Division of Spill Prevention & Response

Spill Penalties Overview

House Resources Committee

February 2, 2018

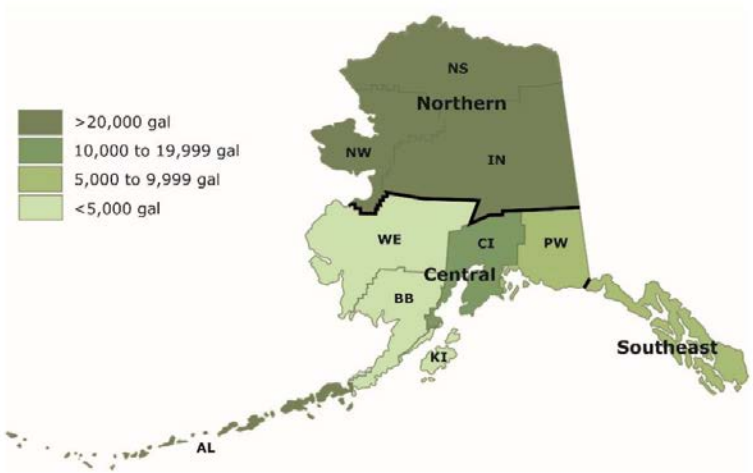
The Division's Mission

Preventing spills of oil and hazardous substances, preparing for when a spill occurs, and responding rapidly to protect human health and the environment.

2017 Spill Statistics

- **2,046 substance releases**
- **271,809 gallons spilled:**
  - 1,665 gal crude oil
  - 188,379 gal noncrude oil
  - 62,527 gal hazardous substances
  - 18,980 gal process water
- **Large spills accounted for over 80% of the total volume released**

