



Olympia Sea Level Rise Briefing

City Council Study Session
August 19, 2025

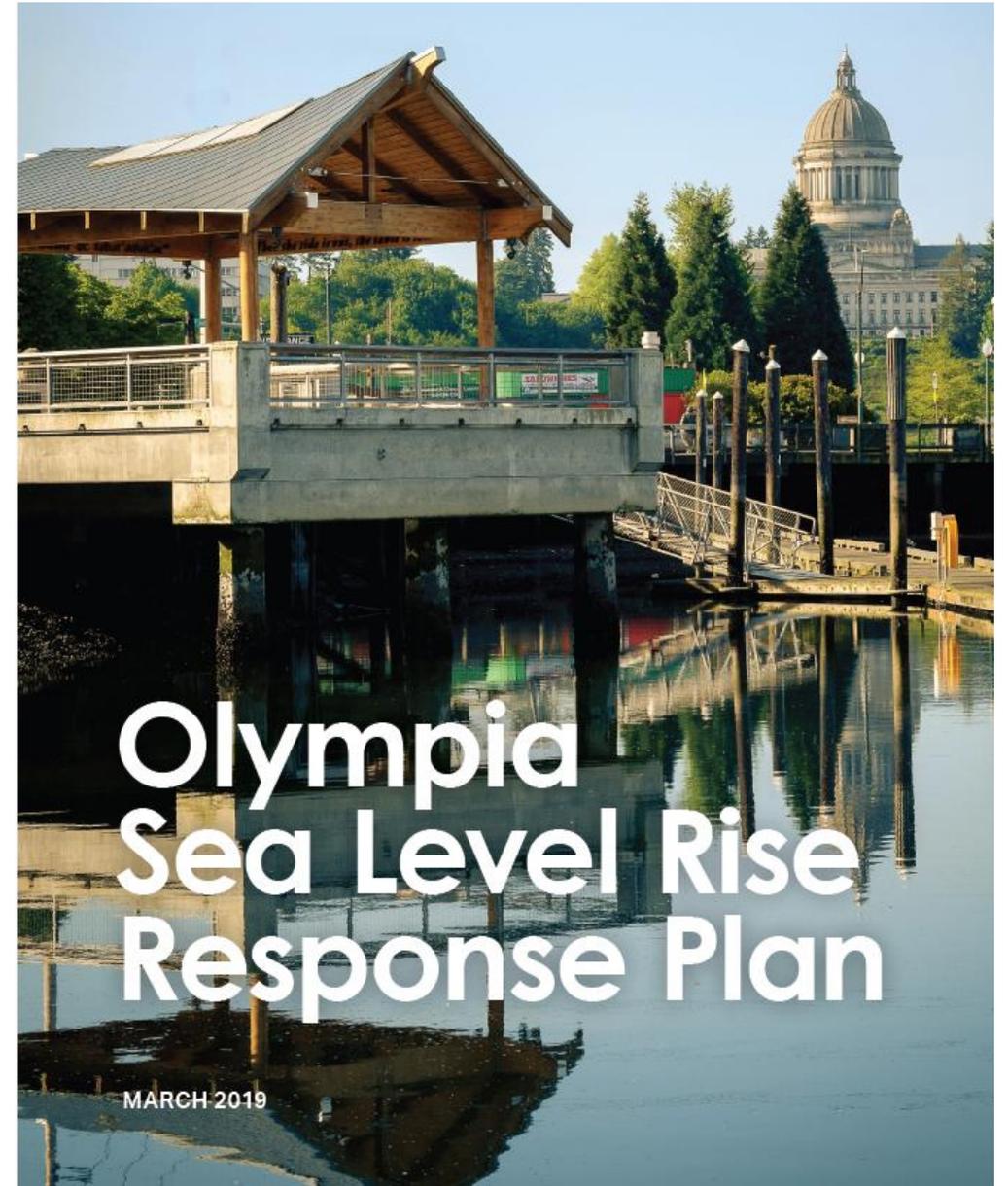
Overview

- Introduce Olympia Sea Level Rise Response Plan
- Progress update on near-term strategies
- Planning for mid-term strategies
- Next steps and work moving forward



Olympia Sea Level Rise Response Plan

- Document guiding all sea level rise planning until 2100
- Developed with City of Olympia, LOTT Clean Water Alliance, and Port of Olympia
- SLR Plan includes:
 - Science and Projections
 - Vulnerability and Risks of assets
 - Adaptation Strategies
 - Needed Actions and Next Steps
 - Estimated Costs and Resources
 - Implementation Schedules



