



Regulatory Update

Joshua M Kindred

October 5, 2017

OIL & GAS:
FUELING
ALASKA'S
ECONOMY

AOGA
Alaska Oil and Gas Association

Regulations in Alaska

Cost and Opportunity

Access

Transitioning to a new administration

Challenges of a one-size fits all federal regulatory approach

Regulatory Reform Opportunities

State Regulations

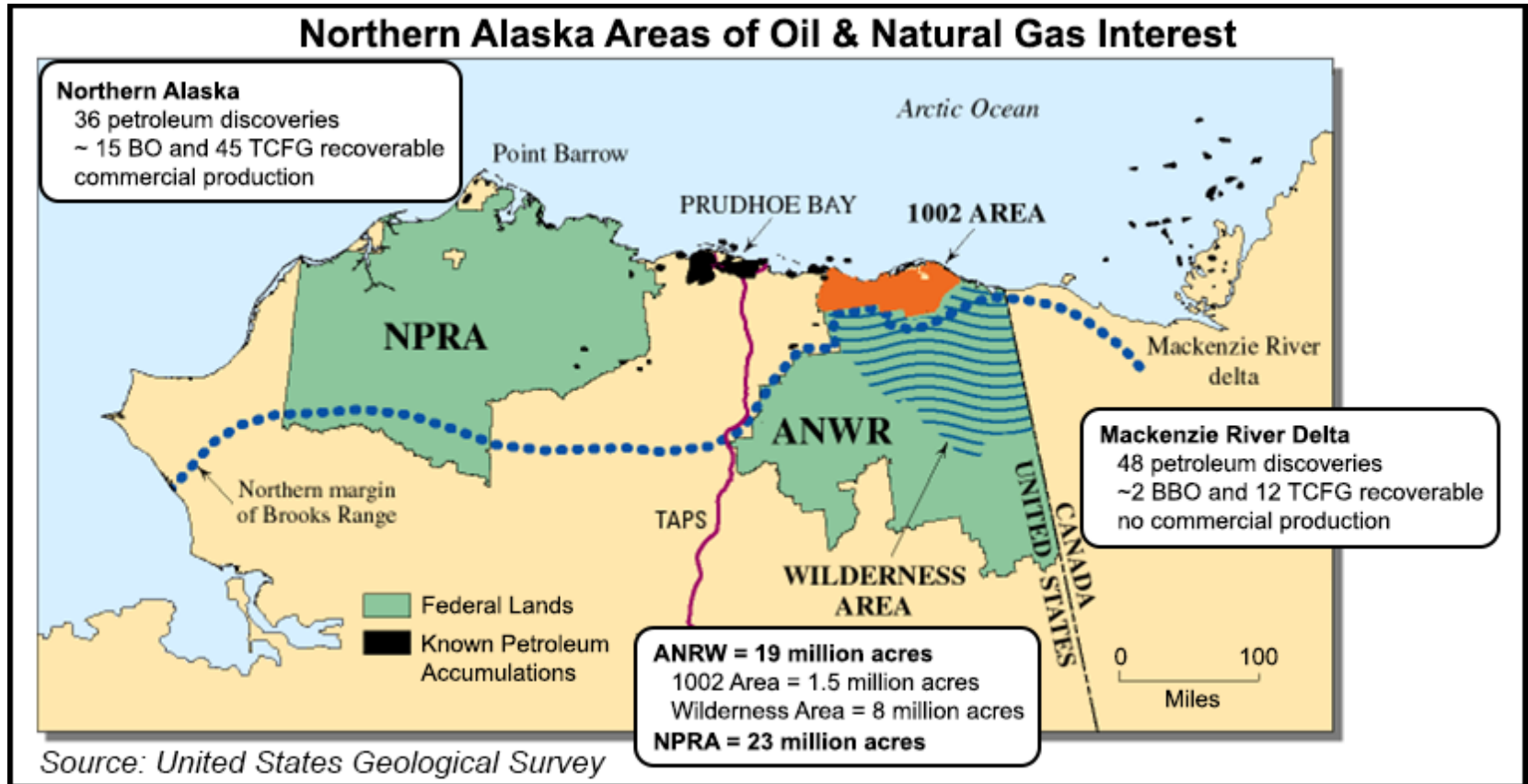
What does the future hold?

