

New territory for salmon as glaciers retreat

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# Safety is paramount

Welcome to the New Year and the new fishing opportunities ahead.

But wait. Before you even imagine that first fish coming over the rail, or splashing in your net, remember the most important thing: Safe practices are priority No. 1.

We always use our January issue to focus on safety.

In this issue, we again reprint a marine accident report from the National Transportation Safety Board. These reports are not only compelling narratives, they're full of valuable lessons on avoiding disastrous mistakes.

The National Institute for Occupational Safety and Health recommends all fishermen should:

- Take a marine safety class at least once every five years
- Find a comfortable personal flotation device and wear it on deck at all times
- Participate in monthly drills including abandon ship, flooding, fire, and man overboard
- Heed weather forecasts and avoid fishing in severe sea conditions
- Maintain watertight integrity by inspecting the vessel, sealing watertight doors and hatches, and testing high-water alarms regularly
- Test immersion suits for leaks.

NIOSH further recommends vessel owners install a man overboard alarm system and retrieval devices, and install emergency stop devices on hydraulic deck machinery to prevent entanglement.

Simple and sound advice. Please be safe this year. ↴

*Wesley*



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A deadly explosion • Page 10

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**ON THE COVER:** The crew of the catcher-processor *Starbound* dons survival suits as part of safety drills in May 2021, just prior to deploying to Alaska for the pollock "B" season. For more news about the *Starbound*, turn to Page 9. Photo courtesy of Aleutian Spray Fisheries

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# Fish Wrap

It's FREE!\*

It's the best commercial fishing news digest available in the North Pacific. Here's some of what you missed by not reading Fish Wrap.

**Kodiak rescue:** A U.S. Coast Guard helicopter rescued four people from a fishing vessel that ran aground off Kodiak Island.  
– [kmxt.org](http://kmxt.org)

**Alaska's lucrative salmon season:** Adjusted for inflation, the 2021 preliminary fishery ex-vessel value of \$643.9 million is the 26th-highest since 1975, the state Department of Fish and Game reports.  
– [adfg.alaska.gov](http://adfg.alaska.gov)

**Cook Inlet closure:** NOAA Fisheries is implementing a fishery management plan amendment to prohibit commercial salmon fishing in the federal waters of Alaska's Cook Inlet.  
– [fisheries.noaa.gov](http://fisheries.noaa.gov)

**California fisheries situation:** "It's bleak," a state senator says.  
– [times-standard.com](http://times-standard.com)

**Prince William Sound salmon season summary:** The total value of the salmon harvest was about \$121.5 million this year, 14 percent more than the 10-year average, the Alaska Department of Fish and Game reports.  
– [adfg.alaska.gov](http://adfg.alaska.gov)

**Promoting Alaska's catch:** The Alaska Seafood Marketing Institute's All Hands on Deck annual conference begins tomorrow.  
– [alaskaseafood.org](http://alaskaseafood.org)

**F/V Laura grounding update:** The fishing vessel has broken up on the rocks, Alaska officials report.  
– [pacificfishing.com](http://pacificfishing.com)

**Bycatch in the spotlight:** The Alaska House Special Committee on Fisheries will meet Nov. 15 for "an informational hearing on bycatch in Alaska fisheries."  
– [akleg.gov](http://akleg.gov)

**Southeast Alaska rescue:** A U.S. Coast Guard helicopter hoists four people from a survival raft.  
– [dvidshub.net](http://dvidshub.net)

**Southeast Alaska pink salmon outlook:** Fishery scientists are forecasting a regionwide catch of around 16 million pinks for 2022.  
– [kfsk.org](http://kfsk.org)

**Epic Bristol Bay forecast:** The Alaska Department of Fish and Game forecast shows potential for a harvest of almost 60 million sockeye salmon.  
– [deckboss.blogspot.com](http://deckboss.blogspot.com)

**Oregon rescue:** U.S. Coast Guard helicopters rescued five people from a life raft after a fishing boat sank about 20 miles offshore from the mouth of the Umpqua River.  
– [pacificfishing.com](http://pacificfishing.com)

**Magnuson-Stevens debate:** California Rep. Jared Huffman, a Democrat, touts his Magnuson-Stevens Act overhaul.  
– [huffman.house.gov](http://huffman.house.gov)

**B.C. deluge:** The heavy rainfall that turned rivers and creeks into raging waterways is expected to have a significant effect on salmon stocks for years to come.  
– [timescolonist.com](http://timescolonist.com)

**Green light for California crab:** Humpback whales have migrated out and crabs have passed quality testing, so the commercial Dungeness fishery will open on Dec. 1 in Northern California, the state Department of Fish and Wildlife says.  
– [wildlife.ca.gov](http://wildlife.ca.gov)

**Is Russia part of the problem?** The North Pacific Fishery Management Council wants the State Department's help in obtaining information on the catch of scarce Alaska salmon in Russian fisheries.  
– [deckboss.blogspot.com](http://deckboss.blogspot.com)

**Cordova harbor rebuild:** The U.S. Department of Transportation has awarded \$20 million for the project, Alaska Congressman Don Young says.  
– [donyoung.house.gov](http://donyoung.house.gov)

**COVID-19 briefing paper:** A new report from the Alaska Seafood Marketing Institute examines supply chain disruptions and inflation.  
– [alaskaseafood.org](http://alaskaseafood.org)

**Crabbing caution:** The U.S. Coast Guard is urging preparedness and safety for the upcoming West Coast Dungeness season.  
– [pacificfishing.com](http://pacificfishing.com)

**California fisheries resumption:** Fishing reopens along the Orange County coast as the state lifts a closure implemented following an October oil spill.  
– [ocregister.com](http://ocregister.com)

**West Coast crabbing start:** An Oregon seafood processor reportedly offers \$5 per pound for Dungeness.  
– [komonews.com](http://komonews.com)

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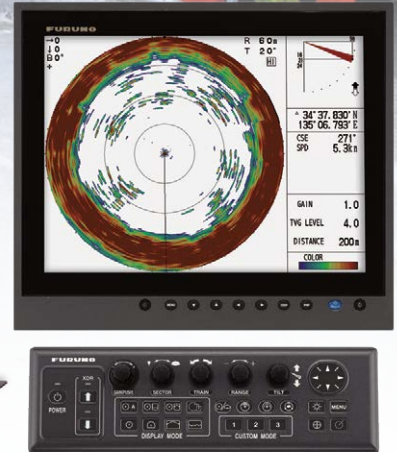


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# Magnuson-Stevens rewrite would damage our federal fishery management system

*Editor's note: The following is adapted from the written testimony of Shannon Carroll prepared for the Nov. 16, 2021, hearing of U.S. House Natural Resources Subcommittee on Water, Oceans, and Wildlife. The subcommittee considered a bill sponsored by Chair Jared Huffman, D-California, that would overhaul the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the nation's top law governing marine fisheries. Carroll, who leads Alaska public affairs for Seattle-based Trident Seafoods Corp., comments on the bill in his testimony. Carroll is a former member of the North Pacific Fishery Management Council's Advisory Panel.*

Despite what may be the best of intentions, as currently drafted H.R. 4690, the Sustaining America's Fisheries for the Future Act, poses significant risks to our world-leading federal fisheries management system.

Chairman Huffman's H.R. 4690, introduced on July 26, is a sweeping MSA reauthorization proposal. It aims to advance reforms targeting five distinct areas, all of critical importance – climate change; fishing communities; public process and transparency; fisheries science and data; and healthy ecosystems and improved fisheries management.

In doing so, however, H.R. 4690 too often departs from the core strength of the MSA and its National Standards framework, namely the compact between the federal government and the regions.

Since 1976, Congress has set clear priorities and expectations through the National Standards framework. Experts at NOAA Fisheries have given those priorities and expectations specific meaning through guidance and rulemakings that provide an evolving roadmap for council actions. Until now, the eight regional fishery management councils have been far more than mere functionaries implementing the will of federal policymakers. Their autonomy, stakeholder-driven decision-making processes, and regional expertise have been a central feature of the MSA framework. Accordingly, they have been afforded flexibility to meet the National Standards in ways that also meet regional needs and account for unique regional conditions. This balance is a centerpiece of the MSA's enduring success.

