

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

CENTER FOR BIOLOGICAL
DIVERSITY et al.,
Plaintiffs,
v.
WILBUR ROSS, et al.,
Federal Defendants, and
MAINE LOBSTERMEN'S ASSOCIATION,
INC., and
MASSACHUSETTS LOBSTERMEN'S
ASSOCIATION,
Defendant-Intervenors.

Civil Action Nos. 18-112 (JEB)

**Declaration of Noah Oppenheim
In support of Intervenor-Defendants' Remedy Brief**

I, Noah Oppenheim, state and declare as follows:

1. I am the Principal of Homarus Strategies, a Limited Liability Corporation formed in April 2020. Homarus Strategies is a consulting firm focused on enhancing marine resource sustainability and productivity, supporting coastal communities and their access to the living marine resources on which they depend. Homarus Strategies is engaged in work on behalf of commercial fishing organizations to support their engagement in public processes that pertain to the prosecution of fisheries and to ensure that their voices are heard by decision makers whose experience rarely includes the perspectives or expertise of professional fishermen who have spent their careers working at sea.

2. I am a marine scientist and fisheries policy expert who has worked as a federal fisheries observer in the fixed and mobile gear groundfish fisheries in the Bering Sea and as a commercial salmon fisherman in Alaska. I received master's degrees in marine biology and marine policy from the University of Maine's School of Marine Sciences. The focus of my graduate research was the American lobster fishery in New England. I developed a population dynamics model forecasting lobster fishery recruitment and commercial harvest for fishing areas from Rhode Island to New Brunswick, Canada based on a survey of larval lobster abundance and environmental factors

including warming ocean temperatures driven by climate change. I also studied the perceptions and utility of scientific information and fishery management policies from the perspectives of lobster fishermen for whom scientific information is sometimes intended but often not appropriately designed or scaled.

3. During my graduate studies from 2013-2016 involving research on the American lobster fishery, I became familiar with various measures implemented to reduce entanglement risk to large whales from lobster gear, including the use of colored line marking to identify gear with its fishery of origin, weak links, the use of line that sinks rather than floats between traps set on bottom, and regulatory requirements for trawling (colloquially known as ‘trawls’ or ‘gangs’) multiple traps on bottom that are connected to a buoy at the surface via a vertical line at one or both ends of the trawl. I also became familiar with measures being developed or proposed to further reduce alleged whale entanglements in the American lobster fishery, including ‘cutter’ systems, expansion of weak link systems in buoy lines and the development of ‘pop-up buoy gear’ (also known as ‘on-call’, ‘ropeless’, or ‘buoy line-less’ gear, although a majority of such systems include buoys and one or more segments of rope). During my studies I engaged with numerous commercial lobstermen, marine scientists, and fishery managers about the various regulatory and technological proposals to address whale entanglement in the lobster fishery, including the viability of using pop-up buoy gear.

4. Pop-up buoy gear is class of fishing equipment that removes or greatly reduces static vertical lines in the water column as a gear retrieval system and instead uses various alternative buoyancy mechanisms and communications technologies to mark the location of fixed gear, identify the owner/operator of the gear, and retrieve the gear. Most prototype or commercially available pop-up buoy gear equipment uses the submersion of a buoyancy device and acoustic signaling to actuate the surfacing of the buoyancy device. Pop-up buoy gear can be divided into two primary types or classes: ‘lift bag gear’ which uses compressed air (for example, SCUBA tanks) to fill a bag to bring submerged gear to the surface for retrieval; and ‘remote coupler gear’ which uses coiled or spooled lines and buoys that are released from traps or separate weighted

anchors to reach the surface using a timed-release mechanism or after receiving an acoustic signal (Figure 1). Some remote coupler-type pop-up buoy gear systems require the use of a destructible component that must be reloaded for re-use. Many pop-up buoy gear systems require the use of GPS-based mapping platforms, specialized networked telecommunications equipment, acoustic modems for transmitting coded acoustic signals, and specialized equipment for re-coiling, re-arming, or re-deploying the equipment.