Resource Potential

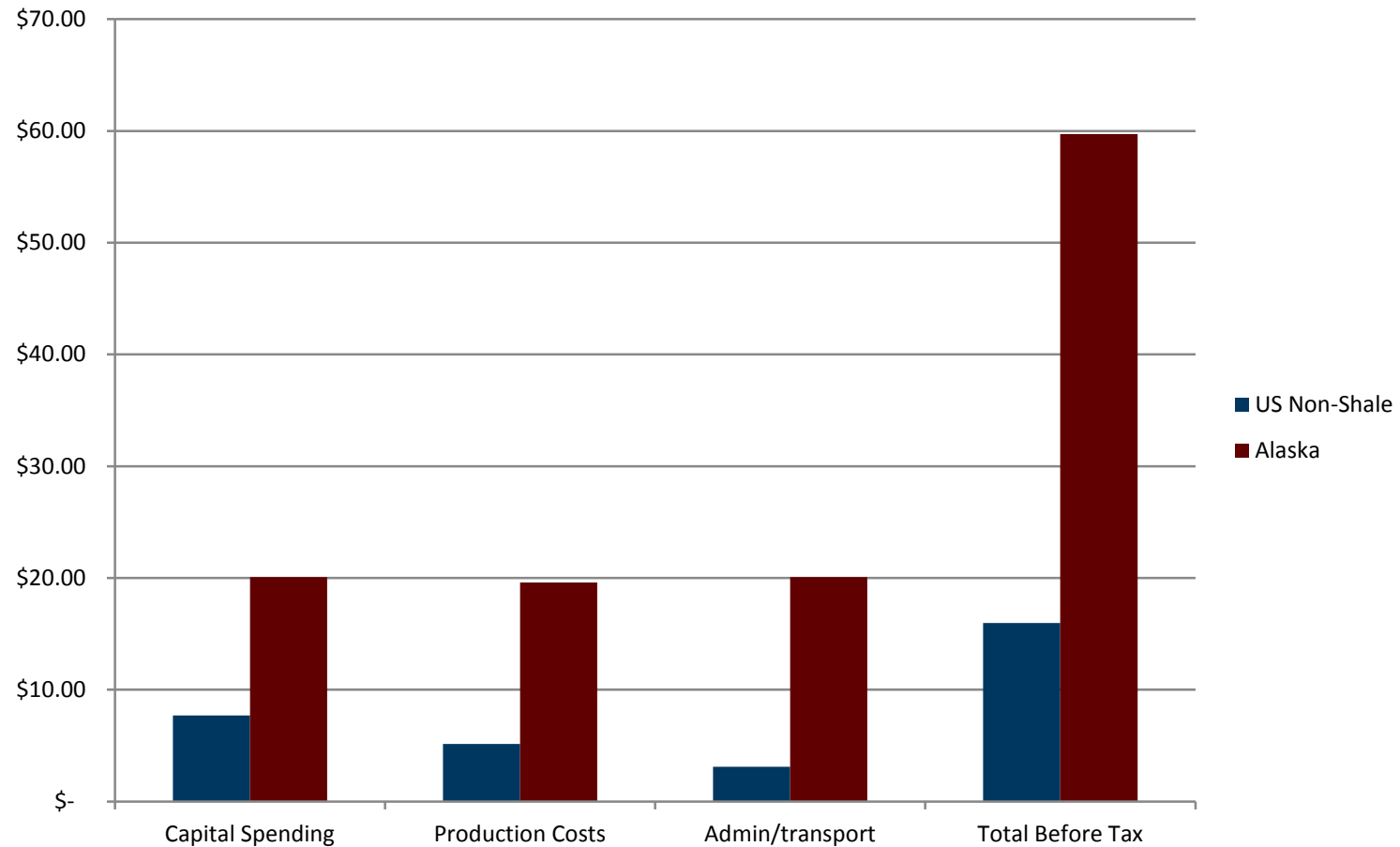
| RESOURCE POTENTIAL | |
|--|---|
| STATE LAND | FEDERAL LAND |
| <p>Cook Inlet 599 mbo and 19 tcf gas</p> <hr/> <p>Onshore North Slope Conventional: 5 bbo and 35 tcf gas Heavy/Viscous: 24-33 bbo Unconventional: 2 bbo and 12 tcf gas</p> | <p>Offshore Arctic 27 bbo and 132 tcf gas</p> <hr/> <p>NPR-A 896 mbo and 53 tcf gas</p> <hr/> <p>ANWR 10 bbo and 3.5 tcf gas</p> |
| <p>mbo – million barrels of oil bbo – billion barrels of oil tcf – trillion cubic feet</p> | |