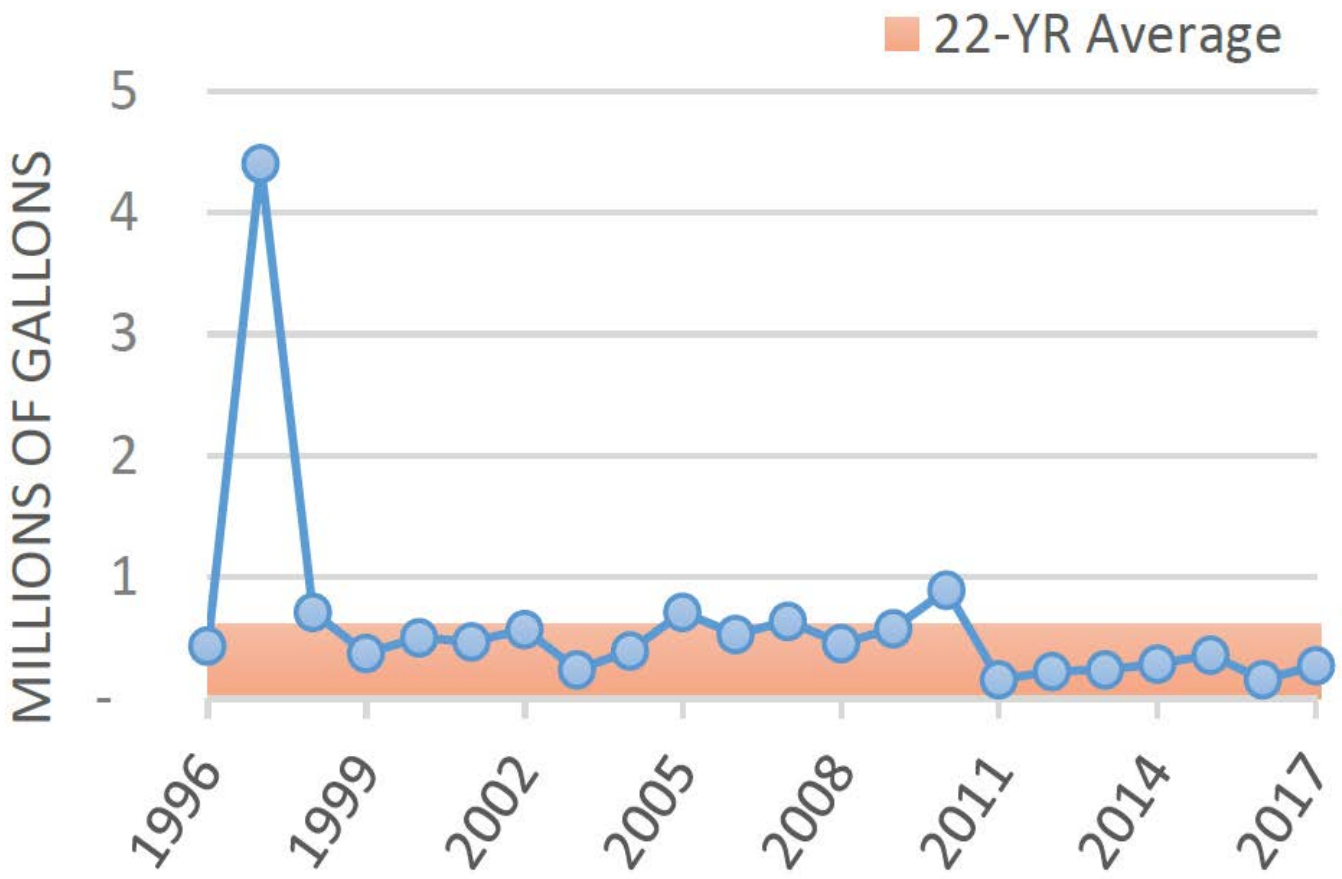
TOTAL SPILL VOLUME BY SUBAREA



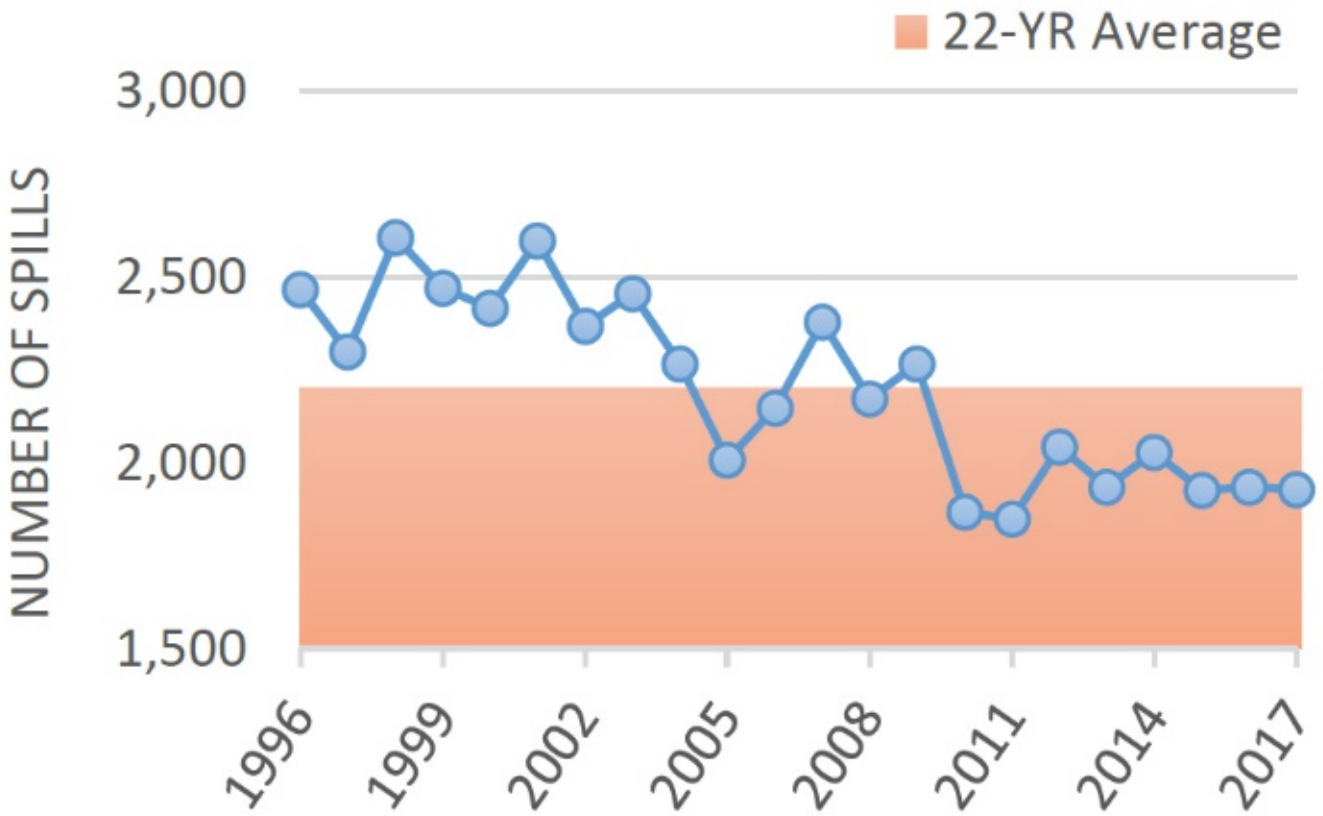
SUBAREA	GALLONS
Aleutians[1]	124,521
Northwest Arctic	51,412
Interior Alaska	35,298
North Slope	21,024
Cook Inlet	14,726
Southeast Alaska	9,215
Prince William Sound	8,490
Bristol Bay	2,672
Kodiak Island	2,469
Western Alaska	1,981