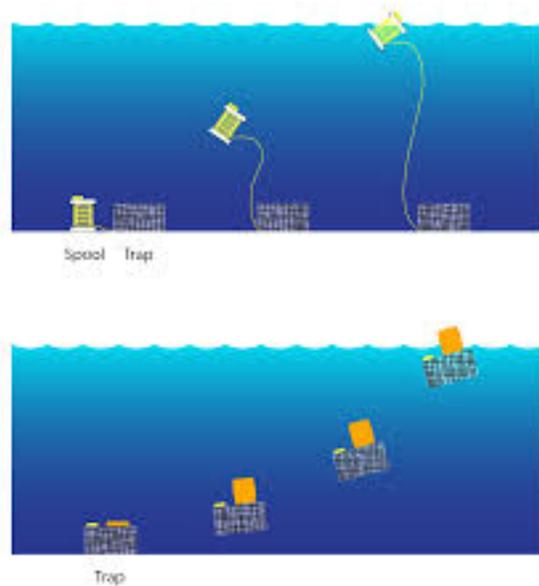


Figure 1: A diagram illustrating two types of pop-up buoy gear systems. The top diagram illustrates remote coupler gear and the bottom diagram illustrates lift bag gear. Accessed from the California Ocean Protection Council website at www.opc.ca.gov.

5. From January 2016 through January 2017 I was a Sea Grant Policy Fellow in the US Congress. During this time, I was responsible for the natural resources portfolio in the office of Congressman Jared Huffman, at the time the Ranking Member of the Water, Power and Oceans Subcommittee of the House Natural Resources Committee. My duties as Policy Fellow included legislative development, office and committee engagement on state and federal fisheries policy matters, assistance with executing the oversight functions of the Congress over the National Oceanic and Atmospheric Administration (“NOAA”) (including the National Marine Fisheries

Service or “NMFS”), and engaging with the constituents of California’s second congressional district.

6. During my tenure with Congressman Huffman I became aware of the issue of whale entanglement in the west coast Dungeness crab fishery as well as various proposed solutions to minimize and mitigate interactions between ESA-listed whales and Dungeness crab fishing gear. During this time I became aware of the existence of proposals to test pop-up buoy gear in Dungeness crab fishing grounds, as well as the proposals by some non-governmental organizations to mandate its use in the Dungeness crab fishery.

7. From February 2017 to April 2020 I was the Executive Director of the Pacific Coast Federation of Fishermen’s Associations (“PCFFA”) and PCFFA’s sister organization, the Institute for Fisheries Resources (“IFR”).¹ In that capacity I directed all of PCFFA’s and IFR’s fishery management policy, environmental advocacy, and litigation in support of the commercial fishing communities of the West Coast. IFR and PCFFA are especially engaged in legal action to prevent harm to the living marine resources on which their members depend as well as to prevent the implementation of policies that unduly or arbitrarily preclude their access to those resources.

8. In the course of executing my responsibilities at PCFFA and IFR I engaged with numerous Dungeness crab fishermen about their experience with and concerns about pop-up buoy gear. I worked closely with two Dungeness crab fishermen who have first-hand knowledge of buoy-less or pop-up buoy gear systems which they tested from their vessels.

¹ PCFFA is a 501(c)(5) nonprofit trade association established in 1976. PCFFA is the largest trade organization of commercial fishing families on the west coast. PCFFA is a federation of 15 smaller commercial fishermen’s associations, vessel owners’ associations, port associations, and marketing associations, with member associations in most major ports in California north of Point Conception. Collectively, PCFFA’s port and member associations represent approximately 750 commercial fishing families West-Coast-wide who are small and mid-sized commercial fishing boat owners and operators, most of whom derive part or all of their income from the harvesting of Dungeness crabs.

IFR is a 501(c)(3) non-profit, public interest marine resources protection and conservation organization incorporated in the State of California which is closely affiliated with PCFFA and with similar Board structure, general membership, and staff. IFR was created in 1993 by PCFFA to help fund, manage, and advocate for PCFFA’s fisheries habitat conservation and restoration agenda, particularly for protecting and restoring and improving fisheries that have suffered from poor inland and coastal water quality and the impacts of climate change including drought and harmful algal blooms. IFR has many supporting members coastwide, most of whom are commercial fishermen and women, or individuals who have a personal interest in protecting fish and the integrity of seafood markets.

