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Yard work



- Maintaining your hydraulics
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The national standards

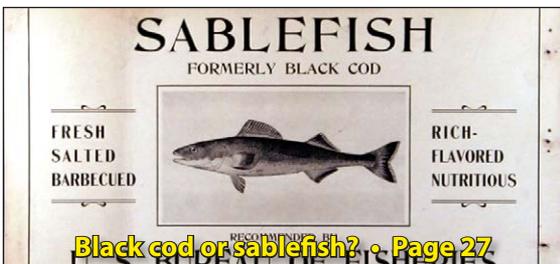
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ON THE COVER: The newly painted F/V Billikin, part of the Trident Seafoods fleet. Lots more shipyard news inside. Jeff Pond photo

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Ride-Along Enclosed

Do you know the national standards?

No, this is not a political or moral question.

The national standards I'm talking about are fundamental principles for guiding U.S. fisheries.

The 10 standards are listed in the Magnuson-Stevens Fishery Conservation and Management Act.

This year marks the 40th anniversary of the act. It's the most important law we have for governing fisheries in federal waters, and the national standards are a vital part of it. When regulators draw up fishery management plans, they must comply with these standards.

Whether they faithfully do so might be the subject of some debate.

But let's save that debate for another time.

In light of the 40th anniversary, we simply print the national standards here.

National Standard 1 – Optimum yield

Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry.

National Standard 2 – Scientific information

Conservation and management measures shall be based upon the best scientific information available.

National Standard 3 – Management units

To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

National Standard 4 – Allocations

Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation shall be fair and equitable to all such fishermen, reasonably calculated to promote conservation, and carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

National Standard 5 – Efficiency

Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources, except that no such measure shall have economic allocation as its sole purpose.

National Standard 6 – Variations and contingencies

Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

National Standard 7 – Costs and benefits

Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

National Standard 8 – Communities

Conservation and management measures shall take into account the importance of fishery resources to fishing communities.

National Standard 9 – Bycatch

Conservation and management measures shall, to the extent practicable, minimize bycatch and, to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

National Standard 10 – Safety of life at sea

Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

Wesley

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Fish Wrap

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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.

Kuskokwim calamity: Coastal Villages Region Fund isn't buying salmon or operating its Platinum processing plant this season, effectively shutting down commercial fishing in the Kuskokwim area. – *adn.com*

Milestone on the horizon: Commercial fishermen this season are expected to reach 2 billion salmon caught over the 133-year fishing history of Bristol Bay – *adfg.alaska.gov*

Fast fishery: Southeast Alaska trollers gobble up their Chinook quota in five days. – *adfg.alaska.gov*

Salmon size concern: Bristol Bay sockeye seem to be undersized again this season. – *kdlg.org*

Presidential appeal: More than 40 West Coast fishing groups have written to the Obama administration opposing proposed California marine monuments that would prohibit commercial fishing. – *us3.campaign-archive1.com*

Bay watch: Fishermen in Alaska's Bristol Bay have landed more than 15 million sockeye salmon. With the season now in the homestretch, will the harvest reach the state forecast of 29.5 million? – *adfg.alaska.gov*

Pink purchase: The U.S. Department of Agriculture is looking to buy another big lot of canned pink salmon. – *ams.usda.gov*

Alaska salmon tally: The commercial catch now exceeds 43 million fish, with more than 19 million sockeye taken so far at Bristol Bay. – *adfg.alaska.gov*

The Georgia J: An historic boat finds a new berth in Kenai, Alaska. – *alaskapublic.org*

Boosting capacity: Iccle Seafoods continues to invest in its Wood River

processing plant at Dillingham. – *kdlg.org*

Day in court: The state is seeking dismissal of a lawsuit challenging Alaska Gov. Bill Walker's overhaul of the Commercial Fisheries Entry Commission. – *juneauempire.com*

Settling up: Processors have started posting prices for sockeye salmon catches at Bristol Bay. – *kdlg.org*

Skeena River blues: It has been a frustrating salmon season in northern British Columbia. – *thenorthernview.com*

Safety net: Fishermen in northern British Columbia are welcoming news of sweeping changes to the Employment Insurance program. – *thenorthernview.com*

Bristol Bay milestone: Who gets credit for catching the bay's 2 billionth salmon? – *kdlg.org*

A win for Pacific Choice: A federal judge has denied the government's motion to dismiss a lawsuit challenging the West Coast groundfish trawl IFQ program. – *scribd.com*

CFEC case tossed: A Juneau judge has dismissed a lawsuit challenging Alaska Gov. Bill Walker's dismantling of the Commercial Fisheries Entry Commission. – *deckboss.blogspot.com*

Bering Sea drama: Rescuers saved 46 people who abandoned the F/V Alaska Juris, which was taking on water near Kiska Island. – *adn.com*

Alaska Juris response: A salvage vessel has been dispatched to try to locate and assess the abandoned Bering Sea fishing vessel. – *uscgnews.com*

Pink purchase: The U.S. Department of Agriculture announced this week it bought nearly \$10 million in canned pink salmon. – *ams.usda.gov*

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Ph: (206) 324-5644, ext. 221

Main Office
1028 INDUSTRY DRIVE
TUKWILA, WA 98188
PH: (206) 324-5644

Chairman/CEO/Publisher
MIKE DAIGLE
miked@nwpublishingcenter.com

Associate Publisher
CHRISTIE DAIGLE
christied@nwpublishingcenter.com

EDITORIAL CONTENT:

Editor
WESLEY LOY
wloy61@gmail.com
Ph: (206) 324-5644, ext. 234

Field Editor
MICHEL DROUIN

Copy Editor
BRIANNA MORGAN

PRODUCTION OPERATIONS:

Production Manager
DAVID SALDANA
davids@nwpublishingcenter.com

Art Director, Design & Layout
ERIN DOWNWARD
erind@nwpublishingcenter.com

SALES & MARKETING:
Advertising Sales Manager
DIANE SANDVIK
Ph: (206) 920-5516
dianes@pacificfishing.com

Ad Support
CANDICE EGAN
Ph: (206) 324-5644, ext. 221
receptionist@nwpublishingcenter.com

CIRCULATION & DISTRIBUTION:
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Let's not mess with the success of Magnuson-Stevens Act

Those who catch ocean fish, dine on the country's marine bounty, or simply appreciate the remarkable improvement in the state of America's fisheries can thank the Magnuson-Stevens Fishery Conservation and Management Act.

From its passage in 1976, the nation's premier fisheries law has been remarkably free of the party politics so often exhibited these days. And that's exactly why we need to be careful about some current initiatives to change it.

Over the years, the act, sometimes called the MSA, has become increasingly prescriptive in order to assure that fishery management is based on sound science and that catches of fish do not exceed the limits of an ecosystem's productivity.

While some regional controversies continue, it is telling that the last reauthorization of the act, in 2007, passed both houses of Congress overwhelmingly and was signed by then-President George W. Bush.

As we approach the transition to a new administration, however, a number of proposals have emerged to revise the law or change its administrative guidelines. Unfortunately, these would loosen effective protections that have been so successful in eliminating overfishing and rebuilding stocks.

For instance, one of these would increase the elapsed time between identifying overfishing and actually addressing the problem.

Why wait? For a fish stock that's already under pressure, such a delay could prove needlessly harmful. Much of our recent success has stemmed from quick action and firm timetables for rebuilding, and that approach has clearly worked.

Catching a certain amount of non-target species (termed "bycatch") may be inevitable, but minimizing this wasteful result is critical. The first step in reducing the problem is knowing how big

the challenge is, which can be done by counting how much bycatch actually occurs. Proposed changes to how bycatches are managed could severely handicap the ability to obtain accurate bycatch data.

Furthermore, under one option, the term bycatch would be refined to completely exclude some dead fish. Combining poorer quality data with such additional changes could mean the appearance of great progress on paper even as marine ecosystems decline.

Currently, the MSA is set up to invest control of allocations and management in regional councils composed of a broad representation of stakeholders. But if, as has been proposed in Congress, we cede overall control of, for instance, the red snapper fishery to the Gulf of Mexico states, local pressures might prove too powerful to resist and overfishing could return in force.

Maintaining flexibility in regionally based management measures under the umbrella of consistent national standards has been a successful formula for rebuilding the nation's fisheries under MSA. But all of the proposed changes would put us on a slippery slope back to unsustainable fisheries.

Commercial and recreational fishers, managers, and scientists have worked hard and sacrificed much to attain the status of having the best-managed fisheries in the world, with all of the attendant benefits to America of stable and productive stocks. The law has functioned with full bipartisan and regional cooperation, and we need to resist the temptation of saying, "It ain't broke, but let's fix it anyway." ↓

William Hogarth recently retired as director of the Florida Institute of Oceanography. He headed the National Marine Fisheries Service from 2001 to 2008. Steve Murawski was chief scientist for the agency at that time and is currently a fisheries biologist and professor at the University of South Florida.

by MICHAEL MCKENZIE

Bellingham SeaFeast: Celebrate maritime heritage, fine seafood

"Come for the seafood, and stay all day to play."

That's the call to action for the new Bellingham SeaFeast 2016.

The two-day event, with many family-centered, free-admission activities, will take place in Bellingham, Washington (9 a.m. to 10 p.m. Friday, Sept. 30) and in Squalicum Harbor on Bellingham Bay (10 a.m. to 8 p.m. Saturday, Oct. 1).

Among the centerpiece attractions for an expected 5,000 visitors: FisherPoets-on-Bellingham Bay; the Salmon BBQ Grilling Championship; Living Legacies of the Bellingham Waterfront; and the Bellingham SeaFeast Grand Seafood Finale (ticketed).

The event will celebrate one of Bellingham's legacy industries - the marine and commercial fishing sector, says Debbie Granger, general manager of Bellingham

SeaFeast 2016.

"We will shine the spotlight on our unsurpassed culinary bounty that distinguishes our little corner of the Pacific Northwest," she says.

An array of seafood vendors and the Lummi Nation's traditional open-fire salmon cooking highlight the food theme, capped by the Grand Seafood Finale featuring about 35 varieties of seafood dishes at the Hotel Bellwether ballroom.

FisherPoets-on-Bellingham Bay will feature a troupe of more than two dozen sea-faring poets, storytellers, and musicians staging workshops and performing.

Oct. 1 will offer 10 hours of activities at Zuanich Point Park on Bellingham Bay, including the Bellingham Circus Guild and a strong lineup of bands playing sea



Squalicum Harbor. Port of Bellingham photo

shanties, gypsy jazz, Americana, blues, and classic rock.

For details on these activities and much more, go to BellinghamSeaFeast.com.

Bellingham SeaFeast is presented by Bornstein Seafoods and Haggan Northwest Fresh, with major sponsorship by the city of Bellingham, the Port of Bellingham, and Bellingham Cold Storage. ↓

Mike McKenzie is marketing director for Bellingham SeaFeast.

Judge's ruling keeps West Coast groundfish lawsuit alive

A major seafood company's lawsuit opposing groundfish quota limits remains active following the denial of a federal agency's motion to have the case dismissed.

On July 20, almost six months after the National Marine Fisheries Service filed for case dismissal, a U.S. District Court judge ruled to deny the motion.

The lawsuit itself was filed in late 2015 by Pacific Choice Seafood Co., the processing arm of West Coast giant Pacific Seafood Group. It named NMFS and Commerce Secretary Penny Pritzker as defendants.

Pacific Choice is alleging that the West Coast groundfish individual fishing quota (IFQ) program's 2.7 percent aggregate limit on single entity ownership of quota shares "supplants well-established common and statutory law without statutory authority to do so."

Pacific Choice is attacking the legality of the quota share limit and the Nov. 30, 2015, deadline for surrendering quota that surpasses it.

The NMFS motion to dismiss the lawsuit argued that the company's claims are "time-barred" by legislative limits on advancing litigation against the IFQ regulations. The motion also argued that the regulations have already been upheld through high court rulings on previous lawsuits from other plaintiffs.

The groundfish IFQ program's regulations were approved in 2010 and went into effect the following year, which involved amending the Magnuson-Stevens Act. The dismissal motion argued that the law requires legal challenges to be timely.

The requirement to divest quota shares was finalized a few weeks prior to the November 2015 deadline, after a public comment period.

According to the NMFS dismissal motion, Pacific Choice has no legal standing to challenge the 2015 rule because of statute of limitation issues and that Pacific Choice had "voluntarily divested quota shares prior to the Nov. 30, 2015, deadline, meaning that the proportional reduction methodology could not apply" to the company.

Pacific Choice is challenging both the quota limit, which was approved in 2010, and the 2015 divestiture deadline rule.

And the company's challenges stand, as U.S. District Judge Haywood S. Gilliam Jr. ruled that it does indeed have legal standing to oppose both the regulations and the deadline.

Regarding the 2015 rule, Gilliam's order states that the timing issues don't apply because Pacific Choice has "alleged a credible threat that they will be required to comply with the divestiture and revocation requirements into the future."

Citing two appeals court decisions dealing with NMFS fisheries management issues in Oregon and the Gulf of Mexico, Gilliam's ruling declares that Pacific Choice is also able to challenge the 2010 groundfish regulations because they were "finalized" through the divestiture deadline, which sets conditions extending into the future.

"Accordingly, plaintiffs have alleged a potentially timely challenge to both the 2010 regulations and the November 2015 rule," Gilliam wrote.

At press time, a case management conference was set for Aug. 16. ↓

- Daniel Mintz

Trawler Alaska Juris lost, all hands saved

The factory trawler Alaska Juris sank in late July in the Bering Sea, but rescuers saved all 46 people aboard.

The crew abandoned ship July 26 near Kiska Island after the vessel began taking on water, the U.S. Coast Guard said. Good Samaritan vessels took part in the rescue.

Subsequent efforts to relocate and salvage the vessel were unsuccessful and the boat was presumed sunk in about 5,400 feet of water, the Coast Guard said.

The Alaska Juris belonged to Fishing Company of Alaska, of Renton, Washington.

FCA lost another of its trawlers, the Alaska Ranger, in 2008 in the Bering Sea. That sinking resulted in 42 people saved and five dead. ↓

- Wesley Loy



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Appeals court affirms whiting quota rules

A bid to reverse a federal court decision in support of Pacific whiting quota regulations has failed.

The management structure for whiting – developed by the Pacific Fishery Management Council and approved by the National Marine Fisheries Service – was reaffirmed by the 9th U.S. Circuit Court of Appeals in San Francisco in an Aug. 3 ruling.

Plaintiffs in the case included fish harvester Pacific Dawn LLC and processor Jessie's Ilwaco Fish Co.

The appeal attempted to overturn an earlier court decision in favor of the NMFS process in determining whiting shares for an individual fishing quota (IFQ) system.

The agency based whiting quota shares on participation in the fishery prior to the years 2003 and 2004, which the plaintiffs argued as being “arbitrary and capricious.” The fishing and harvesting companies claimed that NMFS disregarded aspects of the Magnuson-Stevens Act and a groundfish fishery management plan (FMP).

The appeals court affirmed the earlier U.S. District Court ruling, which declared that those aspects, including consideration of “present participation” in the fishery and the degree of economic dependence on it, were adequately considered.

Prior to the IFQ system being advanced for consideration in 2004, a limited number of whiting trawl permits was granted for a short window of fishing. A total catch limit was set, resulting in what the appeals court ruling described as a “derby-style fishery” and a “race for fish.”

Seeking to improve management, the council began the process of amending the groundfish FMP, leading to final approval of the IFQ trawl permit system in 2013.

Quota shares were set in 2010, and the harvesters and processors argued that the significantly greater fishing activity just prior to that time should have been factored into the shares.

But contrary to the plaintiffs' claims, the appeals court ruled that NMFS considered using more recent fishing history as a basis for decision-making. The agency “reasonably determined” that doing so was “outweighed by other factors such as ‘reducing overcapitalization and ending the race for fish,’” the ruling states.



Petersburg, Alaska, fishermen Brian Mattson and Doug Corl were longlining in Frederick Sound the first weekend in August and caught one heck of a halibut – a 396-pounder. That's Mattson in the photo with the phenomenal fish, which was delivered to the Icicle Seafoods plant in Petersburg for processing. The halibut would have had to weigh into the upper 400s to beat the world record, local radio station KFSK reported. Photo by Abbey Collins, KFSK-FM

It adds that NMFS “provided a thorough explanation of its methodology for evaluating ‘dependence.’”

According to the ruling, “Because NMFS reasonably determined that retaining the 2003 and 2004 end dates would be the least disruptive to current fishing practices, its conclusion was not inconsistent” with the FMP.

The ruling also concludes that “the record makes clear (NMFS) considered ‘present participation,’ but reasonably gave it less

weight than other factors.”

The defense against the lawsuit was joined by several groups and companies including the Midwater Trawlers Cooperative, Trident Seafoods, and the Environmental Defense Fund.

Ironically, the powerful Pacific Seafood Group processing company also joined the defense. The company is challenging NMFS' non-whiting quota system in a separate lawsuit. ↓

– Daniel Mintz

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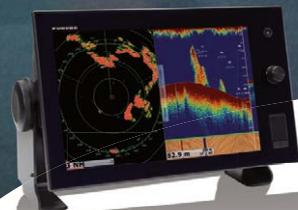


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The Georgia J

Historic wooden boat finds new berth in Kenai, Alaska

Editor's note: This story was produced originally for KBBI radio.

There's a new piece of history outside the Kenai Historical Society's office in the Old Town section of Kenai, Alaska.

It casts back to a time in the state's commercial fishing industry before small boats had engines, electronics, or hydraulics, when everything was done by hand.

For visitors, the 28-foot wooden fishing boat is a rare glimpse at a unique piece of commercial fishing history in Alaska. For Brian Johansen, it's a visceral tie to his father and the start of his 57-year career on the water.

"In 1956, I was 9 years old when I started fishing on this boat," Johansen said.

The boat belonged to his dad, Alex "Ike" Johansen. Ike was born in Kenai in 1919 and spent his life as a commercial fisherman, fishing setnets, fish traps, and drift boats.

Double-ender: He bought this boat, the Georgia J - named after his wife, Brian's mother - from the Libby, McNeill & Libby cannery in Kenai in 1956.

It's a Bristol Bay double-ender, so named because of its distinctive design that helped fishermen haul nets by hand.

"See, this is not a square stern. Most boats you see nowadays are square stern. Because pulling by hand, with a double-ender like this, these boats would cut the water better," Johansen said.

