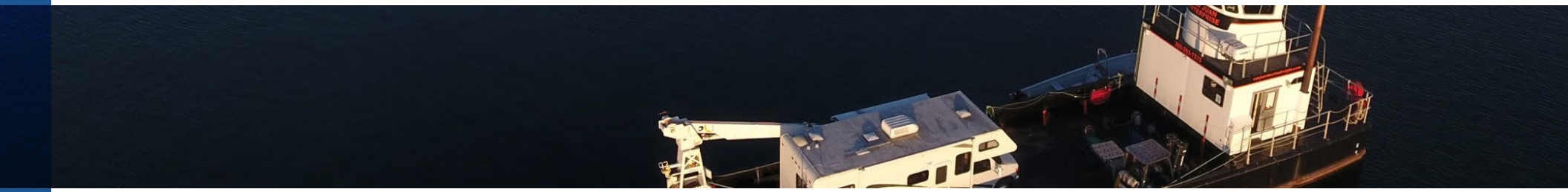
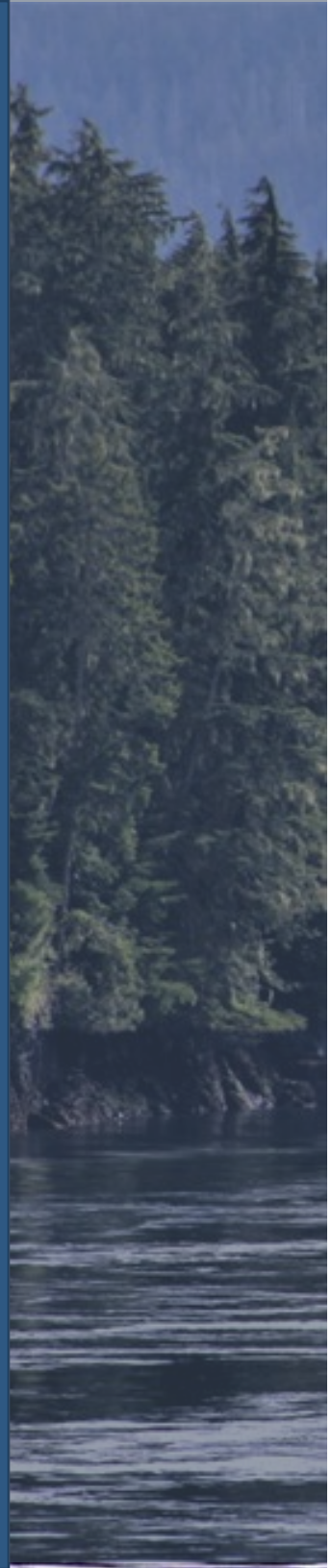
Anacortes Drop Frame Barge System

ECONOMIC PROFILE | APRIL 2026



PREPARED BY McKINLEY RESEARCH GROUP, LLC

PREPARED FOR Port of Anacortes



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Introduction and Methodology

The drop-frame barge system operating between Anacortes and the San Juan Islands has long played a critical role in the region, delivering a wide variety of goods and services that keep the islands running – many of which cannot be delivered via other transportation methods. The Port of Anacortes contracted with McKinley Research Group to prepare this profile of the system with a goal of educating regional stakeholders and enabling informed decisions that could impact the system.

The study team relied on several sources to prepare this report. The most important sources were interviews with representatives of businesses and organizations involved with the system. The interviews provided information on how each entity interacted with the system; locations and routes; goods transported; employment and wage information; and the overall importance of the system. Businesses and organizations interviewed included:

- Camp Nor'wester
- Clean Harbors Environmental
- Humpback Hauling
- Inter-Island Propane
- Island Petroleum Services
- Mike Carlson Enterprises
- Orcas Power and Light Cooperative
- Pintail Marine
- Port of Friday Harbor
- San Juan County
- San Juan Ferry and Barge
- San Juan Marine Freight
- San Juan Propane/Amerigas

Additional sources included the Port of Anacortes, the Washington Input-Output Model (Washington State Office of Financial Management), U.S. Bureau of Labor Statistics 2024 Consumer Expenditure Survey, and Quarterly Census of Employment and Wages data.

