Prendergast

VESSEL TYPE:
CRUISE SHIP
FLAG: Bahamas
GROSS TONNAGE (GT): 68,880
LENGTH: 820 feet
Much larger than most cruise ships active in Arctic Alaska; this vessel made a prominent voyage in 2016 as first large cruise ship to transit the Northwest Passage

Photos and vessel specs from marinetraffic.com. Photos used with appreciation for the photographers' permission.

What happens when oil spills to water?

When oil spills to the ocean, many factors interact to determine where the spill will spread, how the oil will change over time, and how it could affect the environment and those who depend on it. Key factors include the type and quantity of oil spilled, location of spill, and conditions at the time (winds, waves, current, temperature, tides, and sea ice).

Different oil types behave differently when spilled to water, and may have varied effects as well. Petroleum oils can be broadly characterized as persistent (crude, heavy fuel oil) or non-persistent (marine diesel gasoline, jet fuel). These terms refer to how long the oil generally stays in its recognized form in the environment. Persistent fuels spread more slowly than non-persistent, strand on the shore, or sink. Non-persistent oils quickly spread into a thin layer and more readily start to evaporate. All types of oil can be toxic to marine life and people.

The effectiveness of an oil spill response will depend on how quickly the appropriate equipment can be put to use. This requires people, vessels (or aircraft), equipment, and any supporting infrastructure required. Conditions during and following a spill will also affect any attempt to respond to the spill and the options available to responders. In Arctic waters, adverse weather, sea, and/or ice conditions sometimes limit or preclude response efforts.

The consequences of an oil spill most directly result from the effect of the oil on marine species and their habitat, but also include the health, economic, and cultural impacts that may occur to people who use those resources, or who engage in spill response activities. It is very likely that people will perceive the consequences of a marine pollution incident differently depending on how it affects them.

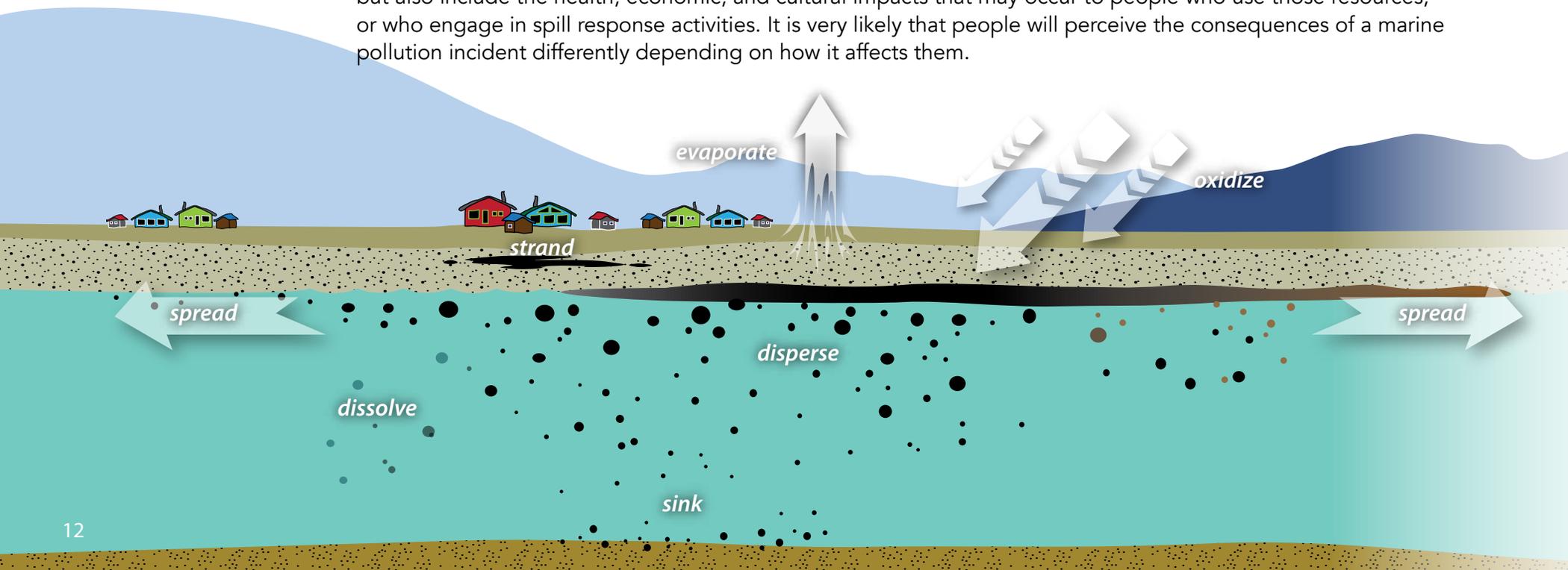




photo credit: © Ground Truth Alaska

PREVENTION

Keeping an oil spill from happening in the first place is far better than trying to clean one up, especially in places with limited infrastructure and vast distances like Arctic Alaska. Oil spills are prevented every day when equipment works correctly, personnel are present and performing their jobs adequately, and there is not interference from outside forces such as bad weather – or, of course, if oil is not used in the first place.

Spill prevention requirements in laws and regulations are intended to ensure – to the extent possible – that everything and everyone works as intended.

This section includes:

- *Prevention regulations applicable in Arctic Alaska*
- *Location-specific prevention requirements and recommendations*

Prevention regulations applicable in Arctic Alaska

This table summarizes requirements applicable throughout Arctic Alaska – and generally around the state (or country). Measures specific to particular locations within Arctic Alaska are noted on the next page.