The double-ender, and a batch of others like it, were built in the

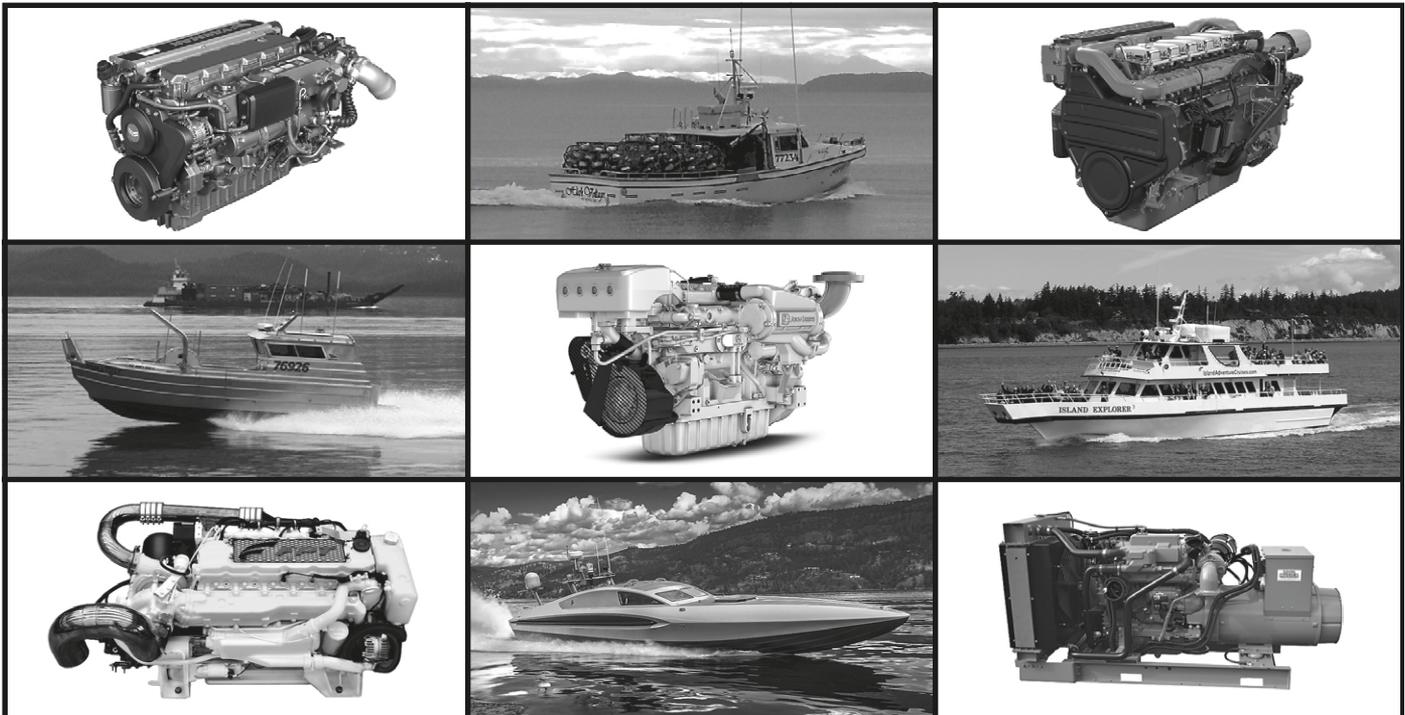


Brian Johansen fished on the Georgia J with his dad, Alex Johansen, starting when he was 9 years old. The boat is a double-ender, with a stern (seen here) that's pointed like a bow. Jenny Neyman photos

Seattle area in the winter of 1931-32. They were company boats used by Libby, primarily in Bristol Bay.

"The tender would tow these boats in a long string together out to the fishing grounds. They had no engine; they had a mast for their sail, a wooden tiller, and a long set of oars," Johansen said.

Libby eventually brought the boats to Cook Inlet and outfitted them with Chris-Craft gasoline engines.



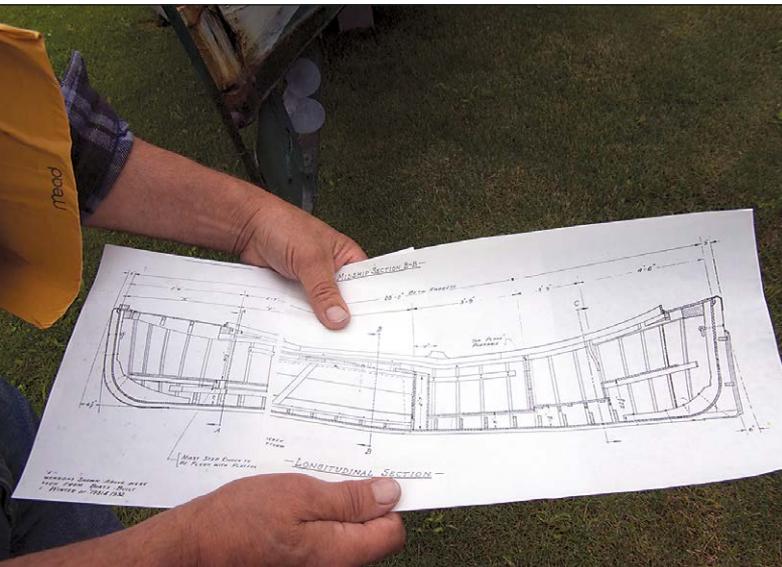
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Johansen shows the plans for his dad's old boat, built in the winter of 1931-32 in the Seattle area.

Ike Johansen requested to buy the boat he was fishing for Libby, No. 112, in 1955. He renamed it after his wife, removed the sailing equipment, and made other modifications over the years.

Labor-intensive: One of the improvements Brian Johansen remembers best is his dad adding a transmission so the nets could be hauled by hydraulics. The nets in those days were linen, with cedar corks, and heavy.

"But I know we pulled by hand for a couple of years there," Johansen said.

It was yellow when Ike bought the boat. He repainted it white with red trim. Or, rather, Brian did.

"I had the honor of painting it every spring. Also, I had to cork the seams of these planks," Johansen said.

He pantomimed taking long strips of cotton, twisting them, and tapping them into the seams between planks on the hull with a corking iron and mallet.

"A seam for every one of these planks, see. And he'd inspect them and make sure the cotton was good, and if not, we'd pull it out and put in new," Johansen said.

Once recorked, they'd run fresh water into the hull with a hose. The cotton would expand and seal the hull watertight.

It was a seaworthy boat, Brian said, especially with his dad at the helm.

"We had no navigational equipment, no electronics - no such thing back then. All we had was a chart and a compass. That was it. And in the fog, you could have got yourself in trouble, but we never did. My father was a good seaman, and he knew his business on the water," Johansen said.

There was one time, though, that Brian questioned his dad's judgment.

Heavy haul: Fishing periods were 24 hours. One of those open periods almost sunk them, even though it was flat, calm water.

"A solid wall of fish hit that net. And I had told dad. I told him, 'Don't you think we better start picking this gear?' He said, 'Naw, let it soak another 15 minutes.' And that was a big mistake," Johansen said.

Continued on Page 42

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Want to keep fishing? Don't neglect your hydraulics maintenance. Terry Johnson photo

Are you hydraulics savvy?

A pro offers tips on keeping your systems running reliably year after year

Hydraulics can be the ghost in the machine. While many commercial fishermen have a good working knowledge of their engines and most of their gear, few really know the technical side of how hydraulics work.

On most boats, hydraulics are very important, powering winches, net reels, chilling systems, deck cranes – all sorts of things. A hydraulic breakdown can bring a fishing trip to a screeching halt.

Professionals are in business to help, and it's smoother for all involved if we work together to prevent failures

before they happen.

Here are some tips to help you avoid breakdowns.

Grease is good

Mechanical failures due to corrosion and poor maintenance make up a large portion of our in-season calls.

The marine environment is hypercorrosive, so protecting metal components is imperative. Metalizing (flamespray), high-end

paint coatings, stainless steel, and grease tape all can help mitigate problems.

Grease your zerks. Nearly all deck machinery requires greasing. The grease you use for your shaft bearing works for most deck applications too.

Deck equipment with open chain and sprockets needs regular lubrication – at the beginning and end of each season at least.

Clean the parts with a solvent to remove dirt, salt, and grime and then regrease (or spray with chain and cable lube). This is also the time to look for worn parts such as stretched chain and sprockets with worn teeth.

Coat parts with grease for storage – including handle linkages, exposed spools of directional valves, motor shafts, and any other open gearing.

If you are bringing in a component for service, clean off grime and spray with a penetrating oil. Many jobs take extra, avoidable hours of labor disassembling stubborn set screws and the like. Additionally, if you install stainless steel set screws, a lot of grief can be avoided. You can also apply grease tape over the head of steel set screws.

Inspect your hoses. Look for chafing, wire poking out, or “mushrooms” below the surface. Wiping hoses with a cotton rag can help you find exposed wires, as they will snag the rag. Carry spare hoses equal to your longest run so that they’ll work for any possible failure.

Beat the heat

Heat is your hydraulic system’s enemy!

Heat destroys your oil. If oil reaches 180 degrees Fahrenheit, the additives designed to lubricate internal parts and prevent internal corrosion break down and the molecule chains begin to unbind, making your system “weaker.”

If grease is melting out of your anti-corrosion tape or components are too hot to touch, you have a system problem.

Additionally, heat causes seal life to decrease substantially and can even cause problems with spools in directional valves.

One way to reduce or prevent excessive heat is properly sizing valves and vessels.

Your retailer should be able to provide the nominal flow rating for the brand and model of valve to be used. An easy rule of thumb may be to compare the inlet port size of the valve with the outlet port size of the pump supplying it. For instance, a pump with a 1-inch outlet probably should not be paired with a valve with a 1/2-inch inlet.

Vessels are the hoses, pipes, and tubes that carry the oil in your system. Sizing your vessels correctly is a critical part of preventing overheating. Properly sized vessels keep the flow rate in check, while undersized

Continued on page 14



Excessive heat is your hydraulic system’s enemy, Paul Rioux says.

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vessels increase flow rate (feet per second) and cause increased heat through friction.

All major hose manufacturers provide website information on hose size for flow.

Comparing the control valve and drive motor ports on your machine provides a lot of information. If the ports on the control valve are 3/4-inch and the motor is 5/8-inch, sizing your hose to match the larger is usually the safe bet, as a rule of thumb. This is especially true with machines of a longer duty cycle – things that run continuously as opposed to, say, a rigging winch that’s used only intermittently.

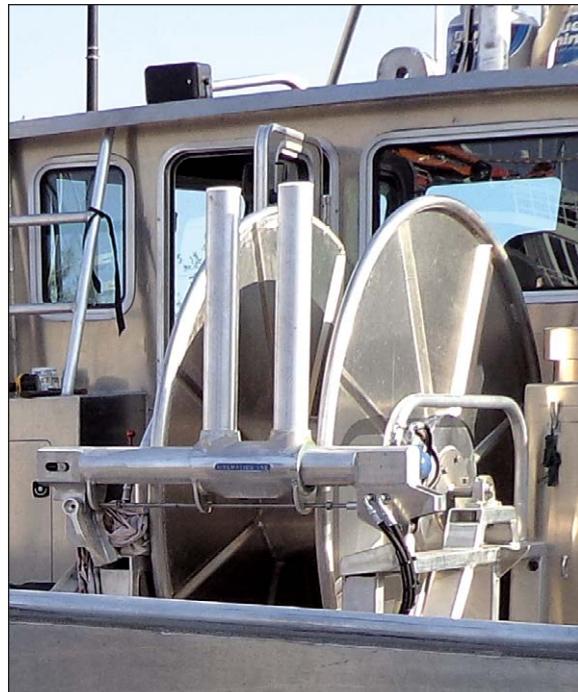
It’s important to know that tubing and piping are measured differently than hose. Hydraulic hose is standardized, so the callout size is equal to the inner diameter (ID). So, a 1/2-inch hose has a 1/2-inch inner diameter. Tubing is nominal to its outer diameter (OD), so depending on its wall thickness, the ID can be significantly smaller than its callout size. Piping is nominally sized – 1/2-inch pipe is neither 1/2-inch ID nor 1/2-inch OD – and like tubing will vary depending on its wall thickness (referred to as “schedule” in piping). A word of warning: Different schedules of pipe

and wall thicknesses of tube have different pressure ratings. Consult professional help before installing.

A properly constructed reservoir is another key to managing heat. Such a reservoir has features that separate it from being simply a box full of oil.

The first element is the size – experts recommend a minimum 3-to-1 ratio to the rated flow of the pump. The rated flow of a pump is the flow it would produce when driven at 1,200 rpm. If you have a pump rated at 10 gallons per minute, you would shoot for a 30-gallon reservoir. Space and weight being limiting factors, reservoirs often are undersized, and we are forced to make up cooling the oil by the use of a heat exchanger (often a shell-in-tube type or keel cooler).

The next element is the return port, which should be situated below the normal operating level to prevent cascading. Cascading is the



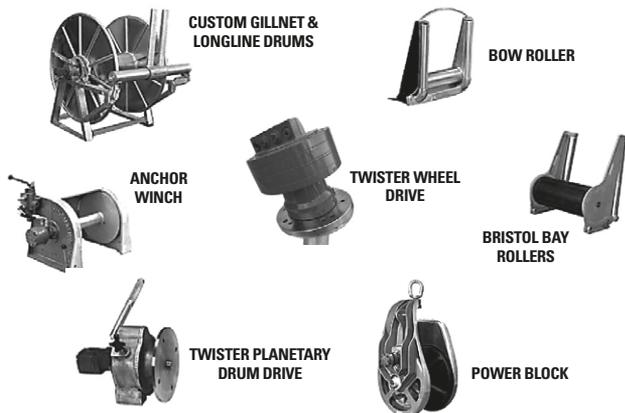
A Kinematics net drum on a newly built Bristol Bay gillnetter. Wesley Loy photo

falling of oil through the dead space above the tank level, which traps air in the oil. The

Continued on Page 16

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Crewmen aboard an Alaska crab vessel use a hydraulic deck crane to stack pots. Jim Paulin photo

trapped air is then sucked through the pump and circulated in the system, causing cavitation – another source of heat and a major cause of system problems.

Another key element is a baffle – a partial wall dividing the return side of the reservoir from the suction side. The baffle forces the oil to slow, minimizing turbulence and spreading the heat evenly throughout.

The last main element is the suction port, which should be equal to or greater than the inlet port of your pump.

More handy tips

- Invest in spares: On many small to mid-sized boats, components are relatively inexpensive, and motors, clutches, and even pumps can be carried as spares without taking up too much space.

Ask yourself if the loss of that component can shut down your operation on a good day. What will the missed fishing cost you?

- Know what you have: Make a list of component parts and serial numbers before those numbers are lost to corrosion and time.

- Keep a log: Record when components are replaced or upgraded, filters are changed, and machines are greased.

- Watch for water: If your oil is “milky,” it has water in it – get it out as soon as possible. Filters are available to pull water out of oil.

- Use case drains properly: If a motor or machine has a case drain, be sure to hook it up and make sure to use a line equal to the size of the port. Case drains should be run directly back to the reservoir unrestricted (not filtered). And if you’re combining case drains from multiple motors or winches, the line size should grow as they “t” together. It’s a common misconception that case drains don’t flow very much.

Some final thoughts

Remember that excessive heat, changes in the sound of your system or components, leaks, and changes in performance are your “check engine” lights – address each light soon before it becomes a failure!

Also, your hydraulics repair person (and likely your wallet) will appreciate it if you address problems at the end of the season rather than waiting until weeks before the next season begins. ↴

Paul Rioux works for Precision Boatworks in Sitka, handling hydraulics for eight years. He has taught a marine hydraulics course for the University of Alaska Southeast. He grew up in Maine and moved to Sitka more than 20 years ago, fishing commercially full time for over 10 years.



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*The newly built combination boat
Insatiable. Photo courtesy of
Fred Wahl Marine Construction Inc.*



Sparks a-flyin'

Fred Wahl launches the F/V Insatiable as Commodore's, Lovric's, and Seaspan buzz with maintenance work



The legendary ex-seiner Sleep-Robber. Commodore's Boats Ltd. photo



The Confidence I in sling. Commodore's Boats Ltd. photo

Here's a look at shipyard activity along the U.S. West Coast and in British Columbia.

Fred Wahl Marine Construction Inc. in Reedsport, Oregon, reports the yard was busy all summer with routine haulouts and a number of larger projects.

The F/V *Insatiable*, launched July 14, is a steel combination boat built for Ron and Julie Kavanaugh, of Kodiak. The vessel will be rigged for pot fishing and tendering.

At 58 feet long and 28.5 feet wide, the boat draws roughly 13 feet of water, packs about 250,000 pounds of salmon, and carries 9,800 gallons of fuel. It's powered by a 750-horsepower Caterpillar C32 main engine.

Electrical power is supplied by two 150-kilowatt John Deere generators and one 40-kW Northern Lights unit.

Hydraulics to all deck equipment and a removable crane are provided by two electric hydraulic pumps, rated at 60 horsepower each.

The 4,080 cubic feet of tanked fish hold is chilled by a pair of Integrated Marine Systems refrigeration systems.

Living quarters aboard the *Insatiable* include berthing for eight in two separate staterooms. The boat also features two wheelhouse day bunks, washer and dryer, a fully equipped galley with stainless steel appliances, and large-screen TVs with a sound system.

Also at Fred Wahl, work continued on the F/V *Winter Bay*, a new 58-foot combination vessel for Frank Abena and Donald Norton, of Kodiak. The vessel will be powered by a 600-horsepower Caterpillar C18 and rigged for pot fishing and tendering.

The 54-by-16-foot *Cape St. James* was in the yard for sponsoning. When complete, the vessel will measure 58 feet by 24 feet. Future plans include repowering and a new wheelhouse.

The 50-foot combination crabber F/V *Aleutian Storm* was in for a main engine repowering and replacement of two

electrical generators.

The 116-foot Bering Sea crabber Alaska Trojan recently departed the yard after installation of a new Fred Wahl Marine 46-foot knuckle crane. The boat also received a complete rebuild of its small crane as well as bottom paint and miscellaneous repairs.

The *Excalibur II*, an 84-foot trawler, just departed the yard after installation of a Deflector articulating rudder. The boat also received hull sandblasting followed by new paint.

On another front, Wahl's shipyard expansion on Bolon Island is in full swing. Work is currently focused on construction of a 200-foot concrete pier. Construction is complete on the new haulout basin and wash-down pad.

