



SAN JUAN COUNTY OIL SPILL RISK CONSEQUENCES ASSESSMENT

A Business Model for Additional Investment in Oil Spill Prevention Measures

Protection against a major and catastrophic oil spill is the highest environmental priority for San Juan County. The San Juan Ecosystem Protection and Recovery Plan identifies investment in an emergency response towing vessel (ERTV) to reduce the risk of a spill at Boundary Pass/Haro Strait on the north and west sides of San Juan County as a priority risk mitigation measure. This measure also is recommended by the Governor's Southern Resident Orca Task Force, Department of Ecology's October 2016 Salish Sea Workshop, and Puget Sound Partnership Ecosystem Coordination Board and Leadership Council.

WHAT WE'RE DOING

To support the cost/benefit business case of investing in an ERTV for Boundary Pass/Haro Strait, San Juan County worked with specialty economics firms to complete two studies that:

- Evaluated the cost of positioning and operating a multi-mission ERTV for Haro Strait/Boundary Pass.
- Assessed the consequences and scale of impacts from two oil spill scenarios at the Haro Strait/Boundary Pass Turn Point to the natural resources health and economic vitality of San Juan County.

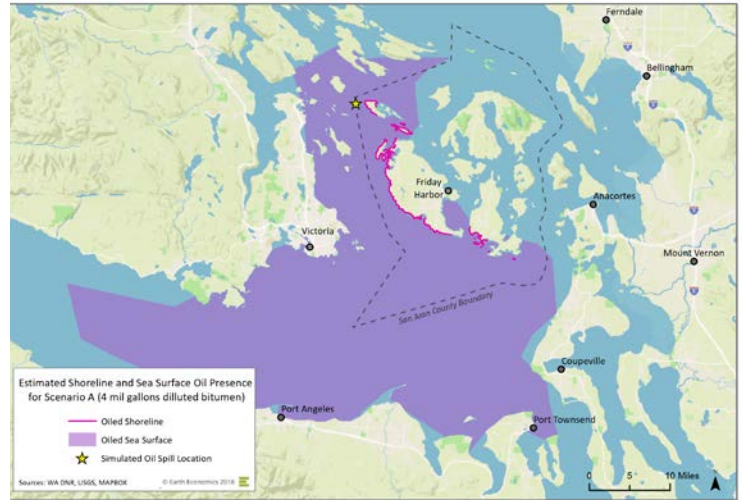
ASSESSMENT RESULTS

The studies conclude that the estimated annual cost of positioning an ERTV in San Juan County ranges from **\$4.3 to \$6.2 million**, largely dependent on crew size and wage rates.

In comparison, the damages incurred by the county associated with an unmitigated oil spill at Haro Strait/Boundary Pass are very conservatively estimated at **\$84 to \$243 million** for a 1-million-gallon spill of heavy fuel oil, and **\$142 to \$510 million** for a more severe 4-million-gallon spill of diluted bitumen, over a thirty-year time period.

FOR MORE INFORMATION

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Estimated Shoreline and Sea Surface Oil Presence for a 4-Million-Gallon Diluted Bitumen Spill at Turn Point

These estimated damages are based on observed impacts from past major oil spills in North America, and include the following affected sectors:

- Tourism Spending, Wages and Tax Revenue
- Property Values and Taxes
- Commercial Fishing and Aquaculture
- Recreational Use Value
- Ecosystem Services

The damages do not include the exorbitant costs associated with spill response and natural resources damage assessment and restoration. They do not include known oil spill impacts such as marine transportation, human health, social services, and science and education, not to mention the loss of tribal treaty rights, the value of which is beyond economic measure.

WHAT YOU CAN DO

San Juan County encourages those with environmental, economic, social, and cultural interests in the region to engage in the legislative process and related initiatives including the Southern Resident Orca Task Force. Engagement may increase public and political will and inform decisions that protect the San Juan Islands and regional ecosystems, communities, and businesses from the consequences of a large oil spill.

PROJECT CONTRIBUTORS

Earth Economics, Northern Economics and The Glostén Associates authored this study for the San Juan County Environmental Resources Division with support from the Marine Resources Committee.



COST ALTERNATIVES FOR AN EMERGENCY RESPONSE TOWING VESSEL IN SAN JUAN COUNTY

Annual Cost	Permanently Moored	Permanently Underway	Seasonally Moored
Low Daily Rate	\$ 4,351,000	\$ 4,460,000	\$ 4,416,000
High Daily Rate	\$ 6,176,000	\$ 6,285,000	\$ 6,241,000



Source: Northern Economics, Inc. and The Glosten Associates (2018)

SAN JUAN COUNTY OIL SPILL DAMAGE ESTIMATES

Total damages: \$84 million to \$510 million

Impact Category	4-million-gallon spill of diluted bitumen		1-million-gallon spill of heavy fuel oil	
	Low	High	Low	High
Commercial Fishing	\$932,000	\$2,505,000	\$69,000	\$223,000
Aquaculture	\$99,000	\$149,000	\$57,000	\$86,000
Tourism Spending, Wages, and Local Tax Revenue	\$21,096,000	\$161,466,000	\$8,645,000	\$59,241,000
Property Values and Taxes	\$89,670,000	\$245,050,000	\$60,544,000	\$134,957,000
Recreational Use Value	\$8,032,000	\$37,156,000	\$2,688,000	\$18,422,000
Ecosystem Services	\$22,465,000	\$63,586,000	\$12,275,000	\$30,268,000
<i>Total Damages</i>	\$142,294,000	\$509,912,000	\$84,278,000	\$243,197,000



Source: Earth Economics (2019)