	State	Federal
Vessels	<ul style="list-style-type: none"> • Alaska Department of Environmental Conservation (ADEC): Requires an ADEC-approved plan for oil tankers and barges which includes training, substance abuse prevention, medical monitoring, security, and transfer procedures and equipment [18 AAC 75.425(e)(2)] • Requires that foreign-flagged vessels must have a licensed marine pilot on board when navigating in state waters plus some bays [12 AAC 75.090] See next page. 	<p>Coast Guard:</p> <ul style="list-style-type: none"> • Mandates general vessel safety and operational requirements for U.S.-flagged vessels anywhere • Inspects foreign vessels calling in U.S. waters for compliance with international standards – such as double hulls – related to safety and operations • Sets procedures and equipment requirements for transferring oil/fuel between vessels (33 CFR § 156) • <i>Requirements for marine firefighting and salvage apply to tankers (33 CFR 155) but these are implemented through alternative compliance in Arctic Alaska. See next page.</i>
Oil Exploration and Production	<ul style="list-style-type: none"> • ADEC: Requires prevention measures for oil exploration and production, including drilling and pipelines on land or in state waters. These vary depending on the operations but include maintenance and testing, adherence to industry standards, training, corrosion control, relief wells, and training and substance abuse prevention¹ 	<ul style="list-style-type: none"> • Coast Guard: Creates general vessel safety and operational requirements for vessels, which apply to mobile drilling units/drilling ships • Bureau of Safety and Environmental Enforcement: Requires safe operation of oil and gas exploration, development, and production outside state waters, for example: barriers/containers to keep smaller spills from reaching water from the deck of a vessel or platform, well control, and overall equipment installation, maintenance, and inspection requirements.³ Response measures can also be included in lease agreements. • Environmental Protection Agency (EPA): See below. • Pipeline and Hazardous Materials Safety Administration: Sets construction, inspection, and maintenance requirements for oil pipelines⁴
Oil Storage Facilities	<ul style="list-style-type: none"> • ADEC: Requires that storage facilities meet state requirements for spill prevention if they hold more than 10,000 gallons of non-crude product or 5,000 bbl of crude oil, including a secondary containment area around the facility² 	<ul style="list-style-type: none"> • Coast Guard: Requires procedures and equipment requirements for shoreside facilities where a vessel (> 250 bbl capacity) loads or unloads oil or hazardous materials⁵ • EPA: Requires that facilities with more than 1,320 gallons of oil capacity above ground must meet basic spill prevention measures if a spill could reach navigable waters. This includes training, loading/unloading procedures and equipment, dikes or berms around storage tanks (or double-walled tanks), over-fill alerts, etc.⁶

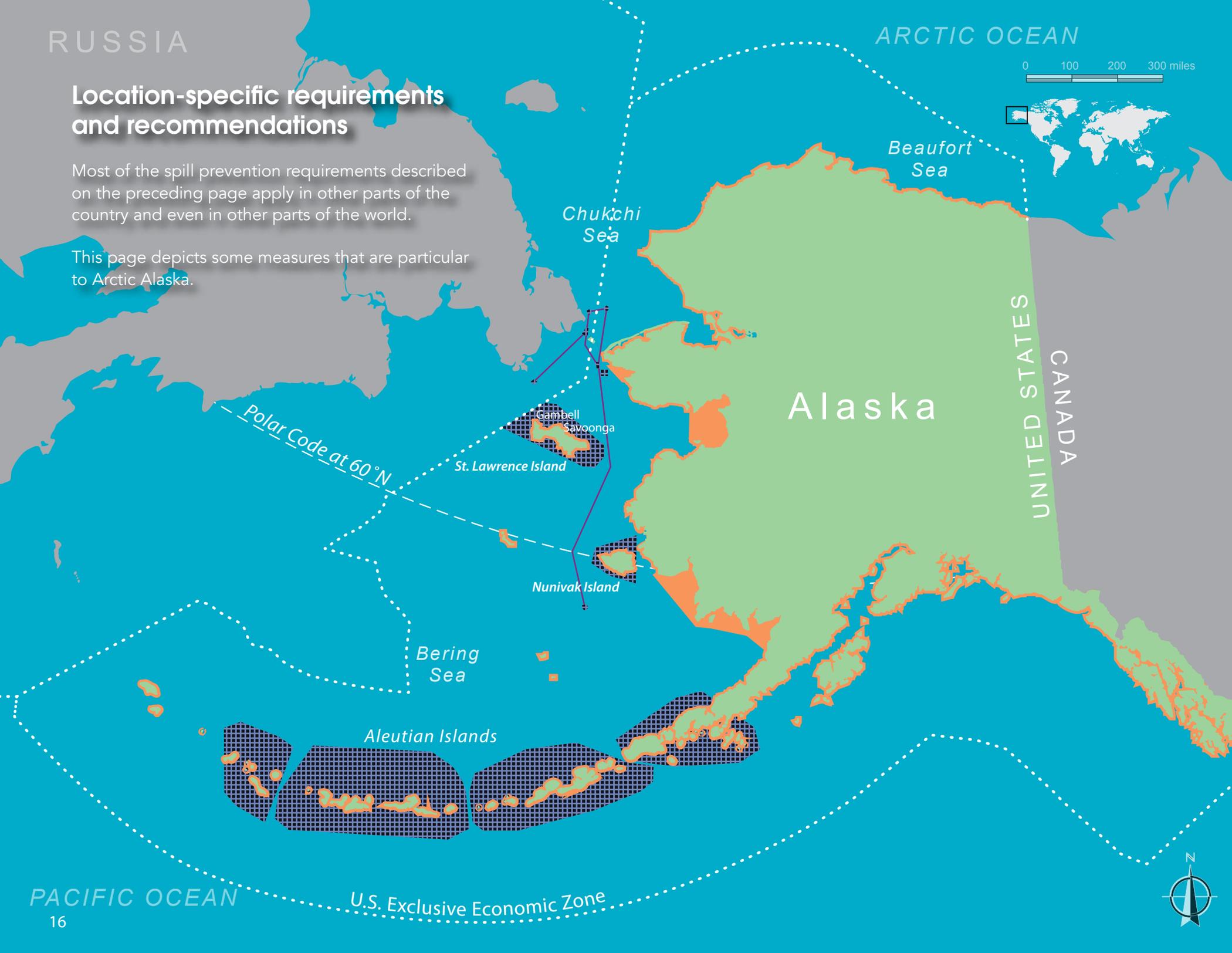
¹ 18 AAC 75.425(e)(2); ² AS 46.04.050; ³ 30 CFR § 250.300; ⁴ 49 CFR 195; ⁵ 33 CFR § 154; ⁶ 40 CFR § 112



Location-specific requirements and recommendations

Most of the spill prevention requirements described on the preceding page apply in other parts of the country and even in other parts of the world.

This page depicts some measures that are particular to Arctic Alaska.