Too often, H.R. 4690 presumes to start from an entirely different premise: that the autonomy and bottom-up approach of the regional fishery management councils is in fact a problem to be fixed. The resulting reauthorization blueprint would weaken the regional council framework, and in so doing make our nation's federal fishery management system less durable and robust. Although some of H.R. 4690's provisions have the potential to win broad support, taken together this legislation appears to reduce management flexibility, upend region-specific solutions, create uncertainty, and impose additional costs and regulatory burdens on the management system and those who rely on it.

Title I of H.R. 4690 provides one such example. In the North Pacific, we are on the front lines of climate change, and it is already a ubiquitous reality in our region's marine environment. Our council and our stakeholders recognize this, and because our investments and businesses depend on long-term access to a sustainable resource, the council, the Alaska Fisheries Science Center, and stakeholders have confronted this reality to the extent that science, data, and funding allow.

**An example of swift action** in response to changing ocean conditions occurred in 2018 with marine surveys that year detecting an extreme decrease in abundance of Pacific cod in the Gulf of Alaska. The decline was linked to North Pacific hot spots, a sudden and acute marine heatwave and threat referred to as "the blob" at the time. The science-based total allowable catch (TAC) setting process and marine mammal forage protections led to a swift closure of the directed fishery for the year. It was supported by regional stakeholders who have long been engaged with our system of TAC setting.

As currently drafted, Title I takes a different approach. Rather than empower the councils, it contains prescriptive mandates that will consume council time, divert resources, and in the case of my region and others already well-advanced in this area, distract from the climate tasks at hand.

Title III, Section 305 contains concerning language that would limit stakeholder engagement by mandating that the secretary of commerce appoint at least one individual to each council who does not have a financial interest in matters before the council. The councils are already governed by comprehensive recusal regulations that prevent direct financial conflicts by council members. This provision may sound good on the surface, but the concern is that the theme of the provision seems to erode one of the core principles of the MSA and its framers, which is that direct stakeholders and those with expertise in the fisheries at issue are best positioned to contribute to the management and long-term health and sustainability of our fisheries.

Also of concern are provisions in Title V, which, among other things, delete the practicability language from the current law. One cannot ignore the realities of implementing such provisions, creating the potential to throw U.S. fisheries into chaos and protracted litigation. Take Section 503, for example. This section amends National Standard 9, which requires that conservation and management measures "minimize bycatch," but removes the existing qualifying language "to the extent practicable." The existing language of National Standard 9 is not a "loophole," as some have erroneously asserted. Rather, it is a recognition of the realities of fisheries and fisheries management. Incidental catch is a feature of all fisheries – whether they be commercial or recreational – regardless of the gear type used.

**There can be no question** that a new and unqualified National Standard 9 would create chaos in our nation's fisheries, with the potential for both positive and negative implications for actual bycatch trends. If Congress makes a deliberate and considered departure from a requirement that councils minimize bycatch "to the extent practicable," by what measure would councils or the secretary judge whether a fishery has "minimized" bycatch? One extreme would be to require the cessation of all fishing activity.

Since 2015, when I first started working in the council process, reduction of incidental catch has been one of the top priorities of the North Pacific Fishery Management Council. Among other bycatch-related efforts, in 2015, the council took actions that have reduced halibut bycatch in the flatfish sector by 25 percent, and it is poised to secure further reductions at its upcoming meeting.

Incidental catch management is about more than hard caps as actual catch numbers are often well below cap levels. Our council

# New research looks at catch shares and fishing safety

A new study examines how catch share programs can make fishing safer by providing flexibility in when fishermen can fish.

Certain “risky” behaviors make fishing one of the most dangerous lines of work. Previous research found that these behaviors dropped sharply following the adoption of catch share management in the West Coast fixed-gear sablefish fishery.

Over the past 20 years, NOAA Fisheries adopted catch shares in eight fisheries across the country. These catch shares, or individual fishing quotas, changed the incentives around fisheries by giving each vessel rights to a specific share of the allowable catch. Vessels could then choose how and when to fish for their share.

“Our initial work showed a classic story of a fishery that evolved into an intense race to fish,” said Lisa Pfeiffer, lead author of the paper and an economist at NOAA’s Northwest Fisheries Science Center. “Then, after implementation of a catch share program, the fishing season lengthened, and we saw a huge shift in fishermen’s decisions to fish.”

Pfeiffer wanted to see how the sablefish fishery compared to the eight other catch share fisheries across the United States. So, she modeled weather conditions and fishing behavior in these eight fisheries to determine how the adoption of catch shares changed fishing behavior, specifically the decision to fish in poor weather.

She expected that weather would have less influence on fishermen’s decisions if they weren’t in a catch share fishery. This is because fishermen often have little choice but to fish when the season is open. If seasons are very short, they may need to fish in poor weather if they are going to fish at all. Pfeiffer hypothesized

that after a catch share program was put in place, fishermen would have more flexibility to avoid poor weather. They would fish less in stormy or dangerous conditions.

Pfeiffer’s research confirmed those expectations in most fisheries she studied. Catch shares reduced the incentive to take riskier trips in poor weather.

However, she found some nuances. The structure of the catch share program and the previous management matters, too.

**One example** is the West Coast groundfish trawl fishery. Before the catch share program, it had a long, drawn-out season in which they could only fish a certain amount per month. Under the catch share program, fishermen condensed their effort into a shorter time window. This is economically advantageous (because they could also participate in other fisheries throughout the year), but resulted in fishers taking on somewhat higher risks.

This illustrates the complex trade-offs that fishermen make as they balance expected returns, risks, participation, and constraints throughout their fishing year. Each fisherman, fishery, and region is influenced by a unique set of drivers.

“There are other incentives driving fishing behavior beyond just safety,” said Pfeiffer, citing the structure of the fishery and the fact that fishermen may fish in multiple fisheries throughout the year. “However, knowing more about how fishermen react to management actions like catch shares can improve future policies.”

The new study is available at [tinyurl.com/2p8peykh](http://tinyurl.com/2p8peykh). ↴

– NOAA Fisheries

has implemented several cooperative programs that have given the fleet tools to make major gains in reducing incidental catch. In the Bering Sea and Aleutian Islands (BSAI) pollock catcher-processor fishery – which is among the highest-scored certified fisheries in the world – all vessels pay for two independent human observers, who carefully record not only total catch of the target species but also all incidental catch that occurs, including a complete census and genetic sampling of all salmon catches. Through the Pollock Conservation Cooperative, extensive gear and technological innovations such as underwater cameras, salmon lights, and salmon excluders have been funded by industry, improving pelagic trawl technology to exclude more nontarget species.

Incentive plan agreements are in place to reduce salmon incidental catch at all levels of pollock and salmon abundance. A key component of these agreements is the use of near real-time data to inform incidental catch “hot spot” closures, whereby vessels are prohibited from fishing in areas of known high salmon abundance as they change throughout the season. For many years more than 98 percent of the catch in the BSAI Alaska pollock fishery has been pollock. These are the kind of successes that should be recognized and scaled up as we all continue to pursue fisheries that minimize bycatch to the extent practicable.

Finally, and more broadly, I am concerned that many of the changes proposed by H.R.

4690 will either create unfunded mandates or divert highly limited resources. The core elements of successful fishery management – surveys, monitoring and data collection programs, research, and staffing – are in constant jeopardy due to decreasing or stagnant funding. The implications of losing funding for this core work includes increased uncertainty in annual catch limits – resulting in more conservative quotas and less fishery-dependent data collection – and fewer tools to integrate management resiliency into management decisions. In balancing the need for new requirements for councils and the secretary to carry out, one must consider whether the new requirements will come at the expense of other measures that have made the MSA so successful for the past 45 years. ↴

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# Inslee rolls out major salmon recovery initiative

Washington Gov. Jay Inslee on Dec. 14 announced a new strategy and investments to protect and restore salmon.

His proposals call for a range of actions including:

- Protect and restore vital salmon habitat
- Invest in clean water infrastructure for salmon and people
- Correct fish passage barriers and restore salmon access to historical habitat
- Align harvest, hatcheries, and hydropower with salmon recovery
- Address predation and food web issues for salmon
- Strengthen science, monitoring, and accountability.

The governor unveiled a suite of budget and policy changes for 2022. His budget would invest \$187 million in salmon recovery.

“The governor’s update to the salmon recovery strategy and his budget proposals represent the most significant state investment in salmon recovery in 20 years,” said Erik Neatherlin, director of the Governor’s Salmon Recovery Office.

