



A cargo ship — one of several thousand transiting local waters each year — shares a narrow Salish Sea passage with a pod of orcas.

photo: Monika Wieland Shields © 2015

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Rescue tug stationed in islands is best bet to avoid oil spills in San Juan – Gulf waters, study says

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Boundary Passage emergency response vessel Gulf Islands Haro Strait oil spill rescue tug Roberts Bank Rosario Strait Salish Sea San Juan Islands ship traffic

Twenty years ago, an emergency response towing vessel was stationed at the northwest corner of the Olympic Peninsula at Neah Bay to serve Washington's coast and the Strait of Juan de Fuca. It remains the only tug in the state dedicated to oil spill prevention. San Juan County wants to see that change.

The island county sits between the narrow shipping corridors of Rosario and Haro straits, through which oil tankers, cargo ships, fishing vessels and private boats move through waters around Northwest Washington and lower British Columbia. According to state records, in 2019, 6,805 transits were logged by the largest vessels, which pose the greatest oil spill potential.

"The San Juan archipelago forms a roundabout for all these shipments," San Juan County Council Chair Jamie Stephens said. "Citizens of San Juan County have worried about oil spills large and small for over 25 years."

Concern has increased over the past decade as shipping of fossil fuel and fuel products to and from refineries, pipelines and ports throughout the region has grown, and more projects are proposed.

With increased vessel traffic from the Bellingham and Anacortes areas and Canada, “some of us ... have been worried about a possible oil spill,” Stephens said during a Feb. 9 county council meeting.

San Juan County has invested hundreds of thousands of dollars to study the potential for oil spills, the cost of establishing and operating another emergency response towing vessel — ERTV, also known as an emergency tug — and, most recently, where the most strategic home base might be for such a vessel. Preventing spills by rescuing boats in trouble is environmentally and economically far preferable to trying to clean up after them.

“We’ve had to really prove our case; this is the third in a series of studies that have been performed,” Stephens said during the meeting, at which Tim Robertson of Nuka Research and Planning Group presented the **preliminary study findings** [begin at 2:21:52].

The study used the University of Washington’s Salish Sea Modeling Center data to analyze how long it might take a midsize container ship, after stalling in various locations and during various weather conditions, to run aground and spill oil. It then compared that with how long it might take tugs coming from various ports in the region, during various weather conditions, to reach a stalled ship and keep it from grounding.

Supercomputer says ...

After using the UW’s supercomputer to run 15.6 billion ship-grounding scenarios, the authors found that an ERTV would have the best chance of success if stationed at either Roche Harbor on west San Juan Island or at Sidney on southeast Vancouver Island.

From those locations, an emergency tug would have an 80% or greater chance of reaching vessels in trouble within Haro Strait and Boundary Pass, or around Turn Point in between them, before a catastrophe.

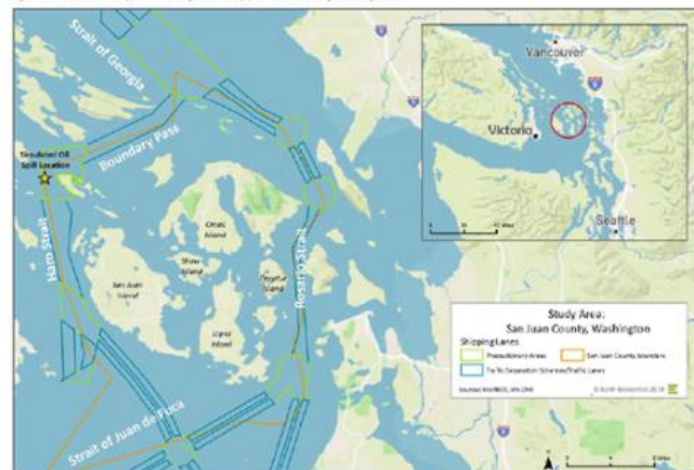
“This study confirms what we already intuitively knew” — bolstering the county’s case for an additional tug station — Stephens told *Salish Current*.

A tug coming from Roche Harbor or Sidney would likely arrive on scene within two hours, according to preliminary study findings. A response from Anacortes to the east could take up to about five hours and a response from Port Angeles to the south could take up to about six hours.

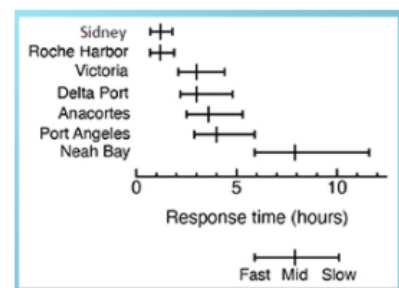
Though the study has not yet been peer-reviewed or published in a final report, the findings are circulating among regulatory agencies and elected leaders, including 40th Legislative District Rep. Debra Lekanoff (D-Bow) and the state Department of Ecology, which leads oil spill response planning in Washington.

