

Industry Anchors profile: Mustad Autoline

# PACIFIC FISHING

www.pacificfishing.com THE BUSINESS MAGAZINE FOR FISHERMEN ■ DECEMBER 2018

## Seattle centenarian



- Alaska salmon forecasts
- Fishermen vs. Big Oil

US \$2.95/CAN. \$3.95

63126



0 56698 63126 2

**When you're as serious about fishing as we are,  
you don't settle for second best.**

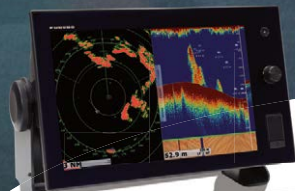


Use Radar to locate birds feeding on bait fish.

Pinpoint the position of fish schools around your boat using sonar.

Find fish and view the sea bed contour with an echo sounder.

Furuno sounders, sonars and even radars have found more fish than any other manufacturer in the world, and now we're finding more than ever! The high-powered FCV295 and FCV1150 employ Furuno Free Synthesizer (FFS) technology which permits a wide selection of operating frequencies from 28 to 200kHz. The workhorse CH250 is designed for a wide range of commercial fishing vessels. And NavNet 3D and NavNet TZtouch can now be outfitted with Furuno's TruEcho CHIRP sounders. When it comes to fishing above and below, look to Furuno for electronics you can depend on.



**NAVNET TZtouch**  
MULTI-FUNCTION DISPLAY  
WITH ALL-NEW DFF1-UHD  
TRUECHO CHIRP FISH FINDER



**FCV295**  
1, 2 OR 3kW, DUAL-FREQUENCY  
FFS FISH FINDER



**FCV1150**  
1, 2 OR 3kW, DUAL-FREQUENCY  
FFS FISH FINDER



**CH250**  
SEARCHLIGHT SONAR

RADAR

FISH FINDERS

SONAR

NAVIGATION

COMMUNICATION

AUTOPILOTS

[www.FurunoUSA.com](http://www.FurunoUSA.com)

**FURUNO**  
The world leader in commercial marine electronics!

# PACIFIC FISHING®

THE BUSINESS MAGAZINE FOR FISHERMEN



**VOLUME XXXIX, NO. 12 • DECEMBER 2018**

*Pacific Fishing* (ISSN 0195-6515) is published 12 times a year (monthly) by *Pacific Fishing Magazine*. Editorial, Circulation, and Advertising offices at 14240 Interurban Ave S, Ste. 190, Tukwila, WA 98168, U.S.A. Telephone (206) 324-5644. ☐ Subscriptions: One-year rate for U.S., \$18.75, two-year \$30.75, three-year \$39.75; Canadian subscriptions paid in U.S. funds add \$10 per year. Canadian subscriptions paid in Canadian funds add \$10 per year. Foreign airmail is \$84 per year. ☐ The publisher of *Pacific Fishing* makes no warranty, express or implied, nor assumes any legal liability or responsibility for the information contained in *Pacific Fishing*. ☐ Periodicals postage paid at Seattle, Washington. Postmaster: Send address changes to *Pacific Fishing*, 14240 Interurban Ave S, Ste. 190, Tukwila, WA 98168. Copyright © 2018 by *Pacific Fishing Magazine*. Contents may not be reproduced without permission. POST OFFICE: Please send address changes to *Pacific Fishing*, 14240 Interurban Ave S, Ste. 190, Tukwila, WA 98168.

**ON THE COVER:** The 100-year-old Puget Sound salmon tender *Emancipator*, docked at Fishermen's Terminal in Seattle. See more of this boat on Page 16. Wesley Loy photo

PREFERRED PUBLICATION OF:

BRISTOL BAY  
FISHERMEN'S ASSOCIATION

CORDOVA DISTRICT  
FISHERMEN UNITED

OREGON DUNGENESS  
CRAB COMMISSION

UNITED FISHERMEN  
OF ALASKA

WASHINGTON DUNGENESS  
CRAB FISHERMEN'S ASSOC.

WASHINGTON REEF NET  
OWNERS ASSOC.

WESTERN FISHBOAT  
OWNERS ASSOC.

# 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.

**California fishery buyback:** Gov. Jerry Brown has signed a bill phasing out gillnets used to catch swordfish. – *times-standard.com*

**Winter troll season set:** The 2018-19 Southeast Alaska winter troll fishery will open Oct. 11 with a quota of 45,000 non-Alaska, hatchery-produced Chinook salmon. – *adfg.alaska.gov*

**Mixed bag for Alaska crab quotas:** The Bering Sea snow crab quota is up 45 percent, while the limit for Bristol Bay red king crab is down 35 percent. – *deckboss.blogspot.com*

**In defense of hatcheries:** Petersburg's borough assembly has passed a resolution in support of Alaska's embattled salmon hatchery program. – *kfsk.org*

**Alaska salmon summary:** With the season all but done, the total harvest stands at 113.5 million fish. – *uploads.alaskaseafood.org*

**Tariff relief:** Gov. Bill Walker says Alaska salmon has been removed from the list of goods subject to new tariffs between the United States and China. – *gov.alaska.gov*

**Bristol Bay bonanza:** This season's sockeye run was the largest on record. – *kdlg.org*

**Canada's mines:** Alaska's top elected officials sign a letter highlighting continued concerns over mining activity in British Columbia. – *murkowski.senate.gov*

**Oregon medevac:** The Coast Guard transports the ailing chief engineer off the fishing vessel Alaska Ocean. – *content.govdelivery.com*

**Salmon summit:** The Cook Inlet Salmon Task Force is holding its first meeting today in Anchorage. – *adfg.alaska.gov*

**Hatchery debate:** The Alaska Board of Fisheries kicks off a work session today in Anchorage, and salmon hatcheries will be a hot topic. – *kbbi.org*

**Alaska shakeup:** Lt. Gov. Byron Mallott has resigned effective immediately. – *scribd.com*

**October surprise:** The abrupt resignation of Alaska's lieutenant governor seriously rocks the gubernatorial race. – *newsminer.com*

**Hot ruling:** A federal judge has ordered the EPA to protect Columbia basin salmon and steelhead from dangerously warm water temperatures. – *seattletimes.com*

**Walker's out:** Alaska Gov. Bill Walker has dropped his reelection bid. – *adn.com*

**No debate:** With Mark Begich the only candidate planning to attend, the Kodiak gubernatorial debate on fisheries is canceled. – *adn.com*

**Oregon medevac:** A crewman aboard the fishing vessel Arctic Storm suffered a facial injury, the U.S. Coast Guard says. – *content.govdelivery.com*

**Big blow:** Near hurricane-force winds hammered Cordova on Tuesday, setting a derelict fish processing boat adrift on Prince William Sound. – *adn.com*

**Columbia River spill:** The U.S. Coast Guard and state agencies responded to a large sheen on the Columbia River that originated near Kalama, Wash. – *content.govdelivery.com*

**What happened on hatcheries?** UFA offers an Alaska Board of Fisheries recap. – *mailchi.mp*

**Sitka survivor:** A 40-foot troller rolled and sank in high winds just outside of the Sitka harbor Saturday, but the skipper was rescued unharmed. – *alaskapublic.org*

**The halibut calendar:** A proposal from the staff of the International Pacific Halibut Commission would set fixed season start and end dates. – *deckboss.blogspot.com*

**Crabbers go to court:** The Inter-Cooperative Exchange, a cooperative of Bering Sea and Aleutian Islands crab fishermen, is suing the National Marine Fisheries Service. – *deckboss.blogspot.com*

\*You can subscribe to **Fish Wrap** by sending an email to [circulation@nwpublishingcenter.com](mailto:circulation@nwpublishingcenter.com). Write your first name, your last name, and the words "Fish Wrap." Do it now, before you go another month without **Fish Wrap**!

To subscribe:

[www.pacificfishing.com](http://www.pacificfishing.com)

Ph: (206) 324-5644

[circulation@pacificfishing.com](mailto:circulation@pacificfishing.com)

Main Office

14240 INTERURBAN AVE S. SUITE 190

TUKWILA, WA 98168

PH: (206) 324-5644

Chairman/CEO/Publisher

MIKE DAIGLE

[miked@nwpublishingcenter.com](mailto:miked@nwpublishingcenter.com)

Associate Publisher

CHRISTIE DAIGLE

[christied@nwpublishingcenter.com](mailto:christied@nwpublishingcenter.com)

EDITORIAL CONTENT:

Editor

WESLEY LOY

[wloy61@gmail.com](mailto:wloy61@gmail.com)

Ph: (907) 351-1881

West Coast Field Editor

DANIEL MINTZ

PRODUCTION OPERATIONS:

Art Director, Design & Layout

PATRICIA WOODS

[patriciaw@nwpublishingcenter.com](mailto:patriciaw@nwpublishingcenter.com)

SALES & MARKETING:

JOHN NORDAHL

Ph: (206) 775-6286

[johnn@pacificfishing.com](mailto:johnn@pacificfishing.com)

Ad Support

CANDICE EGAN

Ph: (206) 324-5644

[candice@nwpublishingcenter.com](mailto:candice@nwpublishingcenter.com)



# Happy Holidays

from all of us at Pacific Fishing!

**Thank you for your support throughout the year.  
Here is to a joyous season and a prosperous 2019!**

*Your Pacific Fishing team,  
Mike, Christie, Wesley, John, Patricia and Candice*

**Stay in touch with us in 2019! With our monthly magazine, daily Fish Wrap email, and Facebook, you have many ways to interact with us throughout the year.**

**Fish Wrap**

Sign up to receive our **FREE** emails which bring the latest commercial fishing news and events to your inbox.

Email us at [circulation@pacificfishing.com](mailto:circulation@pacificfishing.com). Please include your name and email address in your email.

**facebook**

Follow us on Facebook, and let us know what is happening out on the water. Check out the photos, videos and more!

Visit our page at [facebook.com/PacificFishing!](https://facebook.com/PacificFishing)

**Website**

[www.pacificfishing.com](http://www.pacificfishing.com)

**Questions?** Contact us at (206) 324-5644 or [christied@nwpublishingcenter.com](mailto:christied@nwpublishingcenter.com).

# Here's why PCFFA is suing the fossil fuel industry

On Nov. 14, the Pacific Coast Federation of Fishermen's Associations filed a lawsuit to hold 30 oil and gas companies accountable for losses caused by three straight years of Dungeness crab fishery closures in California and Oregon. We didn't take that step lightly, but it's fully consistent with our mission of "protecting the rights of fishermen and fishing communities" and fighting for "the long-term survival of commercial fishing as a productive livelihood and way of life."

It's what we've done for 42 years, and we're not about to stop now.

There's been widespread support for the lawsuit up and down the coast, but some fishermen are wondering, perhaps understandably, why we decided to take on some of the biggest, wealthiest, and most powerful corporations in the world.

---

*This is our new normal. And the evidence is clear that fossil fuel companies are to blame.*

---

Here's why.

If you're reading this, you probably remember how bad things were in 2015-16. Coastal fisheries were having a rough run, and then the hammer dropped on Oregon and California crabbers. High levels of domoic acid shut down most commercial crabbing here for five months, taking an enormous toll on fishermen, their families, and their communities.

Captains lost the income they needed to get through the year. Their crew lost the wages they needed to pay rent, make car payments, and put food on the table. Restaurant and store owners lost money, too, even after the season finally opened in March 2016, because consumers were worried about "toxic crabs." International markets suffered. The list goes on. There was a ripple effect through coastal communities large and small. Some people lost their boats. Some lost their homes. And pretty much everyone suffered one way or another.

Then there were more closures and delays in 2016, and again in 2017. Now the 2018 season in California's District 10 has started with a delay from Bodega Bay to the Sonoma-Mendocino county line. Quality and domoic acid issues are still persistent to the north, threatening protracted delays. Oregon is closed.

Domoic acid flare-ups that delay or close commercial crabbing four years in a row?

**It didn't used to be this way.** And it sure as hell shouldn't be this way now.

But it is. This is our new normal. And the evidence is clear that fossil fuel companies are to blame.

Domoic acid flare-ups are directly linked to harmful algal blooms, and harmful algal blooms are occurring because the Pacific has been warmed by heat-trapping carbon emissions from fossil fuel combustion.

The fact that the Pacific has gotten warmer isn't a surprise to those of you who've spent the past few decades on the water. But what might be surprising is that the defendants in our lawsuit have known all along that this would happen as a direct consequence of their continued activity.

They've known for 50 years that their products would cause the atmosphere and oceans to heat up. Their own staff scientists and consulting experts told them so, warning that the consequences of continuing to produce and promote fossil fuels could be "severe" or "catastrophic." These people aren't dumb; they don't dispute the

science, and neither should you.

I'll say it again: The fossil fuel companies knew from their own experts that the oceans would heat up if they continued selling oil, gas, and coal. They were so certain that some companies even took steps decades ago to protect their own assets from rising seas and the more extreme storms they knew would occur, or they took steps to prepare for a warming Arctic.

But did they do anything to warn the rest of us about those consequences?

No.

Did they do anything to avoid or minimize the harm they knew would be inflicted on the rest of us?

No.

Here's what they did instead.

They continued to promote and market their products to unsuspecting consumers like us.

They ramped up production.

They spent billions of dollars on a public relations and lobbying campaign to convince the public, the press, and elected officials that we had nothing to worry about.

**And they raked in hundreds of billions** of dollars in profits. Exxon alone had nearly \$20 billion in profits in 2017 and has already banked more than \$14 billion through September of this year.

But they don't want to pay a single dime for crabbers' losses, or for the costs of measures that will help them adapt to future domoic acid flare-ups. In fact, the companies and their PR flacks are arguing that it's all our fault - that we're the ones who should pay. They say they only sold the products that we used to fuel our boats and cars or to heat our homes.

Isn't that convenient? We all use oil and gas for fuel, but that doesn't absolve fossil fuel companies from responsibility for the harm we're suffering. If they hadn't spent the last 30 years lying about the consequences of their products and fighting against development of renewable energy alternatives, we'd likely be in a very different situation today - and almost certainly less reliant on energy sources whose consequence is warming the Pacific and damaging our livelihoods.