9. In my position as Executive Director of IFR, I also supervised and directed all of IFR's many fisheries conservation programs in Oregon, Washington, and California. Much of IFR's work focuses on efforts to restore and protect fishery resources within the coastal waters and watersheds of these three states. IFR, in particular, has been an active and important voice in habitat protection and restoration issues coastwide for the benefit of increased harvest of public trust fishery resources. I am currently the commercial fishing representative to the Pacific Fishery Management Council's Habitat Committee.

10. The California Dungeness crab fishery and the New England lobster fishery are similar in many respects. Each are considered models of sustainable fishery management in their region and populations of Dungeness crabs and lobsters are stable and healthy throughout core ranges of both fisheries. These fisheries have developed similar management strategies that are implemented through differing management measures. Each have systems of limited entry, trap limits, size limits and protections of females or gravid females. The economic model for both fisheries is dependent upon a high volume of landings, requiring significant effort by repeatedly retrieving and redeploying traps. Dungeness crab fishermen can haul and redeploy 300-400 traps per day which is similar to some Maine lobstermen who fish further from shore on larger vessels in order to remain competitive. Others, who fish in smaller boats closer to shore, would haul on average 200 or less traps per day.

11. Both the California Dungeness crab fishery and American lobster fishery are required by law to affix a buoy attached by a line to enable the location of gear, identify the individual to whom the gear belongs, and to provide a mechanism by which to retrieve the gear from the seafloor. While the lobster fishery allows for the deployment of multiple traps on bottom, known as a 'trawl' or a 'gang', this practice is unlawful in the Dungeness crab fishery. In the Dungeness crab fishery, each line and buoy setup is coiled and placed entirely within its corresponding trap to maximize stacking volume and to increase safety and handling efficiency on deck (Figure 2). A typical Dungeness crab trap, line, and buoy costs around \$200. An equivalent set-up in the New England lobster fishery also costs around \$200.

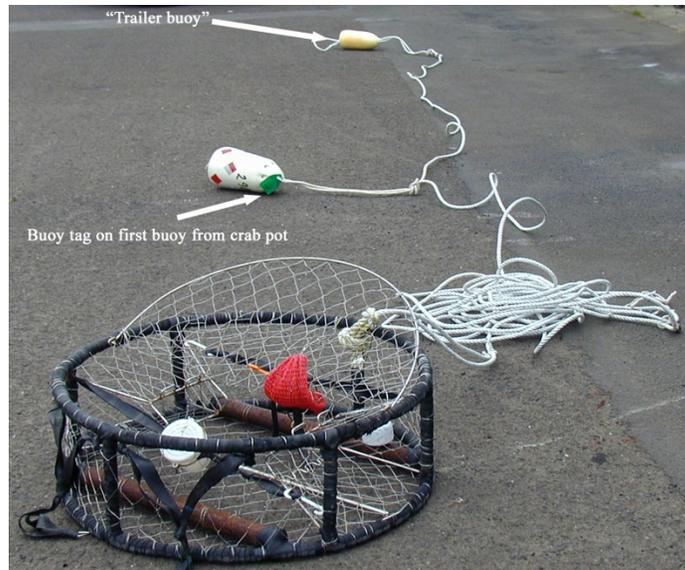


Figure 2. A standard West Coast Dungeness crab trap with main buoy and single trailer buoy setup indicated. Source: Oregon Department of Fish and Wildlife.

12. In California, Dungeness crab fishing occurs from November 15th to July 15th. Frequent intense storms and strong currents throughout the water column can flip and transport fishing gear and mobilize the ocean substrate to such a degree that traps become buried in the sand, often requiring the use of specialized high-velocity water pumps to retrieve them; the nozzles attached to these pumps must ‘chase’ a line with a buoy to a stuck trap in order to retrieve it.