The governor is proposing legislation that would create a new salmon habitat standard to protect and restore riparian habitat, the green corridors along rivers and streams that are important for clean, cold water during critical periods of a salmon’s lifecycle. The legislation is titled the Lorraine Loomis Act, after a prominent salmon advocate and Swinomish tribal elder who passed away recently.

The state would invest \$123 million in new protections for salmon riparian habitat.

“Conserving and restoring riparian habitat – whenever and wherever possible – is essential if we have any hope of seeing healthy salmon runs return to our streams and rivers,” said state Sen. Christine Rolfes, D-Kitsap County. “I look forward to partnering with the governor and my colleagues in the Legislature in the coming months to adopt and implement a bold strategy to protect and restore salmon habitat across the state.”

The governor proposes more than \$16 million to accelerate improvements to water quality, decrease stream and river temperatures, and reduce pollution from stormwater and wastewater treatment plants.

Funding will address toxic tire chemicals shown to kill coho salmon, the governor’s office said. “The governor is also proposing \$5 million in a green infrastructure grant program that would support projects that use natural solutions to help store water during high flows and release it during low-flow periods.”

The governor’s budget would also “create a robust monitoring program to ensure recreational and commercial harvest of salmon and steelhead are within permit limits and demonstrate accountability on the state’s share of salmon harvest. It also ramps up enforcement and prosecution of fisheries crimes.”

“We know what salmon populations need to recover. What we need is the political will and investment to make it happen before it’s too late,” said Kelly Susewind, director of the Washington Department of Fish and Wildlife. ↴

## Canada tightens herring policy

Fisheries and Oceans Canada (DFO) on Dec. 16 announced “a more cautious approach” to Pacific herring management.

Herring are a forage fish and an important food source for salmon, which are struggling in Canada, DFO said.

The new approach “will see most commercial fisheries for Pacific herring closed, and limited to First Nations food, social, and ceremonial fisheries,” DFO said. “For the Strait of Georgia, harvesting will be reduced to a 10 percent harvest rate, with a maximum total allowable catch of 7,850 tons.”

The agency noted “the impacts of the recent floods and landslides on fish habitats in British Columbia.”

“Herring are vital to the health of our ecosystem, and the stocks are in a fragile state. We must do what we can to protect and regenerate this important forage species,” said Joyce Murray, Canada’s fisheries minister. ↴

## ON THE HORIZON

Pacific Fishing magazine’s monthly digest of upcoming management meetings and other notable events.

- **Alaska Board of Fisheries meeting, Jan. 4-15, Ketchikan.**  
*This meeting was postponed due to COVID-19 concerns.*
- **Alaska Marine Science Symposium virtual event, Jan. 24-27.**  
*Details at [alaskamarinescience.org](http://alaskamarinescience.org).*
- **International Pacific Halibut Commission annual meeting, Jan. 24-28.** *The commission is expected to set catch limits for 2022. The meeting will be held electronically and participants are asked to register. More information at [tinyurl.com/vfzk73t9](http://tinyurl.com/vfzk73t9).*
- **North Pacific Fishery Management Council virtual meeting, Jan. 31 to Feb. 10.**
- **International workshop on protecting fishery catches from whale depredation, Feb. 9.** *To be held electronically. Details at [tinyurl.com/nhe9j77c](http://tinyurl.com/nhe9j77c).*
- **Pacific Salmon Commission annual meeting, Feb. 14-18, Vancouver, British Columbia.** *More information at [psc.org/meetings](http://psc.org/meetings).*
- **Pacific Fishery Management Council meeting, March 8-14, San Jose, Calif.**
- **Alaska Board of Fisheries Hatchery Committee meeting, March 10, Anchorage.**
- **Alaska Board of Fisheries meeting, March 11-18, Anchorage.** *The board will consider shellfish proposals across much of the state.*
- **Seafood Expo North America, March 13-15, Boston.**  
*More information at [seafoodexpo.com/north-america](http://seafoodexpo.com/north-america).*
- **ComFish Alaska, March 24-26, Kodiak.** *More information at [comfishak.com](http://comfishak.com).*
- **North Pacific Fishery Management Council meeting, April 4-12, Anchorage.**
- **Pacific Fishery Management Council meeting, April 6-13, Seattle.**
- **North Pacific Fishery Management Council meeting, June 6-14, Sitka.**



# Trident adds to its supertrawler fleet with Starbound purchase

Ownership in the Bering Sea pollock factory trawl fleet is consolidating with Trident Seafoods acquiring the 300-foot catcher-processor Starbound.

The vessel previously belonged to managing partner Aleutian Spray Fisheries, the Aleutian Pribilof Island Community Development Association, and Karl Bratvold.

The Starbound is part of an exclusive fleet of Alaska's largest and most sophisticated fishing vessels.

Aside from their great size, these are special boats in a legal sense as well. The American Fisheries Act of 1998 (AFA) named specific factory trawlers, including the Starbound, as eligible to harvest Bering Sea pollock. Companies that today operate 15 active eligible vessels have a cooperative through which they divide a 36.6 percent share of the directed pollock fishery. Starbound's share is 1.585 percent – an asset worth more than the vessel itself.

Trident's Dec. 6 press release announcing the Starbound acquisition didn't disclose terms of the deal.

**Trident also was to acquire** Aleutian Spray's Ocean Harvester and Muir Milach. These boats – which are catcher vessels, not factory trawlers – likewise were specifically named in the AFA and have associated pollock harvest shares.

Seattle-based Trident, a privately held company, already owned three AFA factory trawlers – the 312-foot Island Enterprise, the 276-foot Kodiak Enterprise, and the 270-foot Seattle Enterprise.

The Starbound originally was built in 1989 as a 240-foot factory



*The Starbound, a Bering Sea pollock factory trawler, was lengthened by 60 feet in 2015. Jeff Pond photo*

trawler. In 2015, it underwent a \$45 million renovation that involved cutting the vessel in two and welding in a 60-foot extension.

"The expansion added state-of-the-art processing capacity that enables full utilization of every sustainably caught wild Alaska pollock pulled from the ocean," Trident said.

"Modernizing our aging fleet of catcher-processors has been a priority for some time," Trident CEO Joe Bundrant said. ↓

– Wesley Loy

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The barge Alaganik ablaze in Whittier, Alaska. U.S. Coast Guard photo

# Barge blast

## A crewman dies after an explosion rocks a fishery support vessel in Alaska. How did it happen?

*Editor's note: The following is adapted from a National Transportation Safety Board marine accident brief issued Aug. 6, 2020.*

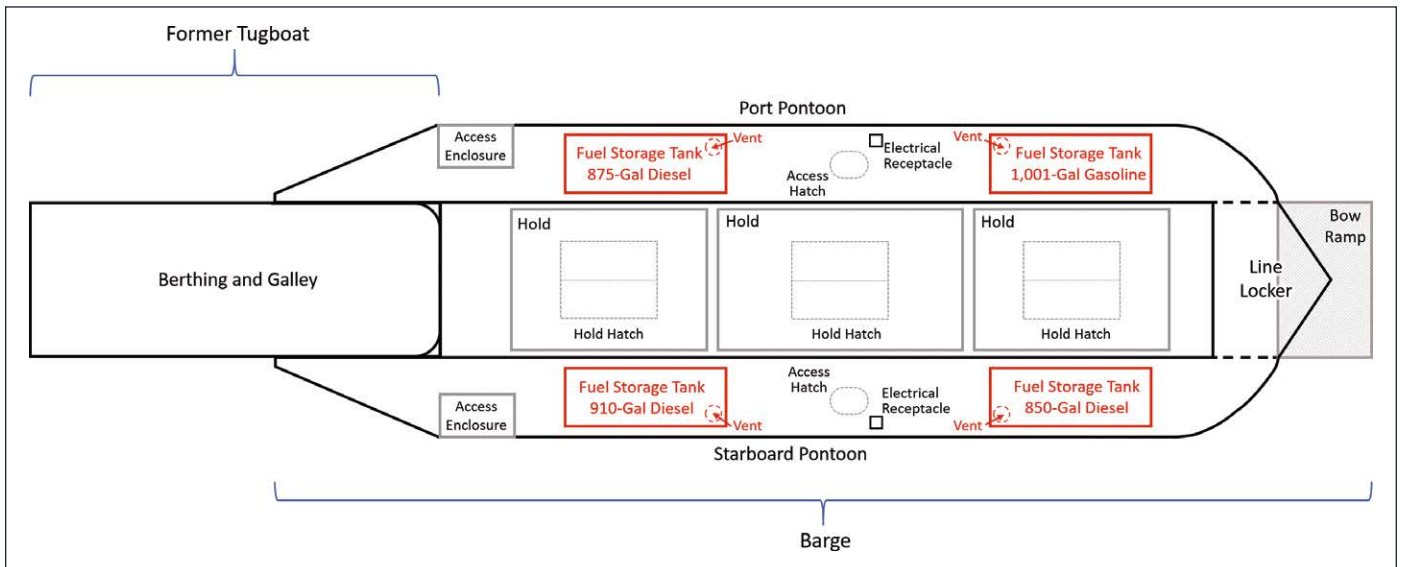
On July 7, 2019, at 2339 local time, an explosion occurred on the barge Alaganik as it was moored port side to the end of the DeLong Dock in Whittier, Alaska. The vessel was serving as a platform for pumping fish cargo ashore from fishing vessels and tenders that came alongside. It also provided diesel fuel and gasoline to the fishing vessels. No cargo operations were ongoing when the explosion occurred. Despite the efforts of shore-based responders to fight the ensuing fire, the vessel eventually sank in 60 to 80 feet of water. The single crewmember aboard the vessel died in the explosion. About 1,896 gallons of gasoline and diesel fuel stored on board the vessel were consumed by the fire or released into the environment. The vessel was a total loss at an estimated value of \$300,000. Pier damage was estimated at \$400,000.