Congress passed a disaster relief act earlier this year that will help offset some of the losses crabbers suffered in the past. While it's certainly welcome and graciously received - and PCFFA worked hard with senators, members of Congress, and others to make it happen - it's still only partial relief. This industry needs to be made whole and that burden shouldn't just fall on us and other taxpayers.

The bottom line is this: We don't think that these giant corporations, who knowingly and deliberately caused the problems we are dealing with on the water, should get off scot-free. That's why we've taken them to court. They need to be held accountable for the damage they've caused, and that includes requiring them to pay for the testing, development, and implementation of technologies that will help us survive domoic acid flare-ups in the future.

PCFFA has a long history of protecting Pacific Coast fisheries and standing up for its fishermen. If that means holding fossil fuel companies accountable for the damage they're inflicting on our members, their families, and their communities - and it does - then that's what we're going to do. ↓

*Noah Oppenheim is the executive director of the Pacific Coast Federation of Fishermen's Associations.*

# Orcas, fishermen are both endangered species

*Editor's note: This commentary was first published Nov. 8 by The Daily Astorian. It is reprinted here with permission of the author.*

Orcas and commercial salmon fishermen share a common crisis: Both need more adult Chinook salmon to return to the Columbia River – orcas to avoid starvation, fishermen to sustain their livelihoods and families.

Northwest orcas are starving and their population is declining – only 74 remain, in large part because their primary prey, Chinook salmon, have been pushed by dams, dewatering, and habitat destruction to near extinction almost everywhere.

Salmon fishermen know this because, for years, they have seen reduced catches, reduced fishing seasons, and spreading closures. Salmon fishermen too are now effectively an endangered species, and for the same reasons as orcas – their Chinook salmon prey are rapidly disappearing.

So, when six of the world's leading orca scientists banded together recently and wrote to Washington Gov. Jay Inslee's Southern Resident Killer Whale Task Force to share their conclusion that restoring Snake River spring Chinook is critical to preventing orca extinction, salmon fishermen from Astoria, Ilwaco, and other coastal communities took note. These scientists are talking about their futures as well.

Since the mid-1990s, salmon scientists have said the single biggest step we can take to restore healthy salmon runs in the Snake River is to remove four low-value, high-cost dams on the lower river above its confluence with the Columbia. This step has been vigorously opposed by those who benefit from status quo dam operations.

But just as our understanding of the connection between orcas and Chinook salmon from the Columbia has evolved, so too has our understanding of the role these four dams play in damaging our regional salmon economy. We now know the region could bypass these four obsolete dams and still thrive.

**A recent analysis** by Energy Strategies, a Utah-based consulting firm that primarily works for utilities, concluded that the power these four dams combined produce could readily be replaced with clean energy and conservation, with little or no increase in greenhouse gas emissions, and at a low cost to consumers – about \$1.25 per month on the average bill. The economic costs of these lower Snake River dams, in terms of thousands of lost salmon-based jobs (in Astoria and elsewhere), costs the region staggeringly more.

Once, the hydropower produced by the four lower Snake River dams was useful and valuable. But over the past 17 years, the average annual 943 megawatts these dams produced was actually “surplus power,” amounting to less than 4 percent of the total power generated from the Federal Power System, which today generates a 17 percent energy surplus. The Northwest is so awash with surplus power that it can often be sold only at a net loss. In other words, instead of making money on it, the Bonneville Power Administration often has to pay California and other states to take it! In short, as power producers, the four lower Snake River dams are now economically obsolete.

The dams' agriculture transportation functions are also replaceable. U.S. Army Corps of Engineers data show barge shipping on the lower Snake has been in steady decline since at least 2000, so much so that, under Corps criteria, the lower Snake would today be classified as a “low use” waterway.

Today, the only thing shipped by barge on the lower Snake waterway is grain, chiefly wheat. But increasingly, wheat is being

transported by rail. In fact, because of increased rail efficiency, more wheat is going to market by train every year. It is only massive subsidies that keep barge shipments economically viable at all.

Removing the lower Snake River dams would require some reinvestment in rail capacity, but doing so would improve efficiency even more. It could even cut greenhouse gas emissions by reducing the distance grain has to be moved by truck, which is both costly and highly polluting. And grain could still be moved by barge on the Columbia from the Tri-Cities to Portland, an economic opportunity for the Tri-Cities, an area that was a booming grain shipment port before the Snake River dams were built in the 1960s – and could be again.

Those opposing restoring the lower Snake River often cite irrigation and flood control in defending the dams. But irrigation from the lower Snake only serves 13 farms, all around Ice Harbor dam, irrigation that could be easily maintained by modifying the current system to include stronger pumps and longer pipes, a simple plumbing problem. And, because the lower Snake River dams have no water storage capacity, they play no significant role in flood control.

**So where does this leave us?** As a region, do we continue failed policies that push the orcas, and salmon fishermen and their communities, further toward extinction? Or do we want to do something to save them both?

The message couldn't be clearer: It is past time for bold action to bring back the Chinook salmon that sustain mother orcas and their pods as well as salmon-dependent human communities. And the

*Continued on Page 10*

## PORT TOWNSEND SHIPWRIGHTS

*A full service yard servicing the  
NW fishing fleet for over three decades.*



wood ~ aluminum ~ steel ~ systems

360-385-6138 [www.ptshipwrights.com](http://www.ptshipwrights.com)

[f/PortTownsendShipwrightsCoop](https://www.facebook.com/PortTownsendShipwrightsCoop)

# West Coast fishermen sue Big Oil over crab closures

A West Coast fishermen's association is entering a legal fight with the oil and gas industry, accusing 30 fossil fuel companies of advancing climate change and causing a series of Dungeness crab closures.

Filed on Nov. 14 in San Francisco County Superior Court by the Pacific Coast Federation of Fishermen's Associations, the lawsuit takes the oil giants to task for promoting their financial interests at the expense of California and Oregon crab fishermen.

Among the defendants are some of the world's most powerful oil companies - Chevron, ExxonMobil, BP, Shell, and ConocoPhillips.

They're accused of "deliberately and unnecessarily" deceiving consumers about "the role of fossil fuel products in causing ocean warming and consequent harmful algal blooms and domoic acid outbreaks."

The association is represented by the San Francisco-based Sher

Edling LLP law firm.

**Crab contamination:** Toxic algae blooms rocked the West Coast fishing industry during the 2015-16 Dungeness season, which was drastically delayed and declared a disaster in California. Crabs in Oregon also tested above safety levels for the domoic acid toxin, delaying the season there.

---

*Among the defendants are Chevron, Exxon-Mobil, BP, Shell, and ConocoPhillips.*

---

Domoic acid issues also complicated last year's seasons, but the impacts weren't as great because they coincided with delays related to meat quality.

There is concern about this year's crabbing. As the lawsuit notes, the California area from Bodega Head to the Sonoma-Mendocino county line is closed due to domoic acid and crabs collected in northern port areas have unsafe levels of the toxin.

The algae blooms are associated with warm water conditions, and the lawsuit accuses the oil corporations of supporting climate change-inducing carbon emissions.

The suit essentially accuses the companies of a conspiracy to market their products and "conceal the hazards of those products from consumers" despite being aware of the climate change danger.

"Rather than collaborating with the international community by acting to forestall, or at least decrease, their fossil fuel products' contributions to global warming, increased mean sea surface temperature, marine heatwaves, harmful algal blooms, and marine toxin outbreaks, and consequent injuries to plaintiff, defendants embarked on a decades-long campaign designed to maximize continued dependence on their products and undermine national and international efforts to rein in greenhouse gas emissions," the lawsuit states.

**Conspiracy of misinformation:** The suit describes the oil and gas industry as being "at the forefront of carbon dioxide research for much of the latter half of the 20th century."

But instead of acting on it by supporting emissions-reducing technology and alternative energy, the oil companies have "funded dozens of think tanks, front groups, and dark money foundations pushing climate change denial" and "mounted a campaign against regulation of their business practices in order to continue placing their fossil fuel products into the stream of commerce, despite their own knowledge and the growing national and international scientific consensus about the hazards of doing so," according to the lawsuit.

In a press release, Noah Oppenheim, the association's executive director, highlighted liability issues.

"The families and businesses in our coastal communities should not have to bear the costs when fisheries are closed because of domoic acid flare-ups directly linked to fossil fuel companies and global warming," he said. "In addition to seeking compensation from fossil fuel companies for losses suffered by crabbers and others from those closures, we're demanding these companies pay for additional measures that will help mitigate future impacts."

A message left with ExxonMobil's corporate media office was not answered by press time. ↴

- Daniel Mintz

## ON THE HORIZON

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

- **North Pacific Fishery Management Council meeting, Dec. 3-11, Anchorage.** *The council will set Bering Sea and Gulf of Alaska groundfish catch limits for 2019.*
- **Alaska Board of Fisheries meeting, Jan. 15-19, Anchorage.** *The board will consider Arctic-Yukon-Kuskokwim finfish proposals.*
- **Alaska Young Fishermen's Summit, Jan. 21-23, Juneau.** *More information at [tinyurl.com/yaubhxh6](http://tinyurl.com/yaubhxh6).*
- **International Pacific Halibut Commission annual meeting, Jan. 28 to Feb. 1, Victoria, British Columbia.** *The commission will set catch limits for 2019.*
- **North Pacific Fishery Management Council meeting, Feb. 4-12, Portland.**
- **Alaska Board of Fisheries meeting, Feb. 21-26, Anchorage.** *The board will consider Alaska Peninsula, Aleutian Islands, and Chignik finfish proposals.*
- **Pacific Fishery Management Council meeting, March 5-12, Vancouver, Wash.**
- **Alaska Board of Fisheries meeting, March 9-12, Anchorage.** *The board will consider statewide finfish proposals and supplemental issues.*
- **North Pacific Fishery Management Council meeting, April 1-9, Anchorage.**
- **Pacific Fishery Management Council meeting, April 9-16, Rohnert Park, Calif.**
- **Lowell Wakefield Fisheries Symposium, May 7-10, Anchorage.** *The theme this year is "Cooperative research - strategies for integrating industry perspectives and insights in fisheries science." More information at [tinyurl.com/ycwmuw6l](http://tinyurl.com/ycwmuw6l).*



# BBRSDA 'strongly opposed' to large-scale mining in area

The Bristol Bay Regional Seafood Development Association board of directors approved an updated position statement regarding habitat protection and large-scale mining in the Bristol Bay watershed.

With the proposed Pebble copper-gold-molybdenum mine entering the federal permitting process, it was "prudent to reexamine and restate BBRSDA's position on this matter," the association said.

Here's the full statement, as posted Nov. 16 on the group's website:

"The mission of the Bristol Bay Regional Seafood Development Association is to increase the value of the Bristol Bay seafood products for the benefit of fishermen. The organization funds activities that market fishery products, elevate fish quality at the point of harvest, and support resource sustainability.

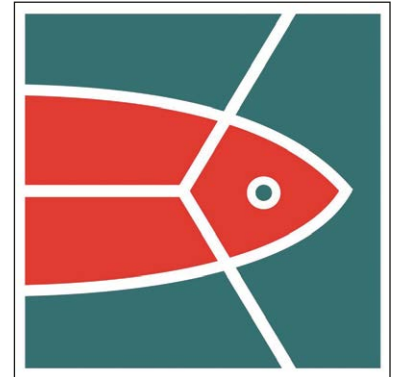
**"BBRSDA and the vast majority of our 1,800-plus fishermen members are strongly opposed to large-scale mining in the Bristol Bay watershed.** This fact is supported by BBRSDA member comments and fleet surveys. Due to the region's geological and hydrological characteristics, large-scale mining poses a significant, long-term risk to regional salmon runs. Productive and diverse sockeye salmon habitat is the foundation of the Bristol Bay salmon fishery. Promotion of seafood harvested in the region is BBRSDA's primary function. Protecting salmon habitat is a critical part of promoting the fishery because without abundant salmon runs, there is no fishery resource to promote. Further, the value of Bristol Bay salmon is closely linked to a favorable public perception of the environment from which it comes. Processing mine ore near the headwaters of this salmon fishery could severely damage the

perception of Bristol Bay salmon, and in doing so adversely affect the value of regional seafood products.

"The Bristol Bay sockeye salmon resource is more than a point of regional pride. It is the most valuable wild salmon fishery in the world and the crown jewel of the Alaska salmon industry. This one region accounts for nearly half the world's sockeye salmon

harvest. While other salmon runs have recently suffered through poor runs due to climate change or man-made calamities, Bristol Bay witnessed the largest sockeye return on record in 2018. This renewable, sustainable resource is a unique, global treasure.

"Going forward, BBRSDA can and will engage in allowable activities to support salmon habitat protection in Bristol Bay, such as: participating in the federal NEPA (National Environmental Policy Act) process, interfacing with appropriate agencies that regulate habitat use, communicating with our fleet, providing information to the public, meeting with stakeholders, and working with habitat protection groups. This work is a fundamental part of our statutory purpose and strongly supported by the fleet which financially supports this organization." ↓



## Smaller sockeye catch expected in 2019 in Bristol Bay

After a blockbuster season in 2018, next year's Bristol Bay sockeye salmon fishery is expected to be a bit tamer.

The Alaska Department of Fish and Game is forecasting a harvest of 26.11 million sockeye in 2019.

This past season saw the largest inshore Bristol Bay sockeye run on record dating back to 1893, with the commercial harvest totaling 41.3 million sockeye, the second-largest on record.

At an average ex-vessel price of \$1.26 per pound, the sockeye harvest tallied an impressive \$275.5 million. But the fish were small, averaging 5.3 pounds each.

For the upcoming season, the harvest forecast by district looks like this:

Naknek-Kvichak, 7.84 million sockeye

Egegik, 7.04 million sockeye

Ugashik, 2.38 million sockeye

Nushagak, 7.97 million sockeye

Togiak, 0.87 million sockeye

Note that the action is expected to cool off considerably in the Nushagak District, which had a stupendous 2018 season. "The Nushagak District sockeye salmon harvest of 24.1 million fish was the largest single Bristol Bay district harvest on record," Fish and Game said.

*Continued on Page 10*

# BE A SOUND THINKER

## REPORT LOST NETS

Puget Sound helps define us and supports our livelihoods. So report lost nets as soon as possible. There are no penalties, removals are free and this simple act can do more than save fish.

