



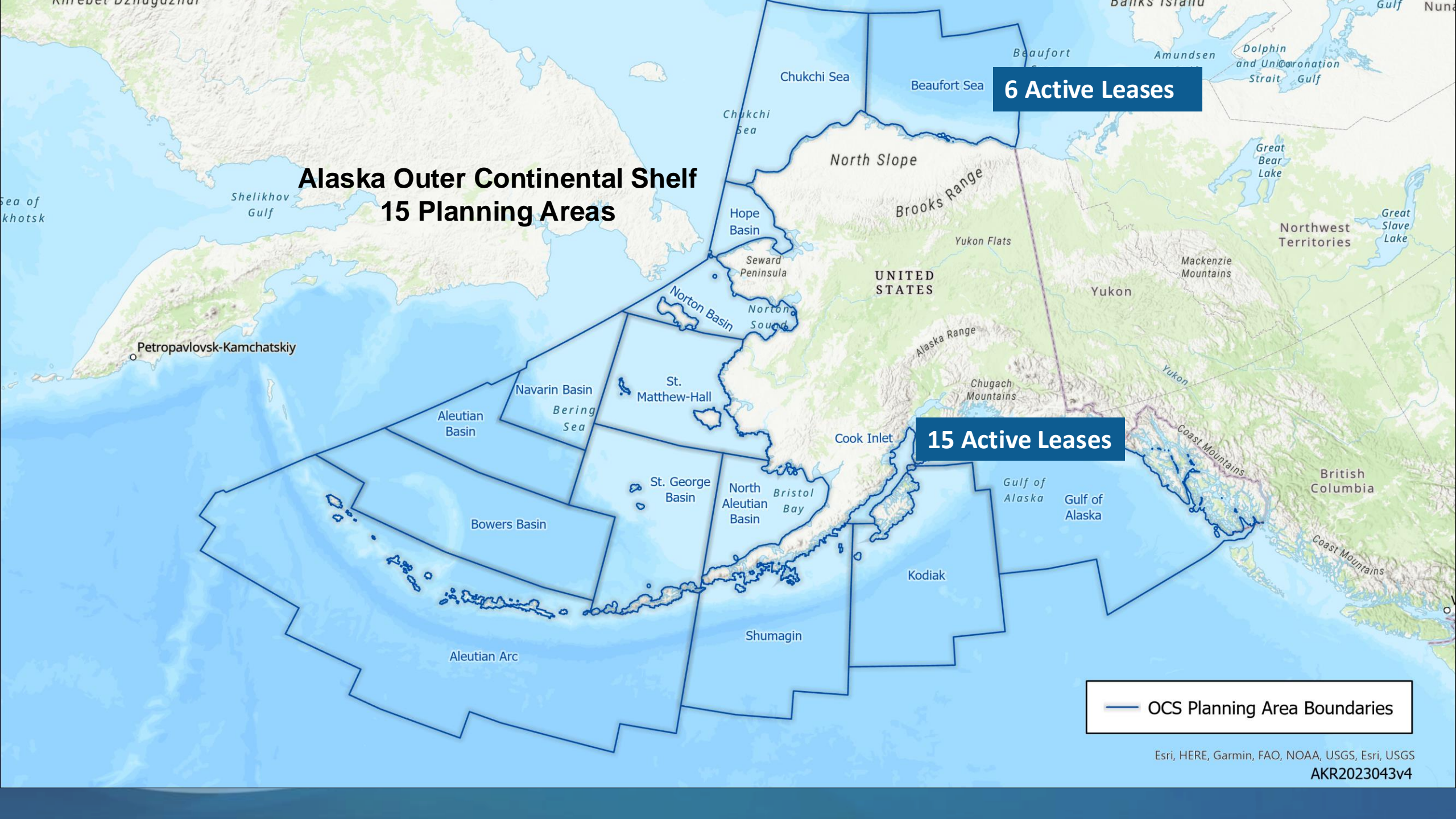
BOEM BUREAU OF OCEAN
ENERGY MANAGEMENT

Alaska Region Update

**26th Meeting
of the
Standing Committee on Offshore Science
and Assessment**

July 11-12, 2024

Casey Rowe | Anchorage Alaska



Alaska Outer Continental Shelf 15 Planning Areas

6 Active Leases

15 Active Leases

— OCS Planning Area Boundaries

Alaska Science Priorities



Marine Mammals



Migratory Birds



Fish & Lower Trophic



Physical Oceanography

Climate Change



Socio-economics



Cumulative Effects



Pollutants & Contaminants



No Alaska Region Lease Sales were included in the 2024-2029 National Program.