Source: USGS

Access



Alaska Costs Per Barrel Compared to US Non-Shale - Before Tax



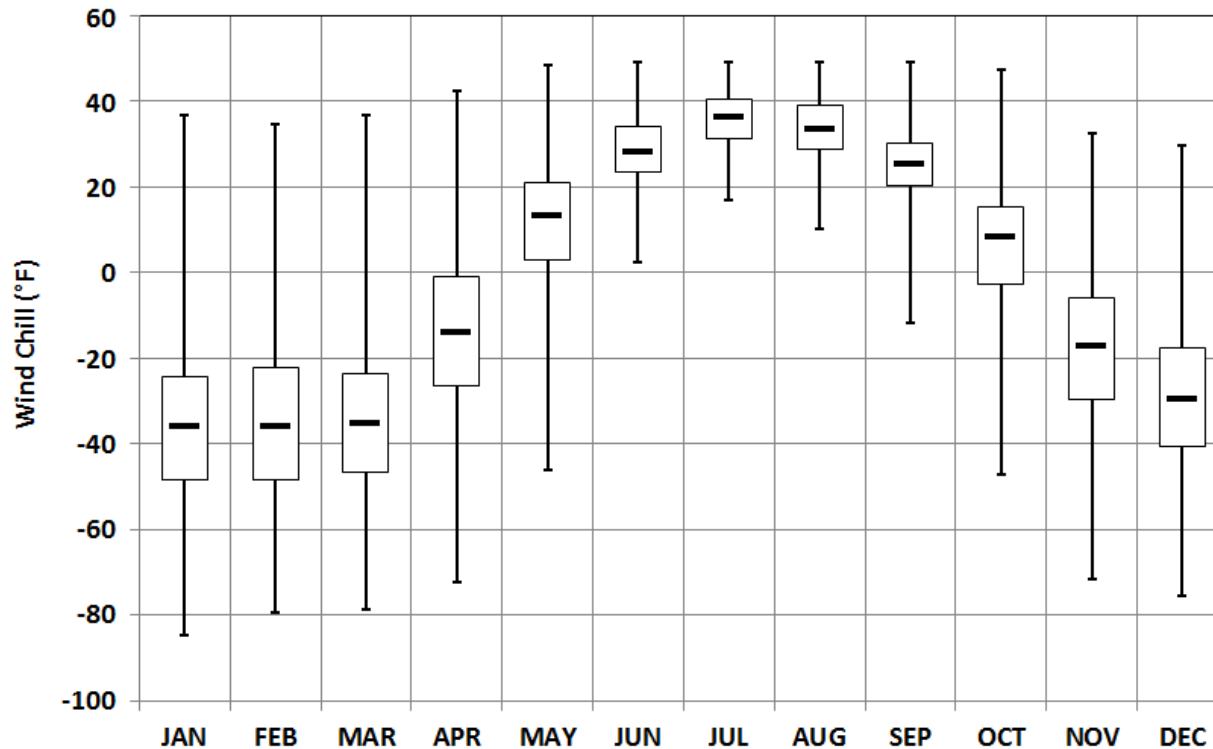
Source: DOR & Wall Street Journal, April 2016 & Rystad Energy UCube