Source: Port of Anacortes

What is the Drop-Frame Barge System?

A drop-frame barge, sometimes referred to as a "landing craft," is a specialized vessel with a wide, hinged bow that lowers onto a ramp or directly onto a beach, allowing materials to be easily transported on and off the vessel.

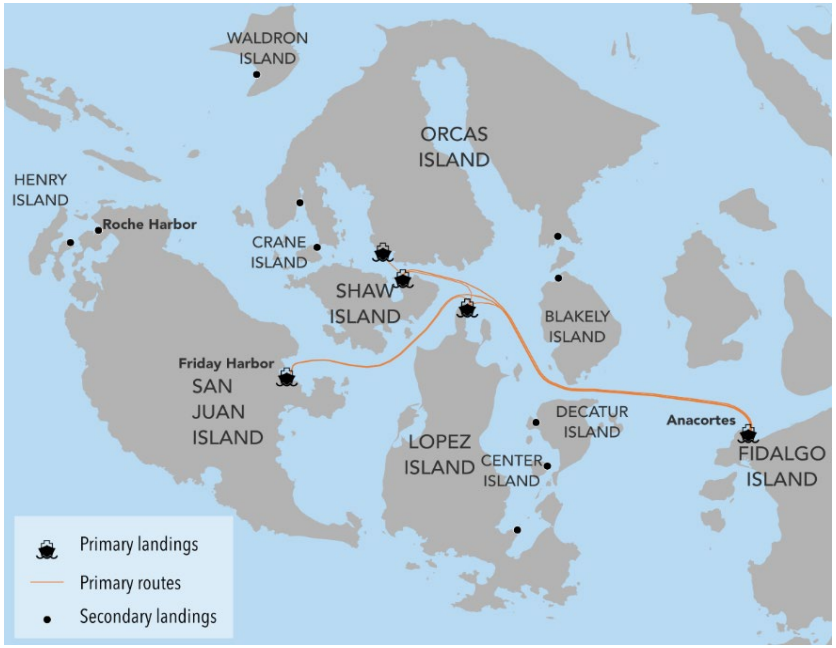
Source: Port of Anacortes

This report addresses the system of drop-frame barges operating between Anacortes (Skagit County) and the San Juan Islands (San Juan County) in Washington State. The system is composed of barge operators that coordinate with an array of businesses and organizations to transport goods and materials (and people, occasionally) between the mainland and islands, as well as among the islands.

Examples of goods, materials, and equipment transported by barge include fuel, vehicles, medical oxygen, construction equipment, hazardous waste, and recyclables, among others. Businesses and organizations that use the barge system include construction companies, hospitals, gas stations, San Juan County (for road-building purposes), summer camps, and utility companies. Barge customers and materials are explored in more detail in the following section.

These barges travel throughout the San Juan Islands, including (but not limited to) the islands identified in the map below. Note that barges also access smaller islands to deliver to private residences.

Anacortes/San Juan Islands Drop-Frame Barge System Common Destinations



Barge Operators

There are four main drop-frame barge operators in the region:

- San Juan Marine Freight
- San Juan Ferry & Barge
- Humpback Hauling
- Pintail Marine

The two Anacortes-based barge companies, **San Juan Marine Freight** and **San Juan Ferry & Barge**, accounted for 95% of the 1,200 barge landings at the Port of Anacortes in 2025. Examples of goods these operators transport from Anacortes to the Islands are various types of bulk and household fuel, oxygen tanks for medical use, gravel and topsoil, construction materials, and heavy equipment for contractors.

Roche Harbor-based **Humpback Hauling** transports freight including heavy equipment, small aircraft, boats, trailers, and construction materials to Outer Islands not serviced by Washington State Ferry. In addition to general freight movement, Humpback can transport passengers and has helped wedding parties, film crews, and firefighters reach their destinations. They also help universities and the U.S. Navy with research projects.

Friday Harbor-based **Pintail Marine** transports construction materials and provides general marine freight services from San Juan Island to the Outer Islands. Pintail is an infrequent user of Port of Anacortes, accounting for 5% of barge landings in 2025. Anacortes landings included pick-up/delivery of equipment, building materials, and modular homes.