13. The American lobster fishery is open year-round with the exception of targeted closures implemented to protect North Atlantic right whales. However, the majority (~80%) of Maine lobstermen hold only state licenses and thus are limited to fishing in state waters located within 3 miles from shore. These vessels typically fish from May through November. Those who hold federal American lobster permits are more likely to fish year-round. Lobstermen who fish in the Outer Cape Cod area and in Downeast Maine also work in areas with intense bottom currents and tides which requires additional ballast to hold gear in place and prevent gear loss.

14. A marine heat wave in the Pacific Ocean that began in late 2013 and persisted for three years affected the timing and distribution of marine mammals off the coast of California. It also caused an increase in the abundance and toxicity of various *Pseudo-nitzschia* plankton species

which are sometimes known to produce elevated levels of the potent neurotoxin, domoic acid. Concentrations of domoic acid exceeding US Food and Drug Administration (FDA) action levels were detected in Dungeness crabs prior to the scheduled opening of the 2015/16 commercial fishing season in November, resulting in five month delay and a phased-in opening of the fishery. This resulted in a significantly greater than normal concentration of fishing gear that corresponded with a very early springtime migration of endangered humpback whales. The whales swam abnormally close to shore in search of forage, resulting in a high level of interactions between fishing gear and humpback whales. According to NOAA, there were 19 confirmed entanglements of humpback whales with California Dungeness crab fishing gear in 2016, compared with an average of 0.84 confirmed entanglements with humpback whales over the previous thirteen years (2003-2015).

15. In September 2015, the California Department of Fish and Wildlife (CDFW), in partnership with California Ocean Protection Council and National Marine Fisheries Service, established the California Dungeness Crab Fishing Gear Working Group (“Working Group”) to address an increase in large whale entanglements in Dungeness crab fishing gear. From July 2019 to April 2020 I was a member of the California Dungeness Crab Fishing Gear Working Group (“Working Group”) which developed fishing gear best practices to reduce entanglement risk. The Working Group identified four factors that served as primary indicators of increased risk of entanglements between ESA-listed whales and commercial fishing gear to be used in a management framework called the Risk Assessment and Mitigation Program (“RAMP”).

16. In October 2017 the Center for Biological Diversity (CBD) filed a lawsuit against the California Department of Fish and Wildlife (CDFW) alleging that continued management of the California Dungeness crab fishery violated the ESA due to the occurrence of ‘take’ of ESA-listed Distinct Population Segments (DPS) of humpback whales and other listed species absent an Incidental Take Permit (“ITP”).² In November 2017 the PCFFA Board of Directors voted to seek

² *CBD v. Bonham*, US. Dist. Ct. California, N. Dist, No. 3:17-cv-05685-MMC (“*CBD v. Bonham*”)

to join *CBD v. Bonham* as Defendant-Intervenors. In March 2018 PCFFA's motion to intervene was filed and subsequently approved.

17. In July 2018 I participated in a meeting convened by pop-up fishing gear proponents with fishing industry members, CDFW Law Enforcement Officers, and pop-up gear manufacturers. The meeting included presentations from the manufacturers of 'remote coupler' and 'lift bag' systems and discussions about the various impediments and problems with each system, including challenges of use on board vessels, challenges with the interaction of pop-up buoy gear with mobile and other fixed gear, and challenges for law enforcement officers regarding location, retrieval, and redeployment of pop-up gear.

18. In November 2018 CDFW announced it would develop a Habitat Conservation Plan pursuant to an application for an ITP for its management of the Dungeness Crab Fishery. In March 2019, Judge Maxine Chesney of the US District Court in San Francisco informed the parties to *CBD v. Bonham* she was inclined to rule in favor of the plaintiff's motion for summary judgment resulting in a settlement agreement for a stay agreement signed by all parties dated March 26, 2019. CBD attorneys insisted on the inclusion of provisions to the stay agreement for certain fishing areas to be "only open to ropeless fishing gear by default" and for "[CDFW to] continue to support development of ropeless gear technology, or any other alternative gear, and explicitly allow for its testing and use in the RAMP regulation"³. Further, the settlement requires CDFW to "...amend existing regulations or finalize new regulations by November 1, 2020, that allow alternate gear, including ropeless gear, that meets the enforcement criteria to be used in any area closed to commercial Dungeness crab fishing to protect whales or sea turtles"⁴.

