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**KITSAP COUNTY**

# **Sea Level Rise Vulnerability and Risk Assessment**

## **Community Meeting #3 – Hansville Focus**

*formerly DCG/Watershed*



# Agenda

- Project Overview
- Risk Exposure Assessment Results
- Draft Maps – Hansville Community
- Draft Mitigation Strategies
- Timeline/Next Steps
- Q&A



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# Project Purpose

## Identify

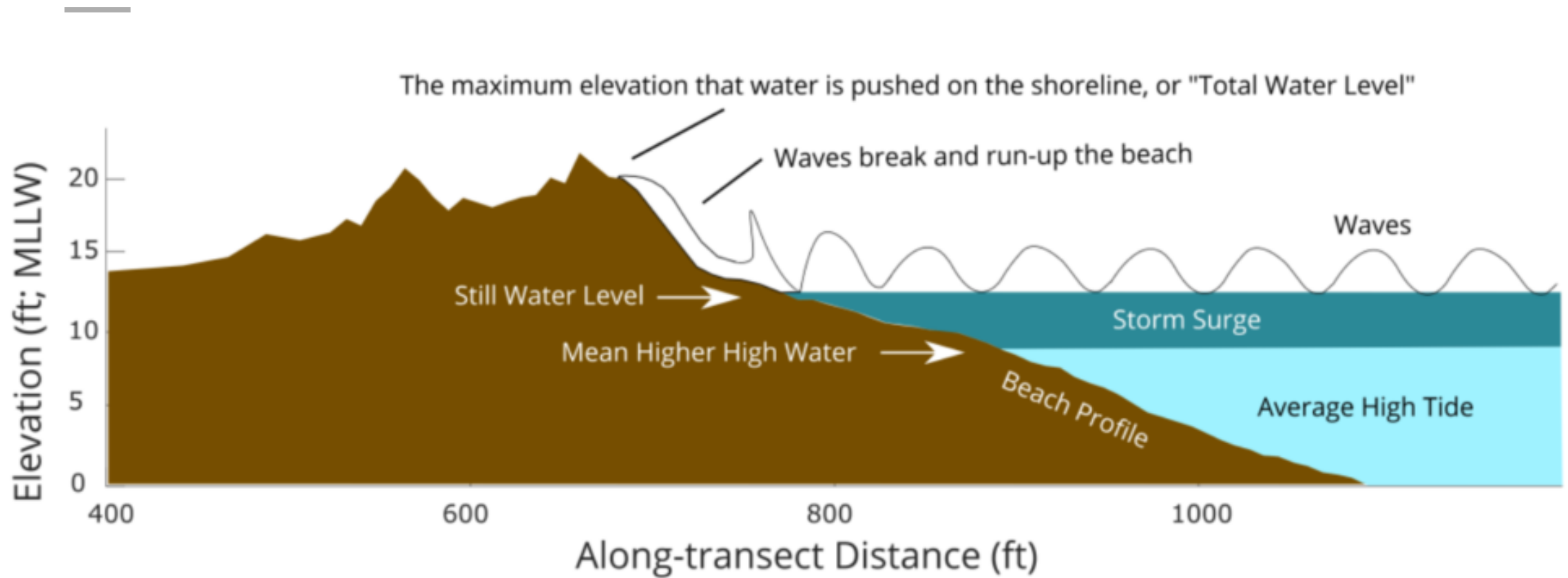
Identify assets with potential for loss of damage from sea level rise.

## Complete

Complete risk analysis and vulnerability assessment, based on mapping predictions to be decided by the Technical Advisory Committee (TAC) in July.

## Propose

Propose practical region-specific actions or projects, to address increased sea water interactions where appropriate.