Ty Keltner, spokesperson for Ecology’s Spills Prevention, Preparedness and Response, said the state agency sees value in the study and will incorporate the findings into its own ongoing study.

Figure 1. San Juan County, Surrounding Waterways, and Surrounding Shipping Lanes



An area vessel transit map from a San Juan County-commissioned study of the economic costs of a major oil spill scenario shows how shipping lines encircle the islands that make up the county, lying between Washington’s mainland and British Columbia.



Preliminary study findings presented to the San Juan County Council show response times for incidents occurring in the Haro Strait – Boundary Pass area.

The state legislature had previously requested that Ecology conduct a study to assess whether an emergency tug serving Haro and Rosario straits, as well as Boundary Pass, would reduce oil spill risks. Results are due by September 2023.

Keltner said that San Juan County's study "increases confidence" that the suggested locations are worth a further look.

Lekanoff, who sponsored the 2020 bill requiring Ecology's study, said she was impressed with the Nuka Research study and is eager to move into logistical discussions about operating an additional tug.

'We have that science'

"Now that we have that science ... how do we identify if and how we incorporate it in an oil spill response plan?" Lekanoff said. "There is so much at risk here in the San Juan Islands and the straits."

San Juan County's Puget Sound Recovery Coordinator, Marta Green, said the county plans to invite public discussion when the Nuka Research study is complete, peer-reviewed and made public as anticipated this spring.

"The study does not make recommendations; rather, it informs further discussions on shipping safety in these waters and oil spill mitigation measures ... what others do with that information is up to them," Green said.

Tugs already play an important role in oil spill prevention during the critical hours after a vessel becomes disabled. According to records of the Coast Guard's Sector Puget Sound, tankers, large passenger ships, fishing vessels and other boats have reported dozens of cases of equipment failure, loss of propulsion and other emergency incidents in waters around the San Juan Islands within the past decade.

Already, a network of more than 100 working tugs that regularly transit the Salish Sea are equipped with automatic identification system transponders and are visible to the U.S. Coast Guard through an "International Tug of Opportunity System." They respond to emergencies as their availability and capacities permit.

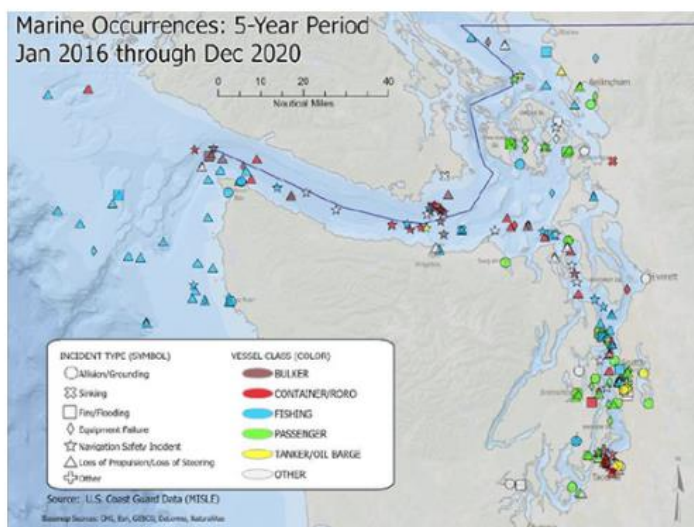
The Neah Bay tug, the only one in Washington that is dedicated to providing 24-hour emergency response services, has been in operation since 1999 and has responded to dozens of emergency calls up and down the coast.

Keltner at Ecology said additional oil spill prevention and response measures are established at state and federal levels and include rules for vessel construction; requirements for licensing, inspections, monitoring, spill response plans and conducting spill response training; and requirements for certain oil tankers and barges to be escorted by tug.

"The tug is a safety net for all vessels — for those that carry oil as a commodity and those that carry a large amount of fuel on board for transportation," an Ecology web page states.

Calls for the Neah Bay tug have come from as far south as off the coast of Oregon and as far east as near Port Angeles, according to Ecology data.

"The response has saved the shorelines of Washington," Lekanoff said.



A map from the most recent U.S. Coast Guard Sector Puget Sound Harbor Safety Committee reports mark incidents throughout the Salish Sea.

Spending, to save a lot

The state paid an average of \$3.6 million per year 1999 to 2010 for the Neah Bay tug, according to Ecology. Starting in 2011, the state required shippers that may need the tug's services to cover the costs.

Lekanoff said investing in a tug to serve the region around the San Juan Islands could be significantly less than the costs of emergency response and cleanup should a major oil spill occur in the area.

