

# ***Using Tidal Benchmarks to Measure Legal and Regulatory Boundaries***

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# In Washington State

The property lines of water front properties are usually defined as the Mean High Tide, the Mean Lower Low Tide or the Extreme Low Tide.

## Executive Order 1873

“... to low-water mark on the shore of Port Susan; thence southeasterly with the **line of low-water mark** along said shore and the shores of Tulalip Bay and Port Gardner, with all the meanders thereof, and across the mouth of Ebey’s Slough to the place of beginning...”

# Regulations

Some of the tribes, counties and cities have tied many of their rules and regulations to tidal elevations.

# Tulalip Tribal Codes - Chapter 8.30

## Tidelands Management Policies

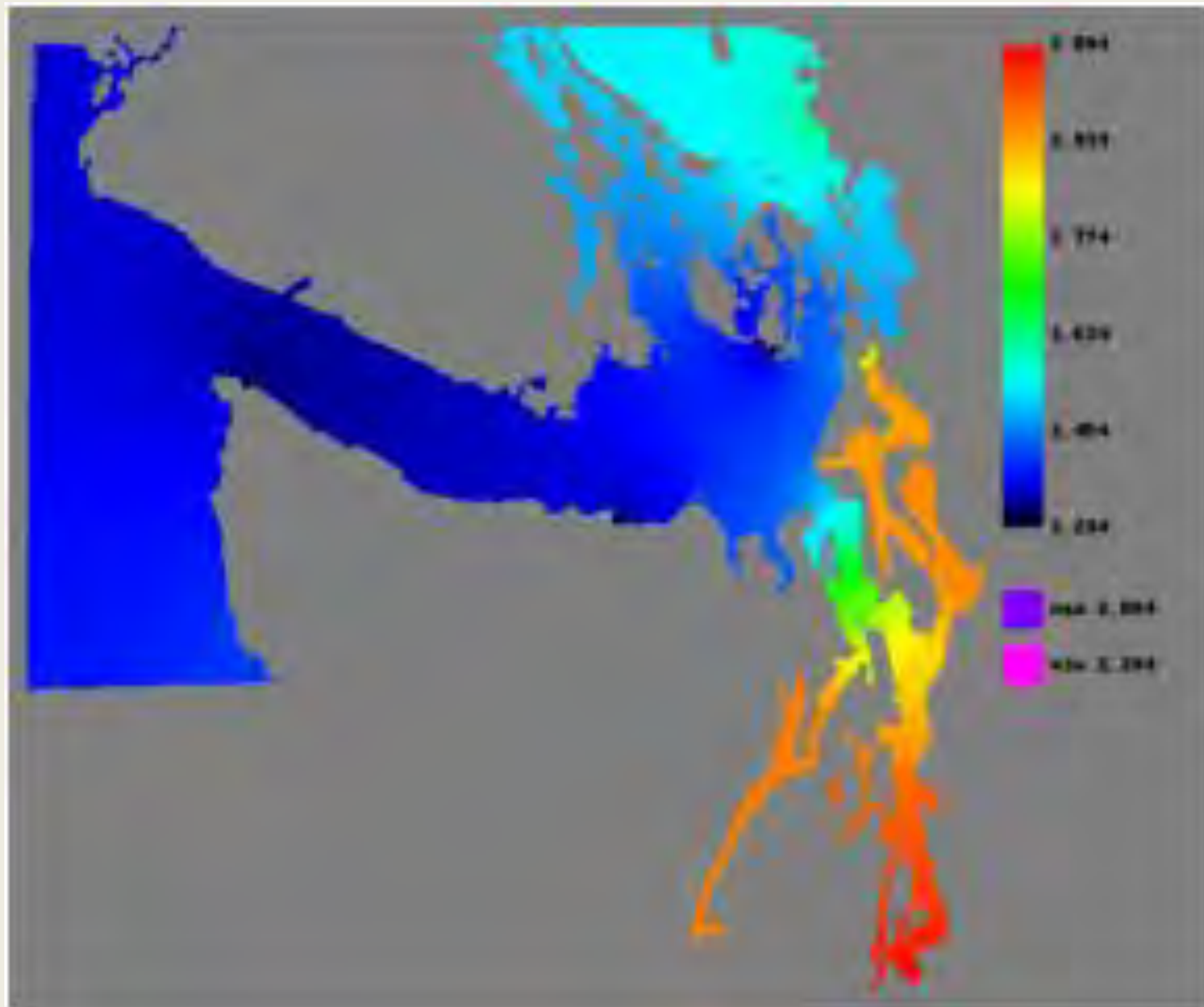
8.30.040(30)

“Tidelands,” as used in this chapter, means land on the shore of the Tulalip Reservation **between the line of mean high tide and the line of extreme low tide**, including all of Tulalip Bay.

