

PROPOSAL 261

5 AAC 32.050. Lawful gear for Dungeness crab.

Allow use of a ropeless system with submerged buoy in the Dungeness crab fishery, as follows:

5 AAC 32.050. Lawful gear for Dungeness crab.

(c) The use of a pop-up on demand or "ropeless" fishing system using a submerged buoy may be affixed to a crab pot provided the owner/operator registers this system with the Alaska Department of Fish and Game so that applicable gear marking regulations and laws may be enforced.

What is the issue you would like the board to address and why? This is a proposal to allow "On-Demand Pop-up buoy" fishing gear for pot fisheries in Alaska. This would be an important tool for individual pot and trap fishers, adding value to fishing operations by reducing gear and catch loss, and securing fisheries by providing a proactive measure against whale entanglements and reducing stock depletion due to ghost gear.

Advantages of pop-up gear for the fisher

Using an on-demand (i.e. boat commanded) "pop-up" buoy system offers protection from poaching and significantly reduces gear loss. No longer would a pot be pulled only to find an empty trap and stolen catch. This method of fishing would also protect gear from the surface hazards of buoy line cutting, ship entanglements, wildlife entanglements, and damage or gear loss from bad weather and sea conditions such as operating near sea ice. The overall annual gear loss has decreased by more than half in areas where this type of gear is already in use. Pop-up technology offers the reliability of accessing buoys in high-currents where surface buoys may submerge. Therefore, gear access can become more reliable, and fishers in New South Wales have experienced engine hour reductions by as much as 40% to harvest their allotted annual quota.

How On-Demand Pop-Up Gear Works

An "on demand pop-up buoy" system is designed so that the rope and buoy is stored with the pot on the seafloor. The boat uses a transducer to signal the release mechanism and the buoys float to the surface. Only the fishers' boat and local fishing regulators would have the capability of releasing the buoys to retrieve the pot trap. Enforcement of applicable laws is made possible by a free app for GPS (or virtual) gear marking. Fishers use the app to mark the location of their traps and this information is shared on a limited basis with other fishers to avoid gear conflict while maintaining gear location privacy using a "visibility radius". Enforcement officers have access to this information for reporting purposes. Enforcement officers can use the same acoustic transducer technology to survey for pot traps in an area. By using this method they can range to an exact location of a pot trap in order to release the buoys for pot trap inspection or they can ID the pot traps without pulling them.

On demand pop-up buy systems may be equipped with several codes, and the owning fishers, other fishers and enforcement officers have access depending on the code used:

- An individual code is specific to an individual gear set. It allows a fishers or (if reported) and enforcement officer to range to an individual pop-up buoy and, if desired, release it.
- A broadcast code is common to all or a portion of a fishers pop-up buoy inventory. It releases the pop-up buoy when the boat approaches, but does not support ranging to or identifying gear on the sea floor. The broadcast code is only for use by the owning fisher.

Some pop-up buoys (lower cost) may only support the broadcast code. Such devices cannot be ranged to, but may still be identified in combination with virtual gear marking by using a boats sonar system to detect the hard floats.

- A public code allows anyone to identify gear on the sea floor, including its presence, distance and owner. This is useful for fishers to assure that the ground is clear before deploying equipment, and to find equipment that may have moved. It can be useful for fisheries enforcement to identify deployed gear that has not been GPS (virtual) marked and reported.

Implications for Fisheries Enforcement

All pop-up gear can be GPS (virtual) marked using available free or low cost apps for gear mark sharing, and by other means such as web sites or email reporting. The availability of individual, broadcast and public codes is device and manufacturer specific. For regulatory purposes, the widest availability of pop-up technology to fishers is reached if no such code is required and even simple pop-up devices such as Galvanic Timed Releases (GTR) which are available for less than \$2 can be used by the fisher. This is the approach taken in both the California spiny lobster fishery and the New South Wales rock lobster fishery. The use of acoustic release and identification codes provides gear locating, gear conflict avoidance and on demand pop-up capabilities to fishers and improved enforcement. But it also limits pop-up availability to the fishing community due to higher cost.

It is noted that in all cases the pop-up buoys should still be marked with the license holder numbers for identification. It is also noted that even 'static' surface buoys do routinely submerge in many areas when the current runs strong. In this sense, on-demand pop-up systems provide enforcement capabilities that exceed those of traditional static buoys. That is, identification is available by GPS (virtual) gear marking and by the acoustic codes even when a buoy is submerged.

Pop-up use in other Jurisdictions

Ropeless is already a legal practice in other fisheries like the California Spiny Lobster and NSW Rock Lobster. A simplistic method of ropeless fishing is used in Ireland and the UK, and other jurisdictions are set to make it the default practice, including the California Dungeness Crab Fishery by 2021.

Commercial availability of pop-up systems and summary of advantages for the pot and trap fishing industry

There are multiple manufacturers and styles of ropeless fishing using submerged buoys commercially available. These technologies should be made available for fishers who can benefit from them most. The business benefits of mitigating marine entanglements, restoring income security by preventing poaching and vandalism, stop gear loss due to ship strikes, rough weather and sea ice, and more reliable gear access in deep water with high currents are all reasons this should be allowable for Alaska fishers.

Without regulatory changes permitting pop-up use, these problems will continue to exist at a high cost to pot and trap fishers. The gear regulations for type, size, maximum soak period etc. of pots and traps will not be affected. Pop-up systems do not replace but enhance and add value, security and flexibility to the gear already in use by harvesters. Allowing the use of this available

technology to Alaska fishers can also prevent future closures intended to prevent endangered species. Both California Dungeness and Cape Cod Lobster Fisheries are currently experiencing annual closures brought upon by the enforcement of the Endangered Species Act. By allowing pop-up gear to fishers in Alaska the potential for closures due to possible entanglements is significantly reduced. Fishers in California and Cape Cod along with their government officials are only now beginning the process of learning to use pop-up systems and writing additions to fishing codes, while they do this the fishers are left with closures when they needed this gear available years prior.

The proposed regulatory changes allowing this type of gear would apply to the pot and trap fisheries for shrimp, crabs, lobster, and ground fish. Example additions to the Alaska Administrative Code for lawful gear to allow for ropeless “pop-up” gear are the following:

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