Source: Miller et al. 2019. Extreme Coastal Water Level in Washington State: Guidelines to Support Sea Level Rise Planning.  
<https://cig.uw.edu/publications/extreme-coastal-water-level-in-washington-state-guidelines-to-support-sea-level-rise-planning/>

# Projections – What are they?

- How are Sea Level Rise (SLR) & flood levels estimated?
  - Probability Confidence
  - International predictions based on emissions
  - Tide gauge trends – Mean Higher High Water (MHHW) and extreme flood
- Relative Sea Level Rise
  - Absolute SLR + Land Movement
- Confidence Intervals by year

# Projections - Where do the levels come from?

- **2018 Report**
  - “Stillwater”, no wave run-up
- **2019 Report**
  - Extreme water levels seen by tide gauges

[Resilience Resource Library | Washington Coastal Hazards Resilience Network](#)  
([wacoastalnetwork.com](http://wacoastalnetwork.com))

[Washington Sea Grant - YouTube](#)

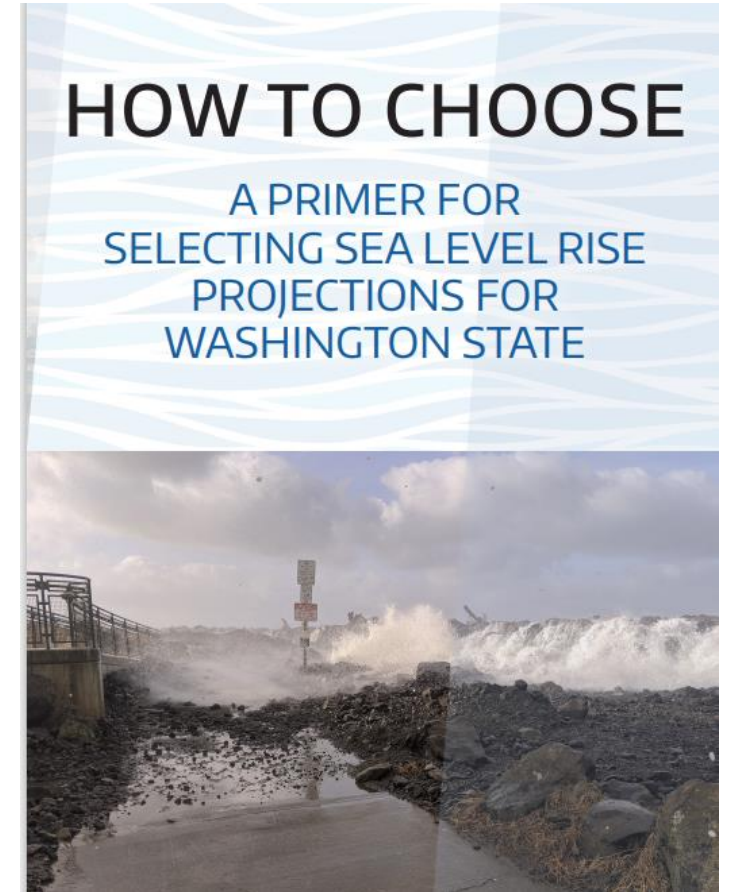


# Projections – Selected by Technical Advisory Committee

1. RCP: 4.5 or **8.5**

2. Timeframe: **2050?** 2060? **2100?** 2150\*?

3. Certainty/Level of Risk: **1%** (less likely),  
**50%, 90%** (very likely)



# Exposure Risk Levels

Modeled Increases of tidal height, due to projected sea level rise and extreme flooding, for Kitsap County by 2050 and 2100 under different certainties.

	Certainty			50-yr Return Flood with 90% certainty		50-yr Return Flood with 50% Certainty		50-yr Return Flood with 1% certainty		
	90%	50%	1%	West-, East- and North-facing shorelines, Dyes	Sinclair, Agate Pass, Port Gamble, Liberty	West-, East- and North-facing shorelines, Dyes	Sinclair, Agate Pass, Port Gamble, Liberty	West-, East- and North-facing shorelines	Sinclair, Agate Pass, Port Gamble, Dyes	Liberty
2050	0.5 ft	1 ft	1.5 ft	3.5 ft	4 ft	4 ft	4.5 ft	4.5 ft	5 ft	5.5 ft
2100	1.5 ft	2.5 ft	5 ft	4.5 ft	5 ft	5.5 ft	6 ft	8 ft	8.5 ft	9 ft

Using the RCP 8.5 projections. Sources: Projected Sea Level Rise for Washington State (Miller et al, 2018) ; Extreme Coastal Water Level in Washington State: Guidelines to Support Sea Level Rise Planning (Miller et al, 2019); NOAA Sea Level Rise Viewer Data Download (2024).