Alaska

UNITED STATES
CANADA

Polar Code at 60°N

Chukchi Sea

Beaufort Sea

St. Lawrence Island

Nunivak Island

Bering Sea

Aleutian Islands

U.S. Exclusive Economic Zone



State-mandated Pilotage Waters

Foreign-flagged vessels must take on a state licensed marine pilot when navigating in pilotage areas. These are generally state waters plus some bays. Marine pilots undergo training and testing specific to the areas in which they are licensed to operate. The duty of marine pilots is to safely navigate a vessel to protect life, property, and the marine environment. (Pilots do not oversee other aspects of vessel activities or operations.)

International Maritime Organization Routing Measures (IMO)

The IMO has approved *voluntary* ships' routing measures to help ships passing through the region to avoid uncharted or particularly sensitive areas, or to stay far enough offshore to facilitate a rescue if needed. These include three different types of measures, all of which apply to vessels 400 GT or larger:

-  Areas to be Avoided (ATBA) unless a vessel has business there (port calls, fishing)
-  Recommended routes that vessels passing through the area should use (two-way routes through the Bering Strait)
-  Precautionary areas at the ends of the two-way routes through the Bering Strait

IMO Polar Code at 60° N

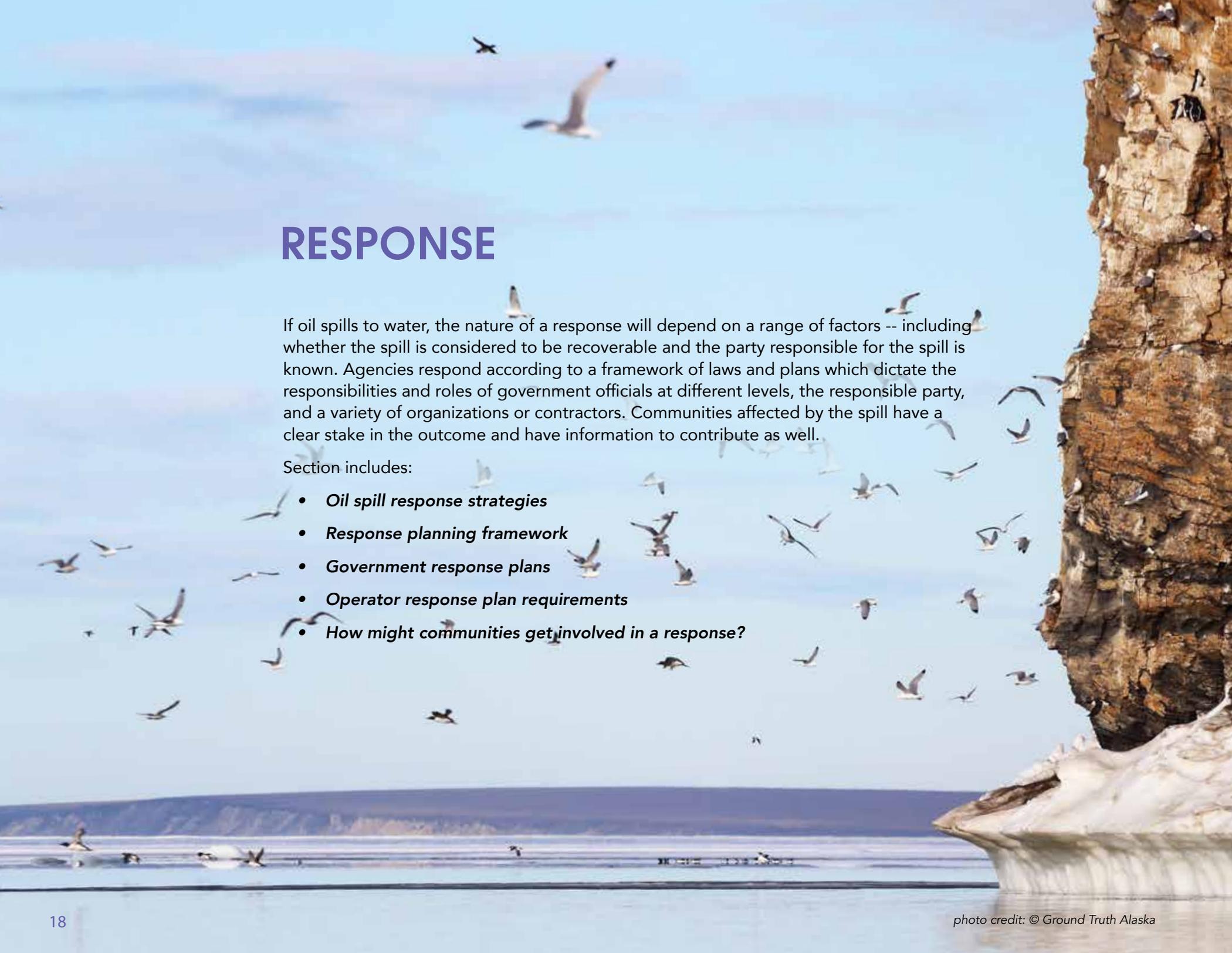
The IMO's Polar Code Safety Measures for Cold and Ice adds requirements to existing international agreements for vessels traveling in the polar regions. In Arctic Alaska this applies to vessels north of 60 degrees North in the Bering, Chukchi, and Beaufort Seas. Measures related to general safety and navigation all help prevent oil spills. This includes ensuring that the vessel and crew are prepared for extreme cold and sea ice conditions they may encounter on their planned voyage. Polar Code requirements are enforced by vessels' flag states and – in U.S. Arctic waters – by port state control through inspections by the U.S. Coast Guard.

Prevention Measures Required through Alternative Compliance with Federal Spill Response Regulations

Additional prevention measures are implemented in Arctic Alaska for some vessels as part of an alternative compliance approach. Operators of tankers, or other vessels 400 gross tons or larger that are subject to U.S. regulations at 33 CFR 155 can meet their obligations by joining a Coast Guard-accepted "alternative compliance" program. Two such options are approved within Arctic Alaska. Both monitor participating vessels when in the area to identify and respond quickly if a vessel has a problem.

1-Call Alaska covers "nontank" vessels only (cargo or passenger ships, for example) and monitors to ensure they follow the IMO routes unless calling at a port.