Barge Customers

Barge customers are scattered throughout the islands and represent a wide range of businesses, organizations, and governmental entities. Customers interviewed for this study are profiled in the table below, demonstrating the diversity of uses, destinations, and base of operations.

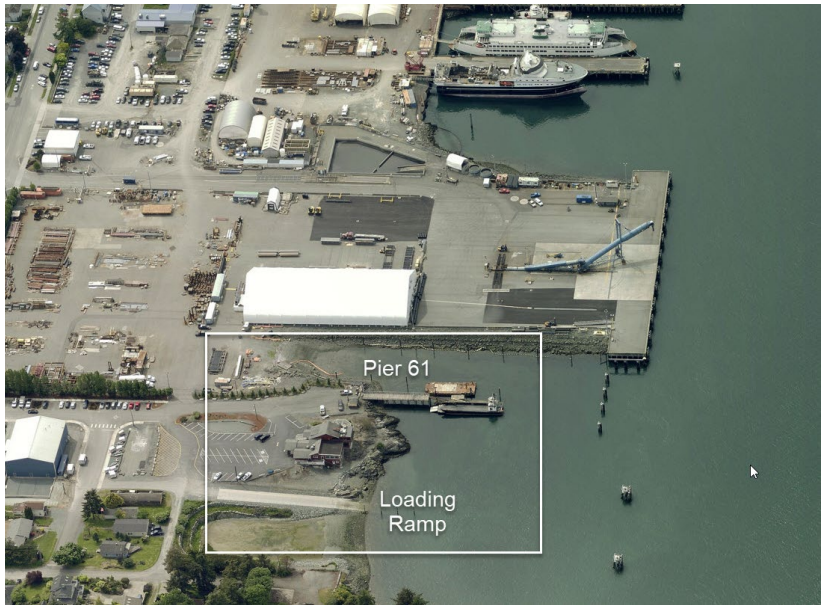
Table 1. Sample of Drop-Frame Barge Customers

Customer	Barge Uses	Destination	Main Location
Clean Harbors Environmental	Removes household/ hazardous waste	Mainland	Kent
Island Petroleum Services	Provides gasoline to gas stations, diesel, lubricants (not propane)	San Juan and Orcas Islands	Friday Harbor
Inter-Island Propane	Provides propane and related services	San Juan and Orcas Islands, Lopez Island	Friday Harbor
San Juan Propane (Amerigas)	Provides propane and related services	San Juan and Orcas Islands, Shaw Island	Friday Harbor
San Juan County	Provides waste collection services, road infrastructure maintenance, emergency management services	San Juan County	San Juan County
OPALCO	Provides power infrastructure Transfers trucks/supplies for power line work by barge	Lopez Island	Friday Harbor
Mike Carlson Enterprises (MCE)	Provides earthwork/road building services on the islands	San Juan Island	Lopez Island

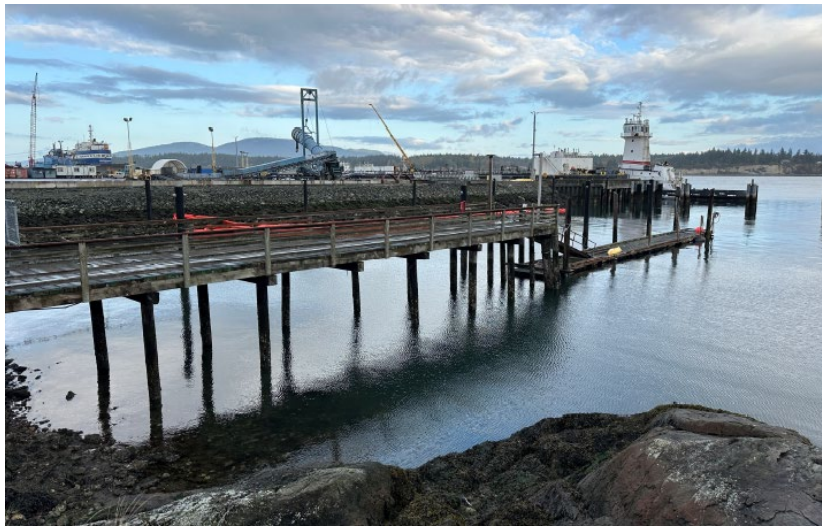
Port of Anacortes

The Port of Anacortes plays an essential role in the barge system in providing access to the state's major highway, railroad, and shipping routes. In 2025, there were more than 1,200 barge landings at Pier 61, generating nearly $100,000 in revenues to the Port.