— OCS Planning Area Boundaries

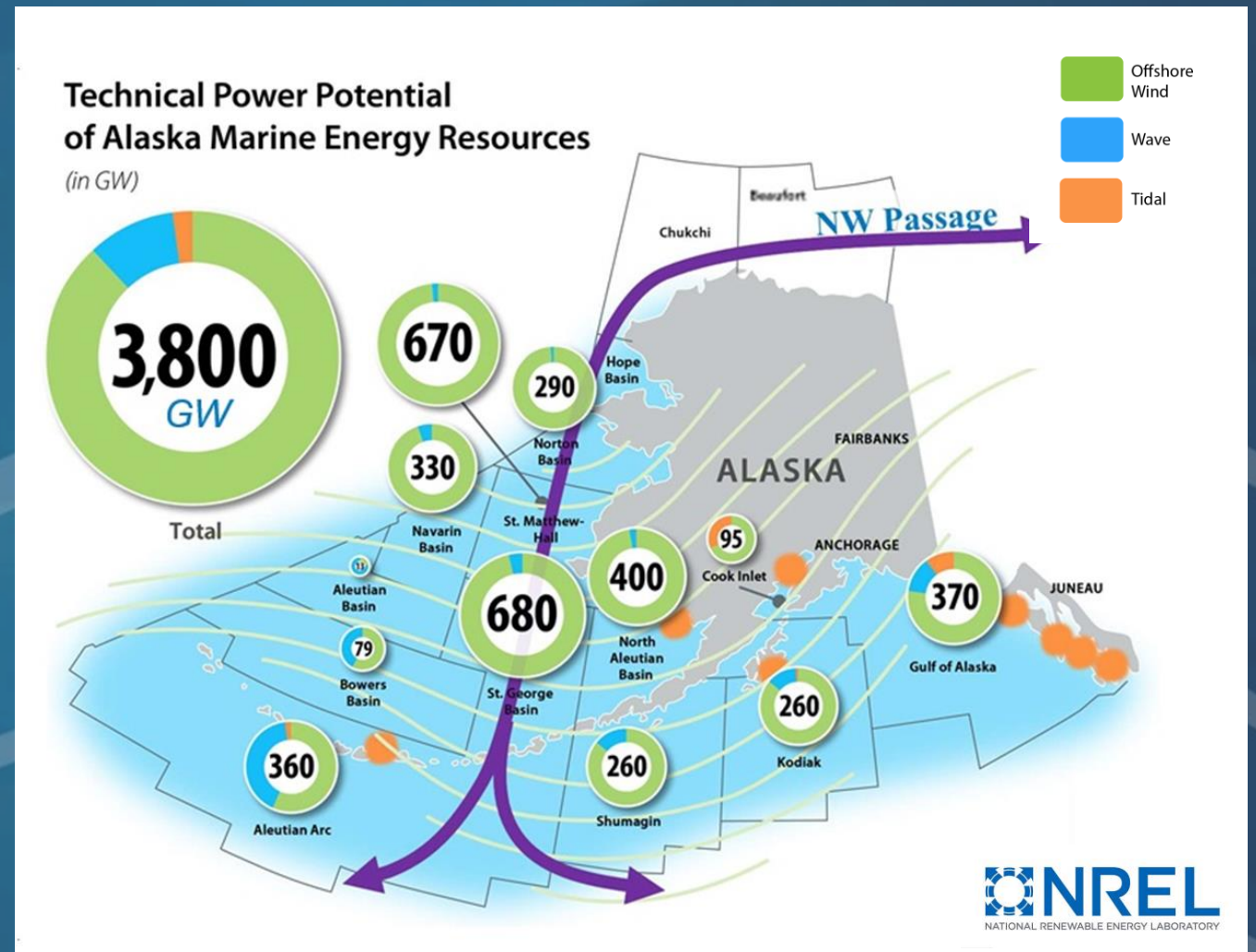
Renewable Energy Potential

3,800 GW of offshore wind, tidal, wave

Offshore wind: greatest potential

Wind energy in Cook Inlet: the largest renewable energy resource at 65 GW

No active renewable energy leases in Alaska



Alaska New Study Profiles

1. Avian Corridors and Collision Risk with Renewable Energy Infrastructure in Cook Inlet
2. Distribution and Abundance of Threatened Steller's Eider in Cook Inlet
3. Occurrence, Seasonal Distribution, and Density of Cetaceans in Lower Cook Inlet
4. Geographic Coverage, Duration, and Type of Sea Ice in Cook Inlet
5. University of Alaska Coastal Marine Institute

Alaska New Study Profiles

1. **Avian Corridors and Collision/Displacement Risk with Renewable Energy Infrastructure in Cook Inlet**
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Why this Profile?

Lower Cook Inlet: Wind and tidal energy potential, undeveloped OCS leases

Final Project Design: In discussion, tradeoffs in value of information, cost, logistics



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ENERGY MANAGEMENT

Assessment and Minimization of Avian Collision and Displacement Risk Associated with Renewable Energy Infrastructure in the Cook Inlet Planning Area, Alaska

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Background

- Seabirds are long-lived, conspicuous, and feed near the top of the marine food web.
- Greatest concentration of seabirds in North America. **40 to 50 million (≈75%) of North America's seabirds breed in Alaska.**¹
- Lower Cook Inlet supports **≈325 seabird colonies** and **>500,000 breeding birds.**
- Cook Inlet provides winter habitat for the threatened Steller's Eider.²
- Collision with or avoidance of wind energy infrastructure is a concern for migratory birds, particularly seabirds and sea ducks.³



Steller's Eider

¹ USFWS 2009; Stephenson and Irons 2003

² Larned 2006, Martin et al. 2015

³ FCC 2021, Langcore et al. 2012



BOEM Information Needs

- **Number, location, and seasonal use** of migratory bird corridors.
- **Number, seasonal use, and types** of migratory birds using corridors across Cook Inlet (e.g., seabirds, sea ducks, shorebirds).
- **Altitudes** used by migratory birds to fly across Cook Inlet.