# Assets

*Italics means assessments pending and not included in draft report as of 02/07/2025*

Transportation	Structures	Water Infrastructure	Environmental	Land Use
Roads and Transportation	Coastal Residences	Coastal On-Site Septic Systems	<i>Beach Access</i>	Agricultural Land/Farmland
Airports	County Buildings	Group A Water Systems	Marinas and Bays	Brownfield Sites
	Fire Stations	<i>PUD Stations and Structures</i>	Wetlands and Estuaries	Landfills
	Historic and Cultural Sites	Sewer Districts/Water Treatment Plants		Parks
	Hospitals	Wastewater Treatment Facilities		Ports (?)
	Libraries			<i>Shellfish/Seafood Industrial Facilities</i>
	Police Stations			
	Schools			

# Hansville & Point No Point

2050



2100

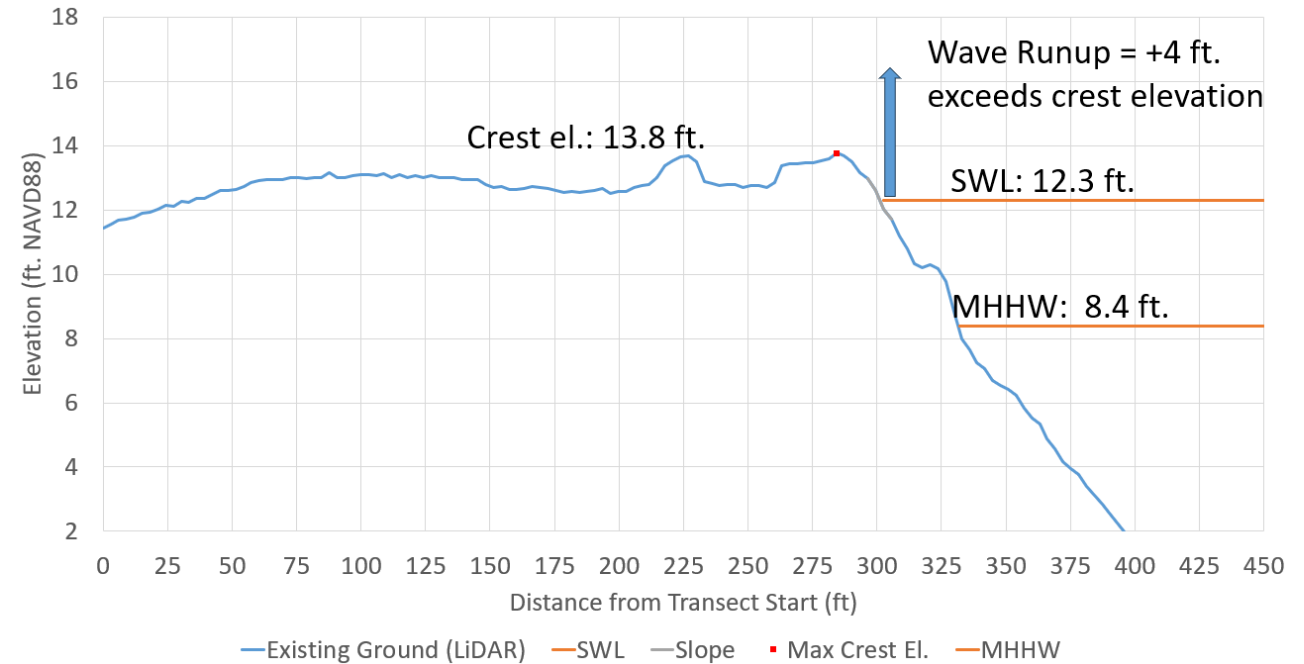
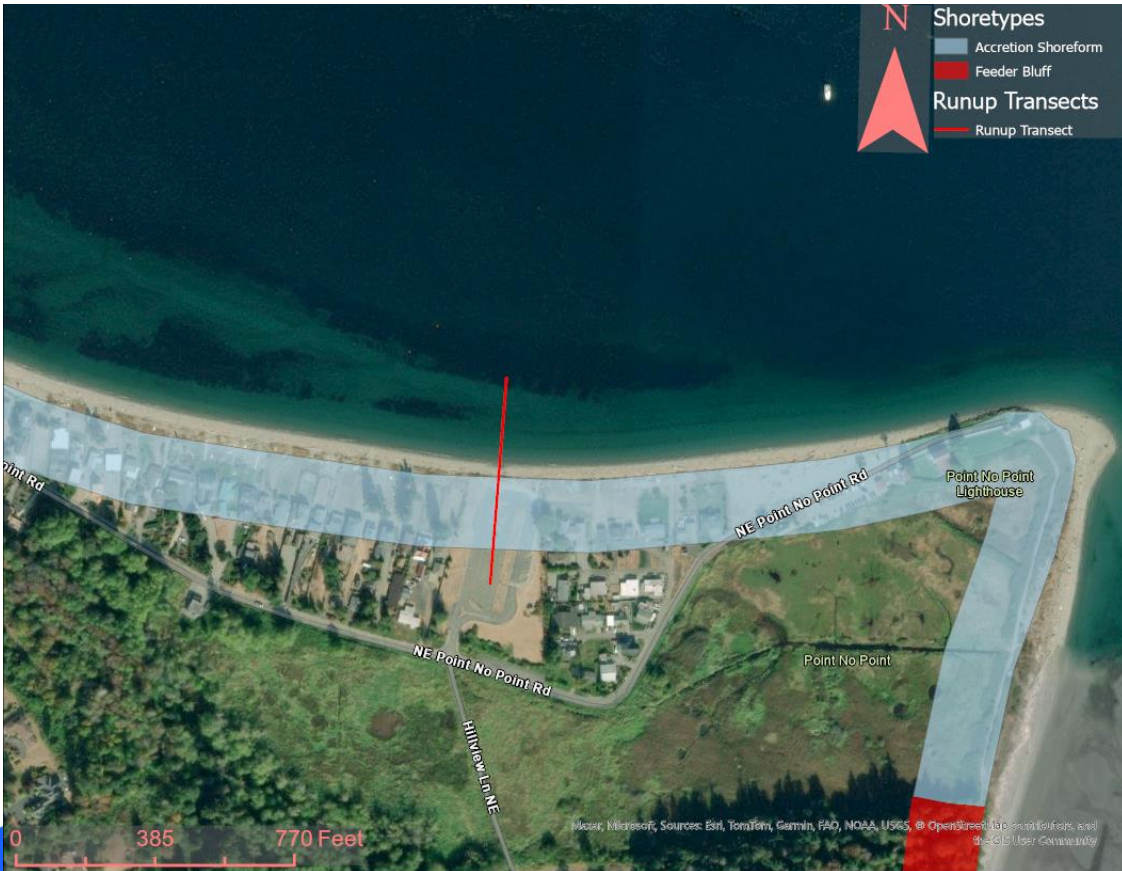