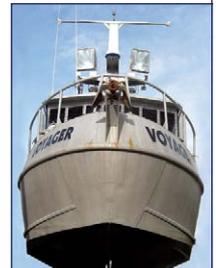
A new 660-ton travel lift was expected to be operational in September.

Continued on Page 20

American fishermen are bringing their boats to Canada to save \$\$\$!

US\$/CAD\$ Exchange rate draws US vessels to Canadian full-service shipyards for repairs

Richmond, British Columbia: During tight economic competitive times, Pacific Coast fishermen are looking for ways to increase efficiency, save money and increase profits. Mark Tucker from Tokeland, Washington (*Voyager*, 42' aluminum crab boat) knows this. Recently he conducted online research of both Canadian and American companies skilled enough to perform a substantial sponson project on his vessel. With the low cost of the Canadian dollar and **Commodore's** reputation as a reputable, skilled, full service boat repair shop, it simply made sense to bring his boat to Canada to do the repairs. For the full story on this sponson project visit our website to find out how easy it is to bring your boat to Canada.



COMMODORE'S BOATS

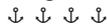
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The Mandala 1 in sling. Commodore's Boats Ltd. photo

The new yard will give Wahl 38 acres of additional space for boat repairs and dry-land moorage. Other features include 200 feet of floating dock, 50,000 square feet of fabrication shop space, and a 12,000-square-foot paint building.



At **Commodore's Boats Ltd.** in Richmond, B.C., the legendary Sleep-Robber, a 75-foot wooden ex-seiner built in 1956, had



The F/V Billikin received a paint job this year at Pacific Fishermen Shipyard in Seattle. The Billikin is a famed member of the Trident Seafoods Corp. fleet. Jeff Pond photo

extensive woodwork done including new planking, caulking, and deck replacement.

A U.S. crab boat, the Voyager, was in the yard in July for sponsoning. The 42-foot aluminum vessel was being lengthened by 5 feet and widened by 3.5 feet on each side.

The Nalle, a 36-foot wooden longliner built in 1964, received an engine overhaul (valves and heads), a new control system, paint and zincs, and railing modifications.

The Confidence 1, an 82-foot wooden patrol boat built in 1941 and converted to a seiner, was planked and completely recaulked below the guards. Canadian Steamship Inspection work was done with the shaft, rudder, and prop all brought up to safety standards. The boat also received a stern repair.

The 1989-built, 46-foot steel longliner/dragger Mandala No.1 was in for prop work, bottom paint, and zincs.

The longliner Keythera, a 47-foot wood-hulled vessel built in 1976, got new bottom paint and zincs and one new through-hull fitting.

The Optimist No. 1, a 56-foot fiberglass longliner, had inspection work done. The shipyard also beefed up the batwings with some fiberglass reinforcing, and the boat received miscellaneous welding repairs, bottom paint, and zinc replacement.

The 52-foot wooden longliner Zapora, built in 1927, received new paint and zincs and had some rotten planks replaced.

The 80-foot wooden packer Kornat 1, built in 1941, had a new aluminum bulwark section fabricated to replace an old wooden section.

The Rosetta K, a 36-foot fiberglass crab boat, got a new welded and fabricated



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Continued on Page 22

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Underneath the Mandala 1. Commodore's Boats Ltd. photo

crow's nest, a bow roller assembly, and other miscellaneous aluminum fabrication such as rails.

The tuna vessel Enterprise also was at Commodore's for new paint and zincs.

↓ ↓ ↓ ↓

At **Lovric's Sea-Craft Inc.** in Anacortes, Washington, the 100-foot tuna boat Dalena received pressure washing, zinc replacement, and anti-fouling paint during a June visit.

Also in June, the 65-foot seiner/tender Kelly Anne received paint, some welding on the stern roller, and fiberglass work in the fish hold.

Work on the 132-foot tender Labrador included some steel replacement and new anti-fouling paint.

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Ocean Peace trawlers reap benefits of advanced Deflector rudders

Steve Becker, port engineer at Seattle-based Ocean Peace Inc., said the company has installed Deflector high-lift flap rudders on the 220-foot factory trawler Ocean Peace and the 98-foot trawl catcher vessel Green Hope.

Both vessels had standard one-piece rudders previously.

High-lift flap rudders are articulating hinged rudders said to perform at twice the level of a conventional rudder.

The Ocean Peace rudder was installed at **Lake Union Drydock**, and the Green Hope rudder was installed at **Northlake Shipyard**.

The rudders are designed and built by Lowell Stambaugh of Deflector Marine Rudder.

"I started looking at high-lift rudders so that we could reduce rudder angle while towing in current and adverse weather," said Ocean Peace's Becker.

The changes have been dramatic, he said.

"In heavy weather or high current, we used to use up to 35 to 40 degrees of rudder angle to tow on a straight course, and we now only use 12 to 15 degrees of rudder to hold the same course."

"By reducing that rudder angle, it reduces the drag on the rudder and allows us to tow faster," Becker said. "And it allows us to maintain certain towing speeds required for different gear combinations."

The main benefit for the vessels, he said, is reduced engine load because of the reduced drag.

"It allows them to maintain towing speed when they are fishing, which improves catch ratio," Becker said. "When they are towing in relatively decent weather, they can reduce load on the engine by reducing pitch and still maintain tow speed. This helps to reduce the overall fuel consumption of the vessel."

- Michel Drouin

The 58-foot seiner D.C. Cole had zincs changed and received fresh anti-fouling paint.

The 86-foot power scow Dorothea was hauled out and pressure-washed and had the props pulled and the cutlass bearings changed. She also received zincs and anti-fouling paint.

Lovric's also hauled out the 60-foot crabber/longliner Aleutian Isle for maintenance.

↓ ↓ ↓ ↓

B.C. shipyard operator **Seaspan** was working on numerous large, American fishing and processing vessels and expecting more to arrive.

The list included the Ocean Phoenix and the Excellence from Premier Pacific Seafoods, the Northern Victor from Icicle Seafoods, the Kodiak Enterprise from Trident Seafoods, and the Katie Ann and the Northern Eagle from American Seafoods.

Others included the Pacific Glacier from Glacier Fish Co., the Seafreeze America from United States Seafoods, the Gordon Jensen and R.M. Thorstenson from Icicle, and the Golden Alaska from Golden Alaska Seafoods ↓.



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F/V BLUE NORTH

*Christened September 9, 2016
Fishermen's Terminal, Seattle, WA*



On behalf of Michael and Patrick Burns, the entire Blue North team, and myself, I welcome you to our newest addition to the Blue North fleet, the F/V Blue North. The F/V Blue North is the next-generation flagship for the company, assuming the name of the first hook and line freezer vessel in the Blue North fleet, now retired. The vessel stands proud of her namesake, heritage, and leadership, not only for Blue North but for the American fishing fleet as a whole.

The "new" F/V Blue North represents more than 35 years of Blue North's commitment to, and hard work in, the North Pacific fishing fleet. Using only hook and line gear, flash-freezing processed product on board, and using Humane Harvest® technology perfected by

Blue North, she is the most environmentally sound and advanced fishing vessel ever constructed in the United States. There is not another vessel of her caliber, quality, innovative features, and quality of build.

The vessel will produce the highest quality products while preserving the natural nutritious value of the fish. All seafood produced will be branded under the Blue North and Humane Harvest name. The premium product is the wild Alaskan cod fillets – the only frozen-at-sea, line-caught, product-of-the-USA fillets available anywhere.

The seafood produced on board is prepared with as low an impact on the environment as possible, reflecting Blue North's commitment to preserving the oceans and fisheries for future generations. Thank you for joining in the celebration and support of the next generation of fishing vessel technology.

Thank you especially to the Blue North supporters and friends who have assisted in every way to our success – you know who you are. It is not only Blue North that celebrates the christening of the new vessel but you as well.



*Kenny G. Down,
President / CEO
Blue North*



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September 9, 2016

Michael Burns
Patrick Burns
Kenny Down
Blue North Fisheries
2930 Westlake Avenue N, #300
Seattle, WA 98109

Dear Michael, Patrick & Kenny:

I want to congratulate you on the launch and christening of the F/V Blue North. This vessel represents our shared value of and commitment to cooperative and sustainable fisheries.

Blue North, as a company, has shown great leadership by creating one of the most environmentally friendly and safe fishing vessels in the world. By utilizing clean technology and building this state-of-the-art vessel, you are leading the way in modernizing the North Pacific Fishing Fleet right here in Washington.

The commitment Blue North has made to quality craftsmanship in Washington shipyards and maritime manufacturing supports thousands of family wage jobs and billions of dollars in income tied to our diverse maritime industry. By investing in the proud history of innovation in our maritime culture we remain relevant in a changing economy. Together we will work to ensure the resilience of our maritime industry and the prosperity of our shared future.

I want to express my deepest appreciation for your continued leadership and wish you and the crew of this incredible vessel many years of bountiful harvest and safe sailing.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Jay Inslee", written over a faint blue line.

Jay Inslee
Governor



BLUE NORTH HISTORY

Patrick and Michael Burns started fishing out of Cordova in the late 1970s. They got jobs seining for pinks and longlining for halibut out of small skiffs. In 1980, they decided to pool their crew shares and purchase their own boat. After an exhaustive search of West Coast fishing communities, they bought a 65-foot old wooden Chesapeake Bay Oyster boat and converted it to a longliner. For two years they fished halibut and black cod, barely making their payments with a 21 percent interest rate. In 1982, they worked their way into a salmon tendering job in Prince William Sound for North Pacific. This started them into buying herring and salmon tenders.

Blue North was founded in 1983 when they chartered the Northland to buy and process herring and salmon from Ketchikan to Nome. In the late 1980s, they entered the crab fishery by buying crab boats that could also be used as salmon tenders. In the 1990s, they continued to expand their tender and crab fleet until they had approximately 15 boats. There was also a South Pacific

venture that took them to Pago Pago, American Samoa, which lasted for almost 20 years.

In 1994 they purchased a Pacific cod freezer longliner that belonged to Arctic Alaska. They named this boat Blue North. This was the start of the freezer longline venture that has grown to approximately 10 boats today. In the late 1990s, they purchased a crab catcher-processor, and by 2013 they were out of the crab business to concentrate on the freezer longliner business.

After the freezer longliner companies entered a voluntary co-op in 2010, they decided it was time to build a new boat to start replacing the aging fleet of longliners that they owned. They went to Norway to look at their newest vessels and innovations and decided to have a Norwegian firm, Skipsteknisk, design the new Blue North. This new vessel will bring their more than 30 years of experience of operating boats in the North Pacific and Bering Sea to fruition.

– Mike Burns



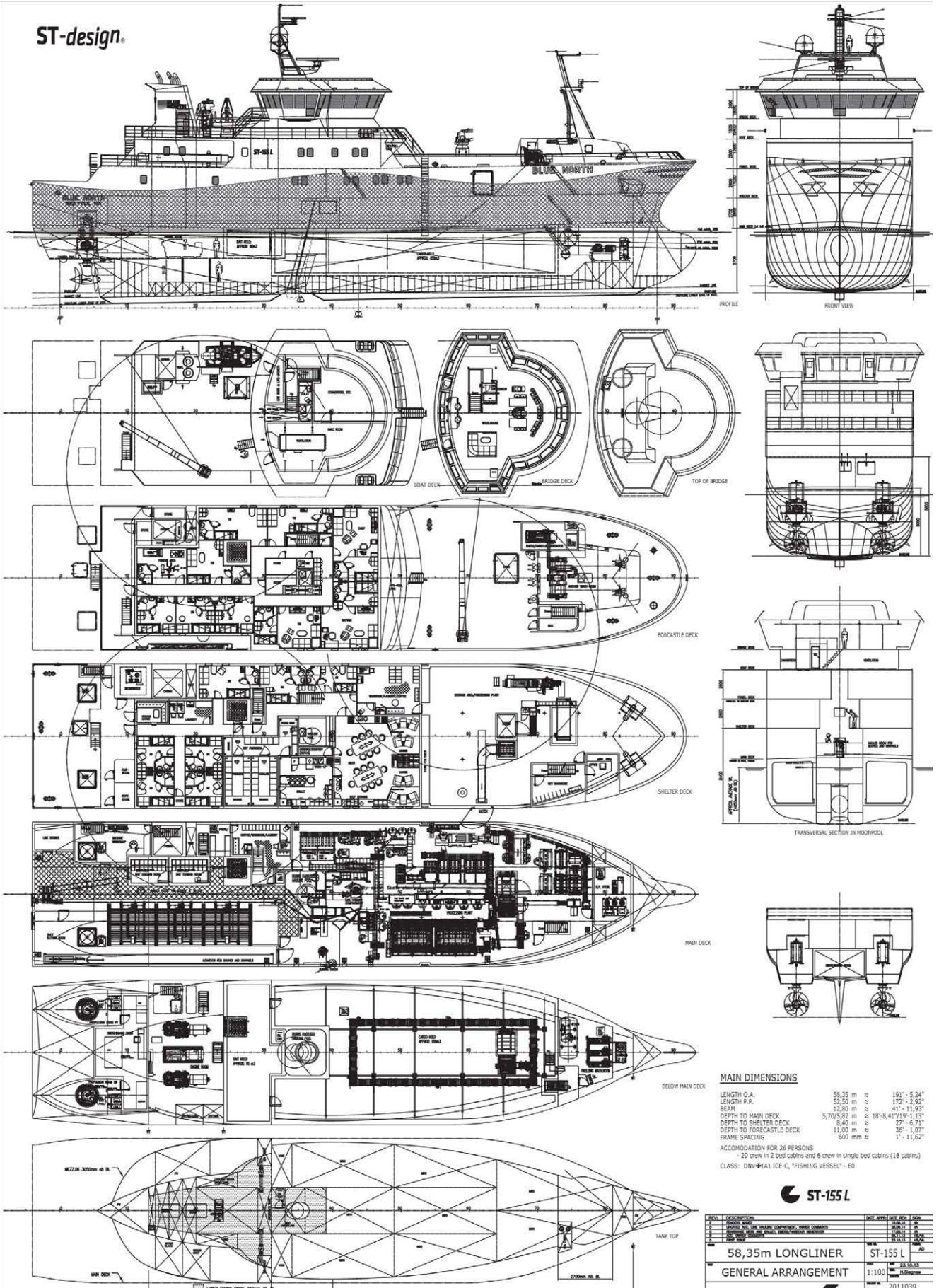
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BLUE NORTH VESSEL DIAGRAM

ST-design



MAIN DIMENSIONS

LENGTH O.A.	58,35 m	191' - 5,34"
LENGTH P.P.	52,50 m	172' - 2,52"
BEAM	12,80 m	41' - 11,93"
DEPTH TO MAIN DECK	5,70/5,82 m	18' - 8,41/19' - 1,13"
DEPTH TO SHELTER DECK	8,40 m	27' - 6,71"
DEPTH TO FORECASTLE DECK	11,00 m	36' - 1,07"
FRAME SPACING	500 mm	1' - 11,92"

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- 20 crew in 2 bed cabins and 6 crew in single bed cabins (16 cabins)
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2	REVISION	2011.03.11	ST	ST
3	REVISION	2011.03.11	ST	ST
4	REVISION	2011.03.11	ST	ST
5	REVISION	2011.03.11	ST	ST
6	REVISION	2011.03.11	ST	ST
7	REVISION	2011.03.11	ST	ST
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10	REVISION	2011.03.11	ST	ST
11	REVISION	2011.03.11	ST	ST
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58,35m LONGLINER
GENERAL ARRANGEMENT
1:100
2011039

SPECIFICATIONS

191FT (58,35M) LONGLINER

OWNERS: Blue North Fisheries

YARD: Dakota Creek Industries, Inc. BN 61

DESIGNER: Skipsteknisk AS

Main Characteristics:

Length over all: 191'-5" (58,35 m)

Length between p.p.: 172'-3" (52,50 m)

Tanks:

Fuel oil capacity: approx. 476,96m³/126.000 gal

Fresh water (potable) capacity: approx. 15m³/4.200 gal

Fresh water (technical, Forepeak and Aftpeak tanks) capacity:
approx. 95m³/25.000 gal

Freezer cargo hold capacity: approx. 850m³/30.000 cu.ft

Freezer bait hold capacity: approx. 95m³/3.300 cu.ft

One passive anti-rolling tank

Class:

DnV +1A1, Ice-1C, "FISHING VESSEL" – EO

Accommodation:

- 26 men in 6 single and 10 double cabins – each cabin has full bathroom & shower
- Messroom with self-serving area
- 2 theater seating, movie and gaming areas
- Exercise Room
- Laundries – main laundry & laundry in each wardrobe room

Main Propulsion System:

Diesel electric propulsion plant provided by Siemens controls & drives, using two SCHOTTEL azimuth twinpropeller thrusters, each powered by a Siemens frequency-controlled AC asynchronous motor of 750 kW

Power Generating Plant:

Caterpillar Engines – Provided by N C Power Systems

- 2 x Generator sets, each 910 kW synchronous generators @1800 rpm
- 1 x Generator set, 500 kW synchronous generator @1800 rpm
- Above mentioned generator sets have Caterpillar diesel engines with Siemens generators
- System primary voltage 690 V/60 Hz
- System secondary voltage 480 V/60 Hz
- 1 x Emergency set 250 kW @1800 rpm – Caterpillar engine & generator

Deck Equipment:

Cranes – Provided by Triplex

- 2 t SWL crane, Outreach 1,2 – 12 m, amidship
- 2 t SWL crane, Outreach 1,2 – 12 m, aft
- Windlass
- Roller fairleads

Navigation, Mapping and Communication:

Provided by Harris Electric

- Furuno FAR2127BB/6 25kW 120nm radar system with ARPA and AIS tracking
- Simrad ES70 commercial bottom-building processor / sounder
- Furuno CI68BB 244kHz Doppler Sonar Current Indicator System
- Furuno WAASP 80kHz system multibeam seabed profiler w/processor and transceiver
- Furuno GP150 5" GPS navigation plotter for basic positioning
- Sailor TT3027 Vessel Monitoring System is a NMFS required piece of hardware for vessel tracking
- ECC GLOBE PC navigation system w/ AIS, TERRAIN, and ROOKERIES is a fishing navigation system
- Simrad OLEX fishing navigation system w/ bottom hardness
- Simrad Ap70 autopilot system
- Dirigo 6" magnetic compass
- Furuno SC50 and SC30 satellite heading sensors
- Icom ID31A05 and ID880H15 UHF radios
- Standard Horizon HX400SIS intrinsic VHF's
- Icom M506 DSC 25 watt VHF Radios
- Morad heavy duty marine antennas for all radios onboard
- Furuno LH3000 30 watt multistation loudhailer
- Furuno FA150 Universal AIS system
- KVH V7 VSAT satellite internet and phone system
- Sailor FB150 satellite internet and phone system (backup)
- ASE IRIDIUM Comcenter satellite internet and phone system (backup)
- Pixel PRO150 XM Radio antenna
- Panasonic DE100 PBX system w/ 38 phones throughout the vessel
- Jotron 4061 sound-powered phone system (emergency phone system)
- Ocean System Deckscan Cameras (12 each)
- Dell 23" monitors
- Extron VGA switcher and controller

Processing Deck Equipment:

Refrigeration – Provided by Highland Refrigeration

Factory Equipment – Provided by Optimar

The vessel to be equipped for processing about 55 tonnes of frozen product per 24 hours. Optimar factory equipment

- Freezing capacity in automatic horizontal plate freezers: 2 x 23t/24h
- Freezing capacity in horizontal plate freezers: 2 x 5t/24h
- Freezing capacity in blast freezer: 5t/24h
- Total freezing capacity: 55t/24h
- Elevators, lifts
- Autoline equipment – Provided by Mustad

Lifesaving Equipment:

- Man Overboard Boat (MOB)
- 2x36 man liferafts

F/V BLUE NORTH: A NEW INDUSTRY STANDARD

By Daniel Mintz

'UNIQUELY AMERICAN'

The history of the Seattle-based company Blue North is rooted in fishing tradition, but its focus is on the future as it launches one of the most innovative and pace-setting freezer longliner vessels in the world.