# Difficulties From Using Tides

A tidal epoch lasts 18.6 years.

Tides are amplified by the geography of the Puget Sound.

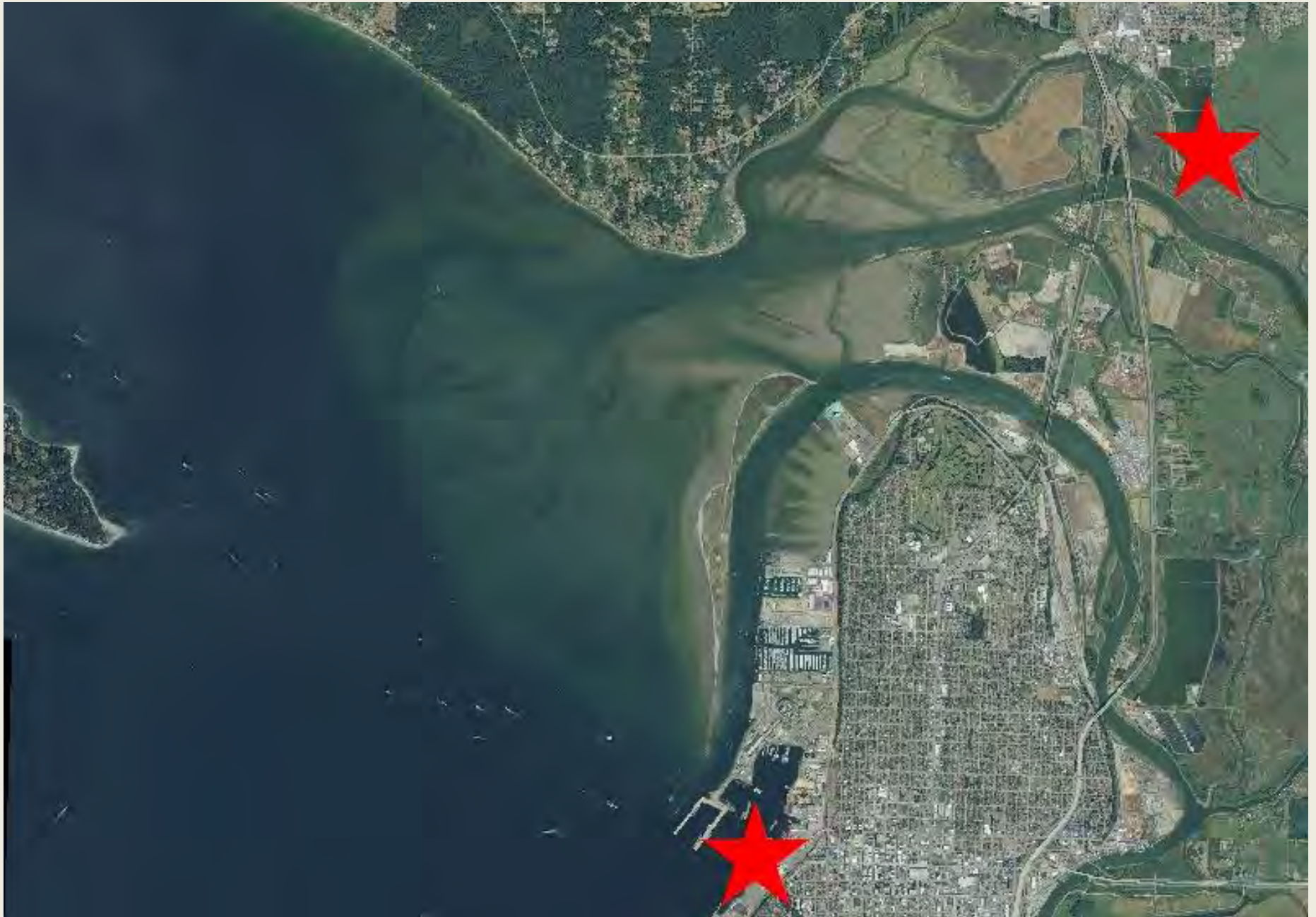


# NOAA

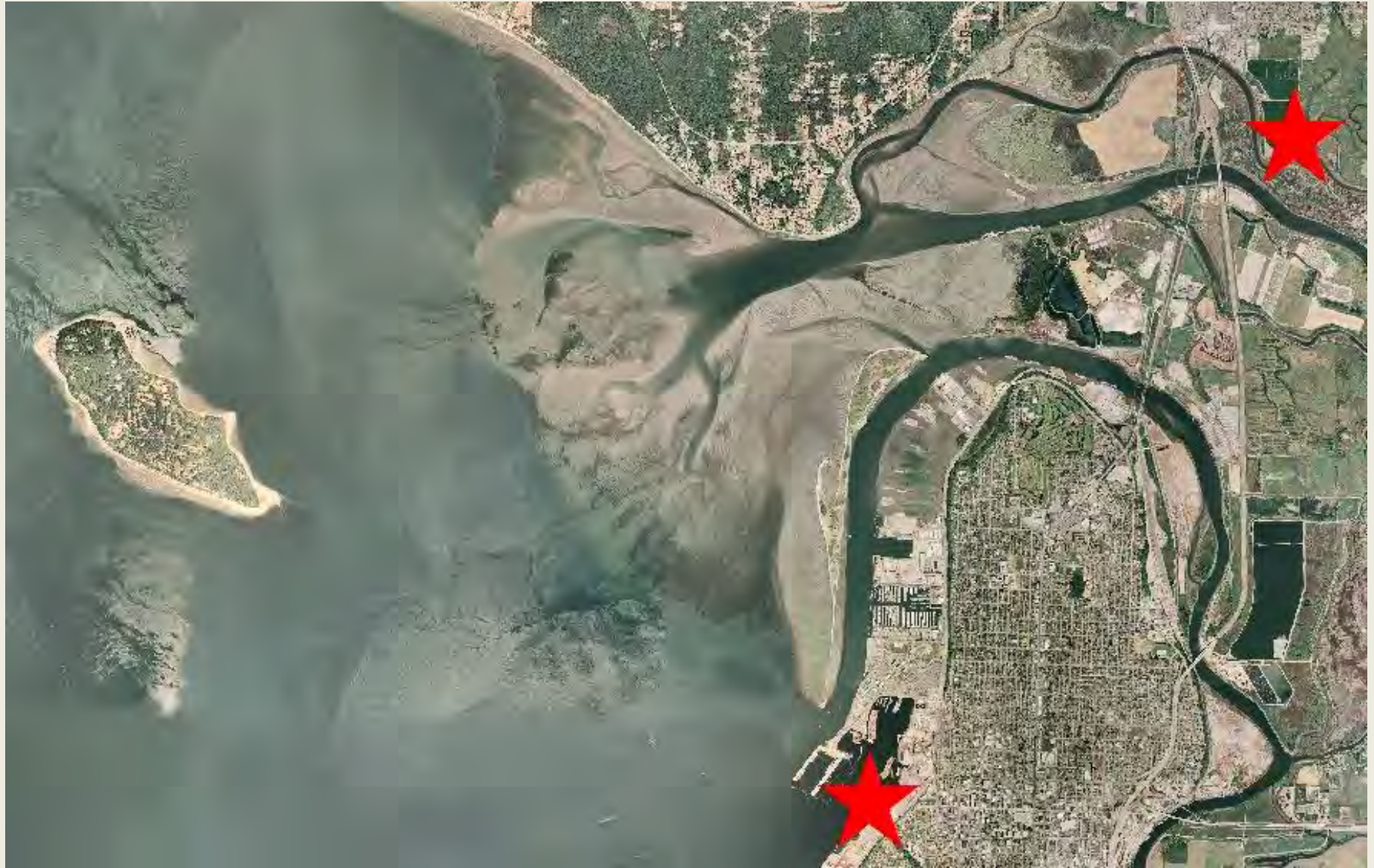
**CO-OPS division** “is the **authoritative source** for accurate, reliable, and timely water-level and current measurements”

**Field Operations Division** “installs, documents, operates and maintains CO-OPS measurement systems; conducts field reconnaissance and **geodetic operations to include the establishment, leveling, documentation, and inspection of NOS benchmarks**; and provides training in the installation, operation and maintenance of CO-OPS observing equipment.”