Barges use the commercial marine ramp (Wyman's Ramp) next to Pier 61. It is the only drop-frame barge facility in northwestern Washington dedicated to serving the San Juan Islands.



Source: Port of Anacortes



Source: Port of Anacortes

Dock Replacement

The Port is currently planning to replace the aging pier infrastructure, potentially allowing for four or more slips (instead of one). The replacement plan aligns with a goal stated in the Port's *2018 Anacortes Maritime Strategic Plan*: "…support and retain existing maritime industry businesses, and facilitate their growth by enhancing infrastructure, including installation of travel lifts and cargo loading/unloading facilities."[1] According to Port staff, "Pier 61 replacement will increase and strengthen this transportation mode, supporting economic vitality and vibrancy, jobs retention and jobs creation, and transportation connectivity for a variety of goods and services to remote island regions."

[1] www.portofanacortes.com/wp-content/uploads/Maritime-Strategic-Plan-with-Resolution.pdf

Jobs and Wages

While the barge system plays a significant role in the greater economy of the San Juan Islands, as explored in the following section, its direct and immediate impacts can be described as follows.

- Mainland providers supplying the islands with goods and services who use the barge system employed at least **124 workers** in 2025 and paid at least **$11.2 million** in wages. Employees earned an average annual wage of **$90,000**.
- Barge operators employed **13 workers** and paid **$1.1 million** in wages in 2025.
- Average wages for barge companies and their customers are **significantly higher than the average wage** for both Skagit County ($65,000) and San Juan County ($53,000).
- Spending on barge services associated with these users was **$1.1 million** in 2025.

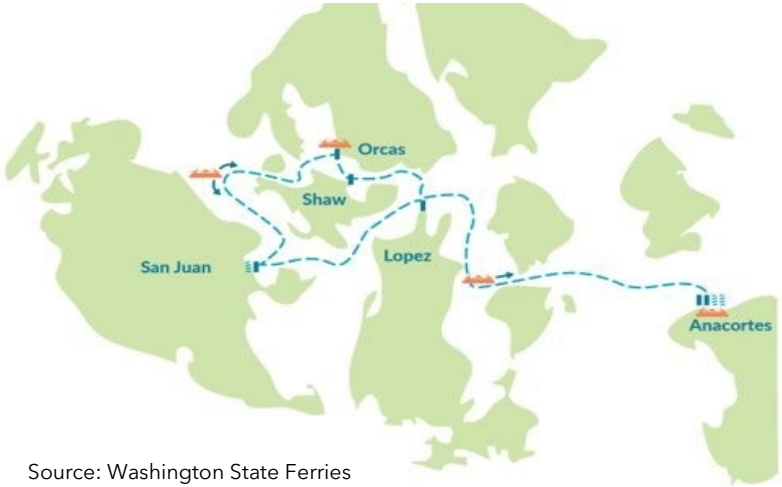
Source: Port of Anacortes

The System's Role in the Region

Ferry Limitations

The Washington State Ferry (WSF) serves four main islands in San Juan County: Lopez, Orcas, San Juan, and Shaw. While the ferry is mainly a passenger/vehicle service, it is also used to transport freight. However, Washington State Department of Transportation limits the amount and type of fuel allowed onboard, as well as hazardous materials. Ferry docks are also limited in the type of equipment they can accommodate, such as cranes and transformers. In addition to transporting these items, barges are also able to access the dozens of islands that lack ferry mooring infrastructure.

Washington State Ferries San Juan Routes



Source: Washington State Ferries

Essential Goods and Services

The barge system provides a lifeline for essential goods and services in the islands.

