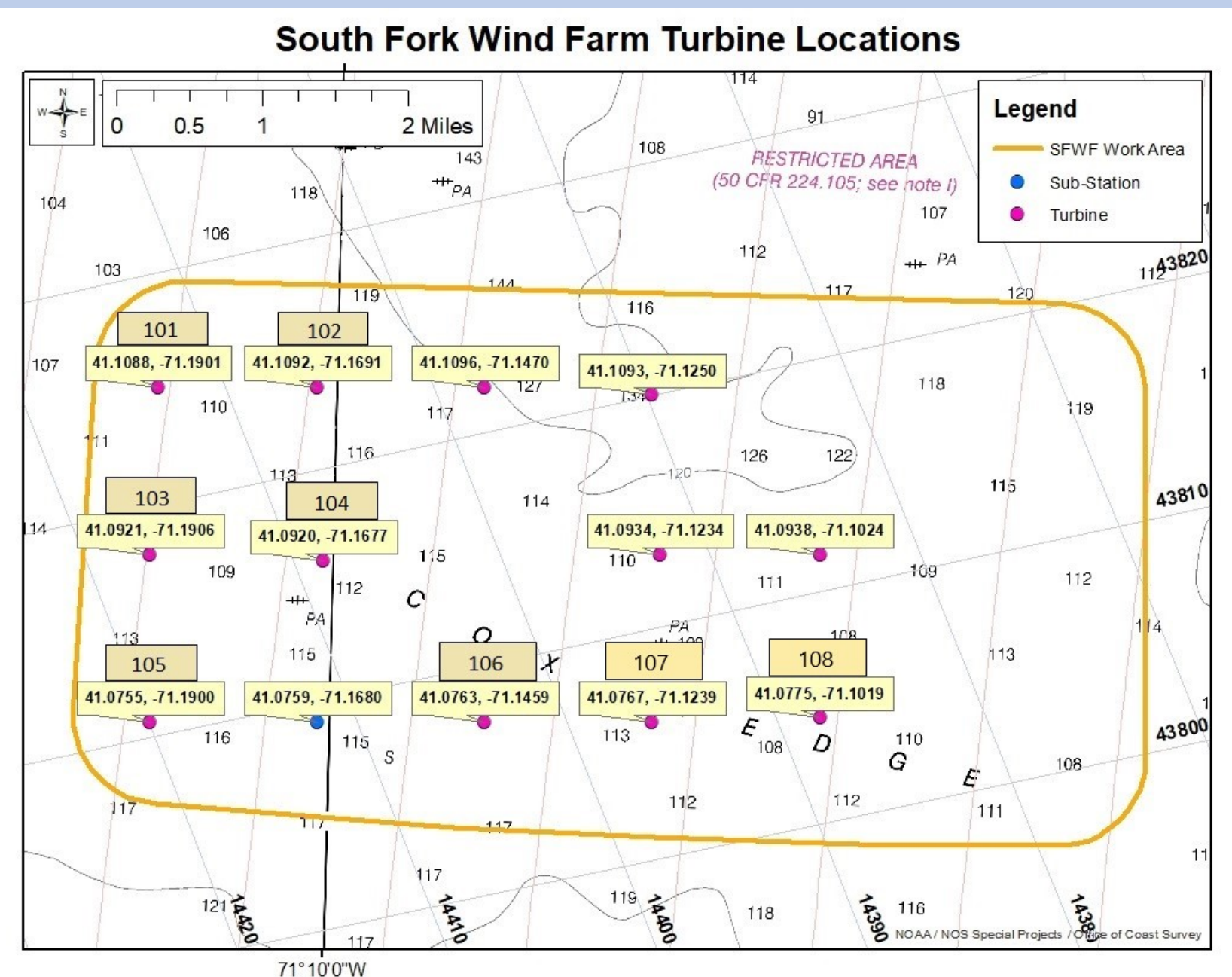


South Fork Wind Farm Fish Pot Survey

A demersal fisheries resource survey to target commercially and recreationally important finfish species like black sea bass, scup, and tautog.

