



# NOAA HABITAT BLUEPRINT

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



*A framework to improve habitat for fisheries, marine life, and coastal communities*

**April 2014**

## **Update: Three Alaska Candidate Habitat Focus Areas Selected for Consideration**

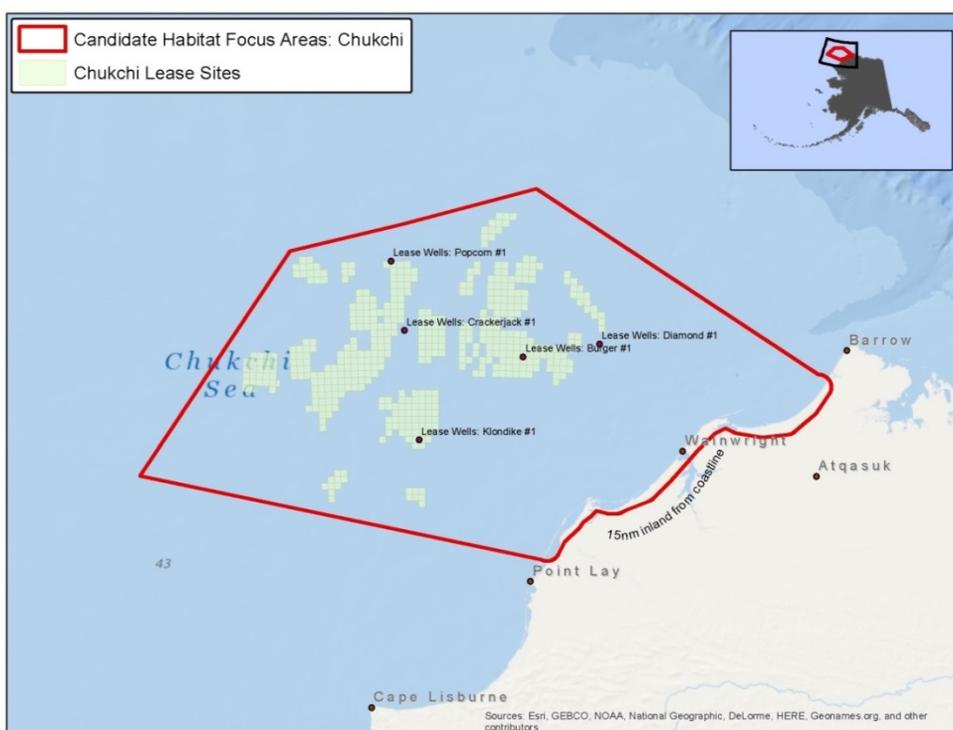
**Background:** Alaska is on the front lines of ecological changes that include the melting of the polar ice cap and glaciers and the spread of invasive species. These changes could have profound impacts on the economy and on the ecological diversity of the marine and coastal ecosystems. Oil and gas opportunities are opening up in areas for which we have little ecological information, and sparse scientific infrastructure for gathering new information exists. Increasing shipping associated with cargo, oil and gas exploration, and tourism will make these ecosystems more vulnerable to the spread of invasive species and increased risk of oil spills. In South Central and Southeast Alaska, traditionally lucrative fisheries for crab, shrimp, clams, and abalone have been closed due to dramatic population declines, perhaps due to changes in climate. These are all big issues and neither the state nor federal government can solve them alone.

These emerging and ongoing problems will require innovative strategies to solve. The NOAA Habitat Blueprint Initiative is a nation-wide effort intended to serve as an example of how agencies and stakeholders can combine their expertise and limited resources and make a meaningful step toward conserving these coastal ecosystems. The Habitat Blueprint in Alaska will draw upon NOAA's expertise and its existing capabilities for research, monitoring, training and outreach, and resource management, to promote collaboration between NOAA and its external partners. Such a partnership is more likely to be successful in addressing these issues than by attempting to solve these problems individually. But first, a habitat focus area needs to be selected for this purpose.

A team of NOAA and state experts has developed screening criteria and considered a number of potential habitat areas to be included in NOAA's Habitat Blueprint. Through screening, the following three areas have been chosen as candidates for further consideration.