Unique Factors for Alaska Production

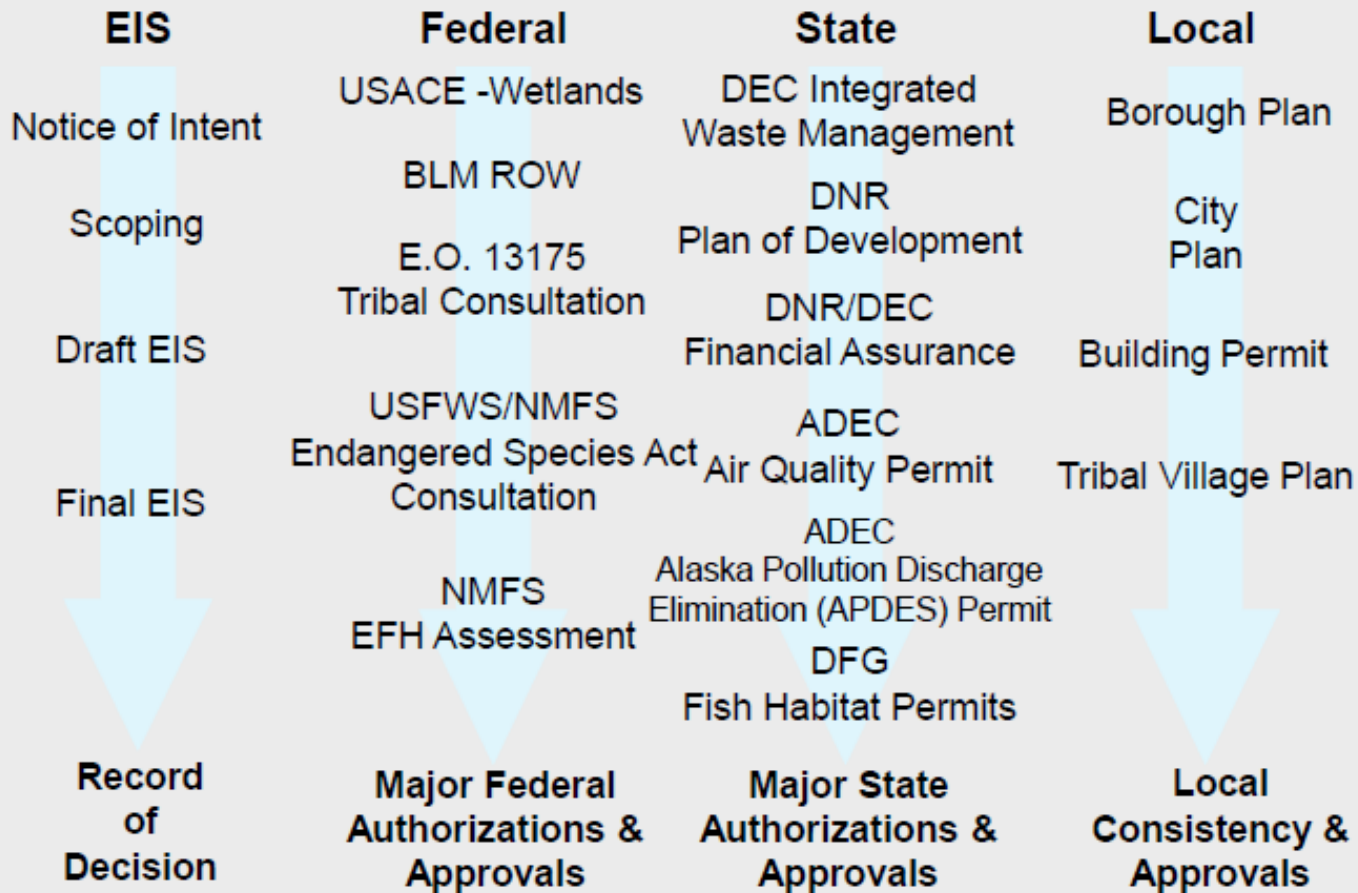
Climate Factors

Distribution of Hourly Wind Chill
Deadhorse, AK 1982-2014

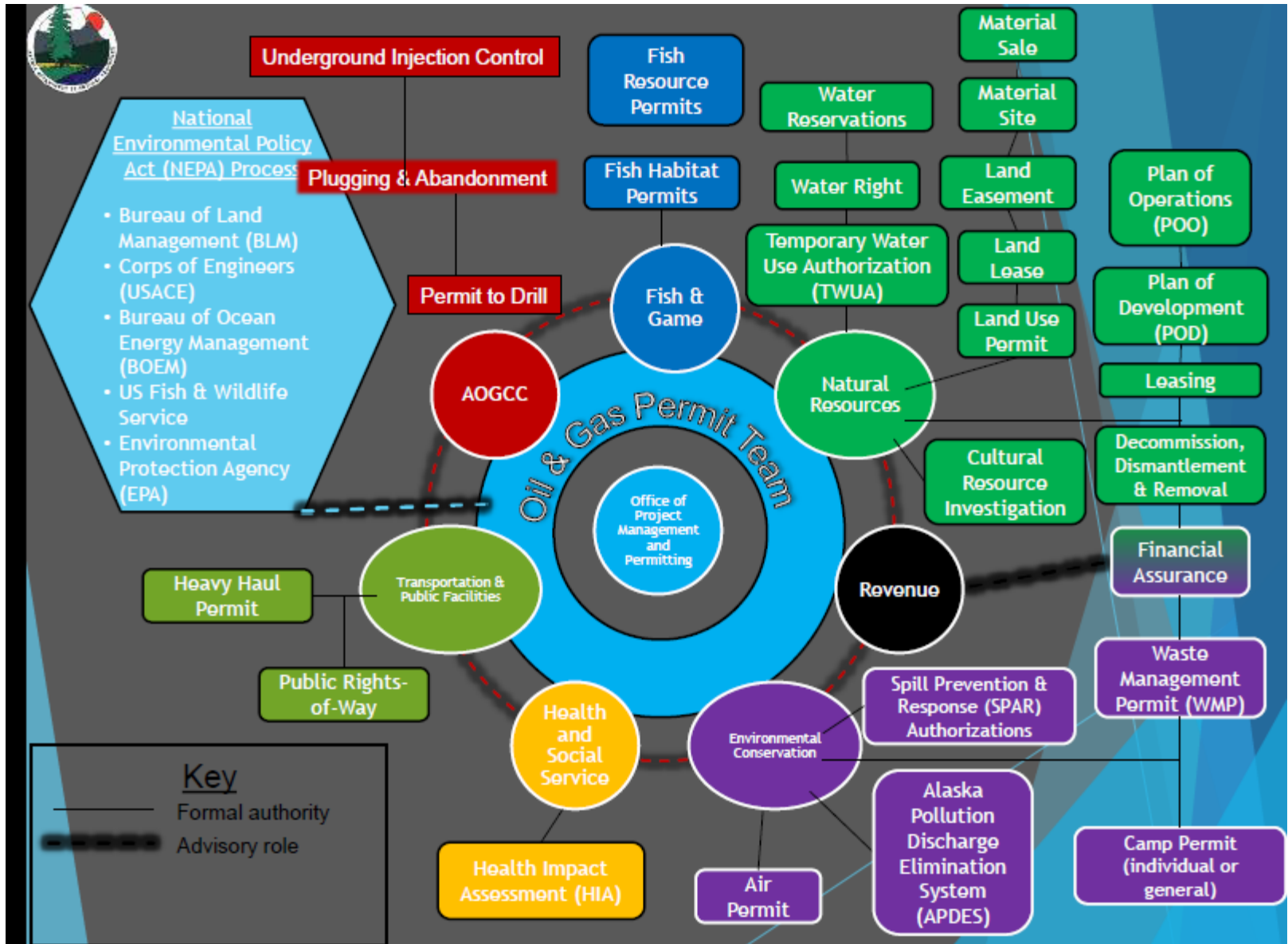


Large Project Major Authorizations

MULTIPLE PERMITTING/APPROVAL PROCESSES RUN IN PARALLEL



Source: Office of Project Management & Permitting, Dec. 2016



Source: Office of Project Management & Permitting, Dec. 2016

Reform Opportunities

Small Remote Incinerator

Waters of the United States

0000(a)