The 98-foot-long, aluminum-construction Alaganik was custom-built in 1974 as a small integrated tugboat and barge, and the two

units that made up the combination were purchased by the current owner in 2006. Following a grounding in 2013, the owner removed the engines from the tugboat and permanently welded the tugboat and barge together. From thereon, the vessel was employed in various tasks, including oceanographic research, fish farming, and fish tendering. The former tugboat provided berthing space and a galley for the crew, while the barge remained the working area of the vessel.

In July 2019, Whittier Seafood LLC chartered the Alaganik for use as a platform for pumping salmon ashore while moored at the end of the DeLong Dock. The arrangement allowed fishing vessels and tenders to more easily offload their catch despite the large tidal range alongside the dock. The charter contract also included a requirement for the Alaganik to supply fuel to the fishing vessels.

**Accident events:** About 1425 on July 3, the Alaganik was towed into position and moored at its DeLong Dock berth to begin preparations for operations with Whittier Seafood. Over the next couple of days, the owner and a vessel crewmember completed various tasks to ready the barge, including installation of a pump on deck



*Simplified general arrangement of the Alaganik, with fuel amounts in each fuel cargo tank at the time of the accident. Vessel hull dimensions are drawn approximately to scale. NTSB graphic*

for transferring fish catch from fishing vessels to containers on the pier. Once preparations were complete, the owner departed the vessel about 1900 on July 6. The crewmember remained aboard Alaganik and was assigned duties to receive and dispense fuel and assist with the offload of cargo from fishing vessels coming alongside.

The charter contract required the Alaganik to supply both diesel fuel and gasoline to the fishing vessels. The barge was carrying diesel fuel when it arrived in Whittier, but it did not have gasoline. Therefore, about 1600 on July 7, the vessel took delivery of 1,001 gallons of gasoline from a fuel truck on shore. The gasoline was loaded into one of the vessel's four fuel cargo tanks, the forward portside tank, and the Alaganik crewmember signed for receipt of the fuel when the transfer was completed at 1635. The three remaining fuel cargo tanks – on the port side aft, starboard side aft, and starboard side forward – contained 875, 850, and 910 gallons of diesel fuel, respectively.

At 2339 that night, an explosion occurred on the Alaganik. Witnesses stated that the ensuing fire was initially concentrated on the port side of the vessel, forward. Photographs of the vessel taken just after the explosion show flames concentrated on the port side, with the vessel listing to port. The fire quickly spread to the pier, and fuel that escaped into the water around the barge also burned.

The fire engulfed the vessel, along with three boom-crane trucks and other equipment and gear on the pier. Shore-based firefighters responded to the pier and began fighting the fire. A good Samaritan vessel that had been moored to the dock near the Alaganik got under way, threw a grappling hook over the rail of the barge, and towed the barge away from the pier. The Alaganik sank shortly thereafter, at 0229. The firefighters continued to fight the fire on the pier and reported that it was extinguished at 0250 on July 8. A hatch from the port side of the vessel was later found on the dock several hundred feet from the vessel's berth.

Witnesses reported seeing the lone crewmember on board the Alaganik walking aft from the bow toward the stern of the vessel just before the explosion. However, in the aftermath of the explosion, he could not be located. A U.S. Coast Guard helicopter, a cutter, and an auxiliary boat conducted a search for the crewmember, covering an area of 12 square miles. Finding no one, the search was suspended after 17 hours. The crewmember's body was recovered

eight weeks later in a secluded cove about 400 yards to the north-east of the accident site.

**Vessel details:** The original barge portion of the Alaganik was composed of a center section, pontoons on either side of the center section, and a line locker forward of the center section used for storing gear. The main deck of the barge provided a flush working area, with cranes mounted on either side of the deck. The center section contained three holds that were accessed by 6-by-7.5-foot two-piece hatches on the main deck. The pontoons were accessed via hatches midship and stairways aft leading down from weather-protected enclosures on the main deck. The pontoon and line locker compartments were interconnected without a solid bulkhead, allowing flow of air between them. The aft portions of the pontoons formed the notch that fit the former tugboat portion of the vessel. A 22-foot-long ramp was fitted on the bow and could be raised or lowered for loading and offloading of equipment. Preaccident photos of the vessel showed "no smoking" signs posted in several locations on the main deck.

According to a 2014 survey, the Alaganik was equipped with 12 float-switch-operated bilge pumps installed throughout the vessel. Power to the pumps was provided by battery or through a breaker



*The salvaged vessel, with damaged forward side plating of port pontoon. NTSB photo*



*The portside hatch from the Alaganik, as found on the pier after the explosion. U.S. Coast Guard photo*

panel on the barge. Post-accident photos of the pump installed midship in the port pontoon showed the pump's electrical leads connected to wiring via wire nuts.

The fuel supplied to fishing vessels from the Alaganik was stored in four permanently installed 1,250-gallon capacity fuel cargo tanks located fore and aft in the pontoons on the barge. The box-shaped tanks were constructed of welded aluminum and mounted to the vessel framing; the tanks were not integral to the hull. Each tank was vented through a 2.5-inch Coast Guard-approved antflash pressure/vacuum vent fitted on a pipe welded through the main deck. There were about 10 inches of space between the top of the tanks and the main deck. The owner believed the tanks were connected to the vent piping by hoses, but he was not sure what type of hoses they were. (The connections were destroyed in the fire.) Gauge glasses used to determine tank levels were connected via piping at the top of the tanks and discharge piping at the bottom of the tanks. According to the owner, the gauge glasses were constructed of clear plastic flexible tubing. The gauge glasses did not have automatic shutoff valves on either end of the gauge.

Fuel was pumped from the fuel cargo tanks to the waiting fishing vessels via 115-volt electric fuel pumps. The owner stated there were two pumps in the portside pontoon, one for each port tank, and a single pump in the starboard-side pontoon that drew fuel from both starboard tanks through a manifold. He said that one of the port pumps was connected via a power cord to an electrical receptacle located between the fuel cargo tanks in the pontoon, while the other pumps were hardwired to a power panel. Prior to the loading of gasoline into the port forward tank on July 7, the owner stated that only diesel fuel had been carried in the fuel cargo tanks.

The aft access enclosures that contained the stairways down to the pontoons from either side of the main deck also served as the ventilation inlet and outlet for the pontoons and line locker. The

owner stated that commercial electric fans, normally sold for use in carpet drying, had been placed in the enclosures to provide active ventilation. The starboard fan was rigged for supply and the port fan was rigged for exhaust, so that air flowed forward through the starboard pontoon, through the line locker, and then aft through the port pontoon. The owner said that the fans ran continuously. According to the manufacturer, the fans were not intrinsically safe or explosion-proof.