**To report lost gear call**

**360-733-1725 (NW Straits Foundation)**

**or 855-542-3935 (WDFW), or visit [derelictgear.org](http://derelictgear.org).**



Continued from Page 9

**Market outlook:** The Bristol Bay Regional Seafood Development Association in November issued a new sockeye market report (posted at [tinyurl.com/y97za4bw](http://tinyurl.com/y97za4bw)). The association represents the bay's drift gillnet fleet.

Here are a few key points from the report.

- Bristol Bay fishermen benefitted from a record sockeye run, poor harvests elsewhere in Alaska, and supportive market conditions in 2018.
- In nominal terms, 2018 was the most valuable harvest ever recorded with a preliminary ex-vessel value of \$281 million (all salmon species).
- After factoring in quality premiums and volume bonuses, the final value is projected to top \$335 million. Adjusted for inflation, the 2018 projected value would rank eighth all-time.
- The market outlook remains positive for Bristol Bay fishermen.
- It appears likely that processors will be able to sell the 2018 pack ahead of next season.
- The most recent sales data for frozen Bristol Bay sockeye is encouraging. Sales made in July-August 2018 were 29 percent greater than the same period in 2017 in volume terms, and 49 percent greater in terms of total sales value (for frozen headed and gutted Bristol Bay sockeye).
- Canned production data for the 2018 season will not be available until next year, but anecdotal information suggests processors continued to focus on frozen H&G and fillet production this past season.
- Frozen roe products generally account for 4 to 7 percent of the first wholesale value of Bristol Bay sockeye. Complete data for the 2018 sales cycle is not available, but early returns are encouraging.
- Farmed salmon production is expected to grow by approxi-



Bristol Bay drift gillnet boats at low tide. Wesley Loy photo

## Maritime Fab Big Bay Roller

Stern Roller Strength Like You've Never Seen Before!

16" dia. Core for increased net traction & reduced fish knock-outs

Heavy-duty 3/8" formed aluminum side frames

Integral ball valve for hubless freewheeling

Low profile base hinges with easily accessible locks



La Conner, WA: (360) 466-3629

[www.laconnermaritime.com](http://www.laconnermaritime.com)

mately 4 to 6 percent in 2018 and 4 to 5 percent in each of the next two years.

- New regulations in Chile's farmed salmon sector will limit production growth in the country's most productive regions.
- In looking ahead, the report says: "Coming off a year with excellent ex-vessel values, the natural question is, 'Yeah, but what about next year.' In 2014, a great season for fishermen was followed up by drastically lower ex-vessel prices in 2015. The 2014 season turned out to be a mirage, but ... early 2018 sales data suggests strong demand for Bristol Bay sockeye and processors are well capitalized after several good seasons." ↴

– Wesley Loy

**Spain commentary** continued from Page 7

biggest champions should be salmon fishermen, sport and commercial alike, who depend on bringing back the same Chinook the orcas so desperately need.

Many fishermen are already at the forefront of salmon restoration efforts, through organizations like Salmon for All and the Pacific Coast Federation of Fishermen's Associations. But we're at a tipping point. If we don't take steps like removing the lower Snake River dams soon, we risk losing our orcas as well as our own salmon heritage and the lives, communities, cultures, and jobs salmon support.

It's time we all raised our voices to insist that we can restore the Snake River, find ways to meet the legitimate needs of those who also depend on it, whether for power or irrigation, and bring back our salmon. Please be part of that effort. ↴

Glen Spain is the Northwest regional director for the Pacific Coast Federation of Fishermen's Associations.

# Two Alaska fishermen sentenced in connection with Steller sea lion slaughter

*Editor's note: The following is a press release issued Nov. 7 from the U.S. Attorney's Office in Anchorage.*

Two Alaska men were sentenced Nov. 6 in federal court for harassing and killing Steller sea lions with shotguns, and obstructing the government's investigation into their criminal activities.

Jon Nichols, 31, of Cordova, was sentenced by U.S. Magistrate Judge Deborah M. Smith to serve five years of probation, three months of home incarceration, 400 hours of community service, and pay a \$20,000 fine. Nichols is also required to publish a public apology in a national magazine covering commercial fishing.

Theodore "Teddy" Turgeon, 21, of Wasilla, was sentenced to serve four years of probation, one month of home incarceration, 40 hours of community work service, and pay a \$5,000 fine.

In June 2018, Nichols and Turgeon each pleaded guilty to one count of Marine Mammal Protection Act - illegal take. Nichols also pleaded guilty to one count of obstruction of a Marine Mammal Protection Act investigation.

According to court documents, a federal investigation was launched after 15 Steller sea lions were found dead at the mouth of the Copper River, during the opening of the 2015 Copper River salmon season.

During that season, Nichols was captain of the fishing vessel Iron Hide, and Turgeon was part of his crew.

The investigation revealed that, on various occasions between

May and June 2015, Nichols regularly directed his crew, including Turgeon, to shoot at Steller sea lions while fishing in the Copper River fishing district.

**The shootings were carried out** using a pair of shotguns kept aboard the vessel, one each belonging to Nichols and Turgeon. At times, Nichols would shoot the Steller sea lions himself, and at other times, Nichols would drive the F/V Iron Hide in the direction of the Steller sea lions to allow Turgeon and his crew to get a better shot.

After learning there was an investigation into the dead Steller sea lions, from June 6, 2015, through October 2016, Nichols obstructed the investigation by, among other things, coordinating false stories between his crewmembers regarding the shooting of sea lions and about the presence of firearms aboard the vessel. For example, after encouraged to do so by Nichols, Turgeon lied to a NOAA law enforcement agent stating that the crew did not shoot sea lions and there were no guns on the F/V Iron Hide, when he knew these statements to be false.

The Steller sea lion is protected by the Marine Mammal Protection Act and is listed as an endangered species for the geographic area where the shooting occurred.



NOAA's Office of Law Enforcement conducted the investigation leading to the successful prosecution of this case. The case was prosecuted by Assistant U.S. Attorney Aunnie Steward. ↴



*"Your Partner for an Exceptional Project"*

Full Service Indoor Shipyard  
Servicing Vessels up to 500 Tons  
Refits - Repairs - Maintenance - New Builds  
[www.platypusmarine.com](http://www.platypusmarine.com)

360-417-0709

Follow us on   



F/V Cape Reliant Repower



Mustad Autoline bills itself as “the most successful company in supplying automated longline systems to fisheries all over the world.”  
Photo courtesy of Mustad Autoline

# MUSTAD AUTOLINE

## The Norwegian company takes longlining ‘to the next level’



**Pacific Fishing** is profiling companies with a deep legacy of support for the fishing industry, providing essential products, services, and innovation. In the spotlight this month: **Mustad Autoline**

Mustad Autoline’s emergence in the 1970s answered a call for innovation in hook-and-line fishing, making it competitive with trawl gear.

The company was a subsidiary of Norway-based O. Mustad & Son, a global leader in the manufacture of sport and commercial fishing hooks, until 2011, when the parent company was bought by a Norwegian investor.

Today, Mustad Autoline is an independent company fully owned by Hans Mustad, and builds its systems in Gjøvik, Norway, where its headquarters are based.

The two companies still work closely together in purchase and spec development for the hooks used in Autoline systems.

“We have a long history and a very close and solid relationship,” said Jahn Hoel, the general manager of Mustad Autoline’s Seattle office.

The company pioneered automated longlining gear with its baiting and hauling systems – and doing so was a matter of commercial survival.

“When O. Mustad & Son saw these new fisheries developing, they were concerned that commer-

cial hook fishing wouldn't be efficient enough to keep up with trawl and net fishing," Hoel said.

After a few years of "testing and failing enough times," the first versions of the Autoline system were commercially released in the early 1970s.

"The idea was, the only way to stay somewhat competitive was to take it to the next level, from hand-baiting to autobaiting," Hoel said.

**Speed and precision:** Today, Autoline systems can bait up to 80,000 hooks per day, with a six-hook-per-second baiting rate and a successful baiting percentage of 95 to 97 percent.

A conveyor chain runs bait through the autobaiter machine, which consistently cuts each piece to size. Swivel lines and hooks hung from storage magazines are pulled through the system and automatically baited, and after soaking, the system automatically hauls the lines over a side roller as a crewmember monitors the process.

Finally, the hooks and lines are automatically cleaned, separated, and returned to the storage magazines, ready for the next set.

Hoel said that on a global scale, there are four other companies producing autobaiting equipment. "But as far as I know, Mustad Autoline is the only one that has autobaiting components as its sole, core business."

More than 800 Autoline systems have been installed worldwide since the company's start. Norway was the initial market, but Hoel said Eastern Canada, which had one of the world's largest and most lucrative cod fisheries, soon followed and was the company's first foray into the North American continent.

In the early 1990s, overfishing and ocean temperature changes led to the collapse of Canada's cod fishery, and Autoline refocused



Crewmen haul cod with a Mustad Autoline Coastal System. Photo courtesy of Mustad Autoline

to Western Canada and then Alaska and the U.S. West Coast.

**Market expansion:** Hoel said that on a global level, longlining is a growing industry in many markets, and Autoline had successive record sales years in 2016 and 2017.

"And this year, it looks like we're going to surpass 2017 numbers, so it still definitely is a large market for fish caught by hook and line, and big companies are investing in new longliners and the latest technology in hook-and-line fishing," he said. "Our numbers – the amount of systems and components being produced and sold around the world – are proof to that."

In Alaska, there are about 50 Autoline systems in use now. More have been sold there, but the Pacific cod quota has been sharply reduced.

"In many ways, Mustad Autoline and many companies in the fishing industry are directly affected in our sales and turnover by what the quota does – Mother Nature has the final word," Hoel said.

Alaska is Autoline's primary U.S. market, but Hoel said "we are seeing interest in other states as well now, which is very exciting to us."



Mustad Autoline says its systems can bait up to 80,000 hooks per day, with a successful baiting rate of 95 to 97 percent. Photo courtesy of Mustad Autoline



Kurt Hansen



The fishing vessel Middleton. Photo courtesy of Kurt Hansen

## COMPANY PROFILE



Kurt Hansen, an Alaska black cod and halibut longline fisherman, says his Mustad Autoline system has “made us much more efficient.” Photo courtesy of Kurt Hansen

He added: “There’s no doubt room for growth since most longliners today are still hand-baiting and lots of them have enough quota to justify a Mustad Autoline system investment – not only for fish species on the bottom of the ocean but also pelagic.”

The overall capability and “operational efficiency” of Autoline systems have “increased significantly” in recent years, said Lasse Rindahl, Autoline’s chief technology officer.

“The greatest technology advance so far may be the SuperBaiter, where we, in close cooperation with Siemens, used the latest technology in servo motors and intelligent drivelines to increase efficiency of baiting by 50 percent,” he said.

Enabling “remote service and electronic surveillance of performance” through the computer-based Autoline LineController system has been another stride.

“The next big step will be to create a complete electric system, to utterly improve energy consumption and add predictive maintenance technology,” Rindahl said.

**Doing the math:** Progressing from hand-baiting to an Autoline system is a game-changing move, and Hoel’s main piece of advice is to be sure it’s appropriate.

“The most important message from us is, contact us, let us evaluate your boat and do a CAD (computer-aided design) drawing for you, free of charge, and investigate if it’s a good fit or not with the vessel you’ve got,” he said.

The evaluation process also allows Autoline to match a vessel with the right system and offer an accurate price estimate.

Autoline systems are available for vessels ranging from 33 feet to freezer longliners with onboard factories. Hoel said the vessels in the smaller range with low amounts of hooks onboard actually account for the majority of systems sold.

“They’ve still done their math and they see that the return on the investment is justifying the investment,” he said.

It’s difficult to identify hard and fast prices because cost is dependent on each system’s components and each customer’s needs. But Hoel said the price range of systems fit for smaller to mid-size vessels is usually between \$80,000 and \$230,000.

There can be sticker shock, but Hoel said most of the time, systems pay for themselves in two to five years with increased catch efficiency and reduced labor.

“And in cases where it doesn’t make sense to use an Autoline



Jahn Hoel is general manager of Mustad Autoline’s Seattle office.

system, we will be the first one to let you know,” said Hoel. “Because selling to vessels where it does make sense continues to keep our reputation where we want it.”

**Game-changer:** Kurt Hansen, an Alaska black cod and halibut longline fisherman who works out of ports in the Seattle area, just finished his first season using a new Autoline system in early November. It was the 95th fishing season for his antique 56-foot vessel, the F/V Middleton, which he’s had for 25 years.

Hand-baiting was “very laborious,” he said, adding that an important advantage of the Autoline system is “just being able to catch a weather window instantly – as weather changes, we can respond almost immediately.”

With conventional gear, it took several days to bait three or four skates (line segments up to 150 fathoms in length). By the time that was done, “the weather might have completely closed in on us,” and the baited gear would have to be taken to a plant for freezer storage until conditions cleared.



SuperBaiter unit.

“So that right off the bat has been an improvement for us,” said Hansen.

The labor-saving aspect hasn’t led to a reduction in the Middleton’s crew size. Instead, it has shifted work and allowed baiting to be done on the fly, as a trip progresses.

“It’s just a factor of how much bait we can store in our bait hold,” Hansen said. “We can just keep setting and setting and setting non-stop, we can haul and set, haul and set constantly – so it’s made us much more efficient right out of the box.”

His startup investment was substantial. The Autoline hook separator and baiter each cost about \$50,000 delivered, and associated gear – lines, hooks, and gangions – cost another \$15,000.

With installation, Hansen estimates the total cost of his system to be \$150,000 to \$175,000.

The return on investment boils down to quota and how much can be grossed using the machines.

“A lot of the guys in the industry who are boat owners have millions of dollars’ worth of quota,” Hansen said. “You have to have a couple million dollars’ worth of quota to make it worthwhile. The way I look at it, a \$150,000 investment when the fishing rights alone are valued at what they are, that’s a small fraction in that context.”

He said the new system has been a “game-changer” and described it as a technological marvel.