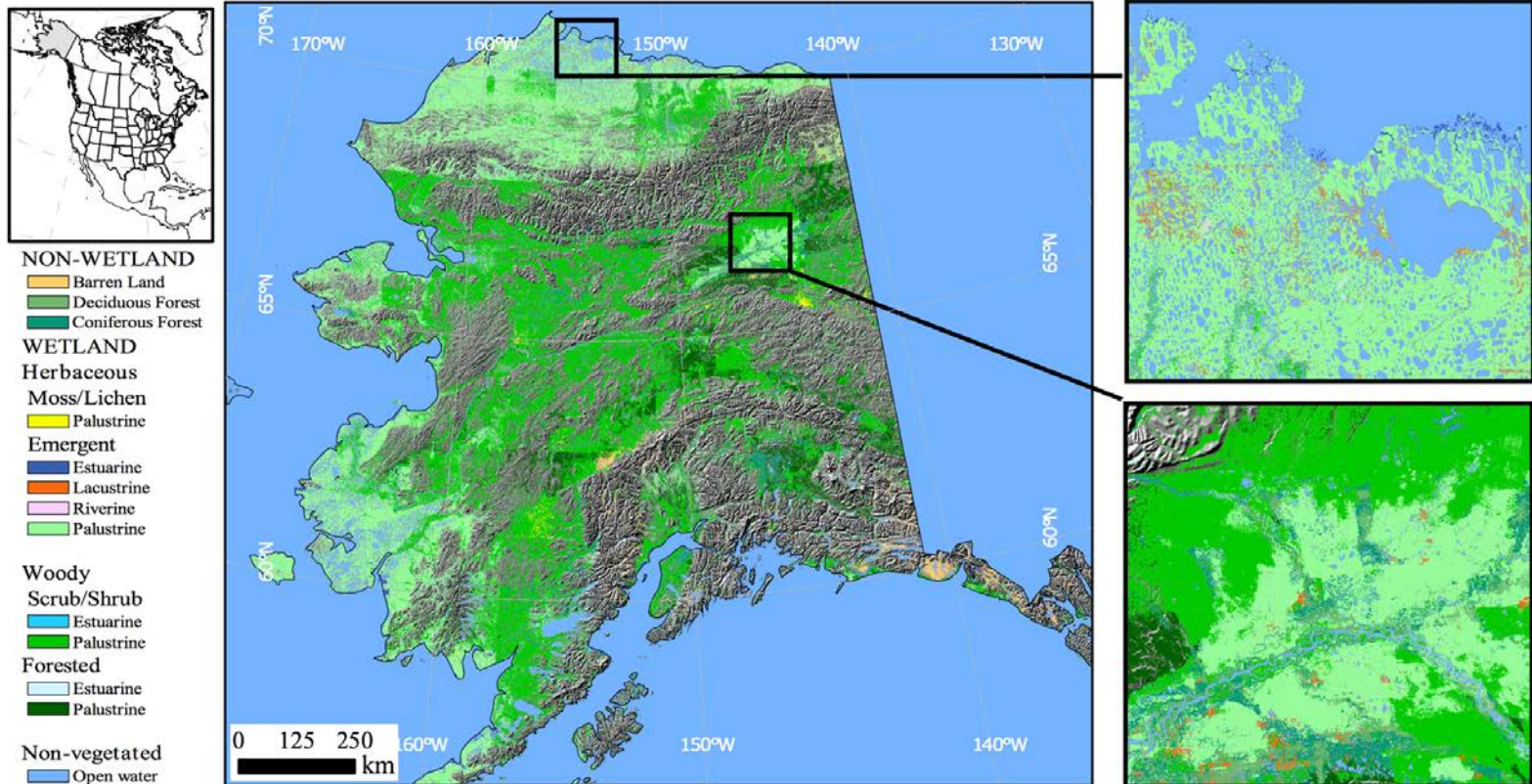
Wetlands Mitigation

NEPA

RCRA Corrective Action

404(b)(1)

Alaska Wetlands



ESA Listings - Alaska

- 8 marine mammals

- Polar bear
- Ringed Seal
- Bearded Seal
- Northern sea otter (DPS)
- Steller sea lion (2 DPSs)
- Bowhead whale
- Fin whale
- Humpback whale
- Cook Inlet beluga whale (DPS)

- 4 birds

- Short-tailed albatross
- Spectacled eider
- Steller's eider (DPS)
- Eskimo curlew (extirpated)

- 1 terrestrial mammal

- Canadian Lynx

- Others (uncommon)

- Leatherback sea turtle
- Blue whale
- North Pacific right whale
- Sei whale
- Loggerhead sea turtle
- Green sea turtle
- Sperm whale

- Candidate species

- Pacific walrus
- Yellow-billed loon

- 1 plant

- Aleutian shield fern

Polar Bear Critical Habitat

Dec. 7, 2010 (75 FR 76086)