19. In April 2019 I attended the Atlantic Large Whale Take Reduction Team meeting and engaged with New England lobstermen, scientists, agency staff, and environmental nonprofit organization staff about risk assessment and mitigation approaches in the New England lobster

³ Case 3:17-cv-05685-MMC Document 71 Exhibit A pp. 2

⁴ *ID.* at 4.

fishery. I specifically explored the state of knowledge and engineering development of pop-up buoy gear.

20. I am familiar with three California commercial Dungeness crab fishermen who have tested pop-up buoy gear systems on their vessels. I have worked extensively with two of them, Captain John Mellor of San Francisco and Captain Dick Ogg of Bodega Bay, to understand their experience testing this gear and its potential as an entanglement mitigation strategy that can be scaled across the fishery. Each of these fishermen has experienced operational and technical challenges with this gear and have stated that they do not believe pop-up buoy gear is compatible with commercial fishing as it currently exists.

21. Mr. Mellor tested the FioBuoy (spooled line) and Desert Star (line-in-bag) pop-up buoy gear systems affixed to his Dungeness crab traps in San Francisco Bay, California, a sheltered area with limited wave action, in shallow water at slack tide with little wind (atypical conditions for the Dungeness crab fishery).⁵ He successfully deployed and retrieved each type of pop-up buoy gear once. He noted that on the final deployment it became difficult to determine the location of the buoyant float released from the trap because the tide had begun to run slightly. He reported that he does not believe the equipment he tested to be compatible with his fishing operation because the equipment was difficult to handle, there is no spatial mapping software platform or package that would enable him to confidently track the deployment and retrieval of his gear, and the equipment was neither robust enough nor compact enough to fit inside his traps for stacking or handling the rigors of loading and unloading or repeated deployments.

22. Mr. Ogg also tested the FioBuoy and Desert Star pop-up buoy gear affixed to his Dungeness crab traps in the ocean waters off the coast of Bodega Bay, California in shallow water with relatively calm sea state conditions. In his first deployment of the FioBuoy system, he was unsuccessful in activating the gear's release mechanism, but successfully activated the release mechanism on a second attempt. He also deployed the Desert Star system, successfully

⁵ FioBuoy at <http://fiomarine.com/>; Desert Star at <https://www.desertstar.com/>

establishing communication with the system and confirming the activation of the release mechanism, although the buoy was not released by the system. He was unable to retrieve the gear and attempted to have the gear retrieved by a SCUBA diver. Unfortunately, this gear was lost and is now a piece of marine debris. Mr. Ogg believes the Desert Star gear may have landed underneath his trap when it contacted the seafloor or that current may have caused his trap to roll over on top of the pop-up buoy gear. It is common in fixed gear fisheries for traps to land upside-down or roll over. The successful retrieval of the pop-up buoy systems he tested is dependent upon the gear landing on bottom in a stable upright position. Based on his experience, Mr. Ogg believes that gear loss resulting from this system would be a common and costly occurrence under normal fishing conditions.

23. Mr. Mellor, Mr. Ogg, as well as many other Dungeness crab fishermen who are familiar with pop-up buoy gear, have described the problems and challenges they see with the use of the gear. Many of these problems and challenges pertain to the ease of use of the systems, including but not limited to the amount of time necessary to use them on board their fishing vessels.

24. Pop-up buoy gear systems are currently, or foreseeably, unreliable and cost prohibitive. Current commercial units cost 10 times or more per trap compared to gear they currently use. Fishermen would also have to purchase or lease expensive electronic equipment to arm and retrieve pop-up buoy gear. For example, if a California Dungeness crab fisherman who owns a tier 1 permit were required to purchase \$5,000 pop-up buoy units for each of her 500 traps, she would incur a cost of \$2,500,000. This same fisherman would have to reduce the number of traps she fishes from 500 to 20 if she wished to maintain the same budget for fishing gear after switching to pop-up buoy gear. The economic model could not be supported by the fishery.