From harvesting methods to energy use, the 191-foot long F/V Blue North sets new standards for environmental friendliness, efficiency, crew safety, and product quality.

Blue North Fisheries looked to Norway and Europe to model its flagship vessel but developed its own designs for many of the key aspects, producing what company President and CEO Kenny Down described as "a uniquely American vessel."

There is no other vessel like it in the Alaska hook-and-line cod fishery, which it is specifically designed for. Innovations range from the technological – including automatic regulation of energy use – to the philosophical, with harvesting done carefully and humanely to minimize the stress and pain that fish experience.

The F/V Blue North marks the peak of years of progress in the fishing industry, beginning in 1980 when brothers Pat and Mike Burns ponied up their deckhand shares to buy their first vessel – an aging wooden boat that they converted into a longliner.

"This is the culmination of 35 years of fishing and thinking about how to do things better," said Blue

"This is the culmination of 35 years of fishing and thinking about how to do things better." Blue North Vice President and co-founder Pat Burns

North Vice President and co-founder Pat Burns. "And here we are, at this point, with the most efficient, safest vessel we could come up with."

A BETTER WAY TO WORK

The new vessel is one of eight freezer longliners operated by Blue North in the Bering Sea. Construction at the Dakota Creek Industries shipyard in Anacortes, Washington, began with keel laying in the summer of 2013.

The blueprinting process started with trips to Norway and meetings with the vessel's designer, the Skipsteknisk AS consulting firm. "We wanted to build a vessel and make it as efficient and modern as possible," said Burns.

Accompanied by the Skipsteknisk designers, the Blue North team surveyed vessels that were docked for offloading. Those observations shaped many of the new vessel's innovations – including the incorporation of what's known as a "moon pool" facility for hauling in longlines.

"In talking to the skippers on these boats, it was obvious that they had come up with a great idea, where you can haul the line through the center of the

Left to right: Deck Boss Jose Santiago at the gear line; Juan Ortiz at the combi-hauler; Assistant Engineer Kevin Curtis in the engineers machinery space; Deck Boss Jose Santiago with deck hands Tanner Curtis and Joevany Espinoza; Josh Dunham with Mustad at anchor and buoy line hauler



boat while your crew is completely inside the vessel instead of side-hauling over rollers like we do now on our other vessels," Burns said.

Pulling the longline gear out of the water through a 5-foot diameter tunnel at the bottom of the vessel enables crew members to work in a climate-controlled environment and shields them from the hazards of working on deck.

"The F/V Blue North is America's first moon pool vessel and marks a breakthrough for crew safety." Inge Bertil Straume, Skipsteknisk's fishing vessel sales manager

"A couple of these vessel owners told us, 'If you're going to build a new boat and you don't put a moon pool in it, you're crazy,'" Burns continued. "And, of course, people around here think we're crazy for putting it in, but it's a fantastic innovation, and it's the wave of the future."

Blue North refined the moon pool design by radiusing the corners and incorporating other efficiencies in collaboration with Skipsteknisk.

Inge Bertil Straume, Skipsteknisk's fishing vessel sales manager, said the F/V Blue North is America's first moon pool vessel and marks a breakthrough for crew safety.

"Longlining vessels in the Bering Sea are in an environment with strong, high waves and a long window of bad weather during the year," he continued. "To enhance safety, protecting the crew from the big seas and having a stable working platform is very important."

The moon pool's stable location at the vessel's center of gravity allows crew members to work close to the water surface, said Straume. This improves catch rates by reducing the number of fish that slip off longline hooks when they're lifted from the water.



Captain Michael Fitzgerald at the helm

ST-design

Skipsteknisk
GENUINE SHIP DESIGN

Building ships for Alaska

Skipsteknisk has successfully designed, built and delivered more than 50 stern trawlers and longliners over the last 15 years at 15 yards in 7 countries, on time, on budget. We are currently putting the most advanced technology into fishing vessels we are building for Fishermen's Finest, O'Hara Corp and Blue North Fisheries. Let us build your ship!

www.skipsteknisk.no Contact: Inge Bertil Straume | Cell +47 91660011 | ibs@skipsteknisk.no

www.fox.com

F/V BLUE NORTH: A NEW INDUSTRY STANDARD *continued*

Enclosure of the haul area also allows workers to focus on the careful release of halibut and other fish that are caught unintentionally.

The moon pool is one of many of the new vessel's cutting-edge elements. "Blue North has adopted innovations developed in Norway, has made meaningful improvements, and is now taking them to a positive new level halfway around the world," said Helge Slagnes, Skipsteknisk's chief designer, in a press release on the project.

MAXIMUM EFFICIENCY

From the outset, Blue North Fisheries targeted the sources of waste and inefficiency that are common to many vessel systems and addressed them with a variety of technological and design solutions.

"Fuel economy is another important benchmark with this vessel," said Straume. Its molded hull design – another first in the U.S. for a vessel of its type – contributes to that, as the hull's formed shape and lack of sharp angles reduce drag and enhance propulsion.

"It goes through the water very smoothly, with very little water resistance," Straume continued.

Dual twin-bladed propeller units made by the German manufacturer Schottel rotate horizontally for maximum maneuverability. Energy demand is reduced by distributing the power load evenly through each thruster unit's twin propeller system.

The new vessel also uses proven efficient and modernized diesel electric propulsion. Instead of

Chief Engineer, Lee Scholl in the control room



having a main engine driving a fixed shaft propeller, the Blue North uses multiple engines to power generator units, which then drive the thrusters. The electric generators also power all the vessel's equipment and its processing factory.

Designed by Siemens Industry Inc., a German company that has offices worldwide, the BlueDrive diesel electric system's generator units use variable load technology to conserve fuel use.

An associated Siemens power management system adjusts delivery of power to the units to achieve optimal fuel efficiency. Engine operations are controlled to precisely meet load demand.

By optimizing responses to load demand, the Siemens system also reduces the need for maintenance and extends equipment life.

Energy efficiency is further enhanced through a complex "waste energy" recovery system

manufactured by Ulmatec Pyro AS of Norway.

The Ulmatec system was first installed on Norwegian fishing vessels in 2011. The F/V Blue North is the first to use it in the U.S.

Jan Petter Urke, Ulmatec Pyro's managing director, said that with most fishing vessels, only 30 percent of power fed to a diesel engine is actually used for propulsion.

"With an efficient waste energy recovery system, utilizing the energy from both cooling water and exhaust gas, the total energy utilization can be increased from 30 percent to a minimum of 60 percent, giving substantial financial and environmental gains," Urke continued.

The recovery system allows otherwise wasted energy from the engines to be used to heat the entire vessel, to convert salt water into fresh water, and to make hot water.

The Bering Sea cod fishery is under a tightly managed quota system, so the goal of Blue North isn't to harvest more fish, but to use 100 percent of every fish that's caught.

CONGRATULATIONS!



Blue North On The Launch Of Their New Fishing Vessel

NC POWER SYSTEMS



In Washington: 800.562.4735
In Alaska: 800.478.7000



Please take a bow.

Congratulations, Blue North Fisheries! It's been an honor to finance your new vessel. We share your passion for commercial fishing and we're proud to support the industry with reliable, consistent credit and financial services, today and tomorrow.

206.691.2000 | northwestfcs.com/fisheries



This institution is an equal opportunity provider and employer.

Here to Help You Grow™

A variety of companies delivered products and services essential to the Blue North project.

POWERING UP

Seattle-based N C Power Systems supplied the vessel's two 1,333-horsepower Cat C32 main engines, a 600-horsepower Cat C18a unit, and a Cat C9 generator set for emergency backup.

The company also built foundations for the generator ends and provided monitoring equipment that interfaces with the Siemens diesel electric system.

Chris Downs, N C Power Systems' engine sales representative, said diesel electric propulsion systems are used by only a few commercial fishing vessels in the United States. The Blue North "should see substantial long-term fuel savings with the diesel electric propulsion over a standard fixed-pitch propulsion system," he continued.

LINE AND GEAR

The Blue North's moon pool feature is complemented by the auto-baiting and line-hauling gear supplied by Seattle-based Mustad Autoline Inc.

Jahn Hoel, the company's general manager, said the Mustad Autoline SuperBaiter can bait up to six hooks per second and has the highest automatic baiting percentage in the industry, with 97 out of every 100 hooks baited successfully.

A conveyor chain runs bait through the autobaiter machine, which consistently cuts each piece to size. The baiting percentage and line-hauling processes are monitored with Mustad's computer-based

continued on Page 14

F/V BLUE NORTH: A NEW INDUSTRY STANDARD *continued*

Energy-related technology and the use of new Caterpillar engines will yield a 30 percent reduction in fuel consumption and emissions compared to conventional platforms, with the Blue North emerging as the first U.S. fishing vessel to meet the U.S. Environmental Protection Agency's Tier III emission standards.



Caterpillar Engines provided by N C Power Systems

FULL UTILIZATION

Efficiency is also maximized with the Blue North's processing factory. Designed by Optimar, which has operations in Seattle, Norway, and Spain, the factory is fully automated and set up for total utilization of every fish that's caught.

"With this factory, we'll sail with the same amount of people, but instead of having them wrestle with pans of fish and load and unload freezers, they'll be at panning tables putting out a variety of ancillary products," said Burns.

The shift of labor will focus on using all parts of the fish, including the internal organs, to boost productivity. The Bering Sea cod fishery is under a tightly managed quota system, so the goal of Blue North isn't to harvest more fish, but to use 100 percent of every fish that's caught.

Fish will be mechanically deheaded and sent to gutting tables for removal and separation of the internal organs, milt, and roe, which will be used to make various products for Asian and European markets.

Twenty to 25 percent of the fish will be sent through filleting and skinning machines, then manually trimmed, inspected for defects, and size-sorted for shatter packing.



NAFS

A COMPANY IN THE
MORENOT GROUP



NORTH AMERICAN FISHING SUPPLIES, INC.

Congratulations to Blue North Fisheries' beautiful new addition to the commercial fleet. We want to thank everyone involved for choosing NAFS to deliver high quality products and great customer service in gearing up the new F/V Blue North. Here's to fair winds, calm seas and great fishing.

2360 West Commodore Way, Suite 201, Seattle, WA 98199 | p: 206.268.0175 www.nafscorp.com

When Blue North Fisheries decided to build a new vessel, they focused on using high quality, reliable and maintenance friendly equipment. Optimar-Stette is very proud to have been chosen to design, produce and install the complete processing factory for the F/V Blue North.

The factory has the latest technology available on the market. Among other things, the vessel is equipped with humane stunning of the catch, revolving bleeding tanks and a complete H/G and filleting factory with automatic horizontal plate freezers. It is also set up to handle all of its byproduct efficiently.

All of us at Optimar-Stette congratulate the company and the crew on the new vessel. We wish them all a safe and prosperous future!



Optimar US Inc.
Pier 91 BLGD C-155
2001 W Garfield St.
Seattle WA 98119
206.351.9451
ff@optimarus.com
www.optimarstette.com

optimar

Autoline LineController system.

"The new Blue North vessel has the latest and greatest auto-baiting system on the planet," Hoel said.

Supplying line gear is North American Fishing Supplies Inc., the Seattle branch of Norway-based Mørenot Fishery AS. Jamie Eik, the company's sales manager, highlighted his company's manufacturing process, which "starts from scratch" in producing lines, hooks, and crimps.

"We don't source any of it – it's all done by us," said Eik.

WHEELHOUSE ELECTRONICS

Harris Electric Inc. sold and installed all of Blue North's wheelhouse and fishing electronics. Kandi Herrington, Harris' sales and marketing manager, highlighted the pilot house's U-shaped "monitor-driven dash" and its incorporation of a dedicated electronics room.

Located underneath the wheelhouse, the electronics room houses processors that are rack-and-panel-mounted, allowing easy access.

"This will streamline any repairs or upgrades that may be done in the future," Herrington said.

The communications and navigation hardware installed by Harris include Furuno radars, a Simrad sonar system, and a Panasonic digital communication system, featuring 44 phone stations throughout the vessel.

Harris also installed the vessel's ECC Globe navigation software.

QUIETING THE ROAR

The Newberg, Oregon-based Harco Manufacturing Co. built the

continued on Page 16

F/V BLUE NORTH: A NEW INDUSTRY STANDARD *continued*

The boneless cod fillets will be packaged into standard 15-pound shatter pack boxes and automatically loaded into plate freezers. Once frozen, the boxes will be automatically placed into the cargo hold.

The remaining cod will be packaged as head off and guts out dressed fish, then frozen onboard and sent to markets worldwide for further processing.

Frank Flem, president of Optimar US, whose Seattle production and sales office opened in February 2015, said the Blue North is one of four fishing vessels being built in the U.S. that are equipped with Optimar factories.

"The key for us is to have factories that are very ergonomic – easy for the crew to work in," he continued. "And at the same time, they are very automated and have high capacity."

The factory also includes two automatically loading elevators for supplies, groceries, and bait. An additional elevator will lift finished products from the cargo hold to the vessel's deck for automatic placement over the side of the vessel and onto the dock.

The Blue North is the only longliner in the U.S. that has onboard fillet production and automatic plate freezing. Flem described it as "the most modern longliner in the continental United States."

Seattle-based Highland Refrigeration provided the Blue North's power-efficient refrigeration equipment and cargo hold freezer. Under maximum production, the vessel has a freezing capacity of 120,000 pounds of finished seafood products per day.

Highland's freezing system achieves temperatures of minus 10 degrees Fahrenheit in the freezers and continuous sub-cooling to minus 22 degrees Fahrenheit in the cargo hold.

The system also includes a walk-in freezer and cooler, a bait freezer, and a bait conditioning room.

Chef Eric Haynes in the galley of the Blue North

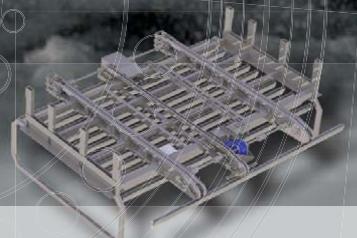


Congratulations to Blue North Fisheries !

***Mustad Autoline is the proud supplier of the latest
Autoline technology on the new Blue North.***

***We want to congratulate Blue North Fisheries on the
completion of this state-of-the-art and first of its
kind longliner. We wish you all the best and look for-
ward to continuing to serve your Autolongline needs.***

Thank you for choosing Mustad Autoline



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AUTOLINE

F/V BLUE NORTH: A NEW INDUSTRY STANDARD *continued*

HUMANE HARVEST

One of the vessel's most striking innovations has been transferred from another industry that Blue North participates in – cattle ranching.

Down noted that ethical treatment of animals has long been required by U.S. laws, but standards for creatures in the sea are lacking. He said it was Blue North Chairman Mike Burns' "flash of genius" to apply humane treatment to the way fish will be harvested on the new vessel.

"In thinking about the way he handles cattle on his ranch versus the way we handle our fish, Mike thought we should put some of those standards in place on our fishing vessels," Down continued.

Mike Burns said that particularly over the last decade, there's been a "regime change on how animals should be treated, and we were very conscious of this in the treatment of our cattle." He considered that in the context of fishing.

"One day I was talking with Kenny about it in light of this new boat, and it just dawned on me – 'Well, we're treating our livestock more humanely, why are we not transferring those principles to how we treat fish?'"



mufflers for the vessel's Caterpillar engines. Dale Gremaux, Harco's sales and marketing manager, said achieving maximum noise attenuation is a primary goal even when space for mufflers is limited.

"We work around that space constraint to make a silencer as noise-critical as possible," Gremaux continued. "Obviously, the last thing the workers want when they're working day in and day out is to hear the dull roar of the engine."

Ballard Insulation of Seattle has been working in the marine vessel field since 1984. Ballard provided the engine exhaust, refrigeration, and

pipe insulation on the Blue North.

"Once everybody else gets their work done, we're the last man in and we make sure we get our work done and get out of the way," said Bob Wagner, the company's president. "The way I look at it, the less conspicuous we are, the better we are."

FUEL SERVICE

The group effort behind the F/V Blue North also includes companies whose services aren't directly related to construction and equipment.

The Covich-Williams company's Seattle terminal will provide the Blue North's fuel, lube, and filter

services. Covich-Williams has been working with the Burns brothers for over 40 years, said owner Mason Williams.

"They've definitely come a long way, from having one little boat to owning a fleet," he continued. "They've done a great job, and we're proud of being able to supply their fuel, lube, and filter needs over years."

FINANCIAL SOLUTIONS

Northwest Farm Credit Services (Northwest FCS) provided a foundational service – the new vessel's financing. A \$10.6 billion

continued on Page 18

HMC

HARCO MANUFACTURING CO.