The Alaska Maritime Prevention & Response Network does the same, and also requires that tankers (which they cover as well as "non-tank" vessels) stay farther offshore of the Aleutians than the IMO requirements and use only Unimak Pass when transiting. The Network has implemented lightering best practices for tankers delivering fuel to barges in the region and requires all vessels to ensure accurate broadcasts for some vessels. (Both groups have varying spill response capabilities as well.)



RESPONSE

If oil spills to water, the nature of a response will depend on a range of factors -- including whether the spill is considered to be recoverable and the party responsible for the spill is known. Agencies respond according to a framework of laws and plans which dictate the responsibilities and roles of government officials at different levels, the responsible party, and a variety of organizations or contractors. Communities affected by the spill have a clear stake in the outcome and have information to contribute as well.

Section includes:

- ***Oil spill response strategies***
- ***Response planning framework***
- ***Government response plans***
- ***Operator response plan requirements***
- ***How might communities get involved in a response?***

<p>Mechanical Recovery</p> 	<p>Vessels maneuver containment boom to capture and concentrate spilled oil. Oil is then removed from the water's surface with a skimmer. Recovered oil is stored and disposed of.</p>	<ul style="list-style-type: none"> + Oil is removed from the environment. - Oil and water/debris must be stored. - Resource intensive (vessels, people, equipment).
<p>Chemical Dispersants</p> 	<p>Chemicals are applied to the oil spill that break the slick into smaller droplets that mix into the water, avoiding contamination of areas like beaches or tide flats.</p>	<ul style="list-style-type: none"> + Oil removed from the surface of the water. - Oil is not actually removed from the environment. - Impact of oil spill is shifted to below the ocean surface. - Dispersants themselves may be toxic.
<p>In-Situ Burning</p> 	<p>Vessels maneuver containment boom to contain and thicken the slick. Oil is then burned off the water's surface in a controlled fashion. Oil contained by ice may be able to be burned as well.</p>	<ul style="list-style-type: none"> + Oil removed from the surface of the water. - Potential for air quality impacts due to smoke. - Residue sinks if not collected and may be toxic.
<p>Tracking & Surveillance</p> 	<p>Spill observation and mapping via aircraft or marine vessel, tracking buoys, or infrared technology may be used to find the spill.</p>	<ul style="list-style-type: none"> + Critical for determining the extent and trajectory of an oil slick. - Method and effectiveness can be very limited by visibility.
<p>Shoreline Cleanup</p> 	<p>Spilled oil which reaches the shore can be collected through a variety of methods, including spraying down with hoses, soaking up with absorbent materials or digging (manually or with heavy equipment).</p>	<ul style="list-style-type: none"> + Oil is removed from shoreline or displaced into the water for removal. - Labor and time intensive. - Impacts may have already occurred, or could be worsened.

Oil spill response strategies

There are three main approaches to responding to an oil spill on the open water: mechanical recovery (booms and skimmers), spraying chemical dispersants, or burning the oil off the water's surface (in-situ burning). If a slick cannot be contained on the water, it may need to be cleaned up on shore. Tracking and surveillance are also critical elements of a response: if responders cannot find the oil, they will not be able to respond.

Each type of system has its own pros and cons, and limitations in terms of the weather, ice, or sea conditions in which it can be safely used. All options are subject to conditions in which they cannot be safely deployed, or would not perform as intended if they were.

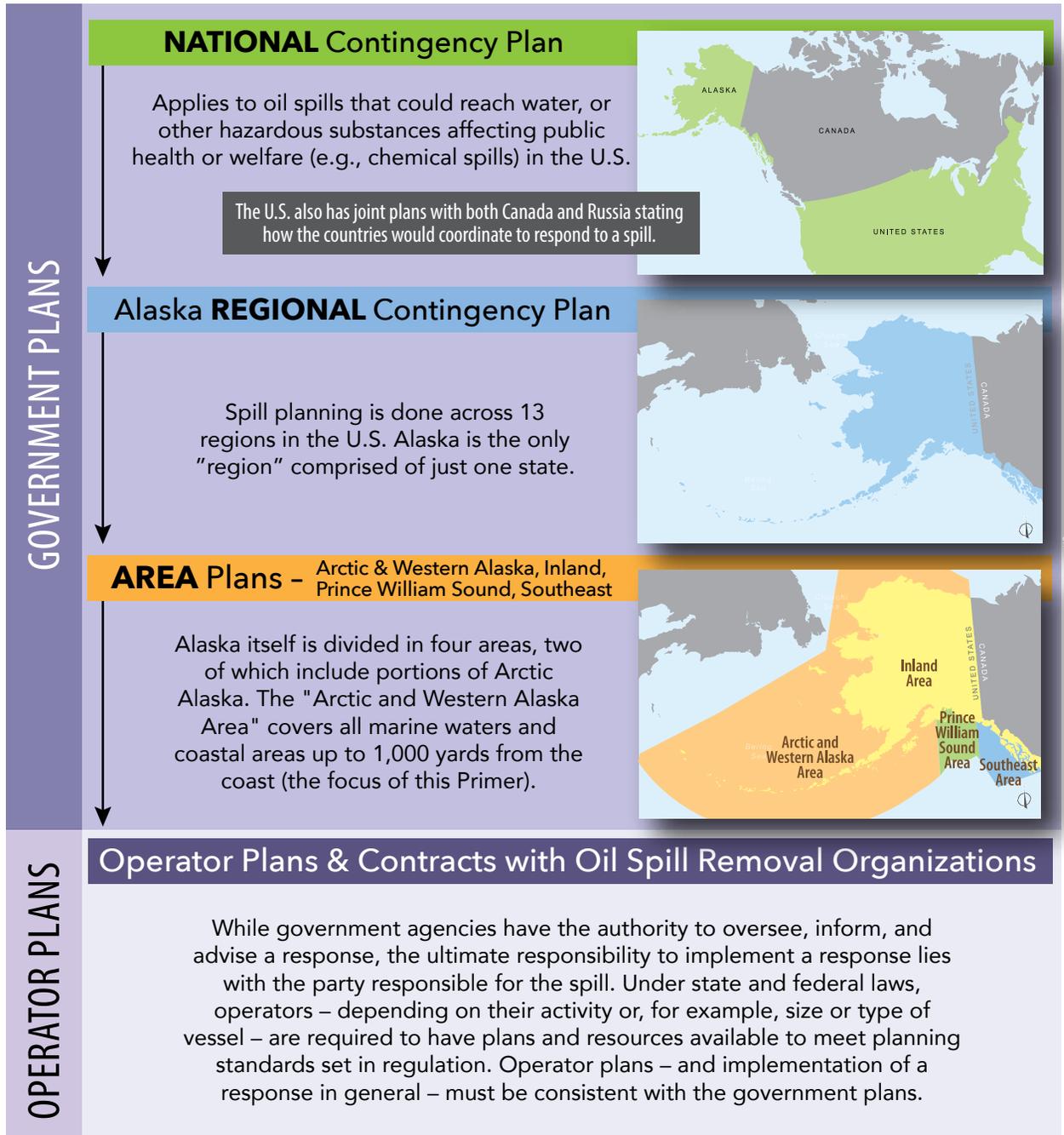
In addition to the general methods described here, it may also be possible to place boom in such a way as to deflect oil away from a particular area. There are also specialized methods being developed for containment at a wellhead, recovering or burning oil in ice conditions, and other emerging technologies.