# Candidate Habitat Focus Area #1 Chukchi Sea

**HFA Purpose:** As a result of an oil spill risk analysis, the Chukchi Sea is identified as having high relative risk of a worst case discharge. The purpose of this candidate Habitat Focus Area (HFA) would be to step up NOAA's efforts to improve our understanding of the ecological and hydrodynamic factors that may affect risk of oil spill impacts on nearshore habitats in the Chukchi Sea lease area. Such improved information could also serve decision makers in the future in determining the potential effects of an underwater pipeline route from the offshore wells to shore. The information that will result from activities in this candidate HFA could support infrastructure design, placement, and contingency planning to minimize impacts on near-shore habitat.



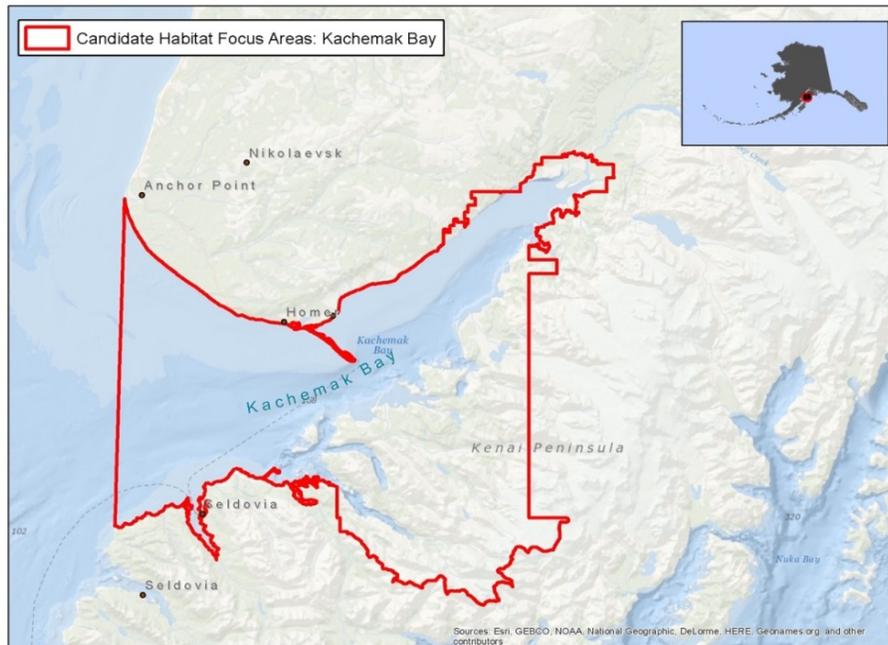
## What we could accomplish with this HFA?

- Habitat Assessments will be conducted to determine best options for pipeline placement;
- Ecological and hydrodynamic models will be applied to fate and transport analysis of potential oil spills to evaluate risk to near-shore sub-tidal and coastal habitats;
- Oil development infrastructure and contingency plans will be designed in response to risk and vulnerability analysis, which could include Hazard Assessment and Critical Control Points (HCCP) planning to avoid introduction of invasive species, and monitoring for invasive species as well; and
- Baseline assessments according to National Resource Damage Assessment guidelines will be conducted to support future potential NRDA cases.

## Candidate Habitat Focus Area #2 Kachemak Bay

**HFA Purpose:** Kachemak Bay supports important recreational, subsistence, and commercial fishing areas, as well as marine transportation and, tourism, and the bay is home threatened and endangered species. The region has experienced significant declines in shrimp and crab fisheries that have not recovered despite fisheries restrictions. The ecological richness is vulnerable to impacts from oil and gas exploration in Cook Inlet and to changes in ocean acidity and hydrodynamics due to retreating glaciers. While there is an extensive scientific body of knowledge of the ecological and hydro dynamic factors, NOAA and its partners, have yet to synthesize that knowledge and integrate it into resource management for the express purpose of restoring these fisheries.

By leveraging the numerous partnerships in Kachemak Bay, this candidate HFA would lead to the development of new habitat assessment tools to support state and federal shellfish and groundfish management and some new products from NOAA including map and monitoring data. Kachemak Bay serves as a testing area for NOAA's modelling and mapping development that could eventually be used in other areas in Alaska.