The Alaganik was not subject to inspection by the Coast Guard under the Code of Federal Regulations. A voluntary fishing vessel dockside safety examination was conducted by the Coast Guard on the Alaganik in June 2008, and the decal issued at the completion of the examination expired in 2010. Dockside safety examinations – which are valid for two years – primarily assess the lifesaving equipment on board a vessel and do not include hull or other machinery assessments. In October 2015, dockside safety examinations became mandatory for fishing vessels operating beyond 3 miles from the territorial sea baseline or with 16 or more individuals on board. As a barge that operated near shore and had a very small crew, the Alaganik was not subject to this requirement.

**Salvage and damage:** In late July, salvors recovered 1,740 gallons of diesel fuel and 225 gallons of hydraulic and other fluids from the sunken vessel. On Aug. 12, the vessel was raised and transported ashore where investigators assessed the damage.

The aluminum hull plating along the forward section of the port pontoon was split and bent outward along weld seams. A significant portion of the hull plating on the bow at the line locker was missing and the remaining plating was cracked and bent outward. The deck plating above the port pontoon and the line locker was missing.

Much of the deckhouse on the former tugboat section, which was constructed of aluminum, had been melted away or deformed by the heat of the fire.

The fuel cargo tank located forward in the port pontoon (the tank that had been carrying gasoline) was missing. The remaining fuel cargo tanks were in place. The fuel-level gauge tubing for each of the forward and aft fuel cargo tanks in the port pontoon was lying in the pontoon bilge, connected on one end to the discharge piping and disconnected on the opposite end. The end of the gauge line for the forward port tank appeared to be melted.

The carpet-drying fans used to provide ventilation in the pontoons and line locker were destroyed in the fire.

**The crewmember:** The crewmember who died in the accident had been hired on June 29, 2019, to work on the Alaganik. The day after he was hired, the owner and crewmember conducted a vessel walk-through, during which the owner showed the crewmember how to operate all equipment. The crewmember was shown how to receive and distribute fuel, operate valves, and calculate tank volumes. The crewmember was known to be a smoker, and, according to the owner, on July 2 the owner informed him about smoking policies on board. Although discouraged, smoking was allowed near the bow ramp on the Alaganik. Toxicology testing during the autopsy of the crewmember's body identified methamphetamine, its primary metabolite amphetamine, and the primary inactive metabolite of marijuana. The tests did not produce a reliable result for the active parent compound for marijuana, tetrahydrocannabinol (THC). Witnesses who interacted with the crewman in the hours prior to the accident stated that he did not appear to be impaired in any way.

**Analysis:** The only crewmember aboard the vessel died in the explosion. The toxicology findings demonstrate evidence that the

crewmember had used methamphetamine and marijuana at some time prior to the accident, but it could not be determined whether he was impaired by any of the effects of the use of these drugs at the time of the explosion.

Photographs of the vessel just after the explosion show flames concentrated on the port side, with the vessel listing to port. The midship hatch located aft of the forward fuel cargo tank in the port pontoon was found on the pier several hundred feet from the vessel's position. Following salvage, hull plating forward of the fuel cargo tank on the port pontoon was found to be split along weld seams and bent outward. The port forward fuel cargo tank was completely missing. Hull plating on the bow and deck plating forward on the starboard pontoon were bent outward and upward. Taken together, the evidence suggests that the initial explosion occurred in the port pontoon in the vicinity of the forward fuel cargo tank, expanding aft through the port pontoon and forward through the line locker and into the starboard pontoon.

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***This accident highlights the need for caution when storing, transporting, or transferring gasoline.***

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Gasoline forms an ignitable vapor at normal ambient temperatures. By comparison, the flashpoint of diesel fuel is 125 degrees. Further, the vapor density of gasoline is three to four times that of air, and thus the vapor tends to gather in low areas and enclosed spaces. Prior to the evening of the accident, only diesel fuel had been stored in the fuel cargo tanks on the Alaganik. Following the onload of gasoline, it is likely that escaping gasoline vapor gathered in the port pontoon around the fuel cargo tank. When this vapor ignited, the explosion occurred.

A source of ignition for the fire could not be determined following salvage of the vessel, but arcing between a plug and the electrical receptacle in the port pontoon, within a fan used for ventilation or a bilge pump motor, or across a loose wire connection for the various installed equipment are potential sources. While less likely sources of ignition, cigarette smoking materials also cannot be ruled out. Just before the explosion, the crewmember, a smoker, was seen walking aft from the bow, where smoking was permitted on the vessel, toward the stern.

Federal regulations contain provisions designed to reduce the dangers of storing gasoline on fishing vessels, but these regulations do not apply to all vessels operating in support of the industry. For commercial fishing vessels that operate with more than 16 persons on board, spaces with a gasoline cargo tank "must be open to the atmosphere and so arranged as to prevent the entrapment of vapors or be ventilated by a mechanical exhaust system with a nonsparking fan." Under the same regulation, vessels over 79 feet in length must be fitted with a fixed gas fire extinguishing system in any space containing a gasoline tank.

Self-propelled fish-processing vessels that, incidental to their primary use, carry and dispense flammable or combustible liquid cargo in bulk have additional regulations governing carriage of fuels, including gasoline. In addition to requirements for the construction of tanks on these vessels, compartments or areas containing the tanks or pumping systems must be closed off from the remainder of the vessel by gastight bulkheads. Each compartment must be provided with a mechanical exhaust system capable of ventilating



*Fire rages at DeLong Dock in Whittier after the explosion on the barge Alaganik. U.S. Coast Guard photo*

the compartment with a complete change of air every three minutes. The intake duct or ducts must be of a sufficient size to permit the required air change, and the exhaust duct or ducts must be located to enable the removal of vapors from the lower portion of the space or bilges. Fish-processing vessels subject to these regulations must be inspected before entering service and annually thereafter to ensure compliance with requirements.

The space on the Alaganik containing the fuel cargo tank carrying gasoline was not closed off from other spaces by gastight bulkheads and had framing and other obstructions that could have entrapped vapors. The carpet-drying fans rigged to provide supply and exhaust ventilation were not intrinsically safe or explosion-proof and were not specifically designed to ensure a complete changeout of air every three minutes. There was no ventilation ducting to remove vapor from the lower portion of the port pontoon. None of the regulations that required these measures, however, applied to the Alaganik, an uninspected barge. Further, as an uninspected vessel, there were no regular evaluations of the vessel by Coast Guard officials to ensure the vessel was fit for the service intended. Regardless of the applicability of regulations or inspections, this accident highlights the need for caution when storing, transporting, or transferring gasoline.

In 2018, the National Transportation Safety Board investigated a fire aboard the small passenger vessel *Island Lady* that resulted in the death of a passenger and the loss of the vessel. Like the Alaganik, the *Island Lady*'s fuel tank gauge glasses were constructed of clear plastic tubing and did not have automatic shutoff valves that would have prevented fuel flow in the event the gauges were damaged. The NTSB concluded that the use of the tubing and the lack of shutoff valves resulted in the release of fuel, which contributed to the severity of the fire on the passenger vessel. When the Alaganik was salvaged, the gauge glass for each port fuel cargo tank was found to be disconnected on one end. On the forward fuel cargo tank gauge glass, the tubing was melted. Similar to the *Island Lady*, the material of the gauge glasses and lack of automatic shutoff valves likely resulted in the release of additional fuel from the tank that fed the fire. However, unlike the *Island Lady*, which was subject to regulations specific to small passenger vessels, the Alaganik was not required to have gauge glasses made from heat-resistant material or to have automatic shutoffs.

**Probable cause:** The NTSB determines that the probable cause of the explosion on board the barge Alaganik was the ignition, from an undetermined source, of gasoline vapor from a fuel cargo tank, which became entrapped within the vessel's port pontoon compartment. ↴



Exit Glacier, in Alaska, is one of hundreds of glaciers that are melting and retreating. Alexander Milner photo



Thousands of kilometers of new salmon-accessible habitat will be created as glaciers melt. Jonathan Moore photo

## Melting glaciers could produce extensive new Pacific salmon habitat by 2100, study finds

A study led by Simon Fraser University researchers has found that the retreat of glaciers in the Pacific mountains of western North America could produce more than 6,000 kilometers of potential new Pacific salmon habitat by the year 2100.

The researchers modeled glacier retreat under different climate change scenarios – essentially “peeling back the ice” from 46,000 glaciers between southern British Columbia and Southcentral Alaska – to look at how much potential salmon habitat would be created when the underlying bedrock is exposed and new streams flow over the landscape.

Desirable for salmon, in this case, means ocean-accessible, low-gradient streams with retreating glaciers at their headwaters. Of the glaciers considered, 315 fit that bill.