Response planning framework

Three layers of plans describe how federal and state agencies will work together to respond to an oil spill affecting the marine waters of Arctic Alaska.

Government plans are maintained by standing committees of the relevant agency representatives and establish basic policy and coordination.

Local emergency plans may also come into effect, but these are not specific to oil spills. The National Contingency Plan describes the overall planning structure and is established under the Clean Water Act.



Government response plans

National Response Team consists of 15 federal agencies that oversee the National Contingency Plan.

The National Contingency Plan itself is written in regulations at 40 CFR 300.1-1105.

NATIONAL Contingency Plan (NCP)

- Outlines responsibilities of federal agencies during a spill response.
- Applies to oil spills that may impact navigable waters (or other spills if they may impact public health or welfare in any way).
- Requires use of Incident Command System (ICS) nationwide.
- Establishes responsibility of the Federal On-Scene Coordinator (FOSC) to represent federal agencies in a spill response.
- Identifies role of trustees for natural resources.
- Lists approved dispersants and other chemical products.
- Describes **regional** and area committee and plan requirements.

Alaska REGIONAL Contingency Plan (RCP)

- Describes federal and state agency response jurisdictions and responsibilities in Alaska.
- Offers guidance related to use of chemical dispersants and in-situ burning in Alaska.
- Addresses historic properties and endangered species.
- Outlines geographical areas within Alaska used for planning purposes.
- Offers guidance regarding requirements and responsibilities for **Area** Plans and Area Committees within Alaska.

EPA, U.S. Coast Guard and ADEC chair the Alaska Regional Response Team (ARRT) which includes both inland and coastal/marine regions.

The ARRT holds public meetings 2-3 times per year, maintains the RCP, and oversees the Area Plans (below).

U.S. Coast Guard and ADEC chair the Arctic and Western Alaska Area Committee (which oversees the marine/coastal government response plan in Arctic Alaska).

The Area Committee holds public meetings 2-3 times per year and has standing and ad hoc committees to update or address issues in the plan. The Area Committee consists of agencies, but participation from responders, communities and operators is encouraged.

Arctic and Western Alaska AREA Contingency Plan

- Outlines the roles of federal and state agencies, tribes, and local government.
- Describes general safety procedures.
- Contains basic information on operations in the Area.
- Outlines wildlife care needs.
- Identifies area-specific conditions.
- Includes required consultations and permits.
- Details logistics, salvage, and marine firefighting resources.
- Lists key contacts and community information.
- Describes the Regional Stakeholder Committee.
- References area-specific information such as Geographic Response Strategies to protect specific sites during a response and potential places of refuge for disabled vessels.

Operator response plan requirements – Vessels

Operators of vessels or facilities that could spill oil are required to have a plan in place that aligns with agency planning, and to have a certain amount of resources available to respond. Operators are often companies, but can also be public entities that have their own oil storage or other facilities that fall under the regulations.

Actual response operations will most likely be done by an Oil Spill Removal Organization, or OSRO, approved by the U.S. Coast Guard. (In state regulations this is referred to as a Primary Response Action Contractor, or PRAC, and is approved by the Alaska Department of Environmental Conservation.) In Arctic Alaska, this is most likely to be Alaska Chadux (vessels and shoreside activities throughout the area) or Alaska Clean Seas (North Slope oil and gas operations), or 1-Call Alaska (with alternative compliance for non-tank vessels).

	State (Alaska Department of Environmental Conservation) <i>Applies in state waters, unless a non-tank vessel is not stopping at an Alaska port.</i>	Federal (Coast Guard) <i>Applies to U.S.-flagged vessels or those calling at a U.S. port on their voyage</i>
Tank Vessels (tankers or barges that carry oil as cargo)	<ul style="list-style-type: none"> Spill response plans are required, including detailed response scenarios in different conditions, information about sensitive resources in the area of operation, initial response actions, and the prevention measures described on page 15.¹ Plans must demonstrate enough resources to meet a “response planning standard” (RPS), which is different for crude oil or non-crude oil cargoes. <ul style="list-style-type: none"> Non-crude cargo: Resources in the region to contain/control (but not necessarily cleanup) a spill of 15% of total cargo (capacity in 48 hours²) – Tankers with crude oil cargo must meet more stringent requirements, but do not currently operate in state waters in Arctic Alaska. Prevention credits, such as for having double-hulls, can be applied to reduce the RPS volume. 	<p>Requires vessel response plans, including a certain amount of response equipment, marine firefighting, and salvage services, with more resources required for tankers than non-tank vessels – those 400 GT or larger – that do not carry oil as cargo.⁴</p> <p>In Arctic Alaska, these are implemented currently through alternative compliance, which allows different approaches than those prescribed in the regulations for most areas. See page 17.</p>
Non-tank Vessels (e.g., a variety of “self-propelled” vessels 400 GT or larger)	<ul style="list-style-type: none"> Plans are required, but a “streamlined” plan option simply requires proof of a contract with an OSRO. Must have resources in the region the vessel operates (or can get there in 24 hours) to contain and control a spill of 15% of the vessel’s fuel capacity.³ 	