Congratulations from Harco Manufacturing to all who were associated with the Blue North project!

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SIMRAD
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**HARRIS
ELECTRIC
INC.**

Harris Electric and Simrad would like to congratulate Blue North Fisheries on their new longliner.

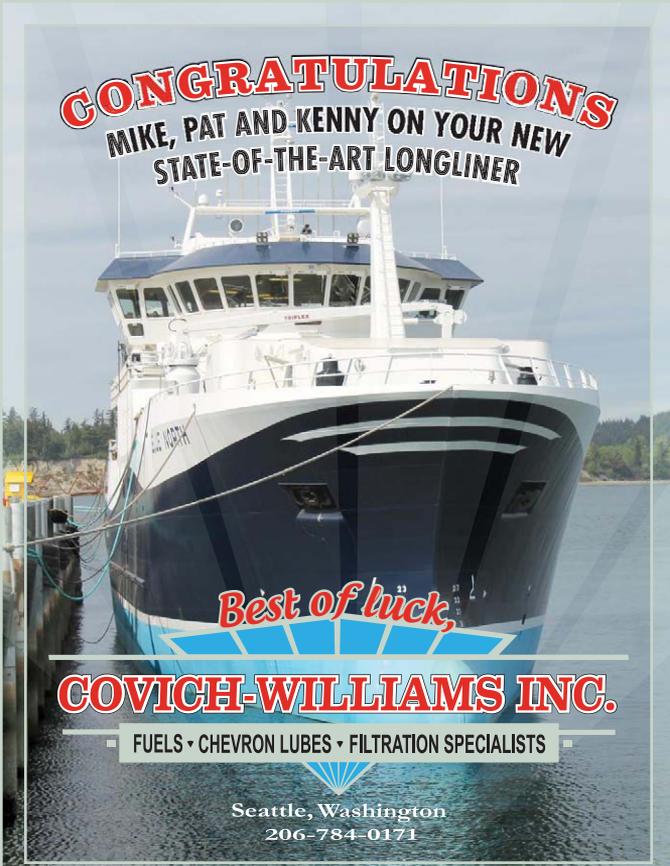
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financial cooperative, Northwest FCS provides financial services to resource industry participants and rural homeowners in multiple states.

Senior Vice President Michael Wittman said Northwest FCS has “a fully dedicated lending team in Seattle that focuses just on the fishing industry.”

Northwest FCS has “a long history of providing financial solutions” to the owners of Blue North Fisheries, he added.

MARINE ADVISER

Finally, DNV GL is a global company with an office in Seattle that performed an important oversight service – confirming compliance with vessel safety and construction standards.

The company’s goal is to enhance safety, quality, energy efficiency, and environmental integrity of the global shipping industry, across all vessel types and offshore structures.

F/V BLUE NORTH: A NEW INDUSTRY STANDARD *continued*

That led to the development of a system that relieves the stress and pain fish experience once they leave the water and are brought onboard.

The system uses electrical stunning to render fish unconscious as they’re taken from the water, prior to hook removal. Part of Optimar’s processing system, the stunner is basically a bed of stainless steel tubes that stun fish with low voltage electrical charges.

Down said the process “puts the central nervous system to sleep,” reducing or eliminating pain.

“Once you remove the stress and all the adrenaline and cortisol, the products are healthier and taste better – so it’s a win-win for both the fish and the consumer.” Blue North Vice President and co-founder Pat Burns

“And there’s no doubt that fish do have stress reactions and react to pain,” said Burns. “A lot of people will argue, no, they don’t, but that’s not our belief and scientifically, it’s been proven that they do have those capacities to feel pain.”

Scientific studies have measured the stress levels through the presence of adrenaline, lactic acid, and cortisol, a hormone. There’s another, more direct way to detect it – through taste.

“Once you remove the stress and all the adrenaline and cortisol, the products are healthier and taste better – so it’s a win-win for both the fish and the consumer,” Burns said.

Blue North Fisheries seeks to promote this consciousness through its Humane Harvest Initiative, which was kicked off with a panel discussion at the 2015 Seafood Expo in Boston. The initiative will strive “to increase the recognition of fish as sentient beings deserving of ethical treatment by encouraging harvesters to take all steps possible to reduce stress, pain, and fear from capture to processing,” according to its mission statement.

All the fish products from the F/V Blue North will carry the Humane Harvest Initiative label – a certification that could become sought after in the future.

“Quite frankly, the industry is adverse to change in a lot of ways, and of course this is a big change,” said Burns. “But eventually, they’ll come around, just like it happened in the cattle industry. They’ll come around and realize it makes for a better product, and it’s going to be worth doing.”

Left to right, top to bottom: Factory Foreman, David Kent at auto plate freezer controls; Baader fillet machine; and factory controls





SIEMENS

Ingenuity for life

Blue North Fisheries modernizes its fleet

Siemens helps save up to 30% in annual fuel and maintenance costs.

Blue North Fisheries (BNF) based in Seattle, operates five fishing boats called “freezer long liners” in the Bering Sea and Gulf of Alaska and one smaller seiner in Alaska, Washington and Oregon. BNF’s vessels range from 180-feet long with 23 crew members to smaller seiners at 58-feet with a crew of six. Established in 1983, BNF currently has 300 employees. It harvests and sells more than 20,000 metric tons of fish and fish products each year.

The Challenge: To design a vessel that delivers the most premium fish products for each measure of fuel burned in the most environmentally friendly, efficient and reliable way.

BNF’s fishing fleet is out to sea most of the year, harvesting from ocean depths of 300 feet or more. Weather is often brutal, with waves up to 20 feet or more constantly washing corrosive salt water over the decks.

Maintenance can’t be deferred and vessels can’t be at port too long, since they’re the source of the company’s product — and revenue. Still, with the harsh conditions, the boats are in constant need of maintenance and repair. At the same time, the vessels’

diesel engines, which are also old and inefficient, cost hundreds of thousands of dollars to fill. With maintenance and fuel costs rising, BNF’s management decided to modernize their fleet. Even more, they decided to build one of the most environmentally friendly and technologically advanced fishing vessels in the world.

Solution: A next-generation long lining fishing vessel with diesel-electric propulsion (DEP) featuring a Siemens BLUEDRIVE™ SISHIP LV drive system.

The first new vessel, which is christened the “FV Blue North,” is designed by Skipsteknisk AS, a

Norwegian Naval Architect. Its center hull features a breakthrough fishing concept called an “internal hauling pool.” Inside this weather-protected enclosure, BNF’s crew will haul in the long line, reducing fish losses and enjoy much more safety, even in the worst weather.

Results: Fuel savings and overall reduction in OPEX and faster ROI — and a revolutionary model for the entire fishing industry.

It is estimated that the Blue North equipped with Siemens BLUEDRIVE technology will save up to 30 percent in fuel consumption and help reduce diesel engine maintenance costs compared to other DEP systems now on the market. For BNF, the savings will help improve profitability. The new vessel’s ability to process more of each fish that’s caught means BNF can sell once-discarded parts, thereby boosting profits.

BNF’s new vessel will enable it to provide a better quality product to stores and their customers.



The FV Blue North, expected to be in operation and fishing by the fall of 2016.

**F/V BLUE NORTH:
A NEW INDUSTRY STANDARD** *continued*

CREW COMFORT

Though its technological innovations are impressive, the Blue North will still be dependent on a human element – its staff.

Filling crew positions for Bering Sea fishing can be difficult, and on many vessels, onboard space is limited and multiple crew members share single rooms.

The Blue North's accommodations for its 26 crew members are probably unrivaled in the Bering Sea, however. Each of the new vessel's staterooms houses one to two crew members, and each includes a port window, seating area, lockers and drawers, a phone, and a full bathroom with a shower.

The galley and dining area includes two small theaters for movie viewing and gaming, one on the port side and one on the starboard side.

The vessel's pilot house has a series of wrap-around windows for a full 360-degree view, and monitoring screens provide underwater views. Alarms, safety-



Top and bottom: Chief's Stateroom

FISHERMEN'S TERMINAL

CONGRATULATIONS
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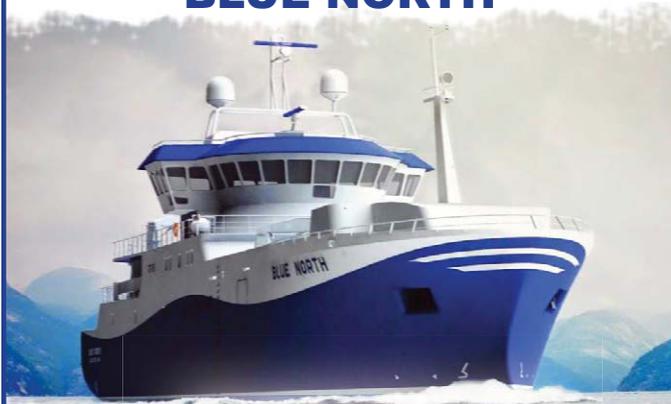
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## CLASSIFICATION RULES

**DNV GL is proud to be the Classification partner for the BLUE NORTH. This vessel delivers new technology and sets new standards for safety and production at sea.**

DNV GL has developed new Classification Rules for U.S. Fishing Vessels with input from the fishing industry. These rules provide a practical, cost effective, and tailor made framework for improving safety while meeting these requirements.

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## F/V BLUE NORTH: A NEW INDUSTRY STANDARD *continued*

monitoring equipment, an observer station, and a communications station round out the bridge's facilities.

With its innovations contributing to a superior working atmosphere, the Blue North is likely to attract some of the very best staff working in the North Pacific.



*F/V Blue North docked at the Dakota Creek Shipyards, awaiting christening*

### **'UNLIMITED POSSIBILITIES'**

Blue North Fisheries' \$36 million investment in the new vessel is part of an overall turning point in the company's history.

Under a recent agreement with Prowler Fisheries, Blue North will manage five hook and line catcher-processors in the Bering Sea, Aleutian Islands, and Gulf of Alaska.

Blue North Trading, a wholly owned Blue North subsidiary, will also market and sell all of the frozen-at-sea products from the Prowler vessels.

As that effort ramps up, the F/V Blue North will begin fishing in early October. The vessel's launch advances Blue North Fisheries as an industry trendsetter.

"It's a one-of-a-kind vessel," said Pat Burns. "We're breaking trail with this boat, and there are unlimited possibilities for the future with it."

## CONTRIBUTING VENDORS

### **COVICH-WILLIAMS**



Covich-Williams Inc. has been a family-owned business for over 40 years on the Salmon Bay Canal.

The company has worked with Blue North Fisheries for over 30 years, providing fuel, filtration, and Chevron lubricants. Covich-Williams fueled the new F/V Blue North during construction at Dakota Creek Shipyard.

Specializing in marine fueling and heavy-duty filtration needs, they are one of the top Chevron marketers in the country, requiring highly trained sales people to ensure high-quality service for all lubrication needs.

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We undertake single components or complete turnkey projects, containerized or prefabricated refrigeration systems. Our expertise covers low temperature cold storages, -76° F (-60° C), complete integrated refrigeration systems for processing lines, semi-automatic plate freezers, and blast freezers of any kind.

Highland Refrigeration works directly with the world's leading suppliers of components, including Danfoss valves and controls, GEA and Mycom screw compressors, Bock reciprocating compressors, DSI and Freezertech plate freezers, BUUS and Northstar flake ice machines, leading manufacturers of custom evaporators and evaporative condensers, as well as titanium condenser and chiller manufacturers, making this well-engineered equipment available at competitive prices and with full service backup. Our five refrigeration engineers bring a total

of more than 80 years of experience, both as customers and suppliers.

Highland Refrigeration has strong ties to the world's leading refrigeration engineers and utilizes the vast experience we have available. At the same time, our lead employees participate in worldwide refrigeration conferences and exhibitions, staying current in the technical forefront with the latest industrial development within safety and energy efficiency standards.

Our highly experienced Engineering Department is fully capable of making the calculations and design determinations required to support our customers – for example, in converting existing Freon systems to natural refrigerants. We have a strong team of engineers to assist and ensure that our customers are in compliance with regulatory requirements for industrial refrigeration systems, classifications, and Process Safety Management. Our experienced Service Department is available for service and follow-up wherever it's needed. We carry a large stock of spare parts including ice machines and screw and piston compressors in Seattle to support our products and systems.

Our success is based on the quality of our products as well as the excellent customer service we provide. We can be reached 24 hours a day, seven days a week, for service and parts.

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## DNV GL MARITIME



DNV GL is a global company with an office in Seattle that performed an important oversight service – confirming compliance with vessel safety and construction standards.

DNV GL is globally recognized as a leading classification society (an authorized non-governmental organization that sets and maintains operations and construction standards) and advisor for the maritime industry.

The company's goal is to enhance safety, quality, energy efficiency, and environmental integrity of the global shipping industry, across all vessel types and offshore structures.

Together with the industry, DNV GL invests heavily in research and development, leading to solutions that address strategic, operational, or regulatory challenges.

The company's services are applied to both new vessel construction projects and vessels in operation. DNV GL has 300 offices and employs 3,000 surveyors worldwide to advance the maritime industry's construction, energy conservation, and safety performance.

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Ph 206.387.4200

## HARRIS ELECTRIC, INC.



Harris Electric Inc. is headquartered in Seattle, adjacent to the city's Fishermen's Terminal industrial maritime hub, and also has two branch facilities in Alaska.

Family-owned since 1928, Harris Electric provides design, engineering, sales, and installation services for all marine electronics and electrical systems.

The company's services range from troubleshooting assistance on parts and equipment to complex, high-profile work such as the marine electronics installation on the F/V Blue North.

Harris Electric's contributions to the Blue North project included sales and installation of the vessel's fishing and pilot house electronics. The pilot house is unique for its U-shaped bank of monitors and inclusion of a full lower-level electronics room for easy access to cables, processors, and panels.

The company also installed all of the vessel's communications hardware and its radars, sonars, navigation software, and digital telephone system.

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# CONTRIBUTING VENDORS

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Based on experience, knowledge and tradition we develop solutions that are innovative and durable even in the roughest conditions. We work closely with our customers in R&D, engineering and service throughout the solutions' lifetime. We strive to learn from our customers to better understand the longline fisheries and the day-to-day tasks to be able to deliver integrated solutions that improve the longline fishing.

Mustad Autoline is the proud supplier of the latest Autoline technology on the new Blue North, which includes our latest SuperHauler, SuperBaiter, LineController, and MagPacker storage system. This is the ninth Mustad Autoline System delivered to Blue North Fisheries. A Mustad Autoline DeepSea System is customized for boats from 70 feet with the ability to fish with over 75,000 hooks per day, setting and baiting up to six hooks a second, with a baiting percentage averaging 95 to 97 percent.

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*Pacific Fishing* would like to thank Blue North for the opportunity to be part of the christening of the F/V Blue North. Your journey is only beginning and we wish you many years of successful fishing.

*Pacific Fishing* provides readers with information they need to run efficient, profitable, and sustainable fishing operations. We cover markets, resources, technology, politics, emerging challenges, opportunities and trends.

We love being part of this dynamic industry and will continue to support the fishermen and businesses through our magazine.

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Optimar-Stette designed, produced and installed the complete processing factory for the F/V Blue North using the latest technology available on the market. Among other things, the vessel is equipped with humane stunning of the catch, revolving bleeding tanks and a complete H/G and filleting factory with automatic horizontal plate freezers. It is also set up to handle all of its byproduct efficiently.

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## ULMATEC PYRO



**ULMATEC**

The new longliner F/V Blue North for Blue North Fisheries will be the first fishing vessel in the U.S. to install the new generation of the waste energy recovery system from Ulmatec Pyro in Norway, a system that will reduce fuel consumption as well as emissions by exploiting excess heat from the exhaust and cooling systems on board.

On many ships only 30% of the energy in the fuel is utilized efficiently. For every 1,000 kW of energy supplied to a diesel engine, only 300 kW will normally be used to drive the ship.

"With an efficient waste energy recovery system, utilizing the energy from both cooling water and exhaust gas, the total energy utilization can be increased from 30 percent to at minimum 60 percent, giving substantial financial and environmental gains," said Jan Petter Urke, managing director of Ulmatec Pyro.

"Our waste energy management system mobilizes this otherwise lost energy for use on other applications. We see a great many opportunities for huge savings by transferring energy consumption from electricity to waterborne heat," Urke emphasized.

He pointed out that surplus heat has many applications, from warming accommodation areas, tank heating, de-icing of decks, stairways, and railings to ballast water treatment.

"The annual savings on fuel and emissions can be substantial for Blue North Fisheries. Most of the year F/V Blue North probably will not use additional fuel to generate energy for heating on board by utilizing the waste energy in the exhaust and cooling water," said Urke.

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## SERVCO PACIFIC INSURANCE



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NAFS is staffed with highly skilled and motivated professionals who know the urgency of getting back out to the fishing grounds. In between seasons we carry out inspections, maintenance and replacement of sections, so that you always have first class fishing gear ready when you need it.

We would like to congratulate Blue North Fisheries for the progress of building the accomplished F/V Blue North. This is a great addition to the commercial fishing industry and our Pacific NW community with the use of new technologies and environmental low-impact thoughtfulness. We are proud to support Blue North Fisheries and their thriving future.

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Northwest Farm Credit Services provides flexible financing to meet the unique needs of commercial fishermen and aquaculture operations. In addition, we offer exceptional service with a dedicated staff experienced in all major fisheries of the West Coast and Alaska. We finance vessel purchases and new vessel construction, quota shares, permits, equipment purchases, repowers, refrigeration systems, and real estate. We also offer refinancing, lines of credit, beginner programs, payment schedules, and loan terms that help manage interest rate risk.

As the primary lender to Blue North since 2006, we are especially proud to partner with this company and to have provided the construction financing for this boat. We are excited to see the result of all the hard work and effort that went into planning, engineering, and constructing the vessel.

Northwest Farm Credit Services congratulates Blue North Fisheries on the completion of their new fishing vessel, Blue North. Our dedicated fisheries lending team in Seattle is happy to join the owners and crew of the new Blue North in sending this fine fishing vessel off to Alaska's fishing grounds.

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The Port of Seattle is excited to be a part of the celebration for the F/V Blue North and looks forward to seeing the vessel at Fishermen's Terminal for years to come.

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Congratulations, Blue North! The new freezer longliner is a safe and ecofriendly vessel.