“It’s a really impressive device they’ve come up with,” Hansen said. ↓

## MUSTAD AUTOLINE AT A GLANCE



**Specialty:** Automated longline fishing systems

**Headquarters:** Gjøvik, Norway

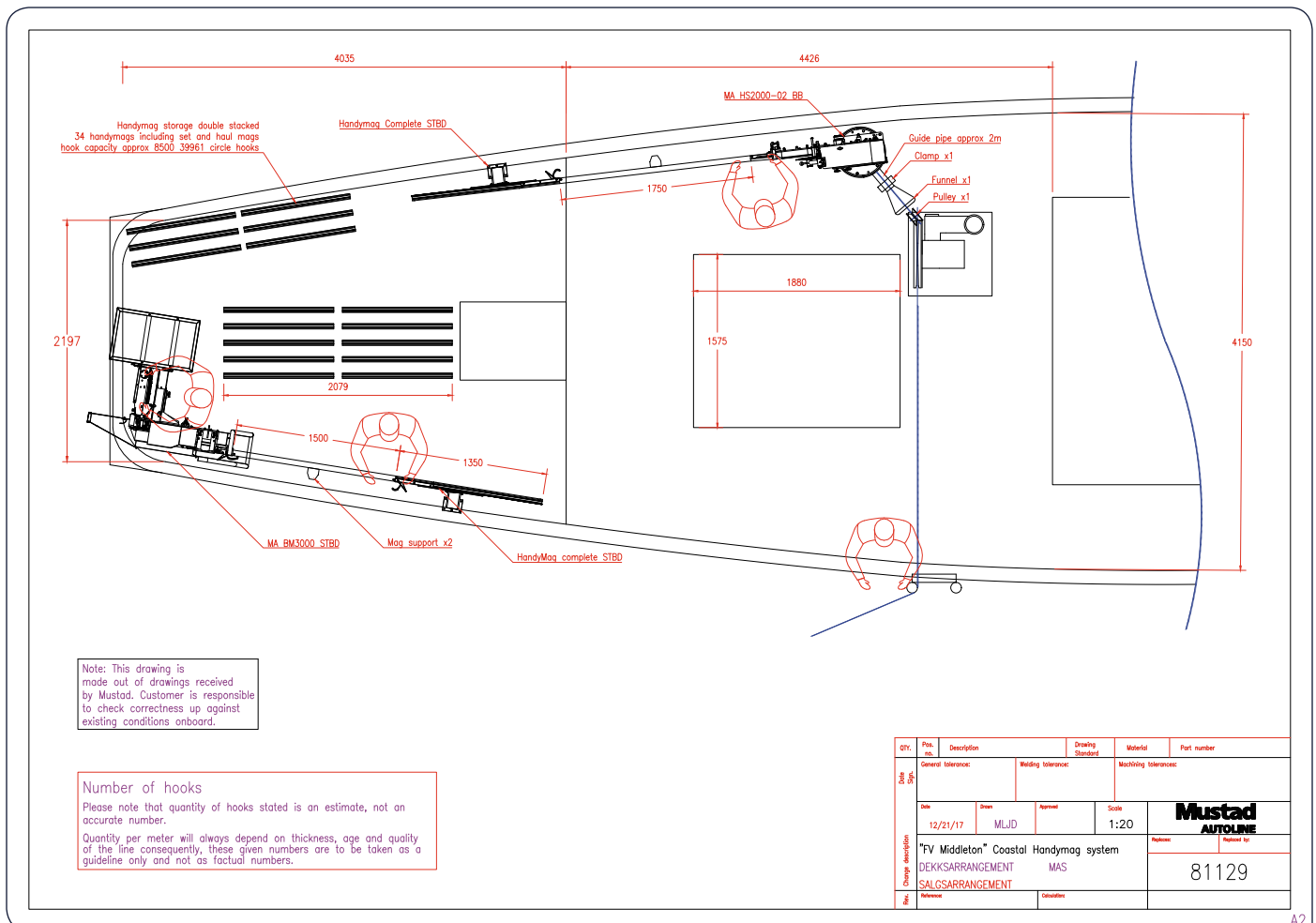
**Ownership:** Privately held

**Leadership:** Anders Frisinger, CEO

**Local office:** Seattle

**Online:** [mustadautoline.com](http://mustadautoline.com)

# Mustad AUTOLINE



A schematic of the Mustad Autoline system aboard the F/V Middleton. Courtesy of Kurt Hansen



## Seattle centenarian

As a kid, Brad Buske helped offload the *Emancipator*, a handsome wooden fishing vessel built in 1918. When Buske grew older and the *Emancipator* deteriorated, he decided to acquire and restore the boat.

"I couldn't let it die," he said. "When I got the boat five years ago, it was ready to sink."

Buske has done a magnificent job on the boat, which today is neat as a pin inside and out.

That's Buske on Nov. 20 standing on the finely planked back deck. Down in the engine room, you'll find a vintage Caterpillar along with a modern IMS refrigerated seawater system, which Buske installed himself.

Built as a purse seiner, the 100-year-old *Emancipator* today works as a salmon tender in Puget Sound.

— Wesley Loy



# New study shows how climate and fishing are changing Alaska pollock spawning time

A new study using an unprecedented 32-year data series reveals that spawning time of Alaska pollock – target of the nation’s biggest fishery – varied by as much as three weeks over the past three decades in the Gulf of Alaska. The new study found clear evidence that the changes were driven by both climate and fishing.

Changes in spawn timing have major ecological and management implications. Timing is critical to survival of newly hatched fish as it determines the conditions they encounter. Many marine fish, like pollock, are adapted to spawn in time for offspring to meet the rapid increase of their plankton prey in spring. If they arrive too early, there may not be enough food; if they arrive too late, the young fish will have less time to grow and will be small compared to their predators and competitors.

Because most mortality happens during the first few weeks of life for pollock, changes in spawn timing that affect larval survival can strongly affect recruitment success – how many fish are available to the fishery two or three years later.

“To effectively monitor and manage pollock populations, managers need to understand what causes changes in spawn timing. With ongoing warming of the world’s oceans, we need to know how changing climate conditions interact with other processes, like harvesting, to influence spawning time,” says Lauren Rogers, the NOAA Fisheries biologist who led the study.

Toward that end, Rogers’ team investigated how pollock spawn timing has shifted over warm and cool periods and large shifts in age structure in the Gulf of Alaska.

“The strength of our study is comprehensive information from an amazing 32-year time series of larval fish size, age, and abundance, validated with maturation data from spawning females, and combined with at-sea process studies, laboratory experiments, and age readings. Using these resources, we were able to test for effects of climate and age structure on both mean spawn timing and duration, and forecast spawn timing under different scenarios of warming and fishing mortality,” Rogers says.

The study produced two major findings:

- Warmer temperatures mean earlier and longer spawning – to a point.

Climate clearly drives variation in spawn timing of walleye pollock, with warmer

temperatures leading to an earlier and longer spawning period. However, above a threshold temperature, increased warming had no additional effect on spawn timing.

“Because temperatures are projected to be consistently above that threshold with ongoing ocean warming, our results suggest that pollock spawn timing will become more stable in the future,” says Rogers.

- Older, bigger mothers spawn earlier and over a longer duration.

An older spawning population started spawning earlier and over a longer duration than a population of predominantly young spawners, highlighting the importance of older mothers.

This is where fishing comes in: Harvesting leads to a younger, smaller population over time. In general, increased mortality reduces the mean age of a population, and this effect is strengthened if older individuals are targeted through size selective harvesting. Besides direct effects of harvesting on age structure, fishing may cause evolutionary change by selecting for reproductive maturation at an earlier age or smaller size.

“Our models suggest that changes in pollock age structure associated with sustainable fishing can shift the mean spawning date to seven days later and shorten the spawning season by nine days compared to an unfished population, independent of climate conditions,” says Rogers.

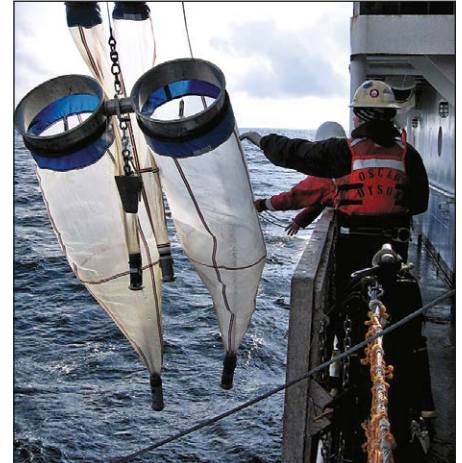
That shift could cause young fish to arrive out of sync with their food in two ways: by decoupling the arrival of first-feeding fish larvae from temperature-driven changes in plankton production; and by reducing the window over which young fish are delivered into the ecosystem, thus increasing the risk of mismatch with plankton production.

“Our models suggest that climate change will lead to an earlier, stabilized spawning season in the future,” Rogers says. “What we don’t know is how that will affect synchrony of first-feeding larvae with production of their zooplankton prey in spring.”

Rogers hopes future research will answer that question.

“We are looking at ways to evaluate match-mismatch with prey by comparing prey and larval fish production.”

She also hopes to develop the model into a practical forecasting tool. “If we could use climate and age composition data to



NOAA Fisheries scientists collect larval fish and their plankton prey during a Gulf of Alaska survey.

predict spawn timing three to four months ahead, the forecast could be used to make sure surveys are optimally timed to coincide with peak spawning periods.” ↴

– NOAA Fisheries

**Rugged. Simple.  
Innovative.  
Deck gear for all  
gillnet applications.**



**MARITIME  
FABRICATIONS, INC.**

**360-466-3629**

**www.laconnermaritime.com**

# Restoring side channels can boost salmon recovery in Puget Sound rivers, new research finds

Teasing apart the elements of Puget Sound rivers that matter most to fish, researchers have found that one of the best ways to recover threatened Chinook salmon may be to restore the winding side channels that once gave young fish essential rearing habitat and refuge from high winter flows.

Models were based on fine-scale river mapping and tracking salmon populations across Puget Sound. They showed that habitat restoration projects in the Cedar River southeast of Seattle could boost the number of young Chinook salmon produced by each spawning adult by adding side channel habitat.

Additional side channels and other habitat improvements also appear to help stabilize salmon numbers, making them less vulnerable to flooding or other extreme conditions that may come more often with climate change.

"The risk of those extreme catastrophes is lessened because the water can spread out and slow down, with less impact to the fish," said Correihe Greene, a research biologist at NOAA's Northwest Fisheries Science Center in Seattle and coauthor of the new research published recently in the journal PLOS ONE.

The team of scientists from NOAA Fisheries, Cramer Fish Sciences, and the Washington Department of Fish and Wildlife used aerial photographs to chart and measure each twist and turn of 10 of Puget Sound's largest rivers, from the Skagit to the Dungeness, and relate them to Chinook salmon populations.

The findings also provide important confirmation that restor-

ing Chinook salmon habitat, a key recovery strategy for Puget Sound populations, can deliver real improvements in their survival and productivity.

"We now know that there is a detectable response to habitat restoration that can inform our decisions about how to pursue recovery and dedicate funding where it will do the most good for fish," said Elizabeth Babcock, northern Puget Sound branch chief in NOAA Fisheries' West Coast Region, who helps carry out recovery plans for threatened Puget Sound Chinook salmon.

**River complexity is best:** Biologists view the braided networks of side channels that are common in natural rivers in the Northwest as evidence of a river's "complexity," which also includes deep pools, outcrops, and logjams, all of which provide important habitat for juvenile and adult fish. Generally, the more complexity a river displays, the better habitat it will provide for fish, because they can more easily find refuge and rearing habitat when they need it.

Many Puget Sound rivers have suffered reduced complexity through years of development as dikes, roads, and riprap have hemmed them into straight, narrow channels with far less room. That leaves less refuge for juvenile fish to grow before migrating into the Salish Sea.

Of all the factors that contribute to a river's complexity, the researchers found that side channels and the number of junctions among them, and to a lesser extent woody material such as logjams, are most important to Chinook salmon.

More complex rivers are generally slower than narrow rivers with impervious banks, so the juvenile salmon aren't swept downstream faster than they're ready to go. The more habitat complexity, the researchers found, the higher the productivity of Chinook salmon populations.

**Moving the needle:** "Once we link habitat metrics to meaningful productivity metrics, we can start to answer some of the big questions such as how much restoration achieves recovery, and what qualities do you most want to focus on," said Jason Hall, a senior scientist at Cramer Fish Sciences and lead author of the new study. He noted that the answers may differ from species to species and river to river.

Habitat complexity also appeared to reduce fluctuations in salmon numbers from year to year, "supporting the idea that habitat complexity buffers populations from annual variation in environmental conditions," the scientists wrote.

Habitat protection and restoration along the Cedar River, which provides much of Seattle's municipal water, is an example of the kind of restoration that can help recover Puget Sound Chinook salmon in the long run, Greene said. Understanding the habitat qualities most important to fish helps estimate "how much we have to do to move the needle over the whole life cycle."

The same mapping and modeling approach that was demonstrated by the research can help plan and track the benefits of other restoration occurring in estuaries and along Puget Sound's shorelines, the authors said.

"If you have funding for restoration, where can you spend it to deliver the best benefit for fish?" Babcock asked. "We're finally starting to have better answers to that question." ↓

— Northwest Fisheries Science Center



**ULTRA CROSS™**

Quality Fishing Gear Since 1978

• CODENDS  
• TRAWL DOORS AND NETS  
• PURSE SEINES

**NET systems**

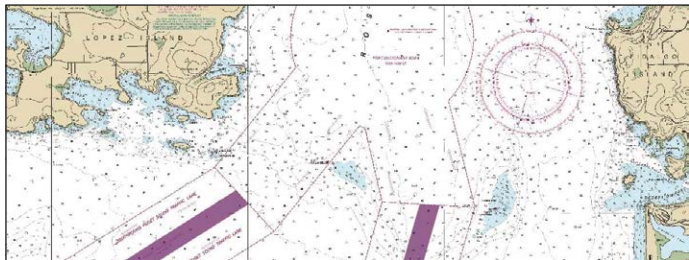
www.net-sys.com • Tel: (206) 842-5623 • Fax: (206) 842-6832  
7910 N.E. Day Rd West, Bainbridge Island, WA 98110 USA

**NICHIMO**  
NICHIMO GROUP

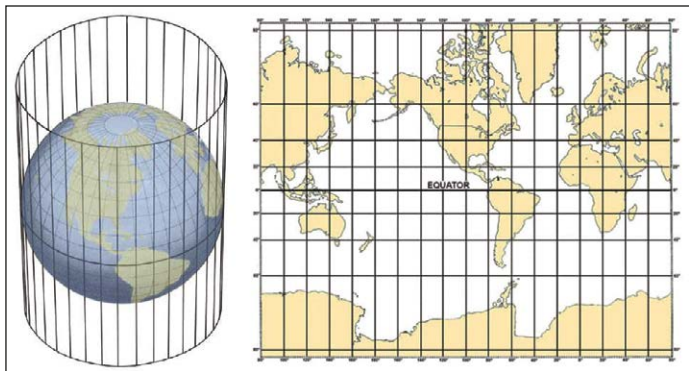
# How does NOAA make nautical charts?