¹ 18 AAC 75.425; ² AAC 75.440; ³ 18 AAC 75.441; ⁴ 33 CFR § 155

Operator response plan requirements – Facilities

	State (Alaska Department of Environmental Conservation)	Federal
Oil Exploration and Production	<p>Spill prevention contingency plans are required for:¹</p> <ul style="list-style-type: none"> • <u>Exploration facilities</u>: Must have resources in the region to clean up 16,500 bbl from water in 72 hours (or in shortest possible time if spilled to land), plus an additional 5,500 bbl/day for 12 days² • <u>Production facilities</u>: Must have resources in the region to clean up 3 times the annual average daily oil production for the maximum producing well in 72 hours if it reaches open water (or shortest possible time if spilled to land)³ 	<ul style="list-style-type: none"> • Bureau of Safety and Environmental Enforcement: Requires oil spill response plans for oil exploration and production activities outside state waters, including a worst-case-discharge scenario⁶ • Environmental Protection Agency (EPA): Requires response plans for onshore and offshore oil production facilities including pipelines that are part of the facility⁷ • Pipeline and Hazardous Materials Safety Administration: Requires response plan including resources to respond to a worst-case discharge; identify sensitive areas and describe procedures⁸
Oil Storage Facilities	<p>Spill response plans are required,⁴ including resources to contain, control and clean up a spill equivalent to the largest tank volume. The volume that may be spilled to open water must be cleaned within 72 hours, while the volume that may be spilled to lands or other waters must be contained and controlled within 72 hours and cleaned up as soon as possible⁵</p>	<ul style="list-style-type: none"> • U.S. Coast Guard: Requires spill response procedure for facilities transferring oil or hazardous materials, in bulk, to or from a vessel with a capacity greater than 250 bbl.⁹ • EPA: Requires plans for onshore facilities¹⁰

¹ 18 AAC 75.425; ² AAC 75.430, .434; ³ 18 AAC 75.434; ⁴ 18 ACC 75.425; ⁵ AAC 75.432; ⁶ 30 CFR § 254; ⁷ 40 CFR § 112.9-11;

⁸ 49 CFR § 194; ⁹ 33 CFR § 154; ¹⁰ 40 CFR § 112.8

How is a response organized?

The National Contingency Plan requires the use of the Incident Command System (ICS) to facilitate the effective integration of multiple agencies and other organizations that otherwise operate under their own structures, titles, and norms. ICS creates a common organizational structure with a clear chain of command, responsibilities, terminology, and planning cycle.

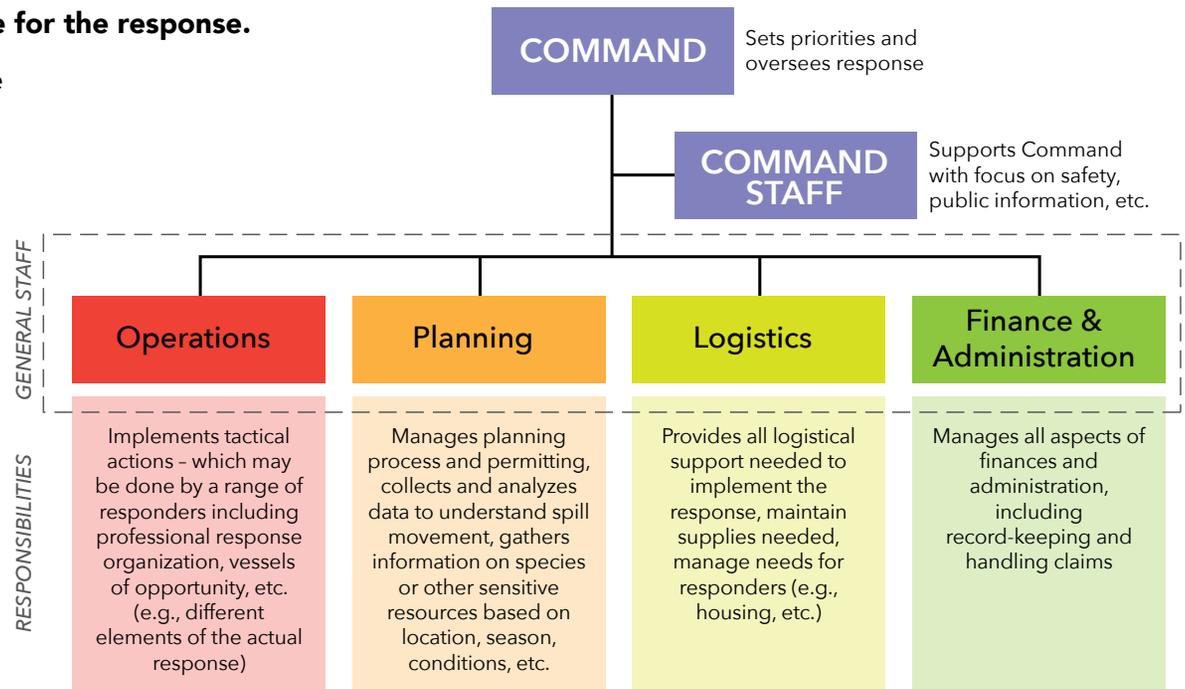
While a small incident could be managed by a single person, a significant response may be overseen by a **Unified Command**. Participants will depend on the area affected and relevant jurisdictions. For a marine oil spill response in Arctic Alaska, this could include:

- Responsible Party (spiller) – usually the Incident Commander
- ADEC (State On Scene Coordinator) representing the State
- U.S. Coast Guard (Federal On Scene Coordinator) representing the federal government
- Tribal On Scene Coordinator
- Local On Scene Coordinator

The spiller is responsible for the response.

Not all spills are traceable to a responsible party. In cases without an identified responsible party, monies from the Oil Spill Liability Trust Fund can be used to finance response operations.

As the response unfolds, Trustees will also begin the process of identifying damages (see page 28).