The diesel electric propulsion system comprises two highly efficient SCHOTTEL Twin Propellers (750 kilowatts each), providing the vessel with utmost thrust and maneuverability. Both azimuth thrusters are controlled by the SCHOTTEL Masterstick. This control system makes steering easy: The moving direction is predefined by the shifting direction of the Masterstick lever. Besides simplifying the control of the vessel, this system reduces steering corrections, thus contributing to the fuel efficiency of the propulsion system.

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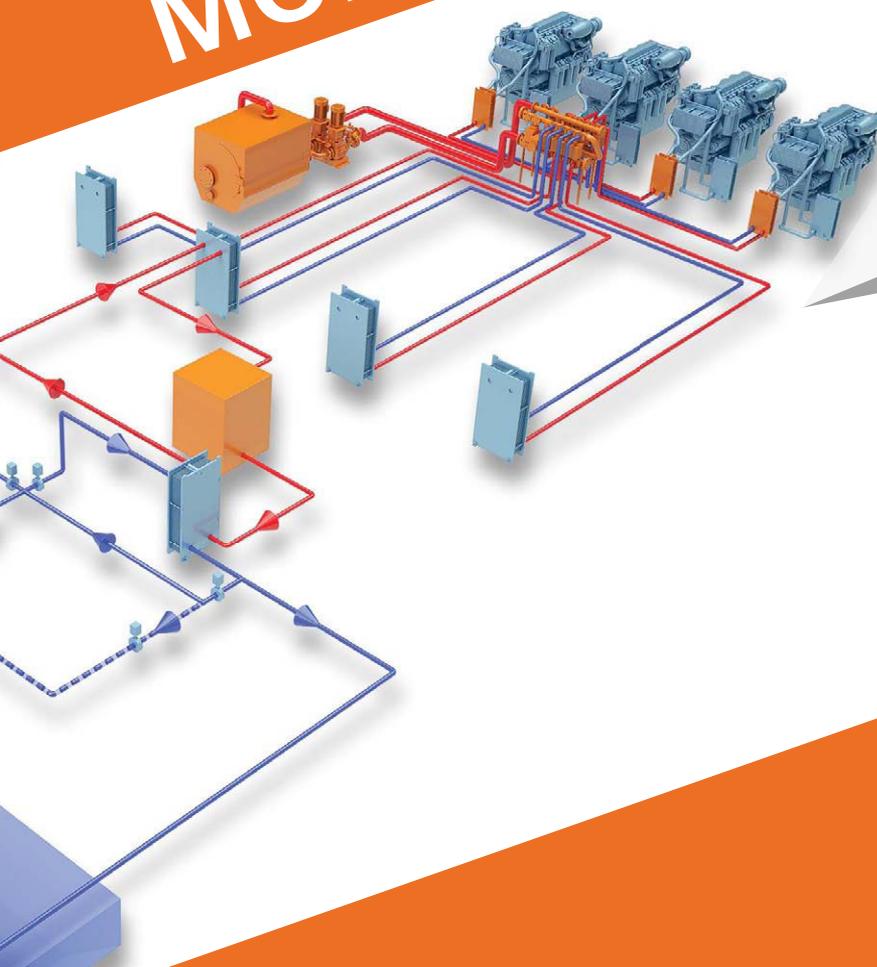
The company was established in 1976, and over the years specialized vessels have been built to our ST-designs for ship owners all over the world. At present, Skipsteknisk keeps an order portfolio of 20 new buildings including four designs for the U.S. deep-sea fisheries.

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# Reborn beauty: Defender ready to pump pollock in Alaska



Here's the new Defender on July 14, ready for a fresh start as an Alaska pollock trawler. Prior to her recent conversion at the **Patti Marine Enterprises** shipyard in Pensacola, Fla., she was an East Coast herring and mackerel vessel known as the *Western Venture*. The 170-foot Defender is different in that it will pump aboard the catch rather than haul the heavy net on deck. She'll be "the largest wet fish hold capacity vessel in the United States," says Seattle-based operator Global Seas LLC. Bristol Bay Economic Development Corp. has an interest in the boat. Jeff Pond photos



# Q&A Essential Fish Habitat: A smart investment for sustainable fisheries

*Editor's note: This NOAA Fisheries article originally appeared July 5 on the agency's website.*

Fish habitat earned legal respect 20 years ago when Congress added it to the Magnuson-Stevens Fishery Conservation and Management Act, the nation's main fisheries law.

In the following interview, Eileen Sobeck, who has headed NOAA Fisheries since 2014, talks about the role of Essential Fish Habitat (EFH).

## Q: Why is habitat important to the fish we catch?

**A:** Fish aren't just sitting there in the ocean waiting to be extracted. They are living in an environment, in a habitat, just like terrestrial species. To pretend that there will always be fish out there if their habitat is destroyed or polluted or otherwise compromised would be naïve.

## Q: What does habitat mean to you?

**A:** I've been snorkeling on coral reefs since childhood. I've been lucky enough to go diving and snorkeling all across the United States and the world. Just last month, in Hawaii, I managed most mornings to go snorkeling outside my hotel. You can't help but understand the concept of habitat supporting an entire ecosystem when you see a coral reef.

## Q: We've reached 40 years of the Magnuson-Stevens Act and 20 years of its Essential Fish Habitat provisions. What's exciting about these anniversaries?

**A:** I think that the Magnuson-Stevens Act doesn't get the credit it deserves as a conservation success story. We're near the lowest number of overfished stocks and near the highest number of recovered stocks. And we're at or near the highest levels of economic value of landings and number of jobs that are supported by fisheries. Those two sets of facts, juxtaposed, show that you can both recover and conserve fisheries and allow them to be even more successfully economically exploited. Recovery and commerce are not mutually exclusive.

With adding EFH 20 years ago, and in 2007 a serious set of amendments that increased accountability for overfishing, this statute allows us to actually show what the successes are. We've gone from having relatively unrestricted foreign fishing in our 200-mile zone to having carefully managed fisheries, where we have corrected for historical overfishing. We are among the most sustainably managed fisheries in the world. That's a huge success story. It's been a good investment for the American people.

## Q: How does habitat fit into our success at addressing overfishing?

**A:** For many years, a common complaint we heard was that we were more focused on cutting back fishing and not on other activities that might help increase fish populations, such as improving fish habitat. Before Essential Fish Habitat was designated, it was very difficult to figure out how to address those other factors, like habitat, especially when overfishing practices were such an obvious concern. There was a feeling of "get your own house in order first."

Today, overfishing has been largely addressed. Commercial and recreational fishermen should be proud of the sacrifices they have made in order to get fish stocks to a point where they aren't subject to overfishing. This gives us some breathing room to focus on habitat.

## Q: How effective are Essential Fish Habitat policies as a tool for conservation?

**A:** EFH continues to be a highly valuable, key provision in the Magnuson-Stevens Act that opens up possibilities. There's a direct opportunity to have an impact through EFH consultations – assembling the facts, getting the science right about the importance of habitat, where it is, drawing those relationships between the habitat and the actual animals in their life stages, and making sure that information gets out there.

Our focus here in NOAA Fisheries is really on fisheries-related habitat. EFH helps us stay on target, and I'm especially proud when we use that authority to support conservation priorities, like those in our Habitat Focus Areas. In those specific places, we're really trying to make a difference in order to benefit fishery resources and coastal communities as we face environmental changes.



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**Q: What's the fishing industry's perspective on a changing environment?**

**A:** I was very pleased when I got here and realized that fishermen were not resistant to talking about climate change and the changes that they've seen in the ocean. Because they work every day in the same areas, they've seen it and recognize the changes in fish patterns. There was not an overall denial that nothing different is happening in the ocean.

**Q: What's your vision for the next 20 years of fisheries management, and what role does Essential Fish Habitat play?**

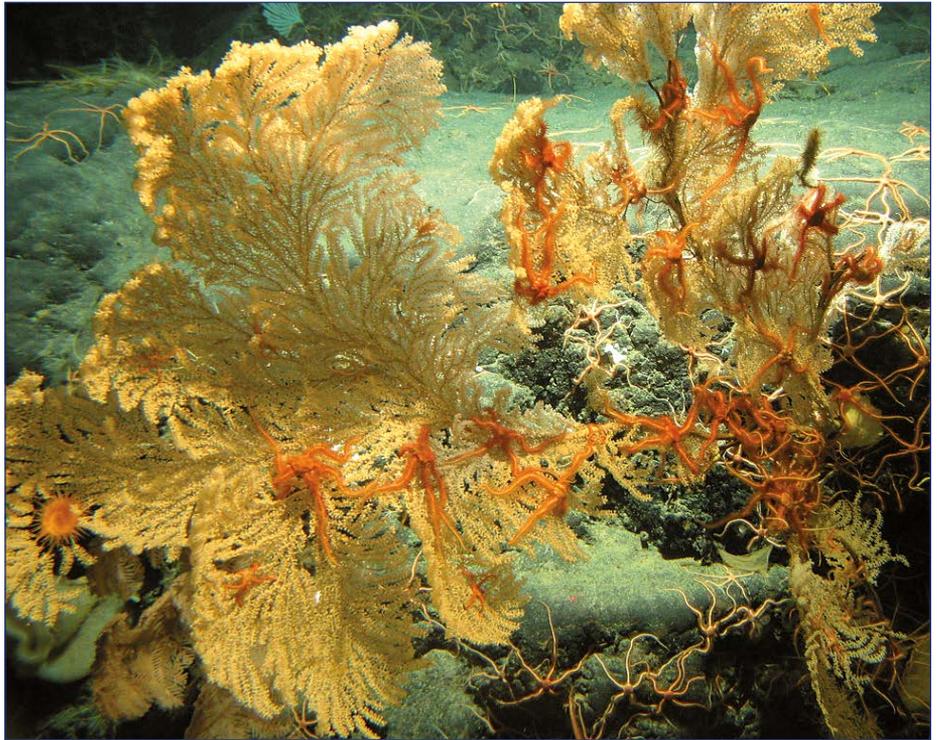
**A:** The challenge for EFH is how to deal with the fact that the ocean environment is changing. We're doing a lot of interesting modeling about which fish species are most likely to be affected by changing ocean temperatures or ocean acidification.

I don't think there's going to be a one-size-fits-all for EFH. There's an opportunity to get the habitat science right and make sure that information gets out there. EFH will be important as we implement ecosystem-based fisheries management and work to identify hotspots of fisheries productivity.

Also, the future of aquaculture is going to be an important chapter in the next 20 years of fisheries management. It will be a challenge to maintain wild fish and their required habitat needs, while aquaculture develops in a compatible way. I think that is possible.

**Q: What should we be teaching the next generation about conserving fish habitat?**

**A:** The general idea of connectedness. You can't dump millions of barrels of oil into the Gulf of Mexico and think that it's not going to have an effect on wildlife. If you pollute the place where you live, you're not going to grow up healthy and strong. I think kids get that connection way more than a lot of their parents do. Many individuals are less and less connected to their physical environment and the great outdoors. We can help in making that connection. ↓



Large primnoid coral loaded with brittle stars on Dickins Seamount in the Gulf of Alaska. NOAA photo

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# Federal scientists survey Bering Sea skate nurseries

NOAA Fisheries scientists are in the midst of a survey on the eastern Bering Sea slope to try to identify the most critical areas used by skates as nursery grounds.

The information gleaned from this summer's data collection and the work by fishery observers on commercial fishing vessels will help fishery managers determine what areas, if any, need protection.

"We are looking at whether nursery areas are unique by species," said Jerry Hoff, a fishery biologist with NOAA's Alaska Fisheries Science Center. "We are also using a computer model to predict locations with the best oceanographic features for nurseries. At the same time, fishery observers are collecting data on the condition of egg cases, by species, caught in commercial catches. If there is a high percentage of live embryos to empty egg cases found, then the probability of nursery habitat disturbance is high and fishing may have a negative impact."

**What are skates?** Skates are related to sharks. Like sharks, they are long-lived, slow growing, and don't produce offspring until late in life.

While there are no directed fisheries in Alaska for skates, skates are still vulnerable to fishing and environmental change.

Skates use the same areas time and time again to lay egg cases on the sandy seafloor. Commercial, bottom-tending fishing gears can interact with egg cases. An egg



A small Alaska skate with a tag attached to the left wing. NOAA Fisheries photos

case may have "horns" and these become entangled in net webbing or are simply swept and relocated by longline gear - like pulling a hose across freshly mowed grass. In this instance, the egg cases are likely intact but redistributed.

Commercial fishers prefer to avoid eggs cases, since interacting with cases costs time to clean them from nets.

"Skate egg cases look like little pouches made of algae, but they are made of keratin like your fingernails," Hoff said. "These egg cases are laid in distinct locations along the upper continental slope near underwater canyons we call nurseries."

**HAPC designations:** In 2015, the North Pacific Fishery Management Council designated eight skate nurseries as HAPCs, or "habitat areas of particular concern."

The designation comes under the Essential Fish Habitat section of the Magnuson-Stevens Fishery Conservation and Management Act because the nurseries are ecologically important to the species.

However, before any conservation measures can be developed for the skate nurseries, the council needs more information.

What makes an area appealing to skates to use as a nursery?

On the slope, temperatures may vary by only half a degree Celsius over an entire year, providing optimal conditions for the survival of skate embryos.

In shallower waters, temperature shifts

are more dramatic due to warm summers and ice-covered winters. Alaska waters are unique, as incubation is thought to be linked to water temperature. Cold waters lengthen the time needed to hatch an egg (three to five years), as compared to warmer-water skate species.



A skate egg case with horns, which can become entangled in fishing gear.

Bottom currents also play a role in providing ideal skate habitat. Known nurseries are located near canyon heads. In these areas, continual water flow prevents sediments from accumulating on the egg cases, which incubate for over three and a half years.

Over the past 13 years, Hoff has discovered 25 skate nursery sites for four species in Alaska waters. His work this summer will help resource managers home in on what areas are most important to skate reproduction and survival. ↓

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# The 100-year struggle to rename black cod ‘sablefish’



“What’s in a name? That which we call a rose by any other name would smell as sweet,” pondered Juliet as she swooned for Romeo.

Fishermen, brokers, and the U.S. Bureau of Fisheries considered a less romantic, yet similar, question in 1916: “Would a black cod by any other name sell better?”

And thus began the now 100-year-old odyssey to call the black cod “sablefish.”

Black cod were first noted by white folks intent on naming and classifying the animal kingdom back in 1811. According to Dr. H.F. Moore in a 1917 publication, “The only name which it bore was the barbarous one used by the Indians,” a name which he regrettably does not mention.

For the next century, black cod became the species’ moniker, even though fishermen knew that sablefish were clearly unrelated to the more commonly known cod.

**Tossed overboard:** Millions of pounds of black cod were caught as bycatch by fishermen who were longlining for halibut. The fish were tossed back into the sea since they took up space in the dories, which would otherwise be filled by much more valuable halibut. It wasn’t until 1912 that landings were reported in federal registers, even though savvy cooks knew it to be a superior fish. Black cod had an image problem, which generally was attributed to its name.

According to a December 1916 article published in *Pacific Fisherman*, “The general feeling (is) that the present name is a misnomer and a decided handicap in its marketing.” The article noted that consumers who “want a cod are always disappointed upon purchasing it, while the many consumers who want a rich fish, such as is the black cod, refuse to take it because of the fear that it would be what its common name implies – a dry-meated fish.”

But black cod are scrumptious. William Calvert of San Juan Fishing & Packing stated, “It is recognized as one of the best fishes we have on the Pacific coast, and as I have repeatedly said in the past, the greatest drawback to the development of a market for it has been its name. As far as we know there are large quantities available, and what we need now is a fish that can be marketed at a low price as compared with halibut and salmon.”

**Marketing campaign:** It was delicious, affordable, and abundant. All black cod needed was a champion. So, John N. Cobb,

then editor of *Pacific Fisherman*, worked to convince the Bureau of Fisheries to launch a marketing campaign in 1916. The first step was renaming black cod as sablefish. (I presume this name was selected because sable was a luxury fur and the most desirable pelts were black.)

Next, the Bureau of Fisheries created display cards for use in sales and published a bulletin, “The Sablefish: Alias Black Cod.” Within, the author lauded the attributes of sablefish and included 33 recipes. “Barbecued” sablefish was quite popular, which was akin to kippering. A home economics professor from the University of Washington is quoted as saying, “It is suitable for the humblest home on account of its price and for the millionaire’s table from its fineness of texture and delicious flavor.”

The next summer, the secretary of commerce presented President Woodrow Wilson and his D.C. cabinet with sablefish, shipped on ice from Puget Sound. The fish “were much appreciated and highly regarded.”

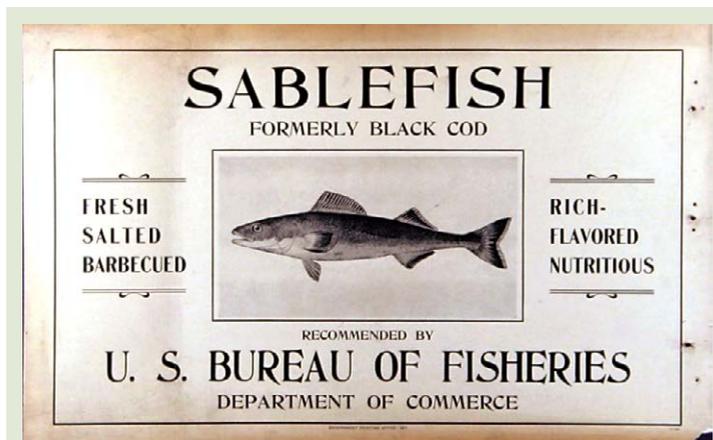
These branding efforts were rewarded. Several small boats geared up to go fishing specifically for sablefish. Larger halibut schooners also started bringing back what until just recently had been an incidentally caught species. From 1916 to 1917, the landings of sablefish increased from 304,000 pounds to 1,020,000 pounds.

Sablefish were one of the cheapest fish on the market. A Seattle fish broker noted that “it is a fish that will reach the poorer people, until the

demand grows, as it no doubt will, to such an extent as to advance the price.”