A nautical chart is a map of the sea. Just as a map helps us navigate on land, a nautical chart helps those traveling on the ocean get where they're going safely and efficiently.

In 2017, \$1.6 trillion worth of goods moved through U.S. ports. With all that traffic, it's important that those navigating through our ports and along our coastlines have the information they need about the shape of the shoreline and seafloor, water depths, potential hazards in the water, buoys, anchorages, and other features.



NOAA's Office of Coast Survey, part of the National Ocean Service, is the nation's nautical chartmaker. A nautical chart is one of the most fundamental tools available to the mariner. It is a map that depicts the configuration of the shoreline and seafloor. It provides water depths, locations of dangers to navigation, locations and characteristics of aids to navigation, anchorages, and other features. Shown here: part of Rosario Strait, Washington state.



The Mercator projection is a cylindrical map projection. Imagine wrapping a piece of paper around a globe to form a cylinder. The map image is what's projected from the 3-D globe onto the 2-D surface of the paper.

Federal laws say most commercial vessels must have nautical charts while traveling in U.S. waters. NOAA's Office of Coast Survey makes and updates all charts of U.S. coastal waters, the Great Lakes, and waters surrounding U.S. territories.

So, how do these important resources get made and updated? It's a continuous process that involves many people from different disciplines and organizations.

**Data, data, data:** It all starts with collecting the data. Historically, chartmakers measured water depths with simple methods, like tying a lead weight to a line. Today, NOAA uses advanced technologies to study bodies of water and locate dangerous hazards to navigation, such as shoals or shipwrecks.

This data is gathered by hydrographers at the Office of Coast

*Continued on Page 20*

OCTOBER 2018

FACEBOOK PHOTO CONTEST WINNER



QUINN PHILLIPS

Deckhand Seth Balint (foreground) with Justin Allen aboard F/V Rylayla.

Thank you to everyone who entered the photo contest!

To enter the photo contest, go to our Facebook page:

 [facebook.com/PacificFishing](https://facebook.com/PacificFishing)

& look for the photo contest event.

Winners are announced monthly and published in the magazine.

Continued from Page 19

Survey, oceanographers at NOAA’s Center for Operational Oceanographic Products and Services, professionals at other government agencies and international organizations, and even private citizens.

Through sonar, LIDAR, and aerial photography, experts capture some of the data that goes into charts. That includes data about the shape of the coast and seafloor, depth of the water offshore, and features in the water that might hinder navigation.

With sonar, hydrographers bounce sound off the seafloor or underwater objects to determine their features. LIDAR works similarly, except it uses light instead of sound.

Increasingly, NOAA makes use of unmanned systems – robots that collect data where it might be expensive, dangerous, or otherwise impractical to send a human.

**How do I get NOAA nautical charts?**  
Go to [oceanservice.noaa.gov/facts/find-charts.html](http://oceanservice.noaa.gov/facts/find-charts.html)

**Mapping it out:** Once we have the data, we have to turn it into a chart. This is not as straightforward a task as it might seem at first. The data we collect about the ocean and coasts describes a 3-D world, but a chart is a 2-D representation.

Making a flat chart of some section of our Earth requires making a projection. Imagine a spherical globe. Now, wrap a rectangular piece of paper around it, so it forms a cylinder. If there were a light shining from the center of our globe, the features on the globe would be projected onto our piece of paper. If we unroll the paper, we have a rectangular map. Map projections are actually created through mathematical calculation, but this is a way of imagining what happens when a map projection is created.

NOAA has a team of cartographers who are experts in interpreting data after it is collected. They are responsible for making sure that it is easy to understand as charts are made ready for use.

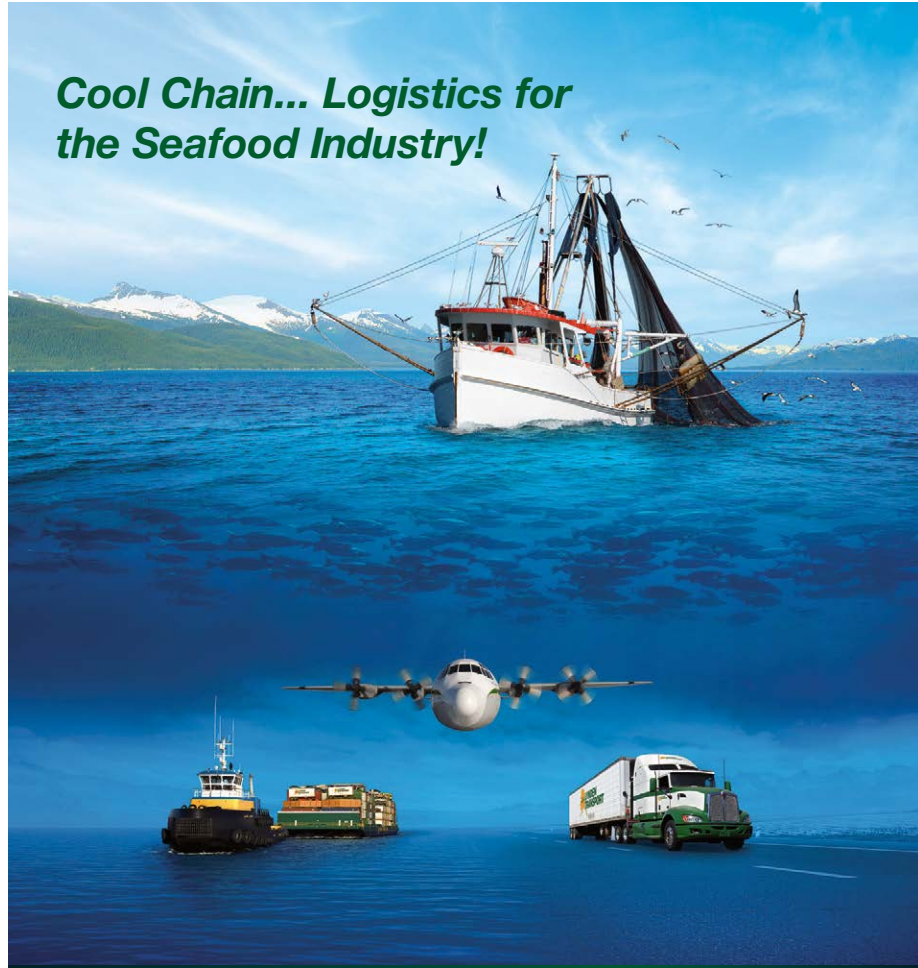
No map projection is a perfect picture of our world. Each projection method introduces its own distortions, so cartographers have to pick the right projection for the job. For charts, that’s usually Mercator. Lines of latitude and longitude on the Mercator projection meet at right angles, and any constant compass heading can be drawn on a chart with a straight line. That’s why mariners have used Mercator charts since the 16th century.

**Sea change:** But the story doesn’t end there. Our ocean and coasts are always changing. Storms and other natural processes change harbor depths and the shape of coastlines. New channels, harbors, piers, wharves, marinas, pipelines, communications cables, bridges, or buoys get added. Recommended travel routes change. All of these updates have to be put on the charts.

And, of course, we’re always working to improve the quality of our charts. Many charts are based on data collected in the very early days of surveying, when data was collected with methods that are now outdated. These charts are accurate, but incomplete. With today’s technology, NOAA is working to complete and update charts for these underserved areas, such as Alaska and the Arctic.

NOAA releases updates to its charts weekly. Visit the Weekly Chart Updates page at [distribution.charts.noaa.gov/weekly\\_updates](http://distribution.charts.noaa.gov/weekly_updates). ↴

– NOAA



**Cool Chain... Logistics for the Seafood Industry!**

**From Sea to Serve.**

Lynden’s Cool Chain<sup>SM</sup> service manages your seafood supply chain from start to finish. Fresh or frozen seafood is transported at just the right speed and temperature to meet your particular needs and to maintain quality. With the ability to deliver via air, highway, or sea or use our temperature-controlled storage facilities, Lynden’s Cool Chain<sup>SM</sup> service has the solution to your seafood supply chain challenges.



[lynden.com](http://lynden.com) | 1-888-596-3361

# Voters keep Young, pick new governor, kill salmon measure

**Election recap:** Alaska’s Nov. 6 general election delivered a mix of continuity, change, and – for backers of the Stand for Salmon initiative – disappointment.

With respect to continuity, U.S. Rep. Don Young powered to yet another term as Alaska’s lone congressman. Young, a Republican, garnered 53 percent of the vote to best his Democratic challenger, Alyse Galvin.

Young, 85, was first elected to Congress in 1973, and lately has been working to update the nation’s top commercial fishing law, the Magnuson-Stevens Fishery Conservation and Management Act.

Major change came in the governor’s race, where Republican Mike Dunleavy won out over Mark Begich, a Democrat and former U.S. senator for Alaska.

The race was unusual in that the incumbent governor, independent Bill Walker, suspended his campaign prior to election day, saying “we cannot win a three-way race.”

At press time, Dunleavy, a former state senator, was putting together his cabinet, and fishing interests were eagerly awaiting his pick for fish and game commissioner.

The most intense electoral buzz seemed to center on Ballot Measure 1, the Stand for Salmon initiative, aimed at strengthening protections for salmon habitat.

The measure spawned vigorous public debate and drew stiff opposition from mining, oil, building, and other development interests. Voters soundly rejected the measure, with 62 percent going against it compared to 38 percent in favor.

Stand for Salmon campaigners said they were pleased that many Alaskans had voted “yes” on Ballot Measure 1.

“Alaskans no longer take our world-class salmon streams and rivers for granted,” said Mike Wood, a Ballot Measure 1 sponsor and setnet fisherman in Cook Inlet. “This groundswell of Alaskans who want to improve the way we protect our salmon isn’t going away and will only grow stronger over time.”



**Pink salmon outlook:** In Southeast Alaska, one of the state’s main producers of pink salmon, the 2019 harvest is predicted to be in the “weak” range at 18 million fish.

So said a joint federal-state forecast issued Nov. 15.

“The 2019 harvest forecast of 18 million pink salmon is approximately half of the recent 10-year average harvest of 36 million pink salmon,” the announcement said. “A harvest near this forecast would be the lowest odd-year harvest since 1987.”

Forecasters added: “The return of anomalously warm sea surface temperatures in the Gulf of Alaska may have a negative impact on the survival of pink salmon.”



**Stikine, Taku forecasts:** The outlook is dismal regarding Chinook salmon returning to the Stikine and Taku rivers in 2019.

The preseason terminal run forecast for Stikine large Chinook is 8,250 fish, and the forecast for Taku large Chinook is 9,050 fish.

In both cases, these forecasts don’t provide an allowable catch for either the United States or Canada, the Alaska Department of Fish and Game said.

“Due to the very low forecasts and recent poor runs to these transboundary rivers, all salmon fisheries in districts 8 and 11 will have extensive conservation measures in effect through the duration of the Chinook salmon runs in 2019,” the department said.



**Missing man:** Last month, we wrote that a man had been reported missing in late September from the Bering Sea cod freezer longliner Clipper Epic.

The Alaska State Troopers are now identifying the missing man as Nicolas Andres Pettitt, 38, of Washington state.

The 172-foot Clipper Epic was about 60 miles north of St. Matthew Island, the U.S. Coast Guard reported.

“The crew conducted a sweep of the vessel, and a reverse trackline search was performed with negative results,” the Coast Guard said.



**ASMI search:** The state agency charged with promoting Alaska seafood is looking for new leadership.

That’s because Alexa Tonkovich, executive director of the Alaska Seafood Marketing Institute, has resigned.

Tonkovich, in a Nov. 10 press release, said she planned to pursue a master’s degree in international business.

Tonkovich will be missed, said Jack Schultheis, ASMI board chairman, adding: “Her dedication to Alaska and the Alaska seafood industry is unparalleled.”

Tonkovich became executive director in 2015. She previously was ASMI’s international director.

ASMI communications director Jeremy Woodrow was named interim executive director, with Tonkovich planning to stay on through Dec. 21 to provide a period of transition.

Wesley Loy is editor of **Pacific Fishing** magazine and producer of *Deckboss*, a blog on Alaska commercial fisheries.





**MARCO is now part of Smith Berger!**

All MARCO High Quality products and services are now available to you at Smith Berger Marine, Inc.

<p><b>Mooring and Towing Solutions</b></p> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <p><b>Balanced Head Fairleads</b></p> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <p><b>Guide Sheaves</b></p> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <p><b>OCIMF Roller Fairleads</b></p> </div> <div style="display: flex; align-items: center;">  <p><b>OCIMF Pedestal Roller Fairleads</b></p> </div>	<p><b>Commercial Fishing Equipment</b></p> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <p style="margin-right: 10px;"><b>Powerblocks and Deck Winches</b></p>  </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <p style="margin-right: 10px;"><b>Crab Line Haulers</b></p>  </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <p style="margin-right: 10px;"><b>Longline Equipment</b></p>  </div> <div style="display: flex; align-items: center;"> <p style="margin-right: 10px;"><b>Pullmaster</b></p>  </div>
--	--

**Smith Berger Marine, Inc.**  
 7915 10<sup>th</sup> Ave. S., Seattle, WA 98108 USA  
 Tel. 206.764.4650 - Toll Free 888.726.1688  
 E-mail: [sales@smithberger.com](mailto:sales@smithberger.com) - Web: [www.smithberger.com](http://www.smithberger.com)

# Judge orders EPA to protect salmon

**Temperature control:** In a ruling that has major implications for West Coast salmon, a federal judge has ordered the U.S. Environmental Protection Agency to protect habitat in two major river systems by issuing a plan to control water temperature.