"The cost of what could happen if we hadn't invested — the damage that could happen — will be detrimental for our state and internationally ... and if there is a spill, Washington taxpayers are on the hook," she said.

Previous studies commissioned by San Juan County suggest that, while an emergency tug could cost about \$4.3 to \$6.4 million per year, it could prevent a disastrous \$84 million to \$510 million in damages to the environment, industries including fishing and tourism, property values and the tax base of San Juan County alone — not to mention impacts to neighboring Northwest Washington counties and areas of lower British Columbia — if a spill occurred in Haro Strait.

The majority of vessel traffic through the region serves Canada, which both Lekanoff and Stephens noted poses a particular challenge in securing funding for an emergency tug. According to Ecology data tracking transits of the largest vessels entering the Salish Sea, 2,961 of those ships were bound for Canadian ports in 2019 compared to 644 bound for Washington ports accessed through waters around the San Juan Islands including Haro Strait.

Coming up: more traffic

Vessel traffic bound for Canada is also poised to grow. Construction of the country's Trans Mountain Pipeline is underway, [a proposal to expand the Roberts Bank Terminal](#) is under review and, despite the pandemic, existing ports in British Columbia moved record amounts of containers, grain and potash in 2020.

"Trade is continuing to grow," Robin Silvester, president and chief executive officer of the Vancouver Fraser Port Authority, said in a news release issued March 1. The Port Authority, operates 29 marine terminals in British Columbia as Canada's largest port.

"The Boundary Pass and Haro Strait region is outside the port's navigational jurisdiction, said Ram Chung, Senior Communications Advisor for the Vancouver Fraser Port Authority. "We do not dictate the escort tug requirements in this area."

Canadian Coast Guard Communications Advisor Robin Jahn and Pacific Merchant Shipping Association vice president Mike Moore said existing safety and emergency response procedures — "a complex risk management regime," as Moore called it — have had success in assisting ships in trouble as needed. Moore served as Captain of the Port for the U.S. Coast Guard Sector Puget Sound from 1999 to 2002.

Moore asserted that in the narrow waters that bracket the San Juan Islands, an international tug of opportunity system would provide better coverage than a dedicated tug at Roche Harbor or Neah Bay could offer. He said there are many more tugs available in the central Salish Sea region at any given time as they escort, assist or pull commercial shipping vessels through the area than are available to the Strait of Juan de Fuca stretching from Port Angeles and Victoria to Neah Bay.



Workers aboard the Jeffrey Foss, one of several vessels contracted over the years to fill the 24/7 role of the Neah Bay tug, connect a tow line to a stalled ship. (Washington State Department of Ecology photo)

"The tug of opportunity system will often be better positioned at random than trying to pick a spot and hope that spot is close to some incident in the future," Moore said.

Jahn said the Canadian Coast Guard also has two ERTVs serving Canada's West Coast similar to the function of the Neah Bay tug. The vessels don't have permanent stations, but one patrols the northern coast, and the other the southern coast and Salish Sea.

Jahn did not say whether stationing an ERTV at Sidney could reduce the risk of ships drifting, grounding and spilling oil in the Haro Strait and Boundary Pass region, but said the Canadian government is conducting its own assessment of emergency towing needs and working toward a long-term strategy.

"Every situation is different, but assisting ships that find themselves in trouble and are at risk of drifting into land, grounding or polluting is always the goal when a towing vessel is deployed," Jahn said.

Continuing the fight

Green, who has been working for years on vessel traffic and oil spill concerns in the region, does not believe that existing measures meet the need for prevention. "Other towing vessels operate in the area; however these 'tugs of opportunity' may not have the power, equipment and crew trained to rescue a large ship, or may be engaged in other duties," she said.

Determining whether to, or how to, establish a second permanent emergency tug to serve Washington's Salish Sea is likely to be a long process, Moore said.

"There has to be data, rationale, full assessment of risk and risk mitigators clearly concluding the need for another ERTV. Then, if all of that happened, there would have to be a determination as to whether it would be publicly paid for like the two ETV's Canada has deployed, or privately paid for as is the case at Neah Bay," he said.

San Juan County, which has long contended the need for an emergency tug is clear, plans to continue the fight.

"We will continue to lobby federal and state agencies with this information to work across the border to fund this project," Stephens said.

Editor's note: A [2018 Ecology report to the Legislature](#) gives more data on Tugs of Opportunity, and mentions that the program no longer has a formal status internationally.

— Reported by Kimberly Cauvel

We welcome [letters to the editor](#) responding to or amplifying subjects addressed in the Salish Current. If you wish to contribute to [Community Voices](#), please send an email with a subject proposal to Managing Editor Mike Sato (msato@rockisland.com) and he will respond with guidelines.

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