Survey Basics

- Survey runs from June – December aboard the F/V Harvest Moon of Point Judith, RI
- We survey the same 8 stations each month
- Stations are located at potential turbine locations (see map below)
- Each station string has 18 ventless, rectangular fish pots (144 total pots)
- Pots are soaked for 24 hours
- Squid is used for bait

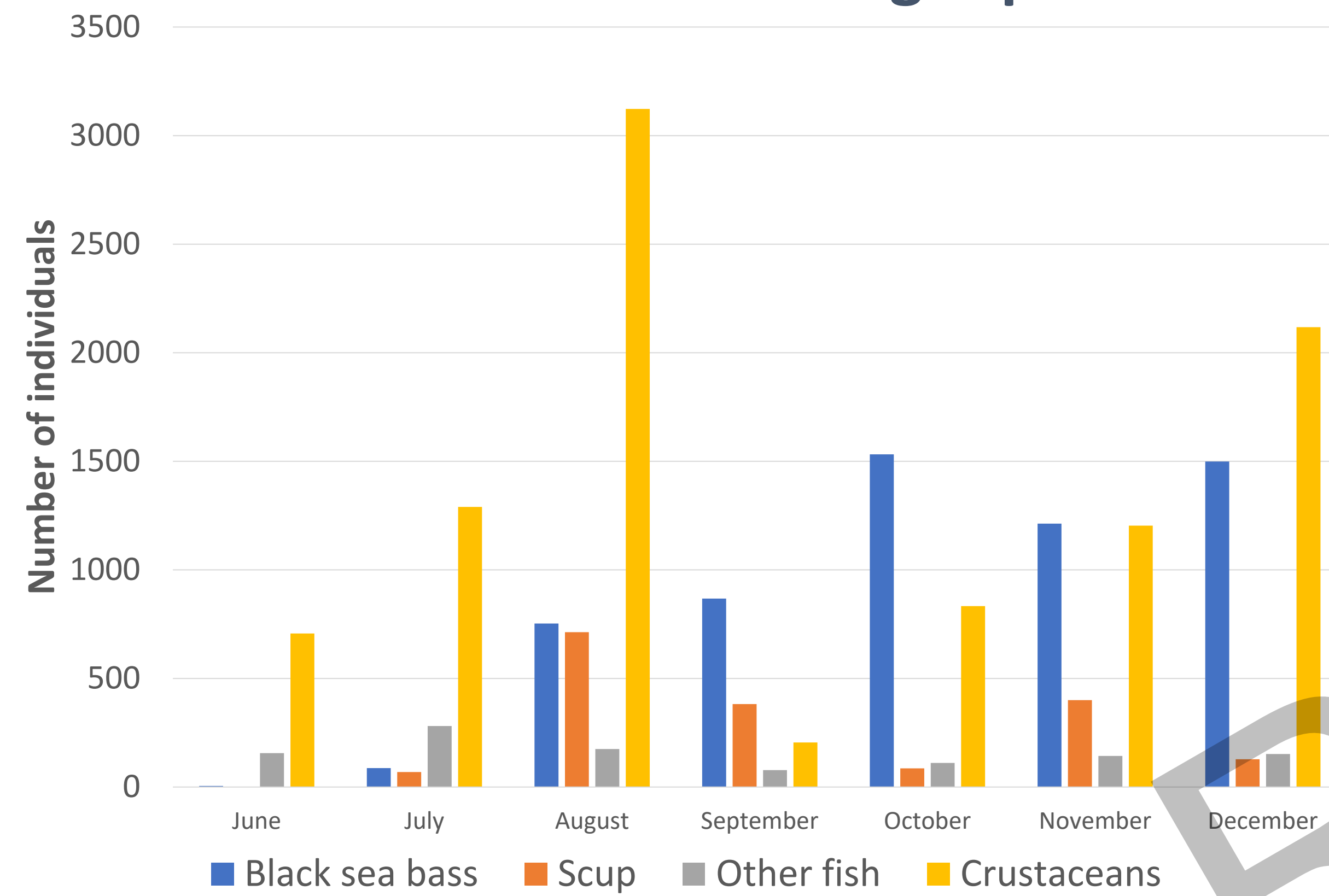


Sampling Basics

- Catch from each pot are sorted, counted, and quantified depending on the species
- Target finfish species are counted, measured, and up to 10 individuals are individually weighed
- Non-target fish species are counted, up to 10 individuals are measured, and a basket weight is taken
- Crustacean species are counted and a basket weight is taken