In an Oct. 17 ruling on a lawsuit whose plaintiffs include the Pacific Coast Federation of Fishermen's Associations, U.S. District Judge Ricardo S. Martinez ruled that the EPA has been derelict in controlling water temperatures in the Columbia and Snake rivers in Oregon and Washington.

Dams that create warm water reservoirs have harmfully hiked temperatures above 68 degrees during salmon and steelhead runs, leading to impaired listings for both rivers under the Clean Water Act.

The ruling notes that "in 2015, warm water temperatures in the Columbia and Snake rivers were responsible for the deaths of roughly 250,000 migrating adult sockeye salmon."

Upper Columbia River sockeye had "the lowest survival rate in the past six years, and endangered Snake River sockeye had a survival rate of only 4 percent, down from the 44 to 77 percent survival rates of the past five years."

High temperature is considered a pollutant under the CWA and the two states failed to submit plans to address it when it was flagged as an issue 17 years ago. Martinez ruled that since the states aren't acting on the CWA violations, the EPA is obligated to step in.

The agency has argued that its intervention "would run counter to the intent of Congress which allowed states to set priorities," but Martinez didn't buy the states' rights argument.

He said in his ruling that the two states have "clearly and unambiguously" indicated a lack of willingness to take action.

"Whether rightly or wrongly, they placed the ball in the EPA's court, and the subsequent 17-year delay is strong evidence that the states have abandoned any initial step the EPA could possibly be awaiting," Martinez said in his ruling. "Recent communication between the EPA and the states indicates a desire to further delay this process."

The EPA can theoretically respond to the court order by concurring

with the states' inaction, but the ruling equates that with allowing a violation of the CWA.

The EPA's plan for the rivers was due 30 days after the ruling and was pending at press time.



**In the pink:** Oregon trawlers finished a high-performing pink shrimp season on Oct. 31, having netted 35.8 million pounds valued at \$26.6 million.

While that doesn't match the peak seen in 2015, a year whose total pink shrimp landings value reached \$40.4 million, or the \$29.3 million landings value seen in 2014, it does rank 2018 as one of the state's best-ever seasons.

Expectations weren't high coming into the season, as 2017's total value was \$12.6 million.

Scott Groth, a pink shrimp and shellfish specialist for the Oregon Department of Fish and Wildlife, noted that a "paucity of shrimp" toward the end of 2017 left fishermen nonplussed about the prospects for this year.

"However, oceanographic conditions in 2017 were very good for shrimp larvae and this resulted in a very large recruit class in 2018," he said. "These 1-year-old shrimp grew quickly and were the main catch in 2018."



**Trump and water:** When he was campaigning for election, President Donald Trump was clear about his allegiance to farmers in California's "water wars." On Oct. 19, he put it in writing.

On that date, Trump issued a memorandum ordering the suspension and/or revision of regulations affecting supply for water users in California's state and federal delivery systems.

The memo's directives include expediting the rewriting of biological opinions, which farmers have been lobbying for.

Noah Oppenheim, executive director of the Pacific Coast Federation of Fishermen's Associations, responded to the president's decree the day it was issued.

"Water users have sucked our rivers dry for far too long, and the fish have been paying the price," he said in a statement, noting that "just last month the secretary of commerce declared our 2016 and 2017 fishing seasons to be official federal fishery disasters."

He added that by issuing the memorandum, the Trump administration is "poised to ram another ill-founded biological opinion down our throats."

The presidential memo follows one issued in August from Interior Secretary Ryan Zinke that warned of litigation against "unacceptable restrictions that further reduce the (Interior Department's) ability to deliver water to federal contractors."

The Trump memo also calls for speeding up biological opinions and regulatory processes affecting Oregon's Klamath Irrigation Project and federally managed Columbia River Basin water infrastructure.

Daniel Mintz reports from Eureka, Calif.






**www.pacificwestrefrigeration.com**

**EXPERTS IN MARINE REFRIGERATION**

**BIGGER BOLDER BETTER**



**JUST CHILL IT**

**WITH A Pac West RSW**

**PH: 866.885.3499**



**TITANIUM TURBO CHILLERS**





# PACIFIC BOAT BROKERS.com

## BC's Largest Marine Brokerage

Brokers in Parksville, Nanaimo, Victoria, Vancouver, Washington, Alaska & Mexico

Headquartered on Vancouver Island in British Columbia and regionally represented by independent brokers our focus is commercial fishing vessels, licences / permits, quotas, marine industrial equipment and pleasure boat sales. We've introduced sellers and buyers since 1997; our clients benefit from our marketing strategy, industry knowledge and our visibility within the marketplace.



**Brian Mose**  
Managing Director



**Garth Leighton**  
Manager



**Kelley Douglas**  
Assistant Manager



**Tanya Morris**  
Controller



**Julia van Zyl**  
Receptionist



**Doug Payne**  
IT Manager



**Matt Arata**  
Friday Harbor WA  
360-622-9422



**Jim Armer**  
Parksville BC  
250-954-8061



**Danny Austin**  
Parksville BC  
250-954-8338



**Amanda Babich**  
Glg Harbor WA  
206-817-4166



**Doug Beguin**  
Parksville BC  
250-927-8442



**Grant Gibson**  
Vancouver BC  
604-722-4715



**Margaret Harris**  
Kodiak AK  
907-942-5310



**Trevor Harvey**  
Nanaimo BC  
250-816-2634



**Harry Mose**  
Parksville BC  
250-927-1545

*Merry Christmas*



*Happy New Year*



**Hessel Oerlemans**  
Victoria BC  
250-588-2029



**Carl Pearson**  
Le Paz MX  
360-393-0502



**Hans Ter Horst**  
North Vancouver BC  
604-729-4626



**Maggie**  
Mascot

**BEST WISHES FROM ALL OF US AT PACIFIC BOAT BROKERS**

**THANK YOU FOR YOUR CONTINUED PATRONAGE**

**Commercial Fishing Vessels • Fishing Licences / Permits / Quota • Marine Equipment  
Pleasure Power & Sail Boats • Patrol & Crew Boats / Tugs & Barges**

**BUYING OR SELLING? See Hundreds of Listings at [pacificboatbrokers.com](http://pacificboatbrokers.com)**

**Toll Free 1-877-448-0010 #6 - 1025 Lee Road, Parksville, B.C. V9P 2E1  
FOR EXCELLENT RESULTS - CONTACT US!**

Professional Services



**CliftonLarsonAllen**

**MAKING AN IMPACT**

We're proud to support the **fishing industry** and the important role your organization plays in our community.

425-250-6100 | CLAconnect.com



ADVISORY | OUTSOURCING | AUDIT AND TAX  
©2016 CliftonLarsonAllen LLP

**BOGO!**  
buy one, get one  
for FREE!

**Subscribe to Pacific Fishing**

Call us at (206) 324-5644, mention code **PF-DEC** and receive **two one-year subscriptions for the price of one!**


**Gibbons & Associates, P.S.**  
**MARITIME ATTORNEYS**  
Proctor in Admiralty  
Over 30 years experience

*Trials, appeals, mediations, arbitrations*

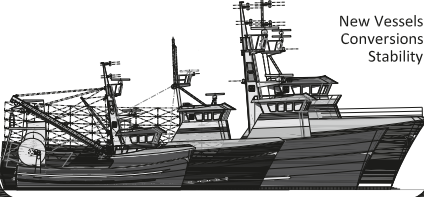
Injury and Wage Claims  
Salvage  
Collisions  
Shipyard Claims  
Liens  
Contracts  
Charter Parties  
Joint Ventures  
Fisheries  
Tug and Barge  
Marine Insurance Disputes  
Coast Guard Licensed Master

*Gibbons & Associates, P.S.*

ph 206-381-3340; fax 206-381-3341  
cell 206-419-6971  
email [svg@gibbonslawgroup.com](mailto:svg@gibbonslawgroup.com)  
SE HABLA ESPANOL



**HOCKEMA WHALEN MYERS ASSOCIATES**  
NAVAL ARCHITECTS / MARINE ENGINEERS  
Seattle WA Bend OR www.hockema.com  
Tel: 206 365 0919 boatstuff@hockema.com



New Vessels  
Conversions  
Stability

**AlaskaTenders.org**



**ATA**  
Tending to our Future

ADVERTISERS INDEX

Alaska Boats and Permits.....	27
Alaska Independent Tendersmens Assoc.....	24
Alaskan Quota & Permits LLC.....	29
Black Pearl IFQ Fisheries.....	27
CliftonLarsonAllen.....	24
Dana F. Besecker Co.....	25
Dock Street Brokers.....	30
F/V Morgan/Jonathan Pavlik.....	29
Foss Maritime.....	24
Furuno U.S.A., Inc.....	2
Gibbons & Associates, P.S.....	24
Hockema Whalen Myers Associates, Inc.....	24
Homer Marine Trades Association.....	27
Integrated Marine Systems.....	32
Jensen Maritime Consultants.....	24
Laconner Maritime Services.....	10, 17
Lynden.....	20
Marine Engine & Gear.....	29
MER Equipment.....	25
Net Systems.....	18
NOAA MOC-A.....	25
Northwest Farm Credit Services.....	27
Northwest Straits Foundation.....	9
Pacific Boat Brokers.....	23
Pacific West Refrigeration.....	22
Permit Master.....	26
Platypus Marine, Inc.....	11
Port Townsend Shipwrights Co-op.....	7
Silver Horde Fishing Supplies.....	25
Smith Berger Marine.....	21
Specialty Metal Baitcans.....	25
Stormline International.....	25
Tri-Core Plastics.....	27, 29



**Turn a PSV into your Next Fishing Vessel**

The Jensen Maritime team leads the industry in upgrading and conversion services of nearly any kind of fishing vessel.

Bring us on board for your next vessel modernization project by calling **206.332.8090** or emailing [mail@jensenmaritime.com](mailto:mail@jensenmaritime.com).



**JENSEN**  
Naval Architects & Marine Engineers  
A CROWLEY Company



**PUT YOUR BEST FLEET FORWARD**

From repairs and maintenance to major conversions and new construction, Foss Maritime's full-service shipyard keeps your fleet moving forward.

[www.foss.com](http://www.foss.com)  
800.426.2885



**FOSS**

ALWAYS SAFE. ALWAYS READY.







**FISHERMEN & ABLE SEAMAN OPPORTUNITIES**

NOAA is the premiere scientific agency of the Federal Government. We offer a variety of seagoing positions aboard our fleet of scientific research and survey vessels. As a Federal employee for the Department of Commerce, you will receive Federal benefits, paid training, excellent pay and job security.


Work for NOAA as a Wage Mariner, your career will have an endless horizon.

**Engineering and Survey opportunities are available.**

Discover more at [www.oma.noaa.gov](http://www.oma.noaa.gov)  
Email: [MOC.Recruiting@noaa.gov](mailto:MOC.Recruiting@noaa.gov)

NOAA is an equal opportunity employer and a drug-free workplace

**SPECIALTY METAL BAITCANS**



100% STAINLESS STEEL  
FULLY CUSTOMIZABLE  
LOCATED IN NW WASHINGTON  
*Made for Fishermen by a Fisherman*

360-224-7971 | [WWW.BAITCANS.COM](http://WWW.BAITCANS.COM)  
[SPECIALTYMETAL@BAITCANS.COM](mailto:SPECIALTYMETAL@BAITCANS.COM)

**WHOLESALEERS/ DEALERS WANTED**



**STORMLINE**  
SINCE 1966  
*World leading rain gear since 1966*



[sales@stormlinegear.com](mailto:sales@stormlinegear.com)  
[www.stormlinegear.com](http://www.stormlinegear.com)


**POWERING THE MARINE INDUSTRY SINCE 1964!**




**8-500kW Marine Generators**

- // Pull harder in the harshest marine environments
- // More copper & premium corrosion resistance
- // Superior motor starting & low operating temps
- // Better fuel economy & longer engine life
- // Easy to service & worldwide dealer support
- // Proudly made in America

1.800.777.0714 toll free  
[www.merequipment.com](http://www.merequipment.com)

**DANA F. BESECKER COMPANY, INC.**



"Buyers of high quality Alaskan and West Coast halibut and black cod."

**WE BUY IN ALL FISHING AREAS AND WE OFFER GREAT PRICES.**

*Call us today for a quote on your trip!*

<b>MAIN OFFICE:</b>	<b>BELLINGHAM OFFICE:</b>
Phone.....206-232-5040	Phone.....360-676-1606
Fax .....206-232-4413	Fax .....360-671-7855
Dana Cell...206-295-7500	Eric Cell.....907-299-1161
Tyler Cell...206-354-7717	Miles Cell.....541-778-3311
Dispatch ...4944	Dispatch .....5644



**SILVER HORDE®**

Fishing Lures & Supplies

20910 63rd Ave. W., Lynnwood, WA 98036  
(425) 778-2640 • 24 Hr. FAX:  
(425) 774-7300 • (425) 774-7300

**MONTHLY PHOTO CONTEST**

- 1** Take a great commercial fishing-related photo
- 2** Post it to the Pacific Fishing Facebook page/event with #pacfishphotos2018.
- 3** Get published in the next issue of *Pacific Fishing* - plus win a free Pacific Fishing hat!