- How **weather** impacts migratory behaviors.
- **Risk and consequences** of collisions or displacement with renewable energy infrastructure.
- Recommendations to **avoid or mitigate impacts**.



Tufted Puffin



Study Objectives

- Determine location and relative importance of migratory corridors and seasonal movements.
- Describe the number and proximity of migratory corridors and seasonal movements of migratory birds for 2 sites in Cook Inlet as having the greatest potential for wind facilities.
- Develop a spatial and temporal model of migratory bird movements in Cook Inlet to determine risk and severity of collisions with offshore wind facilities.
- Develop conservation measures to avoid, minimize, and mitigate impacts to avian migratory corridors.



Marble Murrelet



Methods

- Review scientific publications to describe location and seasonal use of migratory corridors in the Cook Inlet Planning Area.
- Determine seasonal migratory movements from NEXRAD radar sites with coverage of Lower Cook Inlet.
- Install radar equipment to identify movements near Barren Islands and Augustine Island.
- Assess daily movements and seasonal migrations to compare with results described in literature and existing datasets, weather station radar, and experimental radar.



Crested Auklets



Research Questions

- Where are the avian migration corridors in Cook Inlet?
- What is the relative importance of these migratory corridors (measured by seasonal use, frequency of use, and types and numbers of migratory birds)?
- What is the proximity and relative importance of migratory corridors in relation to potential sites of renewable wind facilities?
- How do diurnal movements and seasonal migrations of seabirds compare to corridors identified by weather and localized radar data?
- Given study results, what marine spatial planning and conservation measures may be designed and implemented to avoid or decrease risks to collisions with offshore renewable energy infrastructure?



Requested Input from COSA

Survey Design and Methods:

Suggestions to strengthen the proposed design or methodology are requested and welcomed; Analysis of Displacement vs Collision.





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