## Tulalip Tribal Codes - Chapter 8.30 Tidelands Management Policies

### 8.30.030(7) Permanent Survey Benchmarks.

Tribal staff shall work to establish a **network of permanent survey benchmarks** along the Reservation shoreline. The purpose of the benchmarks will be to accurately and quickly **determine the tidal elevation** of shoreline structures and activities in the field and whether or not the structure or activity is on or over tidelands.





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Sunny Shores

Tulare Beach

Spee-Bi-Dah

Tulalip Shores

Tulalip Bay

Priest Point

140th St NW

140th St NE

34th Ave NE

34th Ave NE

34th Ave NE

34th Ave NE

34th Ave NE

34th Ave NE

34th Ave NE

Marine Dr NW

Waterworks Rd

Curk Dr

19th Ave NE

27th Ave NE

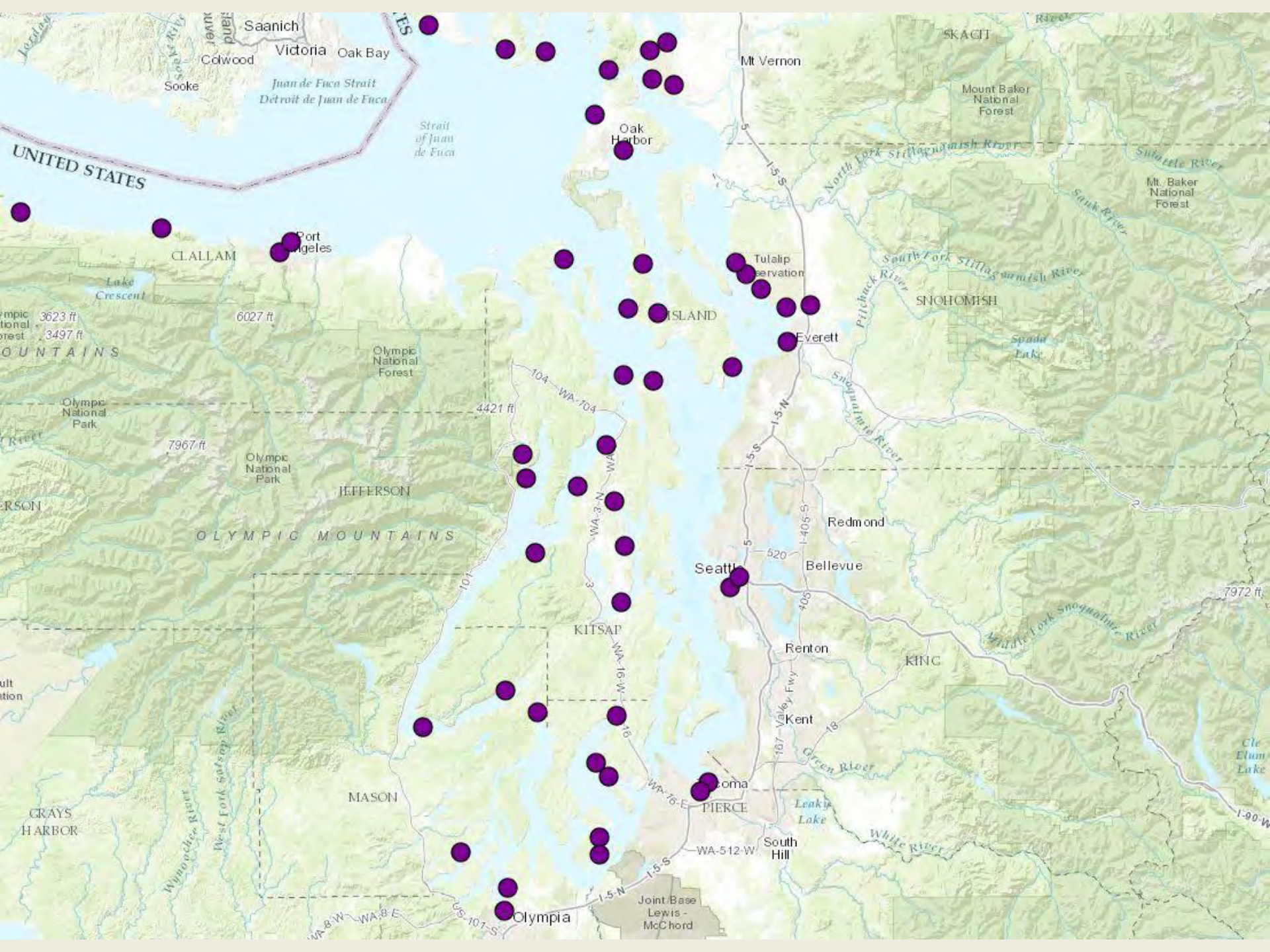
Meridian Ave N

Marine Dr NE

Quil Ceda Blvd







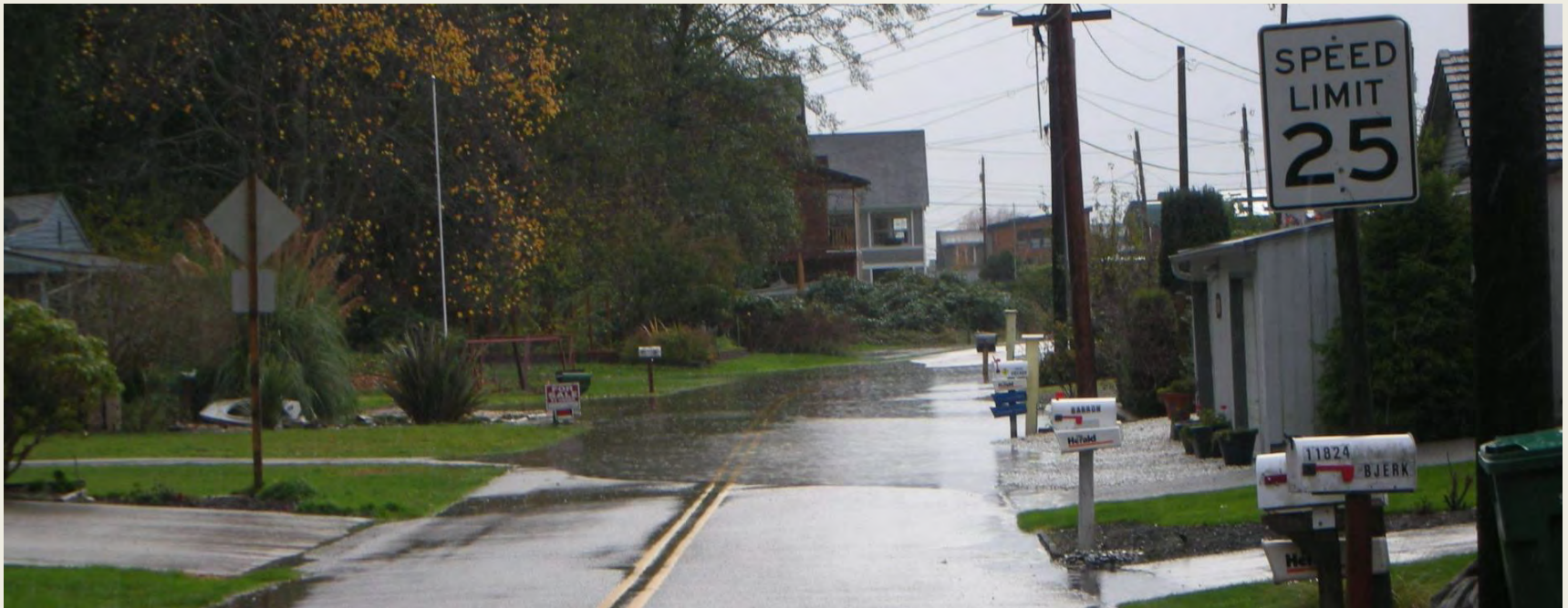
**Who else will benefit  
from this project?**



Architects  
want to design  
house  
foundations to  
be higher than  
the highest  
tide.



Engineers need the highest tide elevation to properly design roads.



Emergency planners can predict and prepare for cut off homes and broken infrastructure.





The height of bulkheads can be evaluated for their ability to hold back storm surges.





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