

Groundfish: Really dwindled in late '90s

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The process also netted a win for conservationists concerned about the future of extreme deepwater habitats where bottom trawlers currently don't go. A tract of ocean the size of New Mexico with waters up to 2.1 miles will be off-limits to bottom trawling to protect deep-sea corals and sponges just now being discovered.

"Not all fishermen are rapers of the environment. When you hear the word 'trawler,' very often that's associated with destruction of the sea and pillaging," said Kevin Dunn, whose trawler Iron Lady was featured in a Whole Foods television commercial about sustainable fishing.

Catch-all term

Groundfish is a catch-all term that refers to dozens of species that live on, or near, the bottom of the Pacific off the West Coast. Trawling vessels drag weighted nets to collect as many fish as possible, but that can damage critical rocky underwater habitat.

The groundfish fishery hasn't always struggled. Starting in 1976, the federal government subsidized the construction of domestic fishing vessels to lock down U.S. interests in West Coast waters, and by the 1980s, that investment paid off. Bottom trawling was booming, with 500 vessels in California, Oregon and Washington state hauling in 200 million pounds of non-whiting groundfish a year. Unlike Dungeness crab and salmon, groundfish could be harvested year-round, providing an economic backbone for ports.

But in the late 1990s, scientists began to sound the alarm about dwindling fish stocks.

Just nine of the more than 90 groundfish species were in trouble, but because of the way bottom trawlers fished — indiscriminately hauling up millions of pounds of whatever their nets encountered — regulators focused on all bottom trawling. Multiple species of rockfish, slow-growing creatures with

spiny fins and colorful names like canary, darkblotched and yellow eye, were the hardest hit.

By 2005, trawlers brought in just one-quarter of the haul of the 1980s. The fleet is now down to 75 boats, said Brad Pettinger, former director of the Oregon Trawl Commission, who was key in developing the plan to reopen fishing grounds.

"We really wiped out the industry for a number of years," Pettinger said. "To get those things up and going again is not easy."

In 2011, trawlers were assigned quotas for how many of each species they could catch. If they went over, they had to buy quota from other fishermen in a system reminiscent of a carbon cap-and-trade model. Mandatory independent observers, paid by the trawlers, accompanied the vessels and hand-counted their haul.

Fishermen quickly learned to avoid areas heavy in off-limits species and began innovating to net fewer banned fish.

Surveys soon showed groundfish rebounding — in some cases, 50 years faster than predicted — and accidental trawling of overfished species fell by 80%. The Marine Stewardship Council certified 13 species in the fishery as sustainable in 2014, and five more followed last year.

As the quota system's success became apparent, environmentalists and trawlers began to talk. Regulators would soon revisit the trawling rules, and the two sides wanted a voice.

They met more than 30 times, slowly building trust as they crafted a proposal. Trawlers brought maps developed over generations, alerted environmentalists to reefs they didn't know about, and even shared proprietary tow paths.

"All we could do on our end is make a good-faith offer, and I really credit the guys in the industry for taking that up," said Seth Atkinson, an attorney with the nonprofit Natural Resources Defense

Council. "These were tough compromises."

'A good deal'

Last year, regulators approved a plan to reopen the 17-year-old Rockfish Conservation Area off Oregon and California, while banning future trawling in extreme-depth waters and making off-limits some habitat dubbed essential to fish reproduction, including a large area off Southern California.

"A fair number of fishermen thought it was a good deal and if it was going to happen, it was better for them to participate than not," said Tom Libby, a fish processor who was instrumental in crafting the agreement. "It's right up there with the best and most rewarding things in my career — and I've been at it 50 years."

Some groups, like Oceana, wanted even more protections from bottom trawling, which it calls the "most damaging fishing method to seafloor habitats off the West Coast." In a news release, the group emphasized that the agreement it did get safeguards 90% of the seafloor in U.S. waters off the West Coast.