MARCH 2019

SLR Collaborative

- Shoreline conditions requires strong planning and design coordination across property owners
- SLR Collaborative established with key shoreline managers and stakeholders to implement the strategies within the focus areas

Port of Olympia

City of Olympia

LOTT Clean Water Alliance

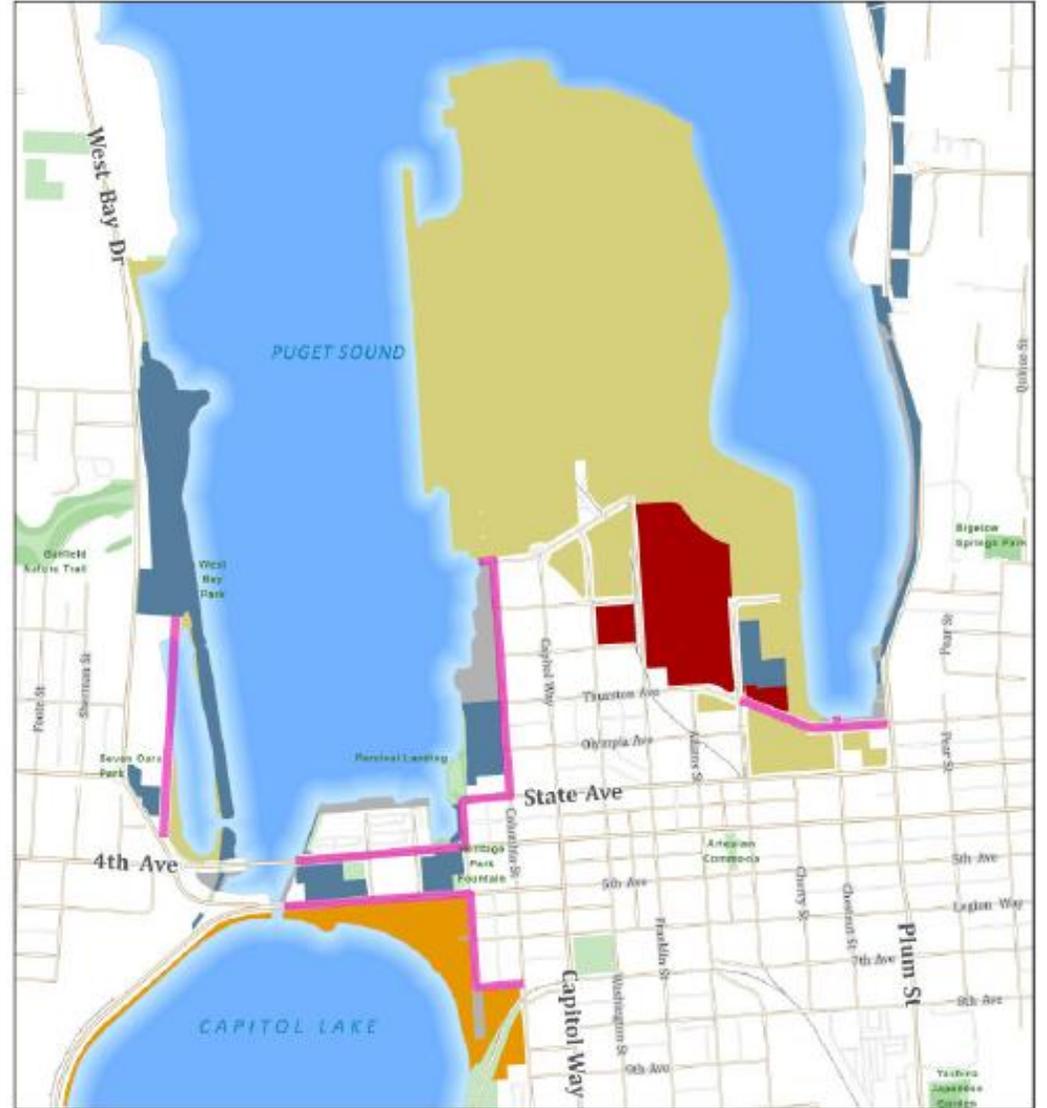
Thurston County*

WA Dept. of Enterprise Services*

Squaxin Island Tribe*

* Non-voting members

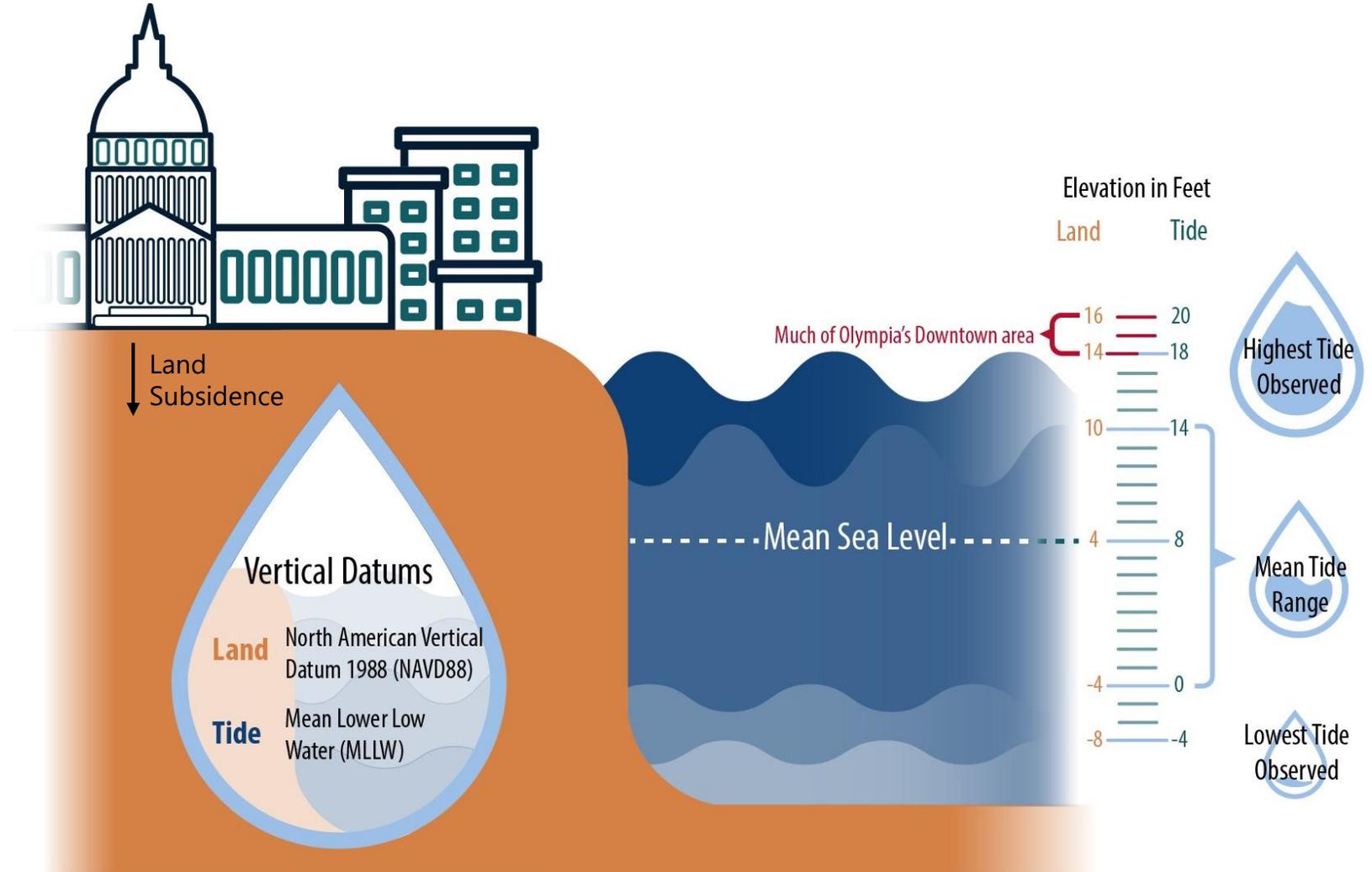
Right-of-Way