Under a moderate climate scenario, those glaciers are predicted to reveal around 6,150 kilometers of potential new salmon habitat throughout the Pacific mountains of western North America by 2100 – a distance nearly equal the length of the Mississippi River.

“We predict that most of the emerging salmon habitat will occur in Alaska and the transboundary region, at the British Columbia-Alaska border, where large coastal glaciers still exist,” says SFU spatial analyst Kara Pitman, the study’s lead author. The Gulf of Alaska subregion is predicted to see the most gains – a 27 percent increase in salmon-accessible habitat by 2100.

Once conditions stabilize in the newly formed streams, salmon can colonize these areas quite quickly.

“It’s a common misconception that all salmon return home to

the streams they were born in,” Pitman says. “Most do, but some individuals will stray – migrating into new streams to spawn and, if conditions are favorable, the population can increase rapidly.”

One example is Stonefly Creek in Glacier Bay, Alaska, where glacier retreat in the late 1970s revealed salmon spawning habitat in the new stream that was colonized within 10 years by pink salmon that grew rapidly to more than 5,000 spawners.

**Climate change challenges:** The researchers caution that while the newly created habitat may be a ray of light for salmon in some locations, overall, climate change poses grave challenges for salmon populations.

“On one hand, this amount of new salmon habitat will provide local opportunities for some salmon populations,” says Pitman. “On the other hand, climate change and other human impacts continue to threaten salmon survival – via warming rivers, changes in stream flows, and poor ocean conditions.”

Climate change means we increasingly need to look to the future, she says. “We can’t just protect current-day habitat for species but need to consider what habitats they might rely on in the future.”

SFU biology professor and paper coauthor Jonathan Moore adds, “Climate change is rapidly transforming ecosystems. Here we show where and when glacial retreat will create new streams for salmon. If we want to protect salmon futures, this information should inform environmental decision-making and habitat protection.” ↴

– Simon Fraser University

# Sea surface temperatures in Gulf of Alaska found to be less favorable for cod, pollock

NOAA Fisheries scientists have developed a new modeling approach to evaluate changing fish population productivity in light of warming ocean temperatures. Fish stock productivity is determined by estimating the number of fish that survive from eggs and larvae to become adults annually.

Scientists used the approach to evaluate productivity for two important commercial fish stocks in the Gulf of Alaska. They found that for pollock and, especially, Pacific cod, sea surface temperatures in the Gulf of Alaska are already less conducive to successful fish development, growth, and survival than in recent decades.

“A critical step in climate change adaptation is the ability to effectively evaluate the likely impacts on individual fisheries,” said Mike Litzow, Kodiak Laboratory director, Alaska Fisheries Science Center, and lead author for this study. “We have to make inferences about how fish populations are likely to fare in ecosystem states that have never been observed before on short time scales – this decade and the next.”

**Case study:** In evaluating Alaska pollock and Pacific cod productivity in the Gulf of Alaska, scientists considered three pieces of information:

- Results from climate models showing that recent extreme temperatures in the Gulf of Alaska were only possible with global emissions from fossil fuel consumption and other human activities
- Observations that both the cod and pollock stocks produce very few young fish during these extreme temperature anomalies
- Further results from climate models showing that these extreme events are expected to be much more common in the current climate than in recent decades.

They used simple modeling techniques to compare current stock productivity with the recent past.

Specifically, they looked at how fish responded to the range of temperatures that could be expected under historical conditions, when human influences to the Gulf of Alaska climate were not so strong. They compared those historical responses to the level of productivity we can expect from the cod and pollock stocks in the current climate, with stronger human influences on Gulf of Alaska temperatures.

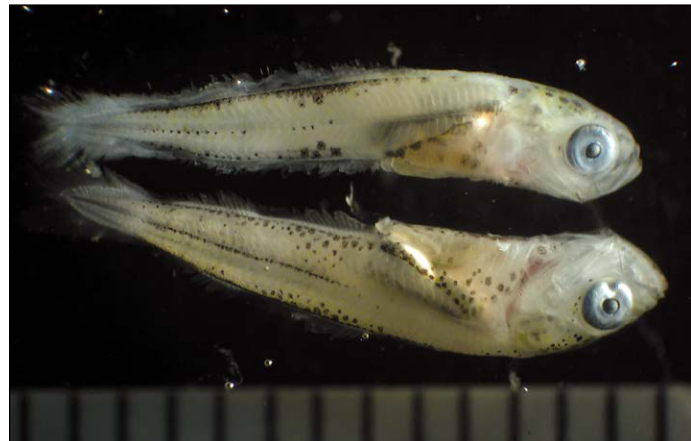
All fish populations experience some level of natural variability with years of high productivity and low productivity – in other words, years when more eggs hatch and successfully reach adulthood than other years. A number of factors affect hatch success and survival including prey availability, predation, and water temperature.

Scientists distinguished between natural variability in these two fish populations and human-caused influences of climate change based on how they responded to changes in ocean temperatures. Both pollock and cod at different stages of development are more or less susceptible to warmer water temperatures.

Using this approach, the scientists projected a decline of 38 to 88 percent in median Pacific cod and pollock recruitment (the number of larval fish to reach maturity) for the 2020s.

Such a decline suggests a reduced likelihood of recovery for Pacific cod and increased likelihood of population declines for pollock. These projections suggest that maintaining sustainable fisheries for these populations is increasingly unlikely in the contemporary Gulf of Alaska.

“However, these projections must be viewed with some cau-



*Juvenile samples of Alaska pollock and Pacific cod*

tion,” said Michael Malick, fisheries scientist, Northwest Fisheries Science Center, and coauthor for the study. “Other factors affect fish stock recruitment beyond just ocean temperature. Fish populations may also be able to adapt, move to new locations, or acclimate to warming temperatures.”

Temperature in the Gulf of Alaska also exhibits high levels of interannual variability, which leaves open the chance of a multiyear cooling event that could offer reprieve from the warming trend.

“Despite these qualifiers and likely variable short-term changes in environmental conditions, the general trend for the climate under the current level of carbon emissions levels is for continuing overall warming in this system. This may overwhelm any beneficial effects due to climate variability. So, a reprieve would be best used to prepare for the negative outcomes suggested by the forward-looking perspective,” Litzow said.

**Helping fishermen plan:** For harvesters and processors, scientists hope this information will help them plan given the climate change effects that have already occurred. They can better weigh the risks versus the potential return on economic investments to participate in these fisheries.

For fisheries scientists and managers, the hope is that this new approach will help them better understand whether a change in management approach is warranted.

“We want to provide fishers and resource managers an early warning to allow time for actions to be taken to preserve important fisheries for as long as possible. At the same time, we want to provide information that may be useful for helping new fisheries to develop,” Malick said.

Alaska Fisheries Science Center scientists are already taking steps to better account for climate variation and associated risks to stock productivity in annual fish stock assessments.

Resource managers at the North Pacific Fishery Management Council and NOAA Fisheries are also considering this important environmental information in the development of annual fisheries management measures.

In developing this new approach, Litzow and his colleagues hope to provide a way to promote resilience in fisheries to climate change. ↴

– NOAA Fisheries

## Council acts to tighten halibut trawl bycatch limits

**Abundance-based management:** The North Pacific Fishery Management Council, at its December meeting, took action to tighten limits on halibut trawl bycatch in the Bering Sea and Aleutian Islands.

The action was a long time coming, as the council had been considering it for six years.

The measure is aimed at a trawl fleet that particularly struggles with halibut bycatch. Such bycatch is controversial especially when halibut stocks are low, as they are now.

The action will link the fleet's bycatch limit to halibut abundance. That's a departure from the current policy, which sets a fixed annual limit of 1,745 metric tons.

Halibut fishermen argued their catches had declined with lower abundance yet the trawl bycatch limit remained the same, taking a proportionately larger bite out of the stock.

Under the council's action, at current halibut abundance levels a 1,309-ton halibut bycatch limit would be set for the trawl fleet, the council's December newsletter reported.

That's a 25 percent reduction from the 1,745-ton limit currently in place, but only 37 tons under the fleet's average halibut take from 2016 through 2019.

The council's action seemed to satisfy no one. Trawl critics wanted more stringent action, while the trawl fleet called it ruinous and unjustified.

Groundfish Forum, a trade association representing five member companies operating 19 trawl vessels targeting yellowfin sole and other flatfish, issued said the council's action "will result in devastating effects to the federal flatfish fishery off Alaska," and will yield "no significant improvements to the halibut fishery."

