

Call for stakeholder engagement in EBS groundfish survey modernization.

AFSC bottom trawl surveys provide critical data used to estimate fish and crab stock status, monitor ecosystems for change, and help inform management decisions. Our bottom trawl surveys in the eastern Bering Sea (EBS) have been conducted for decades using the same survey design, gear, and standardized methods to assure consistency of the time series which increases the value and utility of the data for monitoring trends in the ecosystem and providing sound results for management of crab and groundfish stocks. However, with time and changing environmental conditions, we are faced with a number of new challenges and opportunities that require us to consider updating the way we conduct our surveys. These include:

- Changes in environmental conditions and distribution of fish and crab stocks
- New advanced survey technologies, new survey designs and new estimation methods that can improve the efficiency and effectiveness of the survey (e.g., eDNA, cameras, new effort allocation methods, etc.)
- Survey gear that is based on obsolete designs and materials
- New survey analysis tools (e.g., model-based methods, Artificial Intelligence)
- Need to sample a greater area than originally incorporated into the survey design (e.g. incorporation of upper EBS slope)
- Need to incorporate new data types (e.g. CTD, pH, oxygen, etc) into the survey design to support ecosystem-based fisheries management, Essential Fish Habitat designations, and climate forecasting

AFSC invites all interested stakeholders and the public to participate in the EBS survey modernization project. We recognise that there is a need to modernize groundfish surveys in Alaska, to adapt surveys to a changing environment, and to modernize gear and fishing methods.

AFSC is planning to establish a working group to coordinate all the EBS survey modernization activities in October 2023. This working group will coordinate the following projects, which are necessary to modernize the EBS bottom trawl survey:

1. Sampling design – area, frequency, sampling density (Some initial work started in 2023)
2. Determining 15min vs 30min catchability/selectivity correction factors (some initial work started, more data collections needed)
3. Combining slope/shelf data and determine calibration factors between current slope and shelf gears (some initial work started in 2023)
4. Survey bottom trawl gear and fishing methods redesign (workshop with stakeholders planned for October 2023)
5. New survey gear calibration (no start date yet)
6. Survey time series calibration, transition design, and transition implementation (no start date yet)

Projects 1-4 can be done in parallel, projects 5-6 can be completed only after 1-4 are done.

A workshop or series of workshops will be conducted to provide stakeholders and the public opportunity to participate and contribute to all projects. AFSC investigators are especially

interested to work with stakeholders on new survey gear and redesigned fishing methods to assure consistency and efficiency of the new survey gear. All parties who are interested in participating in the workshops organized by the Survey Modernization Working Group or contributing to any of the projects presented should contact the workshop coordinator: Nancy Roberson nancy.roberson@noaa.gov.

For specific questions about the project you can contact:

Stan Kotwicki, stan.kotwicki@noaa.gov,

Lyle Britt, lyle.britt@noaa.gov,

Mike Litzow, mike.litzow@noaa.gov,

Nicole Charriere, nicole.charriere@noaa.gov,

Shawn Russell, shawn.russell@noaa.gov.