[1] The total volume spilled in the Aleutians Subarea includes the F/V Alaska Juris Incident, which resulted in a release of 87,000 gallons. This incident occurred outside of State waters, however DEC was active in the Unified Command because the vessel posed a potential threat to State waters.

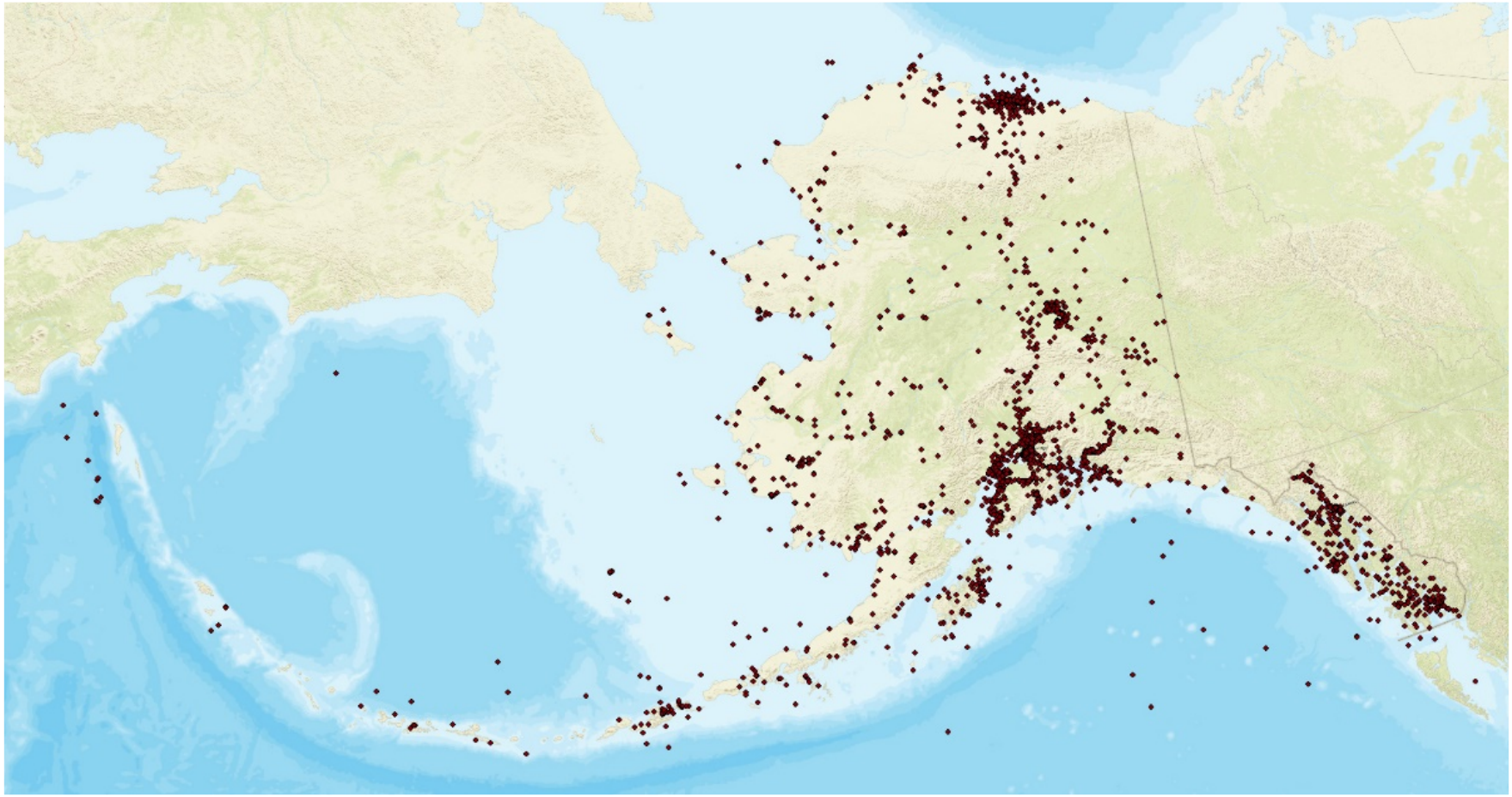
Total Volume Released by Fiscal Year



Number of Spills by Fiscal Year



Spill Locations Across Alaska



How Do Oil Spills Behave in the Environment?