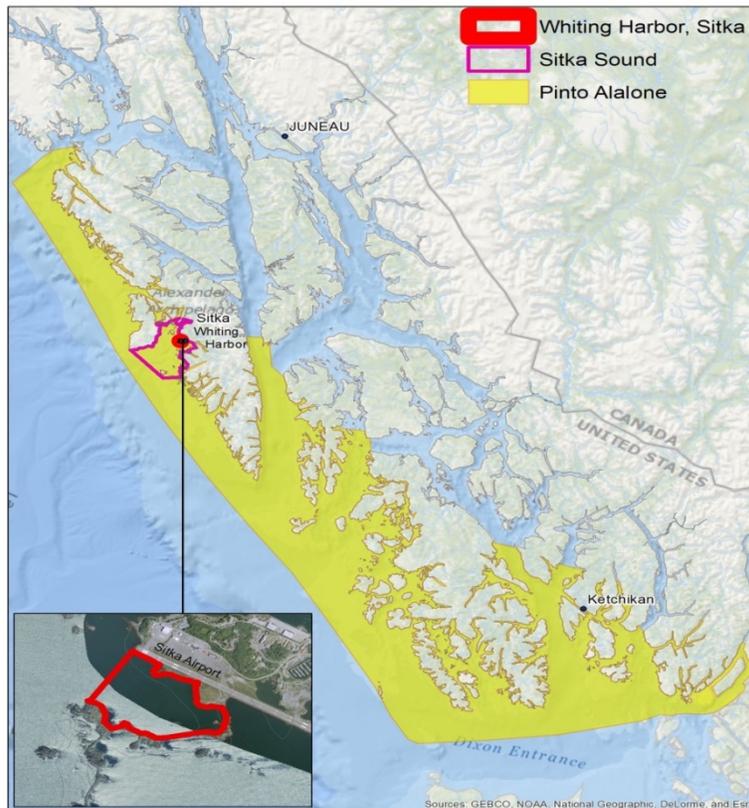
### What could we accomplish with this HFA?

- Develop new resource assessment and management tools customized for ADFG, NMFS, NOS, BOEM, & local communities;
- Develop HACCP (Hazard Analysis and Critical Control Points) planning for marine invasive species and monitoring;
- Develop habitat visualization and assessment tool (provide geospatial data for non-GIS users);
- Develop a user-friendly trajectory tool based on NOS ocean circulation model (spill response planning & larval transport);
- Develop a risk assessment tool for harmful algal bloom; and
- Develop ocean acidification risk assessment tool for marine animals and plants, which could be useful for pinto abalone recovery.

## Candidate Habitat Focus Area #3 Southeast AK/Whiting Harbor

**HFA Purpose:** Southeast Alaskan coastal waters have witnessed the decline of the pinto abalone to the point where the species is being considered for listing under the Endangered Species Act. This region is also a gateway to Alaskan waters for invasive species being transported from southern waters. Whiting Harbor, near Sitka, has recently experienced the introduction of *Didemnum vexillum*, a tunicate not previously found there. Considered an invasive species, *D. vexillum* has seriously impacted waters of other regions, such as the Georges Banks fishing grounds in New England.

The purpose of establishing a Southeast Alaska/Whiting Harbor HFA would be to focus NOAA's resources on exploring issues related to accelerating the recovery of the pinto abalone population, so as to avoid listing the species as endangered; to aid the state in the control and eradication of marine invasive species, including the invasive tunicate *D. vexillum* in Whiting Harbor; to encourage environmentally responsible development of the shellfish mariculture industry in this region; and to streamline NMFS consultations on habitat issues.



### What could we accomplish with this HFA?

- Implement an expanded invasive species monitoring system in SE AK;
- Develop measures to control *D.vex* in Whiting Harbor;
- Explore enhancement and mariculture strategies for restoring pinto abalone using habitat assessments and sea-otter resistant technology; and
- Put in place a streamlined coastal development permitting process.

## **NEXT STEPS**

- Develop an outreach strategy, including the development of a website for introducing these candidate areas more broadly;
- Solicit comments from stakeholders through webinars and workshops on the three candidate HFAs;
- Review stakeholder comments and select HFA;
- And Roll-out the Alaska HFA.

### **For more information contact:**

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