Even so, with fragile species rebounding, trawlers could harvest as much as 120 million pounds a year, but there's only demand for about half that much. That's because groundfish have been replaced in stores by farmed, foreign species like tilapia.

A trade association called Positively Groundfish is trying to change that by touring food festivals and culinary trade shows, evangelizing to chefs and seafood buyers about the industry's rebound and newfound sustainability. They give out samples, too.

"We are treating this almost like a new product for which you have to build awareness — but we do have a great story," said Jana Hennig, the association's executive director. "People are so surprised to hear that not everything is lost, that not everything is doom and gloom, but that it's possible that you can manage a fishery so well that it actually bounces back to abundance."



Photos by Hailey Hoffman/The Astorian
Jeff Harrington, the Astoria public works director, opens the gate to the road leading to a reservoir above Bear Creek Dam.

Water: New plan adds new projects

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During heavy rains four years ago, a section of pipe crossing Little Bear Creek and buried along a steep bank just below a nearby clearcut became exposed by erosion. The city was granted federal emergency funds to armor the bank with rocks.

But a resiliency study found 45 such areas where the 12-mile transmission line is at risk, Harrington said. A seismic risk analysis will look at those and other points of concern, and what the city should do to mitigate the risk, he said.

In addition to the seismic analysis, federal mandates require the city to prepare for all manner of risks to the water supply, be they natural disasters or cybercrime, Harrington said. The city must also create a plan to respond in case of an emergency.

Astoria dodged a seismic bullet when an analysis of the 107-year-old Bear Creek Dam indicated it did not need upgrades to reach current seismic codes.

"That was projected to be a little over \$2 million at the time," Harrington said. "So we were very fortunate ... that we didn't need to do that project."

The last water mas-



Astoria used federal emergency funds to repair erosion along Little Bear Creek threatening its main water transmission line.

ter plan resulted in a fourth cell being added to the slow-sand filtration pond built in the 1990s at the main reservoir above the dam, covered reservoirs for treated water nearer to town, new water storage tanks and a small grant-funded hydroelectric plant that powers the dam.

Projects not completed from the last plan include a clear well system, the final stage in purification; an upgraded chlorine purification system previously voted down by the City Council; and upgrades to water lines for issues such as getting more water to seafood processors at the Port of Astoria, Harrington told the City Council.

"The new plan will capture those projects, update those costs and of course add new projects that will be identified," he said.

The dam is stable and has

never overtopped. But the city still needs to design an emergency spillway around the dam in preparation for 1,000-year storm, Harrington said.

"We don't want it going over the top of the dam, because that could cause erosion on both sides of the dam," Harrington said of heavy rains.

The city is planning to dig an emergency spillway, about 120 feet wide and at least 2 feet lower than the top of the dam, from Main Lake to Cedar Creek, a smaller feeder creek just east of the dam that connects downstream with Bear Creek.

"It was talked about 20 years ago, so (the state) is finally saying, 'Hey, let's get moving on this.' So we're just working on the concept right now. It will probably be built in the next couple of years."

Burials: Code amendments coming soon

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"At the time, it was seen as a thing," Estes said. "I think you were dealing with drinking water issues, and there's a whole issue about cemeteries in city limits, and this whole effort to move them out of the city limits. So we're dealing with some code language that goes back, if not decades, over 100 years."

Planning commissioners, some unaware about the prohibition, were supportive of allowing columbaria inside or outside at places of worship as a conditional use subject to city approval. City Planner Barbara Fryer will return with code amendments in January.

Leaders at Grace Episcopal are holding back on



Edward Stratton/The Astorian
Rev. Elizabeth McWhorter, the interim rector of Grace Episcopal Church in Astoria, shows where the congregation hopes to install a columbarium or living tree.

planning a columbarium until the city amends the code. They are also considering a memorial garden in the courtyard next to the staircase under which remains would be buried.

Peeler's wife, Stacie Peeler, is storing his ashes in hopes of the columbarium being approved.

"She wants to be able to put him in his church," Ralls said.

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