25. Fishermen have observed that they will also have to make extensive, expensive modifications to their vessels in order to operate many of the pop-up buoy gear systems that are currently available, requiring new haulers, wiring for electronics, or custom-built platforms or shelving to stabilize gear while it is being re-coiled or re-spoiled.

26. Mr. Ogg and other fishermen are concerned that the pop-up buoy gear systems that have been tested have an unacceptably high failure rate, resulting in losses of very expensive equipment. The typical failure or loss rate of traps for the California Dungeness crab fishery over the course of a seven month fishing season is around 1.5%. A fisherman might typically cycle through his or her gear twenty times in a typical season, meaning that the failure or loss rate of a typical Dungeness crab trap can be estimated to be around one in 1,250 trap pulls. I am not aware of any existing pop-up buoy gear systems that have a failure rate within two orders of magnitude of ‘traditional’ line and buoy gear configurations when affixed to Dungeness crab or American lobster traps.

27. Increased losses of fishing gear due to the failure of pop-up buoy gear to deploy when signaled would occur if such gear were put into widespread use today. Marine debris resulting from lost ‘ghost gear’ is a recognized problem in fixed gear fisheries and may pose entanglement risk to whales.

28. The Ropeless Fishing Consortium was organized to advance the development of fishing with pop-up buoy gear as a right whale entanglement mitigation solution. The group has held three workshops in 2017, 2018 and 2019. Dr. Mark Baumgartner of Woods Hole Oceanographic Institute (WHOI), a founding member of the group, made two significant observations during the 2019 meeting in response to his question, “When can we go ropeless?” He observed, 1) “We are in the early stages of development – mostly proof of concept with prototypes that are not yet designed for operational fishing by hundreds to thousands of fishermen,” and 2) “Every system you have seen today will need to go through a redesign process to (a) incorporate an interoperable gear location system, (b) work for fishing at scale (e.g., ruggedized design, long endurance), and (c) enable mass production at low cost.”⁶

29. NOAA Fisheries released a concept paper in 2010 to investigate the feasibility of piloting the use of buoy line-less gear in the Great South Channel Restricted Area (GSCRA)

⁶ Slide 12 located at https://ropeless.org/wp-content/uploads/sites/112/2019/11/21.-Baumgartner_nearterm_developments_for_distribution_20191113.pdf

which is already closed to trap/pot and gillnet fishing under the Atlantic Large Whale Take Reduction Plan (TRP). NOAA did not support moving forward with rulemaking to allow buoy line-less gear to be fished in this closed area citing several reasons including: 1) the potential increase in risk to large whales from a malfunctioning device (e.g. vertical line present in the water column for a period of time) compared to the current status quo (i.e. closure), 2) the lack of creation of an incentive to develop innovative gear, 3) the potential for gear conflicts, 4) the lack of viable technologies or methods for fishing without buoy lines, and 5) the need to address regulatory hurdles under the American Lobster Fishery Management Plan and ALWTRP. NMFS concluded that development of fisheries management measures that would include the use of buoy line-less gear could be explored in the future if the gear conflict and other regulatory issues associated with its use were addressed.⁷

30. Based on conversations I have had with fishermen who have tested this gear in both California and New England, the issues identified by NOAA in 2010 have not been addressed at this time. Fishermen continue to observe that the operation of pop-up buoy gear systems significantly slows the pace of fishing operations, poses safety challenges, and challenges their ability to operate in a safe, cost effective manner. Fishermen are concerned that there are specific times at which gear handling would be adversely time-consuming: 1) during retrieval and re-spooling or re-coiling of gear, 2) during re-arming or resetting of the pop-up release mechanism itself, 3) during use of any electronic equipment used to arm, set, or locate the gear, and 4) during the time spent searching for gear that has been moved due by the current. Increased handling time is exacerbated by cold weather operations, which are common in both the Dungeness crab and American lobster fisheries. Cold weather significantly decreases fine motor function and requires the use of gloves, which must be removed to arm most pop-up buoy gear systems and to operate the interfaces of the electronic equipment used to track deployment locations and transmit acoustic signals from vessels to the gear. The increased handling time on