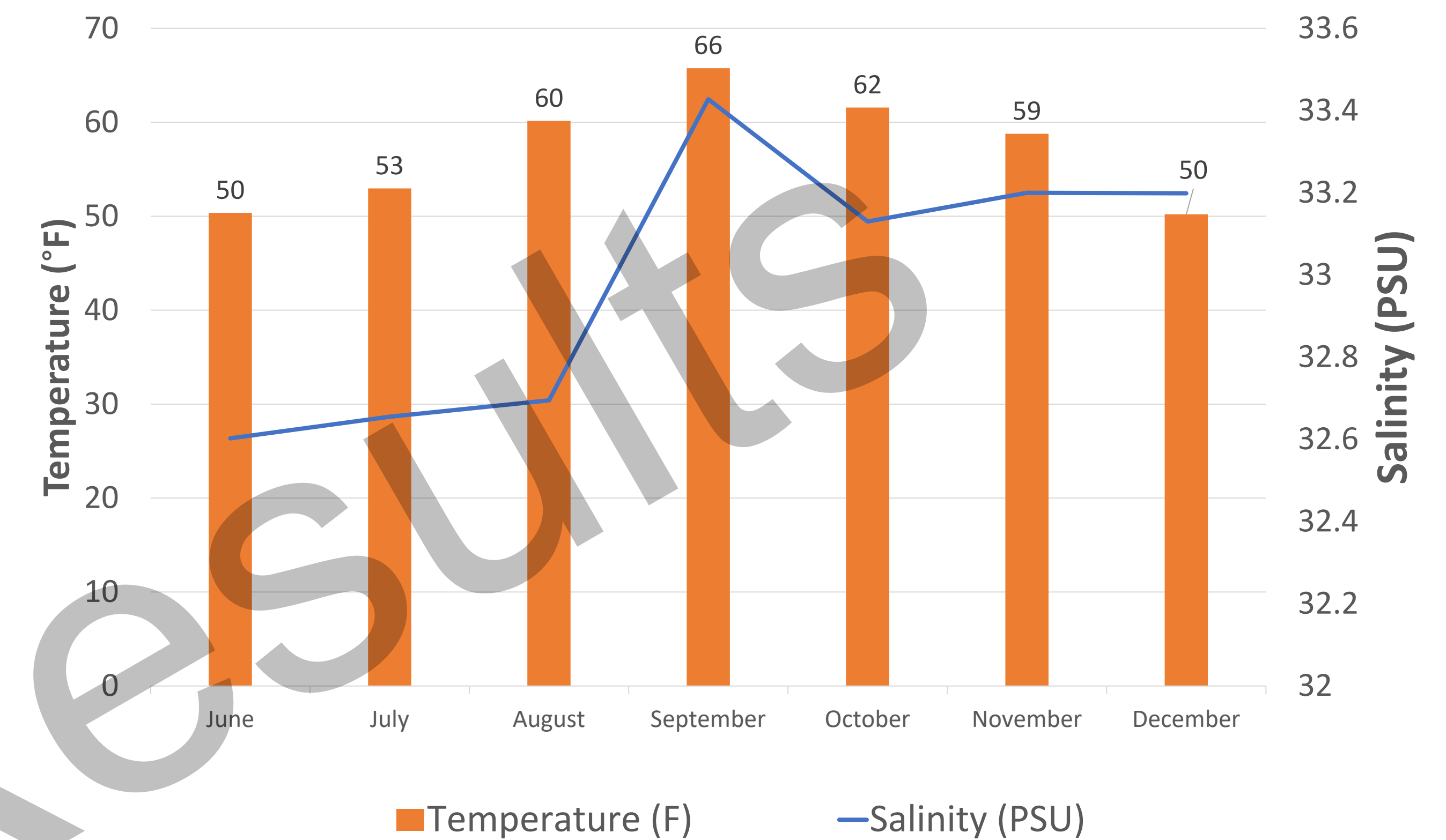


Number of Individuals caught per month



Top 5 Other fish: cunner, red hake, conger eel, ocean pout, and spiny dogfish
Top 3 Crustaceans: Jonah crab, rock crab, and lobster

