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Large-Scale Testing of Pop-up Fishing Gear Successfully Demonstrates Potential to Re-Open the California Commercial Dungeness Crab Spring Fishery While Protecting Whales from Entanglement

San Francisco, Calif. — The US West Coast’s most extensive testing of pop-up fishing gear to date recently concluded off the coast of California in the state’s Dungeness crab fishery. The purpose of the demonstration was to evaluate the performance of the gear while providing hands-on experience to fishermen and state enforcement staff under realistic spring fishing conditions. The spring Dungeness crab fishery has been effectively closed to commercial fishing off Central California for the last five years due to increased entanglement risk for whales and sea turtles in the vertical lines and buoys of conventional crab gear. Pop-up gear eliminates entanglement risks by storing the line and buoy with the crab pot until the fisherman sends it an acoustic signal to “pop-up.” The gear demonstrated in the project was developed and manufactured by [Sub Sea Sonics](#) and [Guardian Ropeless Systems](#) with a focus on providing gear that is reliable and economical for fishermen. The pop-up gear systems were fished under an Experimental Fishing Permit (EFPT2-001) approved by the California Fish and Game Commission to test the performance and reliability of pop-up gear in the Dungeness crab fishery.

Crab fisherman Steve Melz of Half Moon Bay, CA reflected on his experience with the gear: “The pop-ups worked, and we brought home every trap that we set! The whole test is a complete success: crabbing in the spring again in front of home, no dirty buoys to clean, you never go to the wrong end of the string and not to mention the better price that is paid for the crabs.”

According to Bart Chadwick (Sub Sea Sonics), “This EFP provided an opportunity for fishers to get hands on experience with on-demand fishing gear under realistic fishing conditions in the Spring Dungeness crab fishery. The success to date should help to provide a pathway to authorization of the gear for the spring fishery so it is available to all fishers.”

Russ Mullins from Guardian Ropeless Systems pointed out the win-win nature of successful gear demonstration: “Results from this EFP demonstrated that whale protection and management of a highly profitable crab fishery are not mutually exclusive. It is time for the spring pop-up fishery to be authorized for licensed commercial crabbers.”

Summary of results:

- Over 277 fishing trips, 19 fishers hauled 2,361 strings of gear, consisting of 23,048 traps using fully ropeless, on-demand gear.
- The gear reliability rate of the pop-up gear over the course of the project was around 98% and the backup gear recovery method of grappling proved to be manageable and productive in the few cases where the gear did not successfully pop-up on its own. Several fishers did not need to grapple over the course of the project.
- Crabbing activities took place at various depths ranging from 60ft to 360ft.
- The gear loss rate over the course of the project currently sits at 1.6%, however, recovery efforts for the remaining lost gear are still planned. Overall, the project gear loss rate is lower than

estimates of annual gear loss rate in the conventional single-trap fishery (5-10%). Gear failure is not the suspected cause of the experienced gear loss.

- Rigorous hands-on training was highlighted as a key element to the successful operation of the gear and the minimization of technical problems and gear loss.
- Vessels from the ports of San Francisco, Bodega Bay, Half Moon Bay, Santa Cruz and Moss Landing participated in the project.
- Fishers landed over 229,000 lbs. of crab with an estimated landing value of about \$1.6M.

Participating fishers in the 2024 spring testing paid for the gear themselves, and then had the option to keep the gear for future use or turn the gear in for reimbursement, thanks to funding from the California Ocean Protection Council.

Based on these successful results, Sub Sea Sonics and Guardian Ropeless will continue to work with fishermen and the State of California toward full pop-up gear authorization as one approach to restoring access for fishermen to the spring Dungeness crab season off California. The California Department of Fish and Wildlife makes the decision whether to authorize the use of the gear for any licensed fishers who would like to participate.

Testimonials and interviews with EFP fishermen can be facilitated upon request. Fishermen interested in participating in future testing under the EFP can contact Sub Sea Sonics. For more details about the gear trials and lessons learned [click here](#).



Caption: Sub Sea Sonics acoustic release (left) inside a Guardian Ropeless System sled with line and buoy as tested in the trials, pictured above Dungeness crabs caught with the gear system.