[WWW.FACEBOOK.COM/PACIFICFISHING](http://WWW.FACEBOOK.COM/PACIFICFISHING)



# THE PERMIT MASTER

IFQs • VESSELS • PERMITS

EXCEPTIONAL FULL SERVICE BROKERAGE

## — PERMITS —

### — IFQ —

#### EXCEPTIONAL "FULL" SERVICE BROKERAGE SAMPLES

ANY# "B/C" SE BCOD BLK/UNBLKD @ WANTED  
6000# SE BCOD UNBLKD @ \$30  
2,000# "C" WY BCOD BLKD @ \$33  
ANY# "B/C" WY BCOD BLK/UNBLKD @ WANTED  
ANY# "B/C" CG BCOD BLK/UNBLKD @ WANTED  
4000# "C" CG BCOD UNBLKD @ \$28  
15000# "B" AI BCOD UNBLKD @ \$3.25  
17000# "B" BS BCOD BLKD @ \$6  
ANY# "B/C/D" 2C HALIBUT BLKD/UNBLKD @ WANTED  
1600# "C" 2C HALIBUT BLKD @ \$MAKE OFFER  
ANY# "B/C" 3A HALIBUT UNBLKD @ WANTED  
9000# "B" 3A HALIBUT UNBLKD @ \$50  
8000# "B" 3B HALIBUT UNBLKD @ \$32  
ANY# "B/C" 3B HALIBUT UNBLKD @ WANTED  
1300# "C" 4A HALIBUT BLKD @ \$22  
**NEW LISTINGS DAILY. CALL FOR QUOTES  
OR CHECK OUT OUR COMPLETE LIST  
ON THE WEB — \$/F = FISHED**

<b>HERRING</b>			
SITKA SEINE .....	\$320K	CHIGNIK SEINE .....	\$200K
PWS SEINE .....	\$21K	POWER TROLL .....	\$29K
COOK INLET SEINE .....	\$11K	HAND TROLL .....	\$N/A
KODIAK SEINE .....	\$21K	PUGET SOUND DRIFT .....	\$17K
SE GILLNET PKG .....	\$12K	PUGET SOUND SEINE .....	N/A
KODIAK GILLNET .....	\$5K	<b>SHELLFISH</b>	
NORTON SOUND .....	N/A	SE DUNGY 300 POT .....	WANTED
HOONAH POUND .....	N/A	SE DUNGY 225 POT .....	\$48K
CRAIG POUND .....	\$27K	SE DUNGY 150 POT .....	\$35K
PWS POUND .....	N/A	SE DUNGY 75 POT .....	N/A
<b>SALMON</b>		SE POT SHRIMP .....	\$23K
S.E. DRIFT .....	\$90K	KODIAK TANNER <60' .....	\$28K
PWS DRIFT .....	WANTED	PUGET SOUND DUNGY .....	\$167K
WANTED		OR DUNGY 58'/500 POT .....	WANTED
COOK INLET DRIFT .....	35K	OR DUNGY 58'/300 POT .....	WANTED
COOK INLET SET .....	N/A	OR DUNGY 62'/200 POT .....	\$80K
AREA M SEINE .....	150K	WA DUNGY 58'/500 POT .....	\$410K
AREA M DRIFT .....	\$195K	<b>DIVE</b>	
AREA M SET .....	N/A	SE GEODUCK .....	\$135K
BBAY DRIFT .....	\$175K	SE CUCUMBER .....	\$45K
BBAY SET .....	WANTED	<b>MISC.</b>	
SE SEINE .....	\$225K	CHATHAM BLACKCOD .....	WANTED
PWS SEINE .....	TRADE: SE/AREA M	CAIFORNIA SQUID .....	WANTED
COOK INLET SEINE .....	\$87K	CALIF DEEPER NEARSHORE .....	\$38.5K
KODIAK SEINE .....	\$25K	CALIF LOBSTER .....	\$108K
KODIAK SET PKG .....	\$180K		

**PARTIAL LIST/CALL IF YOU DON'T SEE IT!**

### LISTINGS WANTED!!!

IFQ: ALL AREAS  
BOATS: ALL KINDS  
PERMITS: ALL TYPES

JOIN OUR LIST OF  
SATISFIED CUSTOMERS.  
CALL TODAY.

**BUYERS ARE WAITING.**

[www.permitmaster.com](http://www.permitmaster.com)



**P2371M** – 57 X 18 X 9 WAHL TOPHOUSE COMBO, RIGGED FOR SEINING. CUMMINS 855 MAIN W/3000 HOURS SMOH, TWIN DISC GEAR, 45 KW PERKINS AUX, NEW 27KW KUBOTA AUX, HYDRAULICS ON MAIN AND AUX, NEW RSW W/2 COMPRESSORS FOR 40 TON TOTAL. PILKINGTON DECK WINCH, ALUMINUM RIGGING, SLIDER/VANGING MAIN BOOM. FIBERGLASS INSULATED HOLD PACKS 80K+, ALUMINUM HATCH COVER, NEW ALUMINUM TOPHOUSE W/ALL NEW ELECTRONICS AND SAT TV. ALL ELECTRIC GALLEY WELL MAINTAINED, TURN KEY. ASKING \$450K.



**P2370M** – 30' TOLLYCRAFT STERNPICKER, FORD LEHMAN DIESEL MAIN. 2 SPEED HYD DRUM DRIVE. FLUSH DECK. 3 STATION CONTROLS. PROPANE COOKTOP. REWIRED. INCLUDES SPARE ENGINE. ASKING \$50K.



**P2357M** – 32 OHIMA, 8.2L GMC MAIN, TWIN DISC GEAR, 3.8 AND 2.7 CUBE LOAD SENSE HYD PUMPS OFF FRONT OF MAIN. ARTICULATING DRUM (NEW RAMS 2017), AUTO LEVELWIND, MARITIME POWER ROLLER (REBUILT LAST YEAR), 5 TON PACWEST RSW. PACKS 9K IN HATCHES (12-14K DECK LOAD), 8" BOWTHRUSTER. FURUNO SOUNDER, 2 GARMIN PLOTTERS. GREAT TURN KEY RSW STARTER. ASKING \$95K.



**P2355M** – RARE 56' SUNNFJORD COMBO, RIGGED FOR TROLL AND LONGLINE, TMD 102C VOLVO MAIN, TWIN DISC GEAR, PACKS 40-50K ICED FISH IN INSULATED HOLD. ALUMINUM BAIT SHED W/INTEGRATED HAYRACK. EASTHOPE 3 SPOOL GURDIES, HOUGH 17" LONGLINE HAULER. PACKS 1400 GAL FUEL IN ALUMINUM TANKS. COMPLETE ELECTRONICS INCLUDE 2 VHF, SEA SSB, FURUNO RADAR W/NAVNET, FURUNO AND GARMIN GPS, GARMIN AND ECHOTECH PLOTTERS, 2 FURUNO COLOR SOUNDERS, WOOD FREEMAN PILOT. GREAT ACCOMMODATIONS. ONLY \$345K.



**P2349M** – 40' X 11' FIBERGLASS GILLNETTER, 975 HOURS ON 480 HP VOLVO TAMD 74 WITH TWIN DISC GEAR, TROLL VALVE, EXTENSIVE OVERHAUL IN 2010 INCLUDING; NEW INTERIOR, WIRING, FUEL AND HYDRAULIC LINES, ELECTRONICS, AUTOPILOT, LED LIGHTING, 2 EA. 225 GAL. FUEL TANKS, AFT DECKS, FISHHOLDS, CABIN ROOF, WINDOWS, DOOR, RAISED BULWARKS, AMERON EPOXY HULL COATING. 18 KTS, CRUISE 22 KTS MAX, PACKS 13K. VERY CLEAN AND TURN KEY. ASKING \$270K.



**P2335M** – 40' WEGLEY COMBO, LAUNCHED AND SEA TRIALED DEC 2016. CURRENTLY RIGGED FOR POT FISHING AND HAS DECK GEAR FOR GILLNET, ALUMINUM MAST AND BOOM, C-9 CAT MAIN 500HP (1K HOURS SINCE NEW), ZF GEAR, 5.5K AUX. FURUNO RADAR AND SOUNDER, STANDARD HORIZON PLOTTER, SIMRAD PILOT. ROOMY CABIN W/GOOD ACCOMMODATIONS. FLUSH WORK DECK WITH RAILING ALL AROUND. TURN KEY OPERATION. PUGET SOUND GILLNET, CRAB AND SE DUNGY PERMITS AVAILABLE WITH GEAR. PRICE REDUCED BOAT ONLY \$439.5K.



**P2280M** – 32 X 13 RSW FIBERGLASS TOPHOUSE STERNPICKER, TWIN IZUSU MAINS, BORG WARNER GEARS. PACKS 23K UNDER DECKS IN 11 HATCHES. 5 SHACKLE SLIDING REEL W/ LEVEL WIND. NEW ANCHOR GEAR, GARMIN PLOTTER. NEW LED DECK LIGHTS AND FORWARD LITE BAR. NEW IN 2017 GLENN DENNING ELECTRIC CONTROLS. NEW IN 2018: NEW DECKS/7.5 TON IMS RSW/4.8 CUBE HYDRAULIC PUMP AND TANK. NOW HAS TWO SEPARATE SYSTEMS. NEW TRANSMISSION MOUNTS. TURN KEY W/3 SHACKLES OF GEAR. ASKING \$125K.



**P2261M** – 58 X 27 COMBO, CURRENTLY RIGGED FOR POT, LONGLINE AND TENDER, CUMMINS KTA 19M3 MAIN, TWIN DISC 5:1 GEAR, JOHN DEERE 50KW AND 27KW, TEKNOTHERM RSW, MARCO LONGLINE SYSTEM. LOADED W/ ELECTRONICS. LOTS OF NEW EQUIPMENT AND UPGRADES OVER PAST 8 YEARS. \$1.075M WITH AI, BS AND CG LLP. WG POT LLP AVAILABLE.

**CALL FOR A COMPLETE LIST OF VESSELS FOR SALE INCLUDING MANY BOAT/PERMIT PACKAGES**

**Toll Free: 888-588-1001**

**ONLINE @ [www.permitmaster.com](http://www.permitmaster.com) Email: [vessels@permitmaster.com](mailto:vessels@permitmaster.com) Fax: 253-564-3672**

**SELL YOUR  
BOAT HERE.  
CALL TO LIST!**

**CUSTOM MADE • NON STICK  
FREEZER PANS**

Short runs with inexpensive moulds available!

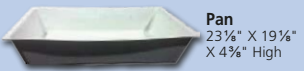
TRAY USES: Frozen fillets, Fish for pet food/zoo food, Herring



**Pan**  
26" X 17½"  
X 5½" High



**Freezer Basket**  
19" X 13½"  
X 3¾" High



**Pan**  
23½" X 19¼"  
X 4¾" High



**Extra long Pan**  
38¾" X 15½"  
X 4½" High

**TRI-CORE PLASTICS CONTAINERS LTD.**

1 (800) 214-3542 • www.plasticfishcontainers.com

**HOMER  
MARINE  
TRADES  
ASSOCIATION**

Choose  
Homer for  
Your Boat  
Work

Homer  
59° 36' 02" N  
151° 24' 34" W

WWW.HOMERMARINETRADES.COM

**Alaska Boats & Permits, Inc.**

IFQs • PERMITS • VESSELS

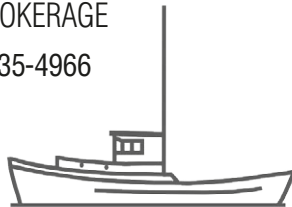
FULL SERVICE MARINE BROKERAGE

(800) 992-4960 • (907) 235-4966

www.alaskaboat.com

alaskaboats@gmail.com

Homer, Alaska



**BLACK PEARL IFQ FISHERIES, LLC**  
Capt. Miron Basargin

Home  
907-235-1538

Cell  
907-299-0826

New Longliner • 80,000 lbs. Halibut • 100,000 lbs. Cod  
50' x 20' • Fish all areas in Alaska • Walk-on or Hired Skipper



**Northwest**  
FARM CREDIT SERVICES



**A good source  
of financing.  
And knowledge.**

We provide more than money. From webinars to workshops, the team at Northwest Farm Credit Services readily shares knowledge and insights with our customer-members – a practice we believe is good for individuals and fishing as a whole.

Learn more at [northwestfcs.com/resources](http://northwestfcs.com/resources).

Equal Housing Lender  
This institution is an equal opportunity provider and employer.

Here to Help You Grow®

**Permit Information**



**Dock Street Brokers**  
 (206) 789-5101 (800) 683-0297  
 www.dockstreetbrokers.com  
 For all the latest permit & IFQ listings please call or visit our website.

**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**

Demand for halibut quota has remains modest. Recent interest has primarily been for unblocked 3A, and reduced asking prices may lead to additional sales. Recent sales have been slow primarily due to market trends over the last six months and concern over potential decrease in the TAC. The next event to influence the market is the 2019 harvest recommendations. The latest is as follows:

AREA	ESTIMATED VALUES
2C - No activity.	\$47.00/# - \$60.00/#
3A - Increase in activity, some recent sales.	\$37.00/# - \$47.00/#
3B - Slight decrease in prices due to limited interest.	\$21.00/# - \$29.00/#
4A - No activity.	\$15.00/# - \$27.00/#
4B - Still no unblocked available, buyers remain active.	\$10.00/# - \$20.00/#
4C - Unblocked available, no activity.	\$10.00/# - \$20.00/#
4D - Very little available.	\$10.00/# - \$20.00/#

**SABLEFISH**

Recent availability in unblocked WY has resulted in sales. Activity in CG and WG remains low despite increased availability in unblocked quota and reduced asking prices. At the time of this writing, two weeks remain in the season and 25% of the 2018 TAC remains unharvested. Expectations are that the current market will continue until the 2019 TAC is released. The latest is as follows:

AREA	ESTIMATED VALUES
SE - Limited interest, offers remain low.	\$22.00/# - \$29.00/#
WY - Recent sales of unblocked.	\$24.00/# - \$30.00/#
CG - No activity.	\$15.00/# - \$24.00/#
WG - Unblocked and large blocks available.	\$10.00/# - \$16.00/#
AI - Active buyers looking for unblocked B & C shares.	\$2.00/# - \$7.50*/# (A class)
BS - Steady demand for large blocks and A shares.	\$1.75/# - \$7.50*/# (A class)

ALASKA PERMITS	ESTIMATED VALUES
AK Power Troll	\$26k
Area M Drift	\$165k
Area M Seine	\$120k
Area M Setnet	\$55k
Bristol Bay Drift	\$165k - \$170k
Bristol Bay Setnet	\$45k - Low availability
Kodiak Seine	\$28k
Kodiak Tanner <60'	\$27k
Kodiak Tanner >60'	\$45k
PWS Drift	\$150k
PWS Seine	\$175k
SE Cucumber Dive	High demand, sellers wanted
SE Dungeness (75-300 pots)	Variable - Call for info
Southeast Drift	\$85k
Southeast Seine	\$200k
Southeast Herring Seine	\$180k

**WEST COAST PERMITS ESTIMATED VALUES**

California Crab Increase in sales and last minute transfers, some driven by new regulations. Most buyers not willing to meet the price expectations of sellers, and recent sales are a result of aggressive prices Call for more information. - 175 pot: \$40k-\$75k. No activity, offers encouraged. - 250 pot: \$60k-\$90k less than 35'. \$90k-\$130k for 35'+ - 300-350 pot: \$150k-\$250k. Recent sales. - 400-450 pot: \$250k-\$400k. Value dependent on length. - 500 pot: \$400k-\$500k. Highest value in 58' and above.	Variable - Call for info
California Squid - Steady interest, low availability	\$20k/ton - \$24k/ton
California Squid Light/Brail - Buyers looking.	Variable - Call for info
Oregon Pink Shrimp - Limited availability, steady demand.	\$55k - \$65k
Oregon Crab - 200 pot: \$50k-\$60k. Steady demand. - 300 pot: \$120k - \$170k. Offers on 58'+ permits. - 500 pot: \$250k - \$300k for <50' & \$300k - \$410k >50'.	Variable - Call for info
Puget Sound Crab	\$165k
Puget Sound Drift	\$15k
Puget Sound Seine	\$155k
Washington Crab Increasing demand as season approaches. - 300 pot: \$110k - \$165k depending on length. - 500 pot: \$300k - \$400k depending on length.	Variable - Call for info
Washington Pink Shrimp	\$75k
Washington Troll	\$25k
Longline - Unendorsed	\$110k
Longline - Sablefish Endorsed - Interest remains steady. Demand for trap endorsed and base permits. Limited availability.	Variable
A-Trawl - Buy: No availability, several cash buyers looking. - Lease: Permits available, 50'-80', \$6k - \$10k per year.	Variable - Call for info.