What are we up against?
Sea level rise projections

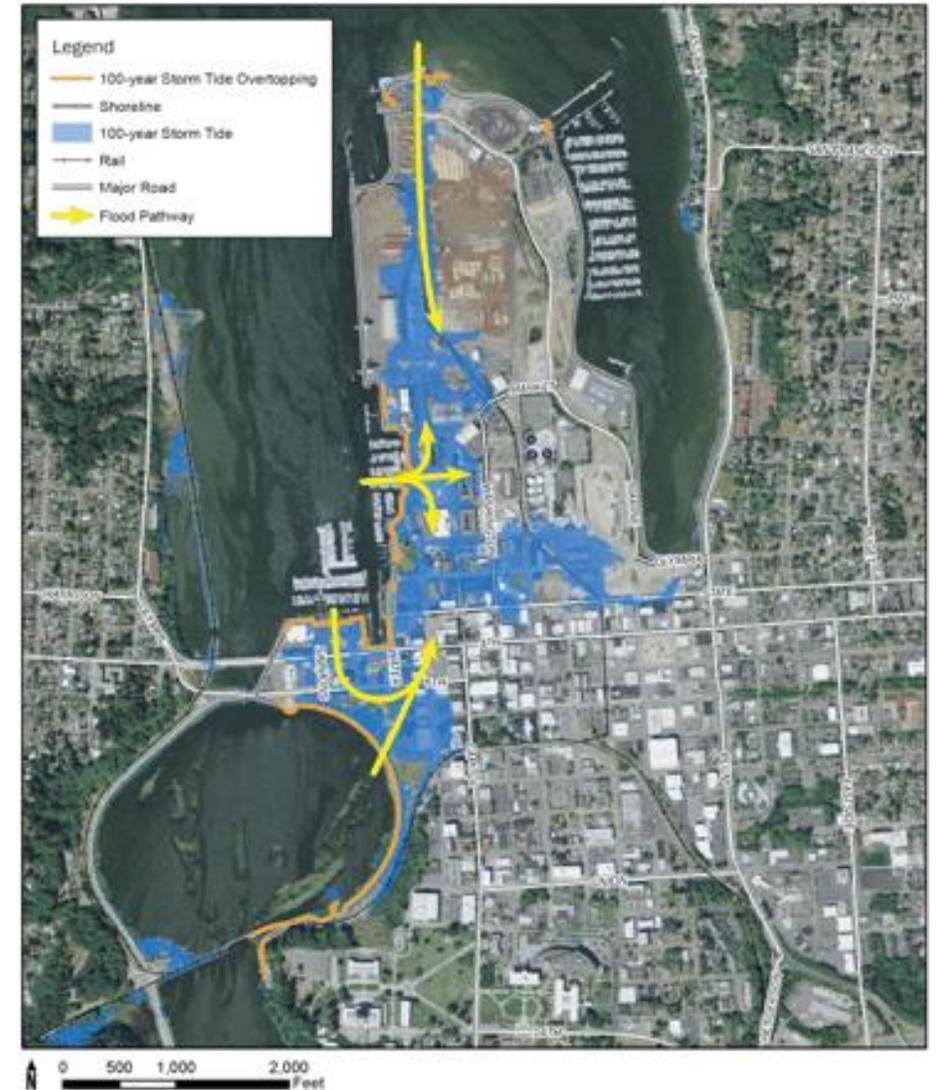
Olympia's Sea Level Rise Context

Olympia's drastic tidal range, high groundwater table, and historic fill are main considerations as we pursue adaptation strategies.



Sea Level Rise Projections

Year	Most Likely (inches)	High-Range (inches)
2020	3	7
2030	5 to 7	11 to 13
2040	8 to 10	16 to 18
2050	11 to 13	23 to 25
2060	15 to 17	30 to 32
2070	18 to 20	37 to 39
2080	22 to 25	46 to 49
2090	27 to 31	54 to 58
2100	32 to 36	64 to 68



Should We Stay or Should We Go?

Managed Retreat Considerations

**\$1.3
Billion**

*Cost of moving
critical infrastructure*

**Above and
Below Ground
Infrastructure**

**Demolition,
Disposal,
Clean Up,
Restoration**

**Irreplaceable
Cultural
Resources**



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Wholesale retreat deemed unpragmatic and infeasible.

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Wholesale retreat deemed unpragmatic and infeasible.