"During its discussion, the council ignored the potential that their action could put at least one flatfish company out of business, so we don't take this issue lightly," said Chris Woodley, Groundfish Forum executive director.

He hinted at legal action, saying "we are exploring all options."

Provided the commerce secretary approves the council's action, implementation is expected in either mid-2023 or for the beginning of the 2024 fishing year.

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**Salmon task force:** U.S. Sen. Dan Sullivan, R-Alaska, in December introduced a bill to establish an Alaska Salmon Research Task Force. Sen. Lisa Murkowski, R-Alaska, signed on as a cosponsor.

The bill (S. 3429) comes in response to the wildly varying nature of Alaska's recent salmon returns. While Bristol Bay has seen enormous salmon runs, other areas of the state such as Western Alaska have seen crashes.

The bill aims to create a "coordinated salmon research strategy" by setting up a panel of up to 19 members, most of them to be federally appointed. Members would come from NOAA and other agencies, the fishing industry, the Alaska Native and subsistence community, and academia. The governor of Alaska would appoint one member.

The task force would, according to the bill, conduct a sweeping review of Pacific salmon science, examining issues such as marine carrying capacity, predator interactions with salmon, and climate effects on habitat. It would have a year to issue a report.

The bill doesn't specify a budget, but directs the Commerce Department to provide administrative support for the task force, including travel expenses.

"Alaskans in some parts of the state have witnessed strong, historic runs of salmon, while Alaskans in other regions have seen shocking and unprecedented declines," Sullivan said in a press release. "With this legislation, we would establish a body to expand our understanding, identify knowledge gaps, and ultimately drive us toward concrete policies and management decisions that we hope will bring increased abundance and stability to our salmon stocks."

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**COVID relief:** Relief checks from the Coronavirus Aid, Relief, and Economic Security Act went in the mail in December.

A total of 2,534 checks for qualified Alaska commercial fishing, processing, charter, and aquaculture applicants were mailed by Dec. 17, the Alaska Department of Fish and Game said.

The CARES Act provided \$300 million nationally for fisheries assistance, with \$50 million of that allocated to Alaska.

The act was signed into law in March 2020, so it obviously took a while for the relief payments to come.

"I continue to hear from Alaska's seafood industry about the numerous ongoing challenges they are facing due to the COVID-19 pandemic," Sen. Murkowski said in a Dec. 23 press release. "I recognize that the time between allocation and distribution has been frustrating and long."

"We thank the Alaska congressional delegation for all the work that they did to secure this funding," said Tracy Welch, executive director of United Fishermen of Alaska. "The lengthy wait ... highlights the need for improvement of the distribution process for disaster relief funds for the fishing industry."

A second round of relief for Alaska fishery participants is planned, the Department of Fish and Game said.

Wesley Loy is editor of **Pacific Fishing** magazine and producer of **Deckboss**.



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## West Coast dam pollution targeted in lawsuit

**Salmon threat:** An environmental watchdog group is accusing the U.S. Army Corps of Engineers of violating water quality rules in its operation of four dams.

A Columbia Riverkeeper lawsuit alleges the agency's dams in Oregon and Washington are damaging the Columbia and Lower Snake rivers with "hot water, oil, and toxic chemicals."

Filed in federal court on Dec. 8, the lawsuit says rising temperatures threaten aquatic life, killing "thousands of migrating sockeye salmon headed to the mid-Columbia and Lower Snake rivers" in 2015.

The dams also release "oils and greases" and harmful chemicals, according to the lawsuit.

This isn't first time the two sides have been in court on the pollution issues. In 2014, a similar lawsuit yielded a settlement agreement in which the Army Corps agreed to get Water Quality Act permits and address dam impacts.

Columbia Riverkeeper agreed to hold off on more litigation for seven years and the group is now suing to get what it originally sought in the settlement.

In a statement provided to multiple news outlets, the Army Corps said its ability to "manage water behind the dams" is misrepresented. The dams are "run-of-river facilities" that don't store water, and "this limits our ability to impact water temperatures by drawing down water levels in the spring."

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**Ropeless request:** West Coast fishing gear entanglements have been a high-profile issue since 2014, when a worrying trend of increases began.

Recent years have seen decreases, but entanglements are still higher than pre-2014 levels and ropeless gear continues to be advocated as a solution.

Now, a formal petition has been filed to get federal agencies to require use of ropeless gear within five years.

Filed on Dec. 9 by the Center for Biological Diversity, the petition says entanglements "threaten the very existence of numerous imperiled species" and is a "primary threat" to whales and sea turtles.

Fishermen have serious doubt the viability of ropeless gear. But according to the petition, it's "the only way to prevent entanglements while allowing fishing to continue."

The group has taken legal action that resulted in shortened crabbing seasons and new regulations in California.

But proposed legislation to require use of ropeless gear in the state didn't gain momentum.

The petition covers fisheries on both coasts of the United States.

On the West Coast, 17 whale entanglements were confirmed in 2020, down from 26 the previous year and 46 in 2018.

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**Dungeness plan:** California has been the epicenter of entanglements, and legal pressure has led to the drafting of a conservation plan to address the impacts of the state's Dungeness crab fishery.

An updated version of a draft plan was released in early December and outlines the scope of the problem and measures taken to address it, both now and into the future.

Once completed, the conservation plan will be key to the California Department of Fish and Wildlife's application for a federal incidental take permit for the fishery.

A public comment period on the updated draft ends on Jan. 17.

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**Crabber bust:** State and federal law enforcers descended on a Dungeness crab haul in Oregon after getting a report of undersized

crabs. After a lot of measuring was done, a vessel captain was cited for the illegal takes.

Oregon State Police fish and wildlife troopers and 14 members of the U.S. Coast Guard Columbia River Sector were dispatched to the Pacific Coast Seafood processing plant in Warrenton on Dec. 6, where a state biologist was sampling crabs.

A number of undersized crabs were flagged as coming from the F/V Calamari, which had landed about 46,000 pounds of crab.

According to an Oregon State Police press release, 11,778 pounds of crab were measured and 2,682 pounds, or more than 22 percent, were deemed as undersized.

The captain, Richard Fulton Brown, of Hebo, Oregon, was cited for take and possession of undersized crab.

A voicemail message to Brown wasn't returned as of press time.

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**Oregon infrastructure:** Oregon Sens. Jeff Merkley and Ron Wyden have joined calls for more federal funding for the state's harbors and ports.

In a Dec. 9 letter to the U.S. Army Corps of Engineers and the White House Office of Management and Budget, the lawmakers urge funding for Oregon ports as the recently approved Infrastructure Investment and Jobs Act of 2021 is implemented.

Noting that the law allots about \$17 billion for Army Corps waterway and navigation projects, the lawmakers advance a roster of Oregon project funding requests.

*Daniel Mintz reports from Eureka, Calif.*



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**IFQ NEWS**

\*Price differences reflect the range from small blocks of D or C class on the lower end to unblocked B class unless otherwise indicated.\*

**HALIBUT**

Market activity for halibut quota continued at a steady pace through the end of 2021. Ex-vessel prices remained strong the entire year, a trend that we expect to continue in 2022. Demand for QS, particularly in the GOA, will be high entering the 2022 season. Once the harvest recommendations are finalized, we expect market activity to accelerate. The latest is as follows:

AREA	ESTIMATED VALUES
2C	\$42.00/# - \$58.00/# - Very low availability, demand for all classes.
3A	\$40.00/# - \$50.00/# - Wide range of offers and sale prices.
3B	\$26.00/# - \$34.00/# - Very low availability, demand for all classes.
4A	\$10.00/# - \$17.00/# - Low activity, blocked and unblocked available.
4B	\$10.00/# - \$16.00/# - No recent activity.
4C	\$10.00/# - \$17.00/# - Some activity, blocked and unblocked available.
4D	\$10.00/# - \$17.00/# - Some recent activity, low availability.