**ONLY 750 AVAILABLE!**  
**PLASTIC RETORT DIVIDERS**

*High Quality, Heat Resistant, Very Flexible*



Plastic Retort Divider:  
 41-3/4" x 47" x 1/8"  
 Hole size: 3/8" hole x 9/16"  
 centers staggered  
 Material: Poly-propylene

**TRI-CORE PLASTICS CONTAINERS LTD.**  
 1 (800) 214-3542 • www.plasticfishcontainers.com

**The F/V MORGAN**  
**is ready to fish**  
**your IFQs!**

The F/V Morgan is a 32' Delta, available to fish all classes of quota in all areas. It's a like-new, fully-equipped, clean, and comfortable boat. Professional crew with 15+ years experience in the fishery. Flexible schedule and competitive rates. No #2s, best prices.

**For more information, contact**  
**Jonathan Pavlik • (907) 314-0714 Cell • (907) 784-3032 Home**



**TWIN DISC MARINE TRANSMISSIONS, Caterpillar and Cummins Engines & parts.** New and rebuilt, biggest selection of used ENG & Gear parts in the world available. Worldwide shipping. Best pricing. Call Steve at Marine Engine & Gear 781-837-5424 or email at twindiscgears@verizon.net



**FOR SALE**

California spot prawn business for sale. Included transferable spot prawn permit with all gear. Price: 995,000 dollars. Call Don (949) 279-9369.



**FOR SALE**

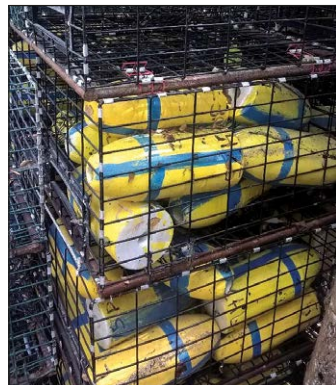
Great charter boat for sale by owner. In good shape boat, fishing 7 days a week, proven fish killer. \$249,000. Call owner (949) 279-9369.

**FOR SALE**

California dive sea cucumber permit for sale by owner: \$25,000. Call (949) 279-9369.

**FOR SALE**

Lobster permit with 120 traps ready to fish 130,000 dollars season in session. Other permits for California available. Call Don (949) 279-9369.



**FOR SALE**

Lobster business for sale for California starting at \$99,000. Call (949) 279-9369 for details.

WORKING HARD FOR COMMERCIAL FISHERMEN SINCE 1996



**Alaskan**  
**quota & permits LLC**

**BUY • SELL • TRADE**

**TIME TO START**

*Getting Ready for*

**2019**

**FISHING SEASON!**

*Ask us about :*

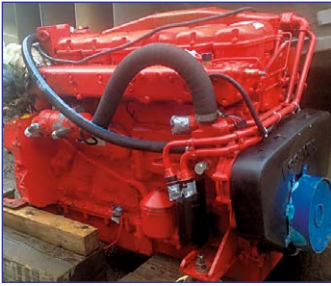
- IFQ'S • FISHING PERMITS • VESSELS
- SELLING • BUYING • TRADING • EMT
- MULTI-PARTY TRADE AGREEMENTS
- LEASES: EMERGENCY TRANSFERS, FISHING PERMITS, VESSELS & CHP
- DIFFICULT TRANSFERS: ESTATES & LIENS
- OWNER FINANCED CONTRACTS
- FREE VESSEL & GEAR LISTINGS

*Call Olivia & Marcie*

**1-888-347-4437 -OR- 907-772-4000**

**WWW.ALASKABROKER.COM**

**Boats/Permits/IFQs**



**SCANIA 650HP ENGINE**

Low 2800 hrs. Perfectly maintained, spare alternator, clean filters. No gear. I am up-powering to 750 hp Scania. GREAT, RELIABLE ENGINE! In Seattle. Almost half price @ \$40,000. (\$70,000 new). Email [chrishwt50@gmail.com](mailto:chrishwt50@gmail.com) or call (208) 265-5742.



**FOR SALE**

40'x11.5'x5' Canadian aluminum gillnetter, built by McEarchern in 1970. 230 hp John Deere 6068 w/ 1,000 hours, new in 2017. Twin Disc 509 gear. 800 gallon fuel capacity in (2) aluminum tanks. Packs 20,000# in (3) insulated holds. 10" shrimp block, Maritime Fabrication stern roller, new Kinematics drum with Twister drive and levelwind, aluminum picking boom, and (2) PL-2 Pullmasters. Electronics include GPS, VHF, radar, sounder, ComNav autopilot, and computer w/ Nobeltec. Great combination vessel with lots of recent upgrades. Asking \$170,000. (907) 401-0158, [cvaughanak@gmail.com](mailto:cvaughanak@gmail.com).



**F/V ANGIE**

**Unique Opportunity - Direct marketing, catcher/processor**

Suitable for a small group of trollers, gill netters, seiners, set netters, or use as a floating lodge. Rigged additionally as factory troller with Alaska permit. Complete tender, processing and transport with current direct Salmon markets established for those who want to sell their fish for more money. Excellent for remote locations and small villages. Completely self contained, with ice machine, water maker, blast freezing, cold storage, vacuum packing and onboard fillet machine. Over 2 million invested, come and inspect. Vessel and equipment excellent condition, available immediately. (206) 369-2486.

2005/drop in slush/crab tank/large insulated & glasses fish hold. Turn-key. Stika. Contact Bill Lewis (907) 738-1054 [williamcampbelllewis@gmail.com](mailto:williamcampbelllewis@gmail.com).



**FOR SALE**

**Highland Refrigeration** self-contained refrigeration seawater/brine freeze system. This chiller RSW/brine freeze system was factory built by Highland Refrigeration and purchased from them in December 2012. The system is composed of two units, the chiller/freezer unit and the generator set, which can be used together on deck of your vessel, or separately ashore. The brine freeze system can chill approximately 4,000lbs fish from 65°F to 32°F per hour, or brine freeze approximately 400lbs/hour from 35°F to 0°F. The 30kW industrial gen-set (3 phase 460V/60 Hz), was assembled by MER Equipment, Inc. The system is essentially new. It has been stored indoors except during two test runs, one week in March 2013 and one week in April 2014. The system has run for a total of 75 hours since it was built, mostly accumulated during monthly maintenance starts. View photos, system description, and specs at: <https://drive.google.com/drive/folders/1cQuhXJsjjXNRPposVVDZLcM8aR5MQ3MR?usp=sharing>. Manuals and complete parts inventory available upon request. Asking \$25,400. Call Ted at (619) 226-7944.



**FOR SALE**

1990, 180' x 32' steel double hull cargo ship in running condition. Good for fish plant, accommodation barge, feed barge or freight. 80, 60, 30 kg gen sets 850 hp main engine, 10 kt @85 liters per hour, 30 ton hydraulic crane. Lying Pacific NW. Price \$ 150,000 OBO. (360) 672-4009.



**F/V ANNA**

47" steel troller/sailer. Steel for price of wood. Isuzu 6BD1 130 h.p./550 fuel/good sails/aluminum poles & hayrack/full electronics/new aluminum pilot house, new hydraulic system and all new wiring

**FOR SALE**

Pair of D-9 500 H.P. Diesels, come with all gauges, wiring and controls still in great condition and can be seen running. Asking \$35,000 U.S. Contact Cedric Towers at Vancouver Whale Watch or cell (604) 220-4763.

**FOR SALE**

Have several California lobster permits for sale. Some with traps. Priced to sell. Call Don Brockman. (949) 279-9369.



**Dock Street Brokers (206) 789-5101 (800) 683-0297**

See all our listings at [www.dockstreetbrokers.com](http://www.dockstreetbrokers.com).



**SE18-016** 56'x18'x6' fiberglass seiner/tender, built by Hoquiam in 1990. Cummins 855 main rated at 370 hp, rebuilt in 2013. Isuzu 40kw genset. IMS 20 ton RSW system. Packs 120,000 salmon in (2) insulated holds. Complete electronics package. Call for more information and current survey. Asking \$1,200,000.

**HALIBUT IFQ**

- 2C-C-U: 2,000 lbs.....asking \$58.00
- 2C-C-B: 2,700 lbs.....asking \$56.00
- 3A-B-U: 7,000 lbs.....asking \$47.00
- 3A-C-U: 1,700 lbs.....asking \$45.00
- 3A-C-B: 2,150 lbs.....asking \$40.00
- 4A-B-B: 8,000 lbs.....asking \$20.00

**SABLEFISH IFQ**

- CG-C-U: 8,000 lbs.....asking \$23.00
- SE-B-U: 15,000 lbs .....asking \$30.00
- SE-B-B: 4,500 lbs .....asking \$27.00
- WG-B-U: 32,000 lbs .....asking \$15.50
- WG-B-U: 17,000 lbs .....asking \$15.50
- WY-C-U: 5,000 lbs .....asking \$30.00



**BB18-026** 32'x13' aluminum, flush deck, RSW, Bristol Bay gillnetter built by KG Marine/Alfa in 1986. Top house, bulwarks and flush deck by SNOW in 2015. Lugger 6140A main rated at 650 hp w/ Twin Disc 511 gear. IMS 7.5 ton RSW system new in 2015. Packs 15,000# in (6) insulated holds. Maritime Fab reel w/ levelwind and Vitek roller. 10" bow thruster. Asking \$275,000.



**CR18-045** 100'x36'x12.5' steel crabber built by Pacific Fishermen Shipyard in 1969. Cat D348 main engine rated at 750 hp. Twin Disc MG527 gear with ratio of 5.17:1. (2) Cat 3306B 165 kW and (1) Deere 4039D 40 kW gen sets. 200,000# crab, 400,000# salmon. 40 ton RSW system built by Highland. Full tender package and hydraulic sorting table included. Full electronics package. Asking \$2,600,000.



**BB18-030** 32'x13' aluminum, flush deck, RSW, Bristol Bay gillnetter built by Kvichak in 1988. John Deere 6081 rated at 375 hp. Bow thruster. Pac West 7.5 ton RSW installed in 2017. Updated Maritime Fab drum, levelwind w/ White reel drive. Kinematic stern roller rebuilt in 2017. Electronics include (2) Garmin GPS, VHF, 2M, sounder, (2) spotlights, and LED lights throughout. Head, shower, and (4) berths. Asking \$289,000.



**TR18-037** 54'x16'x7' steel troller/gillnetter built in 1978 by Frank Rogganbuck. Cummins 855 main engine rated at 200 hp. Cruises at 6.5 knots. 25 kW Isuzu gen set. Packs 22 tons of tuna. Deck equipment includes a gillnet reel with Hydrostat motor. Electronics include VHF, (3) GPS, (3) radars, Furuno sounder, Garmin plotter, and ComNav autopilot. Asking \$175,000.

# New year – new opportunities! Start planning today!

It's time to plan how you will represent your brand in the New Year. View the 2019 Media Kit to browse the editorial calendar, extra distribution opportunities, and ways to increase your web presence with the commercial fishing industry. Decide what advertising plan is right for you!

**We offer the best visibility that money buys in the North Pacific!**

Secure your 2019 advertising plan now and lock in your rates! Contact me today to get started!

**John Nordahl, Advertising Sales**  
(206) 775-6286 • [johnn@pacificfishing.com](mailto:johnn@pacificfishing.com)

*"Pacific Fishing has become a great tool to increase our exposure to our target markets. The team at Pacific Fishing have been a pleasure to work with and is always very accommodating. We look forward to our continued partnership!"*

**Platypus Marine**

*"In the first week we have seen our website have just over an 11% increase in traffic since we launched our banner ad."*

**Bonar Plastics**




88% of our readers are in Alaska, Washington, Oregon and California.

83% of our readers identify as a boat owner and/or fisherman.



# PACIFIC FISHING

THE BUSINESS MAGAZINE FOR FISHERMEN



# 2019 MEDIA KIT

# DELIVER TOP-NOTCH PRODUCT

Self-Contained RSW

Split RSW Systems

Condensing Units for  
Chilling and/or Freezing

Titanium and  
Copper Nickel Chillers

Live Aquatic  
Refrigeration Systems

Parts for All Major Brands  
of Refrigeration

In-House Design,  
Engineering and  
Installation Services

## Systems. Support. Solutions.



5-Ton Hydraulic RSW



8.5-Ton Split Diesel RSW



10-Ton Hydraulic RSW



35 HP Electric RSW



50 HP Electric RSW



Titanium Chillers



## Partner with IMS for Your Refrigeration System



Integrated Marine Systems  
Manufacturers of Refrigeration <sup>INC</sup>

**800.562.1945**

[www.IMSpacific.com](http://www.IMSpacific.com)

[sales@IMSpacific.com](mailto:sales@IMSpacific.com)

4816 15th Ave. NW

Seattle, WA 98107