- **Marine Oil Spills**
  - Oil tends to accumulate at the surface and float on the water and move with the current; oil sheens can last a very long time
- **Land Oil Spills**
  - Oil can penetrate underground and move downward, potentially reaching groundwater
  - May also move laterally along less permeable layers (including surface pavements) or with groundwater and surface waters
- **Underground Oil Spills**
  - Spills from pipelines or leaking underground storage tanks
  - High potential to affect the groundwater since the vertical traveling distance is reduced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Examples of Spill Impacts: Health

- **Direct contact with the skin**
  - Oil can irritate the skin and penetrate the body via skin absorption
- **Inhalation**
  - Many components in oil are volatile and may easily evaporate; while breathing, these components can enter our bodies
  - Less volatile compounds may adsorb on airborne particulates and can enter the body through inhalation
- **Ingestion**
  - Both short and long term health problems can occur by consuming contaminated water, particles, or consuming contaminated food
  - Oil components can bioaccumulate in organisms and can become highly concentrated

Examples of Spill Impacts: Environment

- Oil spills can result in the loss of animals and fish habitat
- Heavy oils may affect several organism functions like reproduction and development, respiration, feeding, and thermo-regulation
- The entire ecosystem can change due to the toxicity of the chemical components and elements of the spilled oil
- Oil can pollute and damage groundwater resources, then residual oil can remain in the subsurface and continue to pollute groundwater

Examples of Spill Impacts: Socio-Economic

- **Mariculture/Agriculture**
  - Valuable commercial fishing or farming areas may be closed due to risks of contaminants
  - Contaminants found in organisms can lead to bans on human consumption
  - Boats, gear, and equipment can be directly and indirectly damaged by spills
- **Tourism/Recreation**
  - Businesses operating or supporting recreational or professional activities in affected areas may suffer significant economic losses
- **Industry**
  - Facilities relying on stable resources (such as clean water) can be negatively affected by contamination in their piping systems
- **Property**
  - Property values can be adversely affected if adjacent to or within a polluted area
- **Cleanup and Resource Costs**
  - Costs to clean up contamination and the cost of lost fuel can be expensive

Cost of Spill Response to the State

- If responsible parties are unable or unwilling to pay, the liability to the State can amount to millions of dollars
- The estimated financial liability at sites where the Division is leading investigation and cleanup efforts currently stands at over $12 million
- The current fine and penalty structure addresses less than 5% of the average oil spill response and cleanup costs

Oil Trucking

- One well at the Cosmopolitan oil and gas field in Cook Inlet restarted production in March 2016. There are currently two producing wells with a total production of 8,083 barrels per month (Alaska Oil & Gas Conservation Commission, 2017)
- The first tanker of crude oil from the Cosmopolitan field delivered to the Tesoro refinery in Kenai in April 2016. At that time, they expected to deliver two tankers per day to the refinery. (Alaska Business Magazine, 2017)
- The highest producing month was August 2017 at 10,653 barrels of crude.
- Current contingency plan indicates tanker trucks up to 250 barrel capacity would be used to haul oil. That would mean about 1 tanker per day to keep up with production.
- As the Cosmopolitan field increases production, tanker truck traffic will increase on the Kenai Peninsula. This will ultimately increase the risk of a crude spill.

Examples of Penalty Change Effects

For including produced water in penalty volume:

There were three large primarily produced water spills within two months during the winter of 2009 (DS 6 Well 11, L3 Common Line, and R Pad Produced Water Spill). Individually, none of them exceeded 18,000 gallons of oil. Had we been able to consider the produced water, the L3 Common Line release would have totaled 46,000 gallons spilled, allowing the Department to assess fines for the damage caused. The other two would have remained under the 18,000 threshold even if the produced water was considered.

For lowering penalty volume threshold:

A 2008 spill from a facility released approximately 13,630 gallons of Jet-A into containment. A tear in the lining allowed 2,777 gallons to enter the surrounding soil. The release did not meet the penalty volume threshold. This case was eventually transferred to the Contaminated Sites Program.


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