⁷ https://archive.fisheries.noaa.gov/garfo/whaletrp/trt/meetings/Mid-Atlantic_Southeast_ALWTRT_Materials/Final%20Lineless%20Concept%20Paper%20Nov2010.pdf

deck required by pop-up buoy gear is a particular concern for fishermen who operate their vessels alone. Fishermen who fish alone must handle gear on deck while maintaining a vigilant watch to ensure safe vessel maneuvering within high traffic areas or in a high sea state; several such fishermen have communicated to me that they would be concerned for their personal safety if they were to have to use pop-up gear and fish alone. In 2018, 1,390 Maine lobstermen were Class 1 lobster license holders, which does not allow them to take crew.

31. A Maine commercial lobster fisherman, Kristan Porter, (President of the Maine Lobstermen's Association), tested the Desert Star System in 2013 during a research trip to eastern Australia to investigate potential whale entanglement mitigation tools for the American lobster fishery. This technology was adopted by some fishermen in the Australian rock lobster fishery to hide gear from poachers because each trap in that fishery is set out for 30 days and each trap haul is worth thousands of dollars. The Australian rock lobster fishery is the sole fishery that operates within lobster fishing grounds, negating gear conflict between fishing sectors. Mr. Porter hauled 14 single traps during his fishing trip there, whereas he typically hauls around 200 per day in the Maine lobster fishery. He reported fishing the pop-up system to be time consuming, frustrating, and tedious. Operation of this equipment required a high level of skill to properly record each gear set in the system, and to reset the burn wire for the acoustic release after each haul. Mr. Porter met others in the Australian lobster fishery who were not able to successfully fish the system. He noted that this technology would not easily transfer to the New England lobster fishery because the system greatly limits that number of traps that can be hauled in a day, lobstermen fish much more tightly together, share bottom with other lobstermen and with fishermen active in other fisheries.⁸

32. A Massachusetts lobsterman, Dave Casoni, has tested the Desert Star pop-up buoy gear on several occasions from his fishing vessel. Mr. Casoni has expressed concerns about the

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https://archive.fisheries.noaa.gov/garfo/protected/whaletrp/trt/meetings/March%202018%20Ropeless%20subgroup/kristan_porter_observations_of_ropless_fishing.pdf

practicability and use of pop-up buoy gear systems on his fishing vessel and those of his peers. Mr. Casoni fishes without a hired crew member and does not feel that pop-up buoy gear would be safe or workable for fishermen operating alone. Additionally, Mr. Casoni has identified the technologies used in pop-up buoy gear systems he is familiar with as highly complicated when compared to the relatively simple technology of a traditional buoy line setup. Many commercial lobstermen are elderly or otherwise have little experience and familiarity with digital technology, touch screens, and other electronic equipment required to operate many pop-up buoy gear systems. Mr. Casoni believes that a significant number of commercial lobstermen would be unable to operate the pop-up buoy gear systems he is familiar with. Required use of these systems would preclude a significant segment of the lobster fishery from being able to participate, based to a large extent on their age and familiarity with certain modern technologies.

33. The Atlantic States Marine Fisheries Commission (ASMFC) has jurisdiction over the Fishery Management Plan for American Lobster, Amendment 3 and its addenda, under the Atlantic Coastal Fisheries Cooperative Management Act. In June 2018, ASMFC's Law Enforcement Committee (LEC) reviewed the enforceability of pop-up buoy gear technologies under consideration to reduce impacts on right whales. The LEC raised several concerns about the impact of pop-up buoy gear technology on the enforceability of lobster conservation rules. The LEC found that the time and cost required for enforcement officers to retrieve and re-deploy pop-up buoy gear would significantly reduce law enforcement agencies' ability to ensure compliance with fishery regulation and lobster conservation laws because gear could not be hauled regularly, resulting in fewer lobster traps inspected per trip, reducing incentives for compliance. The LEC noted that the adoption of multiple pop-up buoy gear technologies and retrieval/mapping systems would represent a financial burden to law enforcement agencies and a logistical challenge for law enforcement, which would need to be equipped to deal with different systems. There were concerns raised about the storage and security of trap location information and the potential for poachers to steal other's acoustic data and unlawfully activate pop-up buoy gear.