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# Wind-Waves increase Flooding Risk

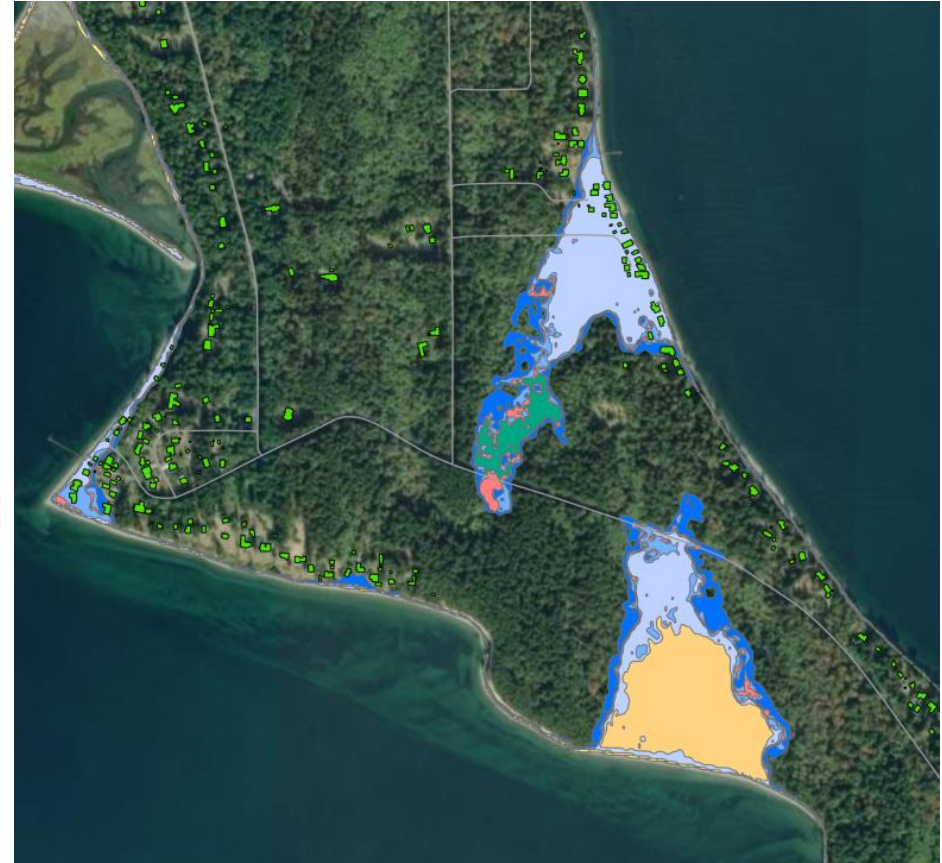


# Twin Spits

2050



2100



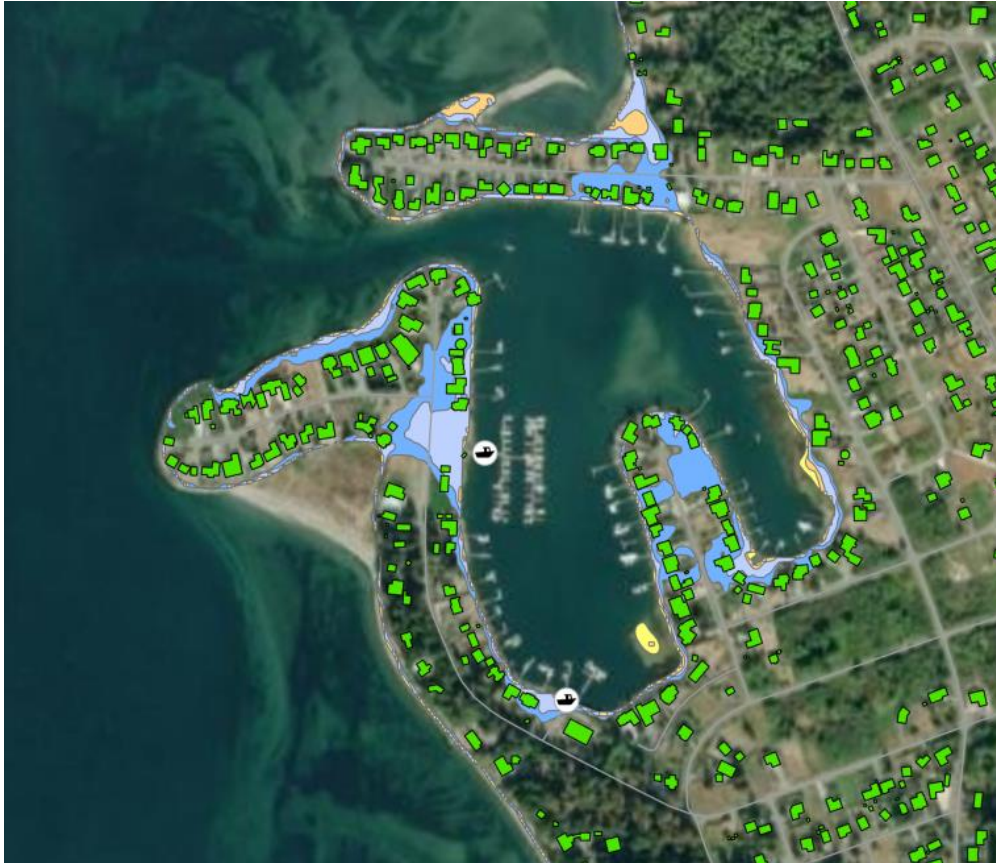
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# Coons Bay