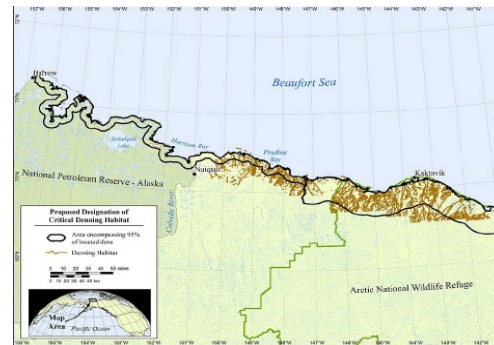
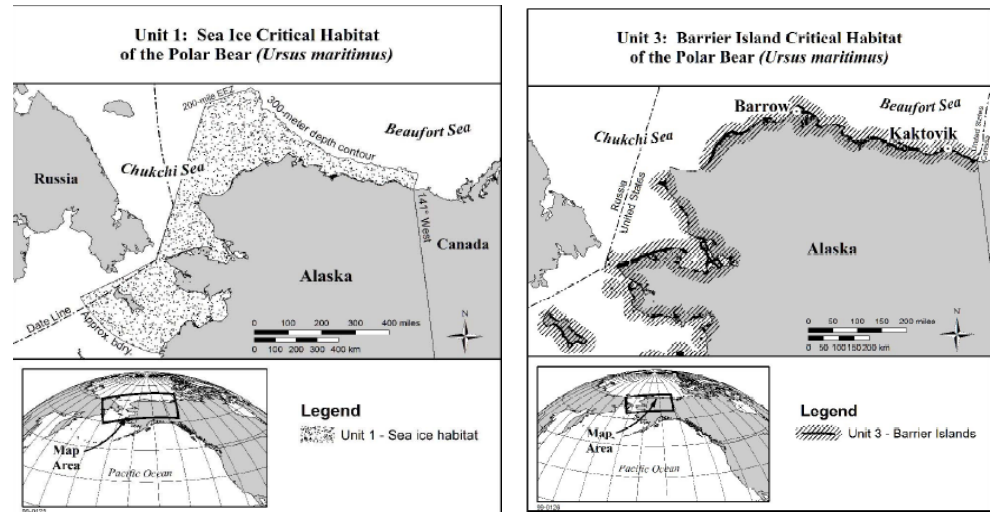
187,000 square miles

- Sea ice habitat
- Terrestrial denning habitat
- Barrier Island habitat

Service admits no conservation benefit

- ESA and MMPA adequately protective
- FWS will not use to regulate GHG emissions

Service recognized O&G activities are not a threat



Ringed Seal proposed critical Habitat



350,000 Square Miles

Small Remote Incinerators (SRI's)

SRI's in Alaska cannot reasonably meet the emission limits as set forth in 40 CFR 60 Subparts CCCC & DDDD (which cover both new and existing limits)

Current compliance date is February 2018

The use of SRI's serves to reduce the environmental footprint of remote operations on Alaska's North Slope

Given the absence of available options, most operators will be forced to shut down SRI's

Without the use of SRI's, operators will be forced to store food-waste, which will invariably attract local wildlife, and transporting waste in such remote areas will likely result in greater air emissions

Waters of the United States

There are a number of issues regarding the final 2015 Waters of the U.S. Rule:

- The Rule is vague in describing features that are purportedly waters of the U.S. (e.g., “tributary,” “adjacent waters,” and “significant nexus”)
- The Rule is overly broad, including many land and water features not within the scope of reasonable interpretation under the Clean Water Act (CWA) and exceeding the Agencies’ Authority under the Commerce Clause
- The Rule relied upon EPA’s Connectivity Report, which was still under review by EPA’s Science Advisory Board during the entire comment period for the Rule and after the comment period closed. Ultimately, the EPA made meaningful changes to the Connectivity Report, without providing the public of an opportunity to comment on or view the final scientific conclusions in the Connectivity Report during the comment period for the Rule
- EPA conducted a flawed cost-benefit analysis that dramatically underestimated and omitted certain key costs from the Rule and overestimated certain benefits of the Rule.

OOOO(a)

Potential issues:

- The Leak Detection and Repair (LDAR) requirements are problematic on the North Slope because some of the requisite instruments do not operate at temperatures under -4 degrees
- The unique demands of operations in the Arctic arena make replacing components a logistical challenge, one that will be difficult if not impossible to meet under the current requirements
- Certain aspects of the OOOO(a) mandates are duplicative of state regulatory requirements that are already in effect



Enclosed Facilities