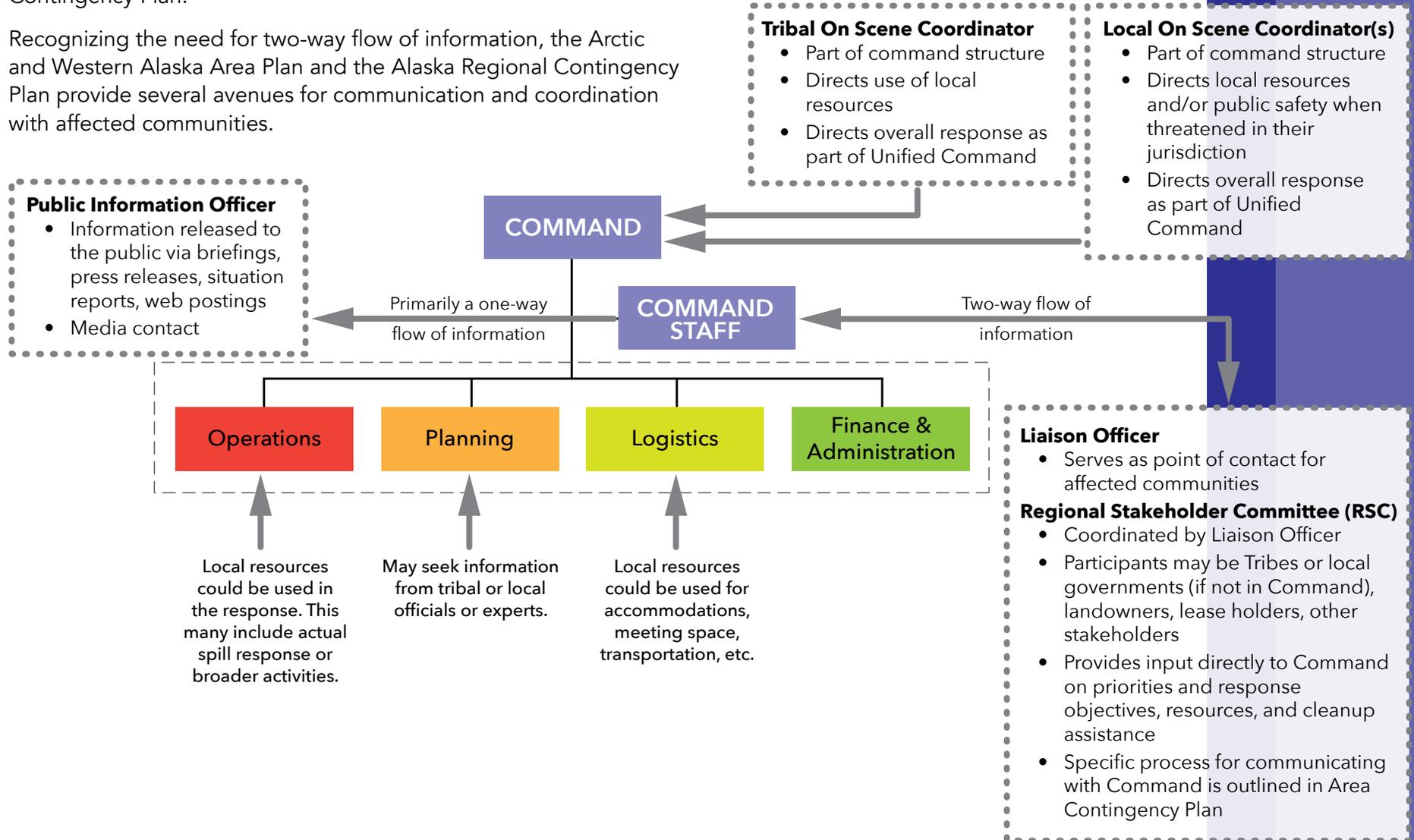


How might communities get involved in a response?

In the event of a marine oil spill, communities in the area will likely bear the brunt of the impacts. In addition to having concerns and questions, they may have knowledge, information and resources that could be useful to the response.

The roles described here are defined in the Arctic and Western Alaska Area Plan and Alaska Regional Contingency Plan.

Recognizing the need for two-way flow of information, the Arctic and Western Alaska Area Plan and the Alaska Regional Contingency Plan provide several avenues for communication and coordination with affected communities.





RECOVERY

The effort to recover from an oil spill actually starts almost as soon as the spill happens – and can go on for years. There are many aspects of recovery, including identifying and addressing impacts to the ecosystem as well as the people who rely on it for food, recreation, income, or cultural expression.

This section discusses two aspects related to recovery:

- ***Who pays for a response?***
- ***How are losses determined and compensated?***

Even with the measures described in this section, the impacts of a large spill can be significant and often can't be fully remedied by laws and policies – or even money. This further emphasizes the importance of preventing spills from happening in the first place.

Who pays for a response?

Responsible Party

Spillers are responsible for paying for a response and any associated damages that result. There are various requirements in state and federal regulations that try to ensure operators can pay up to a set amount, known as a liability limit, such as by providing a Certificate of Financial Responsibility. Both Alaska and federal agencies have such requirements in place for operations that may result in an oil spill.

U.S. Government

However, responding effectively means that responders need to get underway immediately as long as conditions allow, not wait around to be sure there is an identified responsible party who is able to pay. A response – including restoration activities – may also end up costing more than what the spiller can cover (exceeding its limit of liability), or the spiller may remain unknown. In these cases, the Oil Spill Liability Trust Fund (OSLTF) may be used to ensure effective response. In general, though, spillers must reimburse the OSLTF whenever possible.

The OSLTF spends money on:

- Response actions – whether conducted by a public or private entity
- Federal trustees initiating the damage assessment process
- Compensation for losses or damages
- Losses of government revenue
- Some agency or organizational activities related to oversight of spill prevention and response, or research and development

The OSLTF receives income from:

- Costs recovered from responsible parties – for response-related costs or claimed losses
- Taxes on oil produced in or imported to the U.S.
- Penalties from spill cases
- Interest

Among other functions in the Alaska Department of Environmental Conservation, this Fund recovers costs incurred by the State in responding to a spill from the responsible party. These may be costs associated with State activities or contractors. Personnel may also support the Finance section within ICS for a large spill.

State of Alaska

Alaska's Oil and Hazardous Substance Release Prevention and Response Fund plays a parallel role at the state level.

How are losses determined and compensated?

The Natural Resource Damage Assessment and Recovery (NRDAR) process aims to “make the public whole” after an oil spill by assessing the damage to the environment and implementing the appropriate restoration.

