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AQ = Air Quality

IM = Information Management

PO = Physical Oceanography

FE = Fates & Effects

MM = Marine Mammals & Protected Species

SE = Social & Economic Sciences

HE = Habitat & Ecology



BOEM Information Need:

- NEPA analyses
- Essential Fish Habitat
- Paucity of information on Benthic habitat & sensitive intertidal invertebrate organisms

Date info Required:

- 2016 Cook Inlet Lease Sale, EIS analysis starting 2013



Background: Relationship with Previous Efforts

- MMS funded lower trophic studies in the 1990's to 2000's including: The role of Copepods in the Distribution of hydrocarbons; the absorption of hydrocarbons by Marine Sediments; evaluating Potential Relict Arctic Invertebrates and Algal communities
- Cook Inlet Regional Citizens Advisory Council (CIRCAC) has collected sediment and shellfish contaminant data
- Alaska Department of Fish and Game, conducts surveys of scallops and crabs, NOAA's office of Response and Restoration has studies intertidal communities



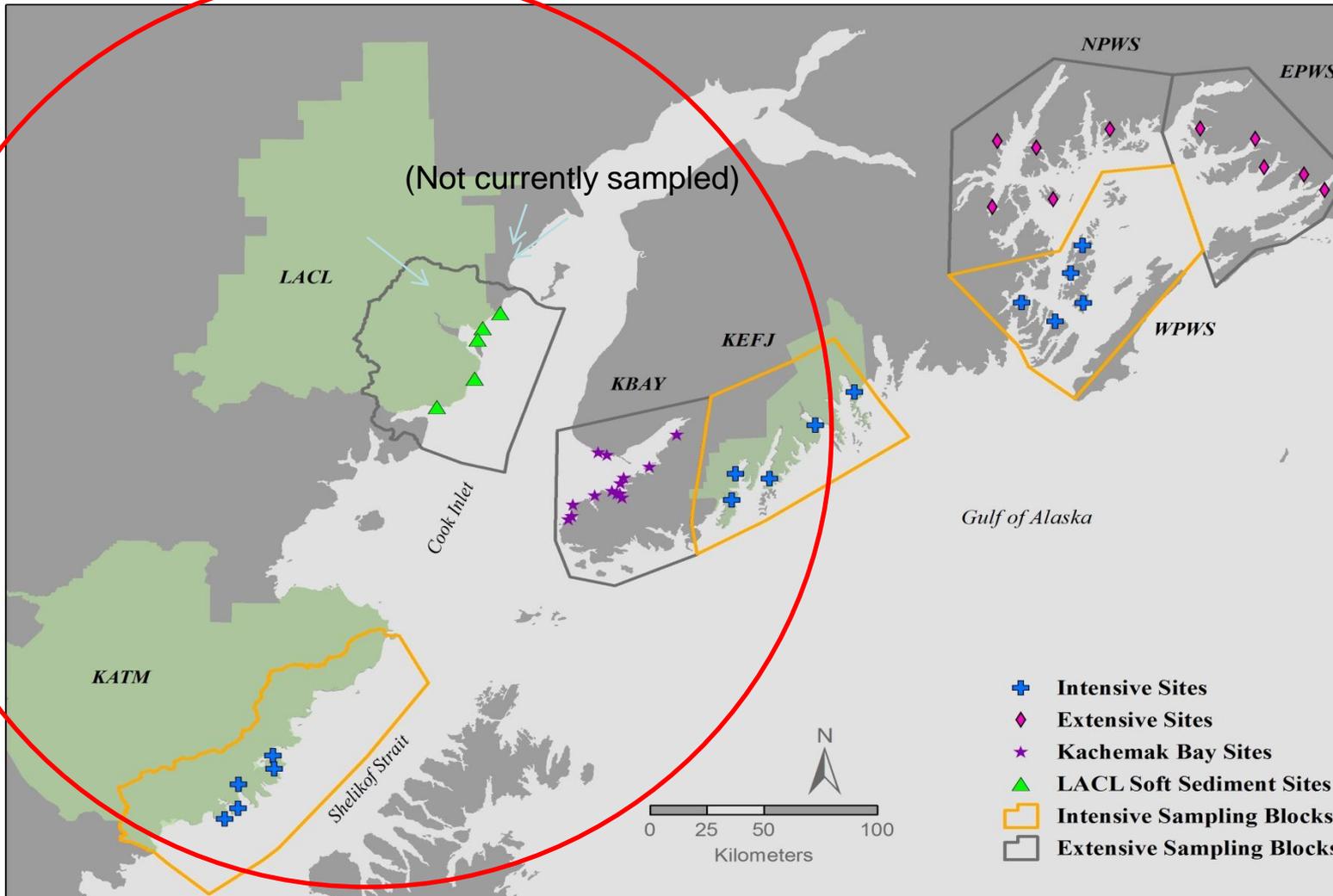
Background:

Recent efforts to collect and serve benthic data:

- Rocky Intertidal Surveys (multi-agency)
- NPS and the NOAA's National Ocean Service -aerial shoreline imagery ShoreZone while the Cook Inlet Regional Citizens Advisory Council (CIRCAC) has collected sediment and shellfish contaminant data.
- Data posted Cook Inlet Response Tool on the CIRCAC website



Examples of current long term monitoring in area of BOEM Interest



Study's Objectives:

- Quantify variability in habitat and invertebrate abundance of invertebrate communities- support existing efforts where available
- Integrate results with existing shoreline data Environmental Sensitivity Index to be used in NEPA analysis (spatial and temporal) and into GIS data tools
- Facilitate improve understanding of the influence of exploration and development activities on sensitive habitats



Methods:

- Prioritize habitat mapping gaps for BOEM needs.
- Utilize collaborations to incorporate existing information into map layers and provide data into a spatial data platform
- Conduct additional targeted benthic surveys of epibenthic and infauna populations and habitats on OCS and adjacent intertidal substrates
- Integrate with existing data delivery systems to provide updated baselines and habitat map layers to BOEM NEPA analysts



Additional *Pertinent* Information

Mapping data provides essential information for NEPA-related environmental analyses, as well as baseline information against which future changes can be measured.

Spatially explicit data on substrates and biological cover also improves our understanding of constraints on biological species distributions.

Development of updated habitat maps that incorporate recent data and use new visualization technology should be used early in the process to inform development project decision-making in the Cook Inlet region.