- Private fuel distributors transport **fuel** trucks to the islands via barge to fill tanks and supply local gas stations. Gas stations on San Juan County islands received at least 3 million gallons of fuel in 2025.
- San Juan County (SJC) contracts with barge operators to haul **household waste** off the islands.
- SJC Public Works uses the barge system to haul materials and equipment for municipal **road construction and maintenance**.
- The barge system transports **oxygen** to Peace Island Medical Center on San Juan Island.
- **Building contractors** rely on the barge system to transport construction equipment and materials.
- Orcas Power and Light Cooperative (OPALCO) uses the barge system to transport equipment and supplies for **power infrastructure** maintenance and construction on Lopez Island.
- Barges often deliver **groceries** to homes in more remote locations.

Interview contacts pointed out that no other viable options exist: the islands have no road connection to mainland; air cargo is too costly and capacity-constrained; and the state ferry limits fuel and other types of essential cargo. The barge system further provides critical backup service when ferries are cancelled.

It is also important to note the role of the barge in supporting other economic activities such as children's summer camps, film production, weddings, and research.

The Islands' Economy

Interviews and analysis reveal that the San Juan Islands' economy and nearly 19,000 residents are extremely dependent on the barge system. A brief overview of the islands' population and economy follow.

POPULATION

San Juan County's population was 18,550 in 2025. The most populous islands include San Juan Island with 8,900 residents, Orcas Island with 6,000 residents, and Lopez Island with 2,900 residents. Friday Harbor is the only incorporated town in the county and had about 2,700 residents in 2025.

EMPLOYMENT AND WAGES

San Juan County's median household income was $85,000 in 2024. (Median is a more useful metric than average for income, as the average figure is skewed by high earners.)

In 2024, wage and salary employment in San Juan County totaled about 6,000 average annual jobs and represented $324 million in wages.[1] Employment in accommodation and food services totaled 984 average annual jobs and $38 million in wages. Local government accounted for 952 workers and $61 million in wages, while retail trade employed 764 workers and $31 million in wages, and the construction sector employed 736 workers and $42 million in wages.

[1]Washington State Office of Financial Management

Table 2. San Juan County Employment and Wages, 2024

Industry	Average Annual Employment	Total Wages Paid ($Millions)
Accommodation & food services	984	$38
Local government	952	$61
Retail trade	764	$31
Construction	736	$42
Healthcare & social assistance	366	$18
All other	2,295	$134
Total	**6,097 jobs**	**$324 million**

Source: Washington State Employment Security Department

Source: San Juan Islands Visitors Bureau

How important is the barge service to the San Juan Islands?

- *The barge system is absolutely crucial. Island life would come to a grinding halt if they didn't have the gas and propane.* – San Juan Ferry & Barge
- *If this doesn't exist the island won't have fuel. There are zero alternatives.* – San Juan Marine Freight
- *It's extremely important. When the power's out, it keeps the hospital and generators running to keep prescription drugs and hospitals going.* – Inter-Island Propane
- *It's very important because without that service I cannot collect hazardous waste from those islands. For example, recycling paint is really important to haul out, instead of throwing it in the trash.* – Clean Harbors Environmental
- *We wouldn't be able to operate without it. It's critical to get the gas over to the islands.* – San Juan Propane-Amerigas Propane
- *I don't know how this part of the world would exist without the barges. People who rely on our services are the ones who don't own a boat anymore. They use our boat for driving on and off to get to their home. We're their bridge to their home.* – Humpback Hauling
- *Without the barge system, the islands would cease to be habitable. There would be no transportation. You couldn't functionally live. There'd be no diesel. No oxygen for the hospital. No propane for heating.* – Port of Friday Harbor

What is transported by the drop-frame barge system?

Interview contacts noted the following goods and groups of people being transported via barge.

- Aviation gas
- Cars
- Christmas trees
- CO_2 for brewing
- Concrete
- Cranes
- Dumpsters
- Dump trucks
- Engine lubricants
- Excavators
- Feed
- Film crews
- Firefighters
- Fireworks
- Fuels
- Fuel tanks
- Garbage
- Gasline materials
- Grain
- Gravel
- Groceries
- Hazardous waste
- Hay
- Hot tubs
- Livestock
- Modular housing units
- Moving trucks
- Oxygen
- Propane
- Research crews
- Septic trucks
- Small planes
- Sodium chloride
- Summer camp participants
- Topsoils
- Transformers
- Trucks
- Wedding parties

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