

NEWS

Goodbye isthmus, hello salmon: new bridge, channel restores flow at Kilisut Harbor

Josh Farley Kitsap Sun

Published 8:00 a.m. PT Oct. 2, 2020 | Updated 8:02 a.m. PT Oct. 2, 2020

INDIAN ISLAND — Young salmon, twisting and flapping their way from the torrents of the Puget Sound en route to the Pacific Ocean, have endured a manmade detour for the past 75 years.

An earthen causeway at the south end of Kilisut Harbor, installed in the 1940s to connect Marrowstone and Indian islands in Jefferson County, has kept the keystone species from quick access to 2,300 acres of prime habitat in which to rest and forage.

"It's basically a gigantic buffet between the two islands," said Rebecca Benjamin, executive director of the North Olympic Salmon Coalition. "But the salmon couldn't get there."

A \$12.6 million project has changed that this past year. The causeway is gone, replaced by a 440-foot-long concrete girder bridge that now carries the lanes of state Highway 116. Around 90,000 cubic yards of sediment and old road — roughly 9,000 dump truck loads — has been hauled away to reveal a restored tidal channel few are old enough to remember.

Mike Gover and Ellen Emmenesser, Marrowstone Island residents who frequent neighboring Isthmus Park and the site enough they joked they're "project supervisors," said they're excited to see what happens next.

"We think it's a big improvement that will lead to a healthier ecosystem," said Gover, who noted he was particularly looking forward to the clam beds that can flourish within the restored tidelands.

The manmade isthmus is gone, replaced by a bridge that is roughly 10 feet higher than the causeway — a side benefit that makes it more resilient to storm surge, Benjamin said.

How two islands spawned an isthmus

The two Jefferson County islands that rest parallel to each other have military legacies. Fort Flagler, built on the north tip of Marrowstone, was part of a "triangle of fire" to protect Admiralty Inlet from attack, along with Fort Worden in Port Townsend and Fort Casey on Whidbey Island. When that mission ended in 1953, it became a state park. The Navy, meanwhile, bought the bulk of Indian Island from homesteaders and set up a Naval magazine just before the Japanese attack on Pearl Harbor in 1941.

Sometime in that same decade, as car travel became ever more ubiquitous, drivers began to traverse the channel where Kilisut Harbor meets Oak Bay. First, the crossing was over timber. But in 1958, according to the state's Department of Transportation, concrete culverts were installed to ease the crossing for vehicles.

It did anything but for salmon.

"It completely constrained the free flow of water," Benjamin said.

Thwarting that free flow through two six-foot diameter culverts did more than just cause a blockage for salmon. The lack of flow reduced oxygen in parts of Kilisut Harbor, made it more prone to algae and warmer temperatures.

Bill Kalina has seen those detrimental conditions first hand. Kalina, Indian Island's environmental program manager for the Navy, remembers a fish kill from 1996 likely caused by hypoxia and increased algae. Sculpin, smelts, herring, and other species littered the shores. "There were fish everywhere," he said.

The Navy partnered on the recent project, kicking in \$1 million. Its nearby Naval magazine, comprising more than 100 igloo-like, grass-covered domes filled with weapons from small arms ammo to aircraft ordnance, stocks up dozens of vessels each year as the Department of Defense's largest conventional ordnance storage site on the west coast.

Pulling off the project, which began in August 2019, required a delicate dance with Mother Nature. A bypass road was built to keep access to Marrowstone open. Crews dug a tidal channel north of the causeway, replete with sediment built up in the decades at the foot of the culverts. A bladder dam was constructed to keep the site of the new bridge dry.

S'Klallam study key to funding project

It's not Puget Sound's typical fish passage removal project. Much of the time, such barriers block streams and rivers or the accessways where freshwater and saltwater splish splash together. In this case, the barrier was one salty side to the other.

The key that brought together funding from a number of federal, tribal and state agencies for the project was a habitat study by the Port Gamble S'klallam Tribe in 2014. It revealed the paths of the salmon for hiding, feeding and rest weren't always toward large estuaries like ones found at the Duckabush and Dosewallips rivers on Hood Canal, according to the Northwest Indian Fisheries Commission. The salmon seemed to prefer embayments like Kilisut Harbor — but with the causeway, they had to swim one of two more daunting paths around Marrowstone and Indian islands.

Now, they can head right between them. And judging by the reopening of the channel, they're not the only ones. Already, some cutthroat trout and crab have been spotted making the journey.

And some human colleagues, as well.

"We're seeing canoers, kayakers, and paddleboarders here," Benjamin said. "This is a new mecca for recreation."

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