34. The widespread deployment of pop-up buoy gear in commercial lobster fishing grounds would result in significant conflict amongst fishermen and between competing gear types. These conflicts reflect both the spatial incompatibility of mobile gear (trawl gear, troll gear) and other types of fixed gear (gillnets, longlines, and ‘traditional’ trap equipment) with pop-up buoy gear that is unmarked at the surface. There are several commercial fisheries that operate within the same fishing grounds as lobster fisheries, including groundfish trawl fisheries, crab fisheries, and scallop fisheries. The deployment of pop-up buoy gear in a fixed gear fishery would require that all other fisheries operating in the area to purchase and use expensive electronic mapping and communications equipment in order to be able to detect and avoid traps deployed with pop-up buoy gear. Alternatively, it would require the delineation of zones of the ocean for specific fisheries or gear types, prioritizing access to resources to some and denying it to others.

35. I am not familiar with any fishery management or marine spatial planning process that could legally facilitate an ocean zoning scheme that would prevent gear conflict between fishing sectors if one or more were required to use pop-up buoy gear. An ocean zoning process that excluded commercial fishing in one or more sectors solely because of the presence of a gear type from another fishery could be in violation of the guiding principles of the Magnuson-Stevens Fishery Conservation and Management Act (16 USC §§1801 *et seq.*) that call for maximized efficiency in the use of the nation’s fisheries resources. It is my opinion that the prevention of the efficient operation of mobile and fixed gear fisheries in areas of the US Exclusive Economic Zone in which pop-up gear is deployed would constitute inefficient management of the nation’s fishery resources.

36. In addition to the challenges of conforming to fishery management principles espoused in federal statute, any requirement to use of pop-up buoy gear in the American lobster fishery would violate both federal and state fishery management laws. Federal gear marking requirements for the American lobster fishery include Universal Trap/Pot Requirements on the buoy, including vessel registration number and/or US vessel documentation number, federal commercial fishing permit number or positive identification as required by the vessel’s home-port state. Lobster trawls

of three or fewer traps fished in federal waters must be attached to and marked with a single buoy; lobster trap trawls of more than three traps must be marked with a radar reflector and a single flag or pennant on the westernmost end and radar reflector only on the easternmost end. Individual states also have gear marking requirements.⁹ For example, Maine law states that “[a] person may not fish for or take lobster by any method other than conventional lobster traps...”¹⁰ and requires that “[a] lobster or crab trap or trawl must be marked by a lobster buoy as described in subsections 3 and 4. The buoy must be visible at the surface.”¹¹ In Massachusetts, state regulations require a single buoy with a flag to mark the north (or west) end of the trawl and a double buoy on the south (or east) end. The double buoy can be two buoys tied together or can be two buoys on a 3- to 4-foot-long stick.

37. Based on my professional experience and for the reasons stated above, it is my opinion and belief that there does not currently exist a pop-up buoy gear system that could be practicably implemented for use today in the Dungeness crab fishery or the American lobster fishery. Further, it is my opinion and belief that there are significant legal, operational, safety, and economic challenges that would be necessary to address, likely requiring years of research, testing, and communication with commercial fisheries stakeholders as well as changes to one or more states’ laws before pop-up buoy gear could become feasible for widespread use in any American fixed gear fishery including Dungeness crab or American lobster fisheries.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed this 18th day of June, 2020, at Brunswick, Maine.

/s/
Noah Oppenheim

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https://archive.fisheries.noaa.gov/garfo/protected/whaletpr/trt/meetings/March%202018%20Ropeless%20subgroup/ropeless_subgroup_lobster_gear.pdf

¹⁰ MRSA, Title 12, §6432(1)

¹¹ MRSA, Title 12, §6432(2)