2050



2100

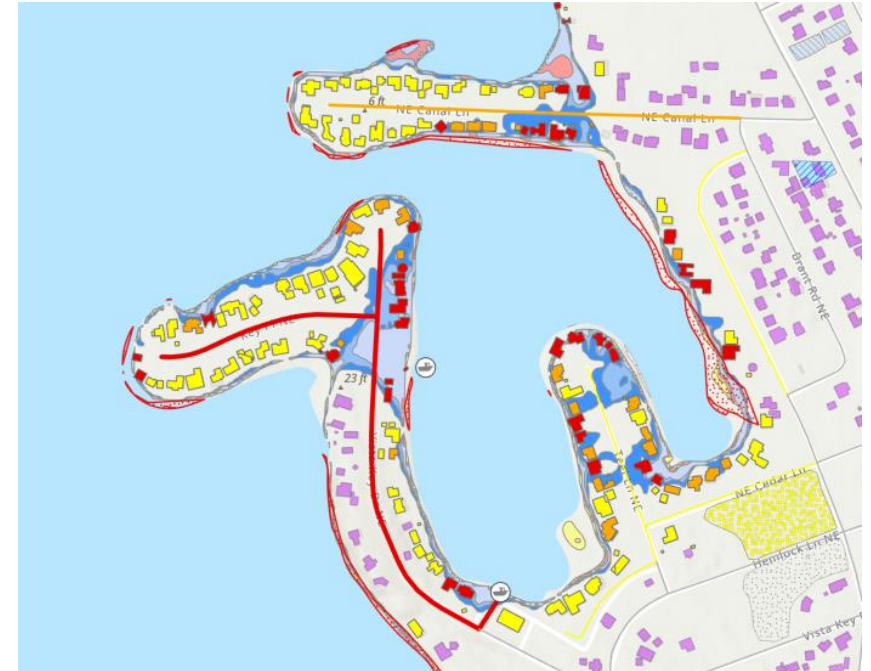
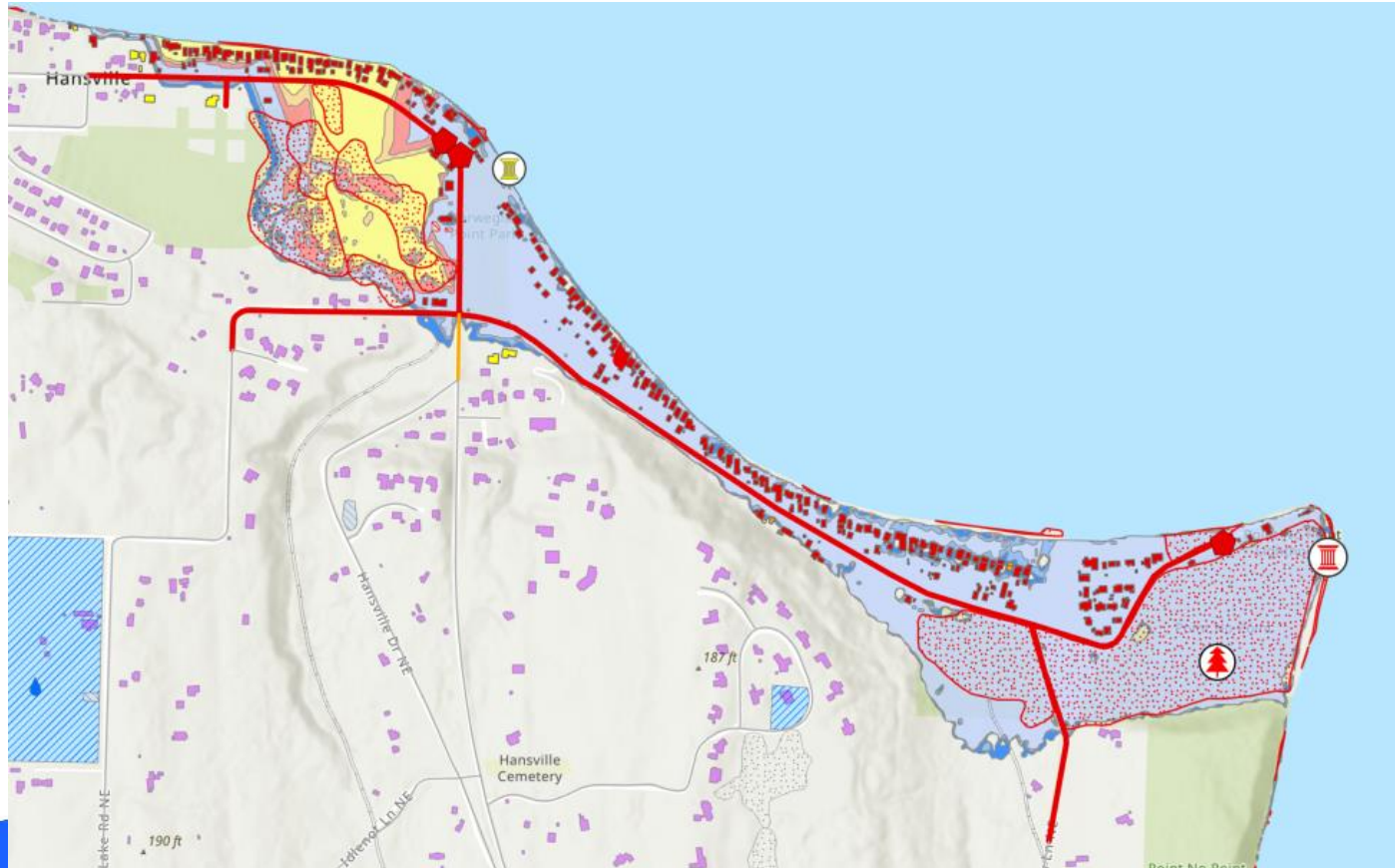