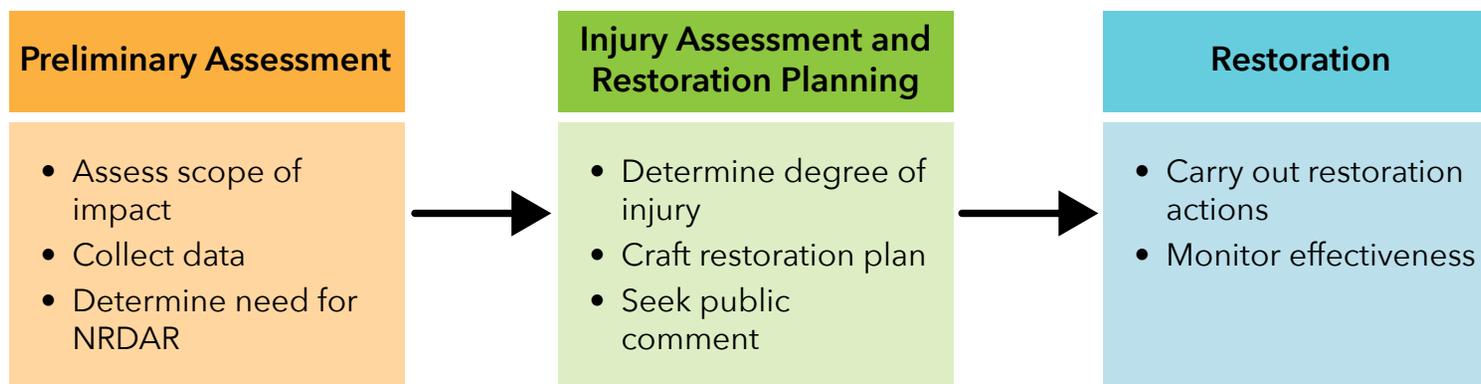
The NRDAR program is run by federal, state, Tribal representatives – or “Trustees” – who act on behalf of the public and resources. NRDAR is intended to be a cooperative process, and the Trustees are required to invite the responsible party (spiller) to participate. The process is separate from punishing, fining, or correcting the actions of the Responsible Party.

NRDAR is initiated immediately after an oil spill, and happens in parallel to the effort to remove or respond to the spill itself. The process focuses on returning injured resources to their original state and compensating for public loss.

For a large spill, this may take years. As of 2020, the NRDAR process is still underway for the 2004 *M/V Selendang Ayu* spill in the Aleutian Islands. Some of the challenges include establishing baseline conditions before the spill, determining the impact of the spill itself as opposed to other sources of existing or “background” pollution, and quantifying impacts. The process is also intended to be collaborative and transparent, and so allows for public comment at key steps along the way.



Three Phases of NRDAR



ACRONYMS

ACP	Area Contingency Plan
ADEC	Alaska Department of Environmental Conservation
ARRT	Alaska Regional Response Team
ATBA	Area to be Avoided
BSEE	Bureau of Safety and Environmental Enforcement
EEZ	Exclusive Economic Zone
EPA	Environmental Protection Agency
FOSC	Federal On-Scene Coordinator
FRP	Facility Response Plan
GT	Gross Tonnage
ICS	Incident Command System
IMO	International Maritime Organization
IPIECA	International Petroleum Industry Environmental Conservation Association
LOFR	Liaison Officer
LOSC	Local On-Scene Coordinator
NCP	National Contingency Plan
NOAA	National Oceanic and Atmospheric Administration
NRF	National Response Framework
NRDAR	National Resource Damage Assessment and Recovery
NM	Nautical Mile
OSC	On-Scene Coordinator
OSRO	Oil Spill Removal Organization
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIO	Public Information Officer
PRAC	Primary Response Action Contractor
RCP	Regional Contingency Plan
RPS	Response Planning Standard
RSC	Regional Stakeholder Committee
SOSC	State On-Scene Coordinator
TOSC	Tribal On-Scene Coordinator
UC	Unified Command
VRP	Vessel Response Plan

REFERENCES

This page provides links to more information on the material in this Primer. There are many other studies and reports on Arctic oil spill prevention and response not listed.

PREVENTION

Alaska Marine Pilots – <https://ampilots.com/>

Alaska Maritime Prevention & Response Network
<https://www.alaskaseas.org/>

IMO (including routing measures)
<http://www.imo.org/en/OurWork/Pages/Home.aspx>

1-Call Alaska – <https://1callalaska.com/>

RESPONSE

Alaska Department of Environmental Conservation – Prevention and Preparedness
<https://dec.alaska.gov/spar/ppr/prevention-preparedness>

Alaska Regional Response Team
<https://alaskarrt.org/>

Alaska Regional Contingency Plan & Area Plans:
<https://dec.alaska.gov/spar/ppr/contingency-plans/response-plans/>
The Arctic and Western Alaska Area Contingency Plan includes a thorough glossary of response-related terminology.

General Information on Oil Spills
National Oceanic and Atmospheric Administration
<https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills>

IPIECA
<https://www.ipieca.org/our-work/oil-spill/oil-spill-response-resources/>

National Response Team
<https://www.nrt.org/>

Spill Reporting

Alaska
<https://dec.alaska.gov/spar/ppr/spill-information/reporting>

U.S. Coast Guard
<https://nrc.uscg.mil/ContactUs.aspx>

Spill Planning and Response Regulations
(many include prevention elements)

Alaska Department of Environmental Conservation
<https://dec.alaska.gov/spar/regulations>

U.S. Bureau of Safety and Environmental Enforcement
<https://www.bsee.gov/what-we-do/oil-spill-preparedness/preparedness-activities/oil-spill-response-plans>

U.S. Coast Guard
<https://www.uscg.mil/>

U.S. Environmental Protection Agency Regulations
<https://www.epa.gov/oil-spills-prevention-and-preparedness/regulations>

U.S. Pipeline and Hazardous Materials Management Safety Administration
<https://www.phmsa.dot.gov/phmsa-regulations>

RECOVERY

Alaska Oil and Hazardous Substance Release Prevention and Response Fund
<https://dec.alaska.gov/spar/rfa/about>

NOAA'S Damage Assessment, Remediation, and Restoration Program
<https://darrp.noaa.gov/>

U.S. Oil Spill Liability Trust Fund
https://www.uscg.mil/Mariners/National-Pollution-Funds-Center/About_NPFC/OSLTF/