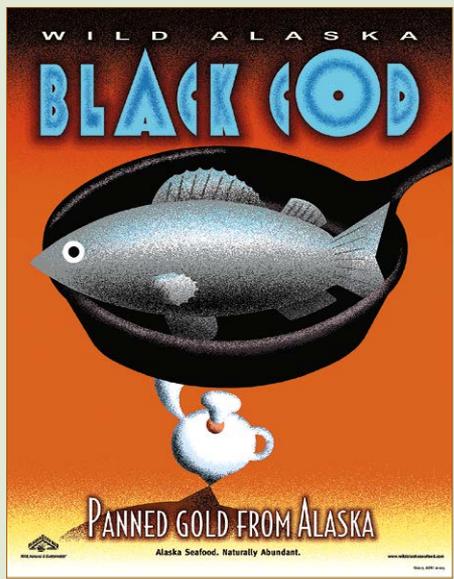
Between 1916 and 1917, the price increased only a smidgen, from 3.6 cents a pound to 3.7 cents a pound.

Now, 100 years later, we still aren’t sure what to call the creature, but at well over \$6 a pound, most of us are happy to just get a few collars thrown our way from fishermen friends.



▲ An ad the U.S. Bureau of Fisheries issued in 1917 to introduce the new name for black cod.

▶ A contemporary marketing poster from the Alaska Seafood Marketing Institute.



*Anjuli Grantham is a freelance public historian based in Kodiak. She directs the Alaska Historical Society's Alaska Historic Canneries Initiative. Read more of her work at [anjuligrantham.com](http://anjuligrantham.com).*

# Bristol Bay sockeye fishery takes big value jump

**Lucrative haul:** The Bristol Bay salmon fishery finished strong with a catch of more than 37.5 million sockeye.

The major processors sent fishermen home with a base price of 75 cents per pound, a substantial improvement over last year's 50 cents.

The Alaska Department of Fish and Game has yet to estimate the value of this season's sockeye haul. But assuming a conservative average weight of 5.5 pounds per fish, the 2016 sockeye catch could tally about \$155 million ex-vessel.

That compares to \$92.4 million for the 2015 harvest of about 35.7 million sockeye. The baywide average sockeye weight in 2015 was 5.2 pounds, the smallest in 20 years.

Bristol Bay sockeye historically has been Alaska's most valuable salmon fishery.



**Vessel seizure:** Alaska Wildlife Troopers in Bristol Bay said that on July 22 they located a commercial fishing vessel, the Sokol, with a net deployed more than 4 miles from legal fishing waters, up the Kvichak River.

"Pursuant to a search and seizure warrant, the vessel was seized and pulled out of the water," the troopers said.

The operator of the vessel was identified as David F. Martushev, 22, of Homer.

An investigation was ongoing and charges were pending at press time.



**Fishing permit transfers:** The Commercial Fisheries Entry

Commission is proposing a regulation change to "allow the temporary emergency transfer of an entry permit to avoid hardship when an intent to permanently transfer the permit cannot presently be fulfilled in spite of substantial, good faith efforts to do so."



**Pink buy:** The U.S. Department of Agriculture on July 27 announced another major purchase of canned pink salmon. The agency bought 250,800 cases (24 tall cans each) for a total of nearly \$10 million.

The salmon is for distribution to child nutrition and other domestic food assistance programs, the USDA said.

The agency bought nearly \$5.5 million worth of pink salmon from Ocean Beauty Seafoods, almost \$3.6 million from Icicle Seafoods, and about \$881,000 from Trident Seafoods.

All three Seattle-based companies are major salmon processors operating in Alaska.



**Sablefish pots:** The National Marine Fisheries Service on Aug. 8 published a notice inviting public comment on a proposed amendment allowing the use of pot gear in the Gulf of Alaska sablefish individual fishing quota fishery.

Pots could offer an advantage over the longlines traditionally used to catch sablefish. Whales stealing hooked fish off longlines has been a problem for fishermen. But the whales can't get at sablefish enclosed in a pot.

Comments are due by Oct. 7. Read the notice at [tinyurl.com/hgv5u8x](http://tinyurl.com/hgv5u8x).



**Kelp cultivation:** The state Department of Natural Resources was considering an application for a land use permit to grow sugar kelp on longlines anchored in Larsen Bay on the west side of Kodiak Island.

The applicant was Efficient Coastal Resources and Erik O'Brien, of Anchorage.

A project description said an estimated 34,560 pounds of sugar kelp are projected for harvest each year from longlines.

"The sugar kelp longline system is composed of anchors and a mooring buoy on each end, and a subsurface rope that hangs 7 feet from the ocean surface. The kelp spores are placed on a string, which is wrapped around the subsurface longline rope," the project description said. "The kelp spores are typically seeded onto the rope in late fall, and harvest occurs late spring of the next year."

The aquatic farm will start out as a single-acre site with a pair of 2,304-foot lines spaced 10 feet apart.



**Parasite study:** Alaska Sea Grant reports two seafood specialists, Brian Himelbloom and Chris Sannito, are leading a project on parasites in fish, funded by the Alaska Seafood Marketing Institute.

"They have collected parasites from Pacific cod and sockeye salmon at processing plants and will identify them and test viability during prolonged refrigeration," Sea Grant said in a June update.

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



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## UFA seeks input for new salmon habitat project

**Prized information:** Who knows more about salmon and their habitat than Alaska fishermen?

That's the basis for a new information-gathering project spawned by United Fishermen of Alaska that aims to provide useful and timely news about the health of the state's salmon runs.

The Salmon Habitat Information Program (SHIP) launched in July with an online survey of commercial fishermen.

"We are asking people what issues they are most concerned about in their region," said SHIP manager Lindsey Bloom. "We also ask what sources they use to get habitat-related information, such as newspapers, websites, or social media, and who they trust and are listening to for information as well."

UFA wants to recognize and tap the wisdom and knowledge of Alaska's 10,888 current salmon permit owners in 26 distinct fisheries to ensure that the SHIP information is useful and relevant. Bloom said the survey results also could be helpful in shaping fishery rules and regulations.

"Fishermen are some of the smartest and best-equipped people to guide fish policy," Bloom said. "With the multigenerational nature of salmon fishing in Alaska, they are grounded in community and family and sustainability and stewardship. We believe that by working together, fishermen can be powerful advocates for pro-salmon policies that ensure commercial fishing jobs remain strong for generations to come."

Respondents to the SHIP survey are entered to win a \$500 Alaska Airlines certificate and a \$200 gift card from LFS Marine.

Find the SHIP survey at the UFA website. Deadline to respond is Labor Day, Sept. 5.



**Mariculture momentum:** Plans to grow more shellfish and aquatic plants are taking shape following two meetings this summer of the Alaska Mariculture Task Force.

The 11-member panel includes representatives from the Department of Fish and Game, the Department of Commerce, and Alaska Sea Grant, and also several public members. It was created by order of Gov. Bill Walker in February. Its mission is to provide a strategy by March 1, 2018, for developing Alaska's mariculture industry.

"We're focusing on both aquatic farming as private businesses and fishery enhancement programs that are more of a common property activity," said Julie Decker, a task force member and executive director of the Alaska Fisheries Development Foundation. "We are looking at different models to advance, basic infrastructure, and research that's needed to really launch this industry."

Mariculture could model Alaska's successful salmon enhancement program, she said, where the state backed a \$100 million low-interest revolving loan to jump-start the fledgling industry for several years.

"It was developed as a public-private model, where the state helped get the infrastructure for the salmon hatcheries started, and then it was taken over through private partnerships and regional nonprofits," Decker said. "And it was developed in rural Alaska, where it is very difficult to make businesses work. Through taxes and cost recovery mechanisms, the industry paid the state back with interest, and every year those hatchery fish produce between \$100 million and \$300 million in value."

"For mariculture, we have high-dollar products like king crab

and geoducks, abalone, sea cucumbers, seaweeds, oysters, and other shellfish. There is really a lot of opportunity," she added.

While Alaska's mariculture operations to date have focused mostly on the Southeast and Southcentral regions, the new vision includes broadening the industry to westward regions.

"It's a different time in history, and people are looking at ways to diversify Alaska's economy," Decker said. "The state has such a large seafood industry, and mariculture is a natural fit. Mariculture would provide more steady supplies and keep processing companies open on shoulder seasons and provide more jobs."

The mariculture task force wants to attract more expertise via advisory panels on investment and infrastructure, regulations, research and development, environmental impacts, public education and marketing, and workforce development.



**Salmon skin!** A chance discovery by farmed salmon hatchery workers has spawned a line of skin care products that helps cure disorders like eczema and also keeps skin younger looking.

Scientists became curious several years ago after it was noticed that hatchery workers who spent long hours handling salmon fry in cold seawater had softer, smoother hands. Researchers at Norway's University of Science and Technology discovered the skin-softening component came from the enzyme zonase, which is found in the hatching fluid of salmon eggs. The enzyme's task is to digest the protein structure of the tough egg shells without harming the tiny fish.

The scientists hailed this dual ability as the secret behind the beneficial properties for human skin. Their research showed that zonase helps flake off dead skin and stimulates the growth of healthy new skin cells. It's also proved helpful in healing wounds.

Norway-based Aqua Bio Technology, which develops marine-based ingredients for the personal care industry, now markets a zonase-infused product under its Aquabeautine brand.

Skin care expert to the stars Dr. Nicholas Perricone, of New York, also promotes salmon as the secret that "works from the inside out" for younger-looking skin. In his bestselling books, Perricone promises that eating wild salmon for 28 days is the cure for wrinkles and provides a "nutrition-based facelift."

Closer to home, Alaska Native triplets Michelle, Amy, and Cika Sparck have found success with their "land and sea" ArXotica line that uses salmon- and berry-infused products to promote healthy skin, hair, and nails.

The sisters hand-gather crowberry, fireweed blossoms, and Arctic sage called "ciaggluk," which translates to "nothing bad about it."

"Because no matter how you use it, it's good for you," Michelle said. "We add extra virgin, cold-pressed salmon oil to our formula. The omega properties blend with the botanicals that are really high in antioxidants. It's ingredients we have trusted for thousands of years, so we can pass on that trust to our customers."

The ArXotica blend won first place this year in the "Beyond the Plate" category at the annual Alaska Symphony of Seafood.

*Laine Welch writes the Fish Factor column and produces "Alaska Fish Radio" out of Kodiak.*



## Gillnetting sockeye along Vancouver Island, Part 2

On July 6, I went out salmon fishing in Alberni Inlet again with my friend John Stevens on the 37-foot gillnetter *Ganhada*.

Fisheries and Oceans Canada (DFO) had changed the fishing area somewhat, closing the outside approaches to the inlet to protect Henderson Lake sockeye, which co-migrate with the Somass River system sockeye we were targeting.

The run was reforecast June 30 to 1.1 million fish. The commercial allocation for seines and gillnets at that run size was 404,017. The seine allocation was 242,410, and the gillnet allocation was 161,607. The seine catch to June 30 was 89,000. With the gillnet catch to that date at approximately 119,000, fishermen were hoping to get a good chunk of the remainder in the opening.

**Guest aboard:** John and I had a passenger this trip. Allison Stocks came along to see the British Columbia salmon fishery firsthand for herself. Allison is the community development director for the T. Buck Suzuki Environmental Foundation, an organiza-



Michel Drouin crewing aboard the gillnetter *Ganhada*. Allison Stocks photo

tion dedicated to fish habitat protection, pollution prevention, and promotion of sustainable fisheries.

The fishery was opening for 24 hours at 6 p.m. We got to Port Alberni in the truck by midday, dropped the net onto the boat, got a bit of grub, and took off for the opening.

The fishery area was smaller than previous weeks, but some boats had already left for northern B.C. fisheries that were opening up that week too. So there was plenty of room for everybody to fish.

Allison was eager to see how things worked in Canada. She studied at the University of British Columbia, but her master's degree field work was on the impact of fishing on wild seahorses in Vietnam. Allison is currently working on strengthening connections between B.C.'s coastal communities and maintaining stewardship over coastal resources. She is organizing a conference in January for younger B.C. fishermen.

John had brought a different net for this trip because we were now permitted a 90-mesh net. With the net sitting in a pile on the hatch, we fed the end over the drum, and right at 6 o'clock John threw the orange bladder at the end of the net over the stern roller and started setting.

I'm always nervous setting off the pile because it whips out so fast – the danger is getting the lead line on the wrong side of the corks. As a former seine drum man, avoiding the lead over the corks remains a worry for me.

We got it set almost perfectly, and then John ran along it to see how it looked. There were a few fish that had hit it as soon as we had set and sure enough, there was a bit of a lead line foul-up near the end.

**First catch:** That first set earned us 37 nice sockeye, which turned out to be the best set of the opening. There were a handful of anchovies in the net, too, a sign of warm water out there, I suppose.

We set the net two more times before dark for 12 fish and four fish – not too promising.

We ended up with nine sockeye and two small spring salmon (kings) in the dark set, so John decided it wasn't worth fishing all night and we should go anchor up and get some rest before making the morning set.

On the way in, I gave Ally a quick lesson and she dressed two sockeye. I assured her that after the first 200-300 she'd get pretty good at it.

We anchored in Nahmint Bay just before midnight, made Allison a bunk by lowering the galley table, and got a few hours of sleep before rising at 3:39 a.m. and heading out into the inlet again.

We got skunked on the morning set. Well, not completely. We did catch a scrawny little hake not much bigger than a herring.

John decided that was it; he didn't want to fish in Alberni Inlet anymore. It was time to head up to northern B.C. and catch the Skeena River sockeye fishery. Talk was that the Area 8 chum fishery was doing good, too, so that was also a possibility, seeing as it was on the way to the Skeena.

We headed back to Port Alberni and dropped Allison off so she could drive John's truck back across Vancouver Island and catch the ferry to the mainland.

At 8:29 a.m. July 7, we started out the inlet to the open west coast for the trip back to the mainland.

By 12:59 p.m. we had motored past the west coast village of Bamfield. Bamfield is in the middle of Pacific Rim National Park and home to the Bamfield Marine Sciences Centre, a teaching and research facility.

It's funny. I grew up on Vancouver Island, and I've been to Tokyo, London, Paris, Berlin, Moscow, Nairobi, and Bangkok. I've even spent a night in Laramie, Wyoming. But I have never been to Bamfield. In fact, this was the first time I'd even seen it. I should go there one day.

After traveling in the open water for much of the day, we got to Sooke on southern Vancouver Island at 10:58 p.m. and John dropped the hook for a few hours. We were up and underway at 4:47 a.m. and after navigating in the fog from Victoria to Active Pass, we got into the Gulf of Georgia and tied up at John's float in



Continued on Page 42

# Culling of salmon predators reauthorized

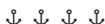
**Dam sea lions:** State fish and wildlife authorities in Oregon, Washington, and Idaho can once again kill problem California sea lions at Bonneville Dam.

NOAA Fisheries reauthorized the permit that allows the states to euthanize individual sea lions seen preying on threatened and endangered salmon and steelhead stocks at the dam. The previous six-year permit ended on June 30. The new permit allows the states to continue the program through June 30, 2021.

Already this year, wildlife officials say California and Steller sea lions have eaten approximately 9,000 spring Chinook salmon and steelhead at the dam – nearly 3 percent of the returning adult fish.

To NOAA and the state fish and wildlife departments, this constitutes a “significant negative impact” on the fish. Under the Marine Mammal Protection Act, which normally protects the sea lions from being hunted or harassed by people, if the individually identified sea lions are having this kind of effect on important fish populations, they can be killed.

Under the NOAA permit, only California sea lions can be targeted. These sea lions are believed to be responsible for the lion’s share of the salmon eaten at the dam.



**Oregon shrimp update:** A voluntary “stand-down” by Oregon shrimpers, initiated May 4 to give sublegal-sized shrimp time to grow, lasted only about a week until competition from out-of-state shrimpers pushed them back onto the water.

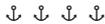
Many Oregon shrimpers opted to stay out of the fishery after boats pulled up pound after pound of sublegal shrimp early in the season. But Washington shrimpers made no such gesture and instead began running down to Oregon to fish, said Brad Pettinger, director of the Oregon Trawl Commission.

Shrimpers in late July were steering clear of “the small stuff” as best they could, and landings were lower than in years prior. Preliminary numbers through the end of June showed the fleet had landed just shy of 14 million pounds in Oregon. For comparison, in last year’s season, the first two months alone yielded around 12 million pounds.

However, fishery managers think it’s likely the Oregon fishery will hit around average numbers for this season, or approximately 25 million pounds. In the last five years, shrimpers have gotten used to much higher season averages, hitting upwards of 50 million pounds per season in Oregon.

“People were spoiled over the last five years,” Pettinger said, “and now it’s back to reality.”

Still, he said, the season was going much better than expected, especially given the El Niño conditions. In the past, El Niño years have made for poor shrimping, fishery managers have said.



**Halibut allocation:** This month – September – the Pacific Fishery Management Council will consider proposed changes to the halibut catch-sharing plan for next year.

The plan is a framework that dictates how the total allowable catch is divided for Oregon, Washington, and California halibut fisheries (Area 2A).

In 2014, the council created a California recreational allocation by reducing Oregon’s recreational allocation. This California allocation was increased again the following year, cutting into both Washington’s recreational allocation as well as Oregon’s recreational and commercial allocations.

Now, the council plans to examine staff information to determine

if further allocation changes are necessary.



**Groundfish program review:** Also up for council review is the West Coast groundfish trawl catch share program.

A review is required every five years and the program, which went into effect at the start of 2011, hit that birthday this year.

The Pacific Fishery Management Council formally approved a review process at a meeting in June. Beginning this month, the council plans to approve a general blueprint for a review document that will be developed during this process and to provide guidance for the appointment of a Community Advisory Board, made up of stakeholders and community members.

Public hearings are scheduled up and down the West Coast. At these hearings, those in attendance can share how they have been impacted by the trawl catch share program and intersector allocations as well as provide input about what they think the five-year review should focus on.

In Oregon, the council has scheduled public hearings for Sept. 8 in Coos Bay, Sept. 28 in Astoria, and Sept. 29 in Newport.

In Washington, hearings will be held Sept. 12 in Westport and Sept. 13 in Seattle.

All hearings start at 7 p.m. For more information, see the blog the council has set up at [tinyurl.com/hjkmvw6](http://tinyurl.com/hjkmvw6).

The review is expected to continue through next year and into 2018.

*Katie Frankowicz reports from Astoria, Ore.*



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# California crab disaster declaration in doubt



**Delayed Dungeness season:** Federal disaster funding is looking a bit less likely for this year’s California Dungeness crab season, which netted a better-than-expected \$30 million in total ex-vessel value despite being drastically delayed by a toxic algal bloom.

Statewide, total landings weighed in at about 10 million pounds for the season, which ended in mid-July. The season began in late March in the state’s central region, where 7.5 million pounds of the total was caught.