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# Assets with an exposure risk



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# Potential Mitigation Strategies

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## Development standard revisions

*Require SLR projections in assessments or reports*

*Review development setbacks near bluffs*

*Limit redevelopment/expansion of legal non-conforming structures in vulnerable locations*

*Incorporate SLR projections when planning for and permitting critical infrastructure and facilities*

*Increase floodproof requirements for high-risk structures, incl FFRMS*

*Map channel migration zones*

*Incorporate climate change impacts in design efforts*

# Potential Mitigation Strategies (Cont...)

## Public Outreach and Incentives

*Incentivize passive management strategies*

*Encourage alternatives to hard shoreline stabilization methods*

*Provide support for educational opportunities on raising or moving vulnerable structures, retrofitting buildings, and other measures, including funding sources.*

*Incentivize community flood control*

## Infrastructure Planning and Improvements

*Prioritize transportation connectivity and resilience*

*Evaluate existing stormwater infrastructure and conduct maintenance as needed*

*Evaluate impacts to commercial water dependent industries*



# Timeline

Public Meeting #1	September 2024	Project Overview
Public Survey	September 2024	Public and Agency Surveys on Concerns and Priorities
TAC Meeting #3	December 4, 2024	Review of Preliminary Maps
Public Meeting #2	December 12, 2024	Review Draft Maps, Survey Results and Preliminary Findings
Draft Documents	January 2024	Draft Maps Published
TAC Meeting #4	February 19, 2025	Review and Discussion of Draft Report
Public Meeting #3 - Hansville	February 25, 2025	Review Draft Maps, Preliminary Results and Strategies
Planning Commission Meeting /Public Meeting #3	May 2025	Review and Discussion of Draft Audit Summary Memorandum and Report
Board of Commissioners/Public Meeting #4	June 2025	Review and Discussion of Final Documents and draft amendments contained within the Audit Summary Memorandum.
Final Report	June 2025	Final Documents Published

# Next Steps

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- Complete remaining analyses and implement adaptive capacity criteria
- Receive feedback from Ecology and County staff
- Complete audit of County Codes and Plans to incorporate into report
- Publish online map of projections
- Update ArcGIS StoryMap with assessment results
- Develop a prioritization of public infrastructure in coordination with Public Works staff
- Meet with decision makers (Planning Commission and Board of County Commissioners) and finalize report

A serene marina scene at sunset. The sky is a mix of orange, yellow, and blue, with a dark forested hillside in the background. In the foreground, a wooden pier extends into the water, featuring a small, illuminated building with a sign that reads "PACIFIC". Several boats are docked at the pier, their lights reflecting on the calm water. The overall atmosphere is peaceful and quiet.

Questions?