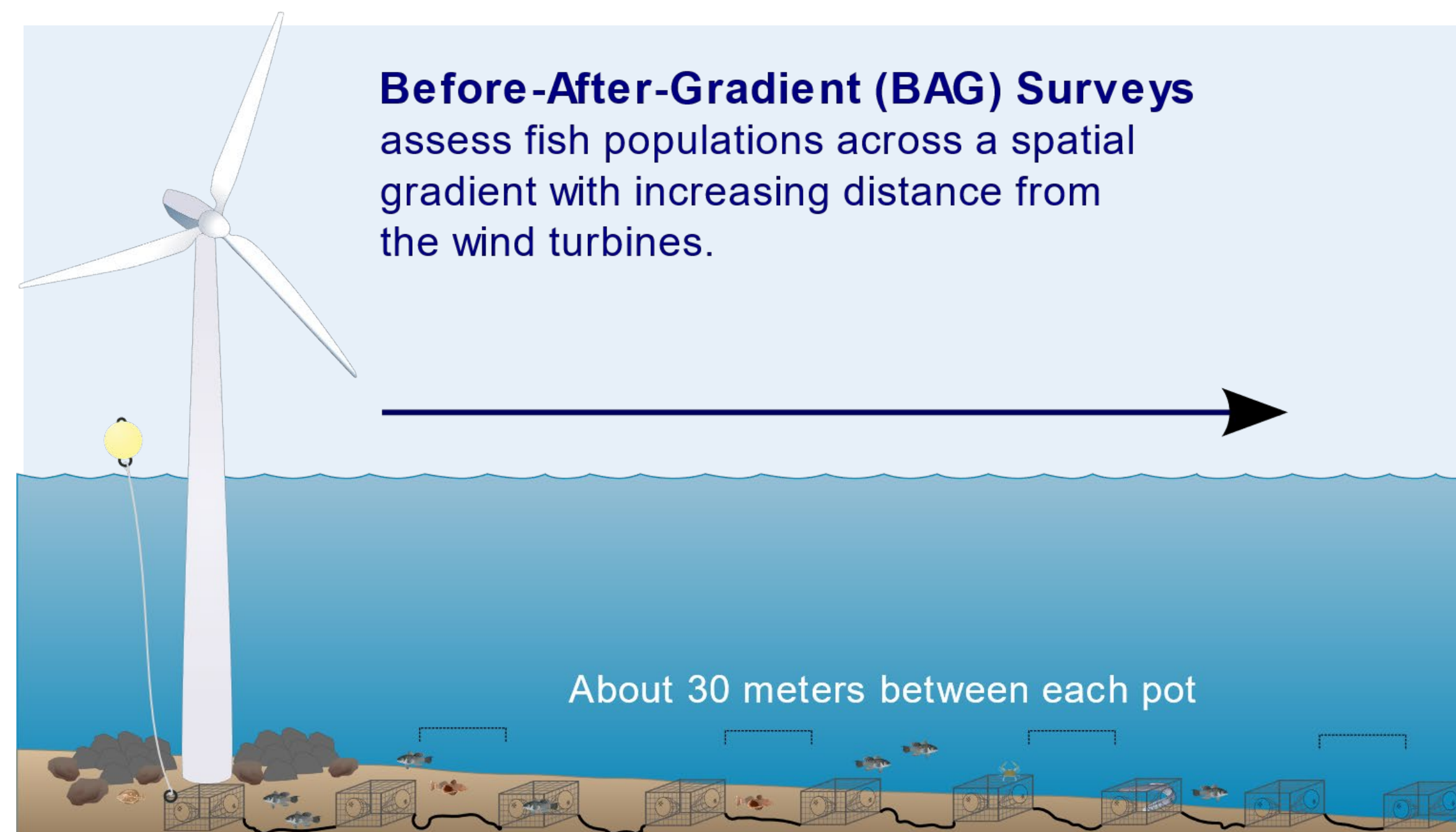
Average Bottom Water Temperature and Salinity



Bottom water temperature and salinity were recorded with a CTD. Both temperature and salinity peaked in September at 66 °F and 33.4 PSU.

What's in the BAG?

Two common methods for surveying windfarm areas are the **Before-After-Control-Impact (BACI)** and the **Before-After-Gradient (BAG)** designs. Both survey designs have pros and cons regarding the requirements for setting up the surveys as well as their statistical implications (Methratta 2020). The SFWF gillnet, beam trawl, and ventless lobster surveys follow a BACI design in which we perform surveys inside the wind farm lease area as well as inside two control or “reference” areas in order to compare species composition pre-, during, and post-turbine construction. The fish pot survey follows a BAG design, so we perform the survey along a spatial gradient starting from eight of the known turbine locations without any reference areas. Some finfish species like black sea bass are known to congregate in areas with structured habitat like artificial reefs, so it will be interesting to see how these species react to the structures constructed turbines.



Empty fish pots on the deck.



Fish baskets full of crabby catch.

Acknowledgements and References



Thank you Joe Baker (left), Captain of F/V Harvest Moon, and crew Evan Adams (right) for all your help and making Year 1 of the fish pot survey run so smoothly!

Methratta, E.T. 2020. Monitoring fisheries resources at offshore wind farms: BACI vs. BAG designs. ICES Journal of Marine Science. 77(3): 890–900. doi:10.1093/icesjms/fsaa026/

Graphics used in BAG Diagram from the Integration and Application Network (IAN) available at <https://ian.umces.edu/media-library/>.

- Tracey Saxby (IAN): black sea bass, eel, sea robin, habitat, rocks, wind turbine; Jane Thomas (IAN): blue crab, flounder; Jane Hawkey (IAN): trap; Dieter Tracey (Diponegoro University Indonesia, University of Queensland): buoy

Project funded by **South Fork Wind** | Powered by Ørsted & Eversource