The season delay lasted several months, as warm water triggered algal blooms and unsafe levels of the domoic acid toxin in crabs.

In the northern region, crab samples took longer to test clean, and the season there didn’t start until mid-May.

A federal disaster is declared automatically if a fishery loses 80 percent of its average season value. The calculation is based on the average value of the previous five years, which in this case is about \$70 million.

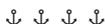
As the season’s domoic acid delay dragged on, it seemed like a disaster was indeed in the making. But although some crabbers saw lackluster catches once the season did start, others were in the right place at the right time and did well.

“I wound up with better than what my average season has been for the last five years,” said Eureka fisherman Dave Bitts, who is president of the Pacific Coast Federation of Fishermen’s Associations (PCFFA). “I personally would have a little trouble putting my hand out.”

Bitts was crabbing north of the Humboldt Jetty, in the area between Eureka and Trinidad. Although the crabbing was good, he reported that there wasn’t much gear set in the area.

As this month’s issue went to press, an Aug. 10 legislative hearing on the conditions of the state’s fisheries was scheduled. An update on the Dungeness season and the prospect of federal disaster funding were on the agenda.

So was a presentation by the California Ocean Science Trust, which is coordinating formation of a working group to enhance the monitoring, testing, and forecasting of what’s come to be known as Harmful Algal Blooms.



**The algae era:** Algal blooms have increasingly fouled up fishing seasons, drinking water supplies, and beach-going nationwide – so much so that a July 21 New York Times report summed up the situation with the headline, “A Dreaded Forecast for Our Times – Algae, and Lots of It.”

The report noted the need for “algae forecasts” and the inadequacy of federal funding for them. Human health and the viability of fishing economies increasingly rely on preparing for algae-foisted toxic messes, according to the report, and Glen Spain, the PCFFA’s north-west regional director, was quoted. He told the newspaper that “Congress has been asleep at the switch for a long time.”

In an interview for this column, Spain said knowing that an algal bloom is pending will allow cautionary actions such as addressing compounding factors like fertilizer runoff.

There’s something else that’s hard to control and is believed to be the overarching cause of warmer water and increased frequency of the blooms – greenhouse gas emissions and climate change.

Spain noted that 2016 is on track to be the hottest year on record globally, topping the previous year’s record, which exceeded the record-setting year before that. Ocean acidification, higher tides and beach erosion, and impacts like algal blooms coupled with “a lack of political will” to deal with climate change signal more trouble ahead.

“We know the causes, but we don’t know where we can expect to see more problems in the future,” Spain said. “What we really need to know is how the future is likely to look for the fishing industry – regulation is based on what’s happened in the past, but we’re adrift in today’s world in knowing what we’ll encounter in the future.”



**Salmon slump:** Another dismal Chinook salmon season was forecast for this year and so far, it’s even more dismal than expected.

As of press time, Jennifer Simon of the California Department of Fish and Wildlife’s Ocean Salmon Project reported that “very preliminary” landing data through the end of June showed that 28,400 Chinook were landed statewide.

The salmon haul weighed in at 288,500 pounds, with average weight per fish slightly topping 10 pounds. Average ex-vessel price has ranged from \$9 to \$12 per pound.

A big chunk of the haul – 11,200 fish – was caught and landed in the Fort Bragg area, where fishing started in June and, like other areas across the state, was closed in July.

The area south of Pidgeon Point – basically the Monterey area – saw 13,300 fish landed.

The San Francisco area was “performing well below preseason expectations,” Simon said, with less than 4,000 Chinook landed.

Windy weather during the second half of June contributed to the San Francisco area’s poor performance, coupled with a migration of fishermen to the Fort Bragg area as word of its favorable catch conditions spread.

Simon said that even considering this year’s more restricted season windows, the fishery is “still performing well under our expectations.”

The combination of drought and unusually warm ocean conditions had telegraphed a poor showing for this year. Those impacts have apparently exacted an even greater toll than predicted.

*Daniel Mintz reports from Eureka, Calif.*

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## INMARSAT



### ALASKAN LEADER FISHERIES TAKES FLEET XPRESS TO BERING WATERS

Inmarsat partner Network Innovations (NI), together with Fusion Marine Technology, have signed a contract with Alaskan Leader Fisheries to install **Fleet Xpress**, Inmarsat's new high-speed broadband maritime communications service, powered by Global Xpress (GX).

Fleet Xpress sets a new standard in broadband maritime communications, delivering the highest levels of reliable high-speed broadband connectivity and exceptional performance across all of the world's oceans, as well as facilitating innovative Connected Ship applications.

"Fleet Xpress is a game changer for satellite communications at sea. The new service opens up a new level of connectivity for fisheries to take advantage of real-time communication back to shore, to enhance

operational performance, maximize catch potential, and start selling even before they have completed their journey back to shore," commented Gerbrand Schalkwijk, Inmarsat Maritime Chief Sales Officer.

"Through our partnership with NI, we are excited that Alaskan Leader Fisheries will be using Fleet Xpress in such hostile waters and to continue to drive innovation in sustainable fishing with highly targeted fishing methods."

"With excellent support provided by Inmarsat and NI throughout the commissioning and activation of the terminal, the Fleet Xpress service has allowed the Alaskan Leader Fisheries to maintain connection and speed even in the harshest of conditions of the Bering Sea, with antenna elevation around 8 – 13 degrees," said David Pratt, VP Fusion Marine Technology.

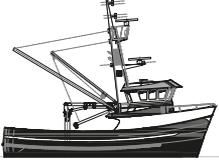
"NI has built a strong partnership with Fusion Marine to provide best-in-class service, support, and advice that meets the communications needs of the fishing market," said Matt George, Vice President Global Maritime Sales, NI.

"By realizing the power of Fleet Xpress, Alaskan Leader Fisheries can benefit from continuous connectivity and guaranteed performance to become more efficient and provide a better working experience for their crew."

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## Alaska Entry Permit Prices

(as of 9-1-16)

| Species            | Fishery             | Asking Price*  | Offer*         | State Value* |
|--------------------|---------------------|----------------|----------------|--------------|
| SALMON             | S SE DRIFT          | 95             | 85             | 87.3+        |
|                    | S PWS DRIFT         | 150            | 130-           | 171.3-       |
|                    | S COOK INLET DRIFT  | 58             | 56             | 54.8+        |
|                    | S AREA M DRIFT      | 115+           | 95             | 100-         |
|                    | S BRISTOL BAY DRIFT | 140+           | 125            | 110+         |
|                    | S SE SEINE          | 200            | 180            | 195-         |
| S                  | PWS SEINE           | 175            | 155            | 149+         |
|                    | COOK INLET SEINE    | 73             | 50             | 78.8         |
|                    | KODIAK SEINE        | 32             | 30             | 38.3-        |
|                    | CHIGNIK SEINE       | 145            | 130            | 167.2-       |
|                    | S AREA M SEINE      | 50             | 50             | 56.1         |
|                    | S YAKUTAT SET       | 16             | 12             | 18.6-        |
| S                  | COOK INLET SET      | 18             | 16             | 15.4         |
|                    | AREA M SET NET      | 60             | 55             | 55.9         |
|                    | BRISTOL SET NET     | 40+            | 36             | 34.1+        |
|                    | S LOWER YUKON       | 9              | 8              | 10.2         |
| S                  | POWER TROLL         | 38+            | 35             | 36.1+        |
|                    | HAND TROLL          | 11+            | 10.5+          | 10.7-        |
| HERRING            | H SE GILLNET        | 12             | N/A            | 13.4         |
|                    | H KODIAK GILLNET    | 5              | 3              | 5            |
| H                  | SITKA SEINE         | 325            | 225            | 238.8        |
|                    | PWS SEINE           | 22.5           | 16             | 30.9         |
|                    | COOK INLET SEINE    | 10             | 8              | 16.8         |
|                    | KODIAK SEINE        | 26             | 20             | 30.3         |
|                    | H SE POUND SOUTH    | 31             | 30             | 32.3         |
| H                  | SE POUND NORTH      | 30             | 25             | 43.1         |
|                    | PWS POUND           | 5              | 3              | 3.5          |
| SHELLFISH          | S SE DUNGY 75 POT   | 18             | 17             | 16+          |
|                    | S SE DUNGY 150 POT  | 39-            | 36             | 38.6+        |
|                    | S SE DUNGY 225 POT  | 60             | 55             | 52.8         |
|                    | S SE DUNGY 300 POT  | 80             | 70             | 56.9         |
|                    | S SE POT SHRIMP     | 22             | 20             | 18.6-        |
|                    | S KODIAK TANNER <60 | 24             | 22             | 29.7         |
|                    | S PUGET SOUND DUNGY | 170            | 155            | N/A          |
|                    | S WASHINGTON DUNGY  | 2,000-4,500/FT | 1,500-3,750/FT | N/A          |
| S OREGON DUNGY     | 2,000-4,500/FT      | 1,500-4,000/FT | N/A            |              |
| S CALIFORNIA DUNGY | 300-800/POT         | 250-700/POT    | N/A            |              |
| SE ALASKA DIVE     |                     |                |                |              |
| SE AK Dive         | URCHIN              | 4              | 3              | 2.4+         |
| SE AK Dive         | CUCUMBER            | 28             | 23             | 22.3-        |
| SE AK Dive         | GEODUCK             | 55             | 50             | 70           |

Prices in SEPTEMBER vary in accordance with market conditions. \*In thousands  
+ denotes an increase from last month. N/A denotes No Activity.  
- denotes a decrease from last month.

By Mike Painter and the Permit Master

**Gillnet:** Post season offers for Bay permits have started to come in. Buyers are offering \$125k, but sellers are at \$145k or more. Nothing new with SE permits at mid-season. A recent sale of a PWS permit went for \$130k. Cook Inlet permits haven't moved since fishing started and are still available as low as the upper \$50s. Asking prices for Area M permits firmed up a bit and will probably move up more from the low pre-season asking price of \$115k.

**Seine:** SE permits were available starting at \$200k. Interest in PWS permits dropped off after fishing started. Nothing new with Kodiak or Chignik permits. A couple of recent trades of Area M permits went for \$50k.

**Troll:** Prices for Alaska Power Troll permits firmed up a bit with prices starting in the upper \$30s. Same with Hand Troll permits, starting at \$11k. A couple of Oregon permits have come on the market in the past month.

## Halibut & Sablefish IFQ Prices

Recent market activity in halibut and sablefish quota shares

| Species | Regulatory Area | Vessel Category* | Poundage (thousands) | Status (blocked/unblocked) | Ask (per pound) Low High | Offer (per pound) Low High |
|---------|-----------------|------------------|----------------------|----------------------------|--------------------------|----------------------------|
| H       | 2C              | D                | 1-10                 | B                          | 60.00-64.00              | 56.00-60.00                |
| H       | 2C              | C/B              | 1-3                  | B                          | 63.00-65.00              | 58.00-62.00                |
| H       | 2C              | C/B              | 4-10                 | B                          | 65.00-67.00              | 62.00-64.00                |
| H       | 2C              | C/B              | ANY                  | U                          | 68.00                    | 64.00                      |
| H       | 2C              | A                |                      | B/U                        | 65.00                    | 64.00                      |
| H       | 3A              | D                |                      | B/U                        | 48.00-58.00              | 44.00-50.00                |
| H       | 3A              | C/B              | 1-5                  | B                          | 52.00-55.00              | 48.00-52.00                |
| H       | 3A              | C/B              | 5-10                 | B                          | 55.00-58.00              | 52.00-54.00                |
| H       | 3A              | C/B              | >10                  | U                          | 60.00-62.00              | 55.00-57.00                |
| H       | 3A              | A                |                      | B/U                        | 62.00                    | 60.00                      |
| H       | 3B              | D                |                      | B                          | 30.00-36.00              | 30.00-35.00                |
| H       | 3B              | C/B              | 1-10                 | B                          | 43.00-45.00              | 42.00-44.00                |
| H       | 3B              | C/B              | >10                  | U                          | 48.00-50.00              | 44.00-46.00                |
| H       | 3B              | A                |                      | B/U                        | N/A                      | 46.00                      |
| H       | 4A              | D                |                      | B/U                        | 16.00-24.00              | 14.00-18.00                |
| H       | 4A              | C/B              | 1-10                 | B                          | 25.00-28.00              | 20.00-25.00                |
| H       | 4A              | C/B              | >10                  | B                          | 28.00-32.00              | 22.00-26.00                |
| H       | 4A              | C/B              | >10                  | U                          | 32.00                    | 24.00-26.00                |
| H       | 4B/C/D          | C/B              | 1-10                 | B                          | 12.00-20.00              | 10.00-15.00                |
| H       | 4B/C/D          | C/B              | >10                  | B/U                        | 20.00-25.00              | 15.00-16.00                |
| S       | SE              | C/B              | 1-10                 | B                          | 25.00-28.00              | 23.00-26.00                |
| S       | SE              | C/B              | >10                  | U                          | 28.00-30.00              | 25.00-27.00                |
| S       | SE              | A                |                      | B/U                        | 32.00                    | 30.00                      |
| S       | WY              | C/B              | 1-10                 | B                          | 24.00-27.00              | 22.00-25.00                |
| S       | WY              | C/B              | >10                  | U                          | 28.00-30.00              | 26.00-28.00                |
| S       | WY              | A                |                      | B/U                        | 30.00                    | 30.00                      |
| S       | CG              | C/B              | 1-10                 | B                          | 22.00-24.00              | 18.00-20.00                |
| S       | CG              | C/B              | >10                  | U                          | 22.00-26.00              | 20.00-22.00                |
| S       | CG              | A                |                      | B/U                        | 26.00                    | 25.00                      |
| S       | WG              | C/B              | 1-10                 | B                          | 11.00-13.00              | 8.00-10.00                 |
| S       | WG              | C/B              | >10                  | B                          | 13.00-14.00              | 10.00-11.00                |
| S       | WG              | C/B/A            | >10                  | U                          | 14.00                    | 10.00-12.00                |
| S       | AI              | C/B/A            |                      | B/U                        | 1.00-4.00                | .50-2.00                   |
| S       | BS              | C/B              |                      | B/U                        | 1.50-5.00                | .75-3.00                   |
| S       | BS              | A                |                      | B/U                        | 4.00-6.00                | 3.00-4.00                  |

\*Vessel Categories: A = freezer boats B = over 60' C = 35'-60' D = < 35'

NOTE: Halibut prices reflect net weight, sablefish round weight. Pricing for leased shares is expressed as a percentage of gross proceeds. \*\* Too few to characterize.

By Mike Painter and the Permit Master



2C blocks have been available for a couple months now in the mid \$60s for fished quota, but no takers so far. Some unblocked 3A sold recently in the mid \$50s for fished quota. Small blocks of 3B are continuing to move in the mid \$40s. Some 4C and 3D sold in the last month for around \$15.

Nothing new with listings of SE Sablefish IFQ. Unblocked is still available for as low as \$28. Nothing new in WY. A bit of unblocked CG sold recently in the low \$20s. No recent activity in WG, AI or BS.

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Crewmen from the U.S. Coast Guard cutter Hickory, based in Homer, Alaska, celebrate winning the tug of war Aug. 17 during the Buoy Tender Roundup in Juneau. The roundup brought together seven U.S. and Canadian buoy tenders for five days of training and maintenance. USCG photo by Petty Officer 2nd Class Jon-Paul Rios

**The Georgia J** continued from Page 11

They were towing three shackles of gear, each net stretching 300 feet.

“The whole net sunk. It was on the bottom of the inlet, and we’re pulling by hand because that transmission broke down,” Johansen said.

They had to pull the 900 feet of heavy net, full of fish, by hand. Over and over again.

“We had over 4,000 fish in a 24-hour period, with this boat. It was tough. We pulled all day and all night,” Johansen said.

Brian fished with his dad about 10 years, until he left for the Navy when he was 19. His dad sold the Georgia J around then, to some schoolteachers in Kenai. They sold it not long after that, and the family hadn’t seen bow nor stern of the Georgia J for decades.

**Final moorage:** David Hutchings, of Soldotna, saw the boat on a trailer along the side of the Sterling Highway several years ago and bought it for display in his yard on Sport Lake. He researched the history of the boat and saw that it had been registered to Ike Johansen.

Hutchings and Brian Johansen had known each other as kids, so he contacted his old friend last year to tell him he had his dad’s old boat. They started talking to the Kenai Historical Society about displaying the boat in town.

June Harris, historical society president, was eager for the opportunity.

Peak Oilfield Services donated a day of labor June 19 to move the boat to its final mooring place. It now sits on the lawn beside the Kenai Historical Society’s office cabin, across the parking lot from the Kenai Visitors and Cultural Center.

“We’re just thrilled to have it. It’s another piece of history,” Harris said.

Johansen and Hutchings are restoring the boat.

“It needs a little work. Some of the planks are sprung out here. I don’t know how bad that will be to get them set back in place.

I’m amazed, though, I mean there’s some damage done there, but most of the hull still looks pretty good, pretty solid,” Johansen said.

Johansen’s dad died in 1993. Even though Ike won’t be around in person to oversee the restoration of the Georgia J, Brian plans to do the work to his dad’s exacting standards. He said Ike will still be watching.

“Oh, he’s probably smiling down right now,” Johansen said.

The Kenai Historical Society is planning a dedication ceremony this fall. ↴

.....  
**British Columbia** continued from Page 30

Ladner in the Fraser River at 4:30 p.m.

**Heading north:** We had a few days off in town, and then John was set to go north. I needed some time at home to write my Around the Yards column for *Pacific Fishing*, but John wanted a hand getting up the coast. So I agreed to go along.

We heard that Smith Inlet on the mainland coast northeast of Port Hardy might be opening, so we ran the boat up to Port Hardy to wait for confirmation. We left at 9:30 p.m. July 11 and arrived in Port Hardy in the morning of July 13.

I left the boat and caught the bus home on July 14.

DFO opened the fishery in Smith Inlet for three daytime openings at 6 a.m. July 15. It was closed for July 18 and then opened again daily for the rest of the week. With over 114,000 sockeye counted over the Docee River fence at the outlet to Long Lake, no more fish were required for escapement.

Fishing continued almost daily in Smith Inlet until the end of the month. By July 27, 182,000 sockeye had been counted passing the Docee fence, and gillnet catches had reached 50,000.

*Michel Drouin has been covering British Columbia’s fishing industry since 1990. He lives in Vancouver, B.C.*

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