**SABLEFISH**

The market for sablefish quota improved towards the end of 2021 due to the increased 2022 TAC and steadily improving ex-vessel prices. Fishing reports for 2022 were largely positive but yet again, a significant amount of IFQ was left in the water. We expect a substantial amount of QS to be for sale in advance of the 2022 season, particularly if free Covid transfers are disallowed. The latest is as follows:

AREA	ESTIMATED VALUES
SE	\$11.00/# - \$14.00/# - Blocked and unblocked available.
WY	\$10.00/# - \$15.00/# - Demand for unblocked.
CG	\$9.00/# - \$12.00/# - Continued demand for unblocked, sellers wanted.
WG	\$7.00/# - \$11.00/# - Limited market activity, sellers wanted.
AI	\$1.50/# - \$5.00*/# (A class) - Recent sales across quota types.
BS	\$1.50/# - \$8.00*/# (A class) - Demand remains steady, sellers wanted.

ALASKA PERMITS	ESTIMATED VALUES
Power Troll	\$30k
Area M Drift	\$164k
Area M Seine	\$165k
Area M Setnet	\$50k
Bristol Bay Drift	\$225k
Bristol Bay Setnet	\$70k
Cook Inlet Drift	\$25k
Kodiak Seine	\$40k
PWS Drift	\$110k
PWS Seine	\$200k
SE Dungeness (75-300 pots)	Variable - Sellers wanted
Southeast Drift	\$65k
Southeast Herring Seine	\$115k
Southeast Salmon Seine	\$175k
SE Chatham Black Cod	\$405k

WEST COAST PERMITS	ESTIMATED VALUES
California Crab	Variable - Call for info
Market activity has increased since the season opened, with several recent sales of bigger permits. We anticipate that trend to continue into 2022. Call for more information. The latest is as follows: - 175 pot: \$30k-\$50k range. - 250 pot: \$45k-\$60k less than 40'. \$50k-\$100k for 40'+ - 300-350 pot: \$70k-\$150k. Low availability. - 400-450 pot: \$100k-\$275k. Value dependent on length. - 500 pot: \$190k-\$375k+. Highest value in 58' and above.	
California Deeper Nearshore	\$56k - Sellers wanted
CA Halibut Trawl	\$45k - \$80k
California Squid	Variable - Call for info
California Squid Light/Brail	Variable - Call for info
Oregon Pink Shrimp	\$60k - \$80k - Sellers wanted
Oregon Crab	Variable - Call for info
Several recent sales leading in to the season. - 200 pot: \$45k-\$60k. - 300 pot: \$100k-\$200k. - 500 pot: \$200k-\$300k for <50' & \$7k-\$7.5k per foot >50'.	
Puget Sound Crab	\$200k - Cash offers
Puget Sound Drift	\$10k
Puget Sound Seine	\$75k
Washington Crab	Variable - Call for info
Market remained strong into the season. - 300 pot: \$90k - \$160k depending on length - 500 pot: \$300k - \$400k depending on length	
Washington Pink Shrimp	\$55k - Leases available
Washington Troll	\$20k - Leases available
Longline - Unendorsed	\$90k - \$120k - Leases available at reduced prices.
Longline - Sablefish Endorsed	Variable - Call for more information.
A-Trawl	Variable - Call for info

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**FOR SALE**

Delta purse seiner, fully rigged, all squid permits and pelagic permits for California. Proven producer and has Oregon squid permit also. Owner retiring and willing to train new owner or captain for three months. \$2.3 million. Call Don: (949) 279-9369.

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65-foot charter boat – totally refurbished and set up for overnight tuna trips. Call Don: (949) 279-9369. Priced to move: \$679,000.



**FOR SALE**

Have two California lobster permits for sale; \$130,000 today. Also looking for a Southern California rock crab permit; have buyer standing by. Call Don at (949) 279-9369.



**FOR SALE**

Beautiful lobster style MDI 45 foot boat located in Santa Barbara, CA. Boat is priced to sell at only \$229,000. Boat is a great sea boat currently fishing offshore for black cod. Boat would make a great lite boat or lobster boat also. Call Don: (949) 279-9369.



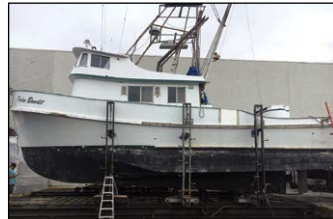
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**SP21-001** 37.5'x13'x4' fiberglass, combination gillnetter/longliner built by Frostad (B.C) in 1990. Repowered in 2018 w/ Hyundai rated at 380 hp w/ Twin Disc 508. Packs 14k lbs in (5) insulated fish holds. Queensboro chain drive gillnet drum, auto levelwind, and power stern roller. Includes longline chute, table, drum and 15 skates w/ snap on gear. Upgrades in 2018 include engine, gear, shaft, prop, steering, controls, thru fittings, wiring, sound proofing, roof, cabin door and more. Electronics include inverter/charger, (2) Navnet VX2 w/ integrated radar, sounder, plotter and autopilot. Diesel stove, head, shower, fridge, and (4) berths total. Reduced to \$179,000.



**SE21-011** 48'x14x5' fiberglass seiner/crabber built in 1979 by Delta. Volvo TAMD 120A main engine rated at 290 hp. Twin Disc MG509 gear with trolling valve. Makes 8 knots. 800 gallons fuel capacity in (2) tanks. 30 kW MER gen set. Packs 30k# in RSW, (1) fish hold. 20 ton IMS RSW system. Fully rigged for seining, net included. Deck equipment includes crab block and dump box. Electronics include (2) VHF, radar, GPS, plotter, and ComNav autopilot. Well-maintained vessel. Asking \$550,000.



**BB21-057** 32'x15.5'x28" aluminum, double jet, Bristol Bay through picker built by All Points in 1996. Twin Cat C9 rated 575 hp each w/ Twin Disc 5065 gears and Ultra Jet 340HTS w/ 377 impellers, all new in 2015. Packs 20k lbs in (8) double walled fish holds. PacWest 10 ton RSW, new in 2019. Hydraulic system refurbished in 2015 w/ (2) Eaton 4.8 cube hydraulic pumps and deck control valves. Electronics include (2) Garmin GPS, VHF, 2M and sonar. Force Ten stove, fridge, (5) berths, Red Dot heater and Wabasto forced air heating in pilot house. Asking \$645,000.



### HALIBUT IFQ

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3A-C-U: 13,000 lbs.....asking \$52.00
3A-C-B: 2,400 lbs.....asking \$48.00
3A-D-B: 1,300 lbs.....asking \$45.00
4A-B-U: 18,000 lbs.....asking \$19.00
4A-B-B: 2,200 lbs.....asking \$14.00
4D-B-U: 18,000 lbs.....asking \$19.00

### SABLEFISH IFQ

AI-B-U: 19,600 lbs.....asking \$2.00
SE-C-U: 10,000 lbs.....asking \$16.00
SE-C-B: 3,700 lbs.....asking \$14.00
WG-B-B: 5,200 lbs.....asking \$10.00
WY-C-U: 10,800 lbs.....asking \$21.00
WY-C-B: 4,500 lbs.....asking \$20.00

**LL21-005** 180'x32'x15' freezer longliner built in 1944 by Higgins Industres Inc. Converted to a freezer/longliner in 1991 by Foss Shipyard. Twin Cat 3412 main engines rated at 624 hp each. Twin Disc MG5201 gears. (3) Cat 3406B gensets make 429 hp/290 kW each. Cat 3306 genset makes 247 hp/165 kW. 15,500 cubic feet of fish hold capacity, holds 700k# of frozen finished cod. Sabroe R717 refrigeration system with (2) compressors, (3) refrigerant pumps. (2) deck mount refrigeration units w/ Carrier compressor and Cold Sea chiller for chilling holding tank. Extensive accommodations for full fishing and processing crew. Jacobs Brothers model 2049 deck crane. Extensive electronics and equipment. Asking \$1,600,000.



**TE21-008** 91'x26'x6' steel tender built by LaConner Machine & Drydock in 1978. Twin John Deere 6081 AFM75 w/ 750 hp combined and Twin Disc MG 509 gears. Mitsubishi 6D22 w/ 100 kW and Isuzu w/ Mer 75 kW gensets. Packs 200k lbs in (4) aluminum fish holds. Aluminum house and recent steel work. RSW includes 15 hp circ pump, (2) Copeland compressors w/ 40 tons combined and (2) IMS chillers. (2) Seattle Crane Corp. MCK 225 knuckle deck cranes. 5,725 gallons fuel capacity. Electronics include (3) VHF, AIS, (2) GPS, (2) Furuno radars, (2) sounders, autopilot and Trac Phone. Full galley, (4) berths plus capt. stateroom. Potential BB tendering contract available to buyer. Asking \$400,000.



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