**Adaptation and protection strategies focus on
publicly owned property and rights-of-way.**

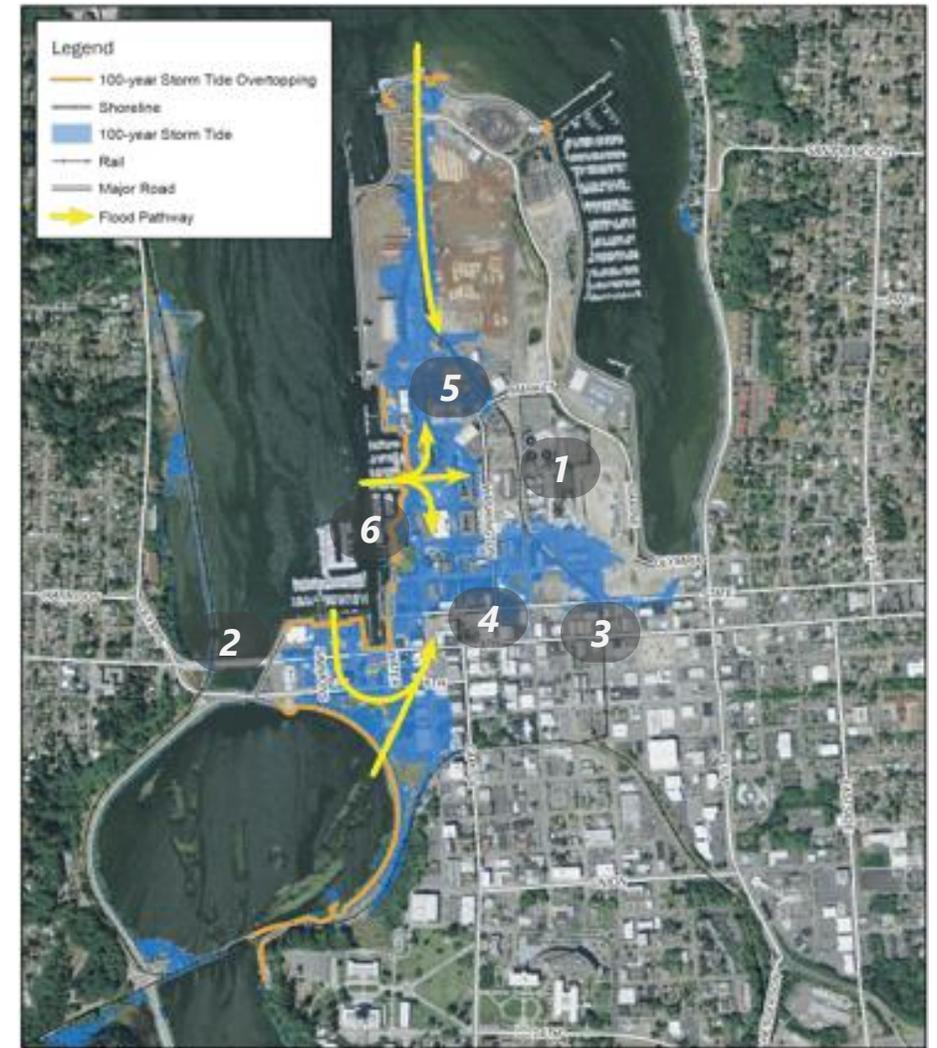
Sea Level Rise Impacts

Critical Infrastructure

1. Budd Inlet Treatment Plant
2. Emergency Transportation Routes
3. Storm drains

Cultural and Economic Resources

4. Historic Downtown
5. Farmer's Market
6. Waterfront Access



How are we guaranteeing protection?

Spatial and Temporal Adaptation Strategies

Using a Comprehensive Approach

We are employing a variety of adaptation actions to address vulnerabilities and mitigate risk from sea level rise.

Informational

Address **data and knowledge gaps** in our understanding of flood vulnerabilities.

Physical

Address flood vulnerabilities by making **physical modifications** to the shoreline or individual assets to make them less vulnerable to flooding.

Governance

Address flood vulnerabilities through **policies, plans, coordination, guidelines, and regulations.**

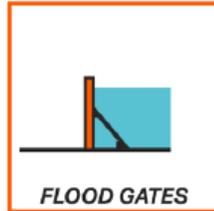
Operational

Address flood vulnerabilities through **operations and maintenance** in response to changing conditions.



Suite of Physical Strategies

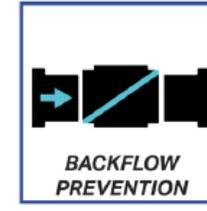
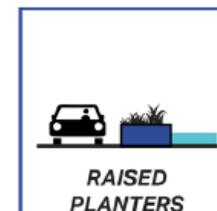
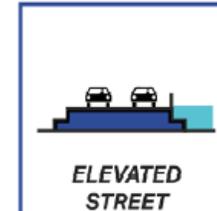
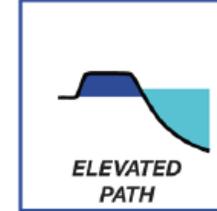
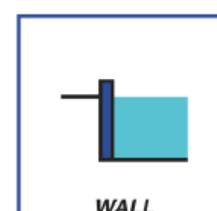
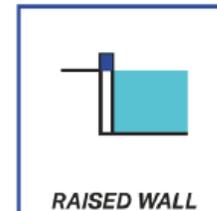
TEMPORARY FLOOD PROTECTION



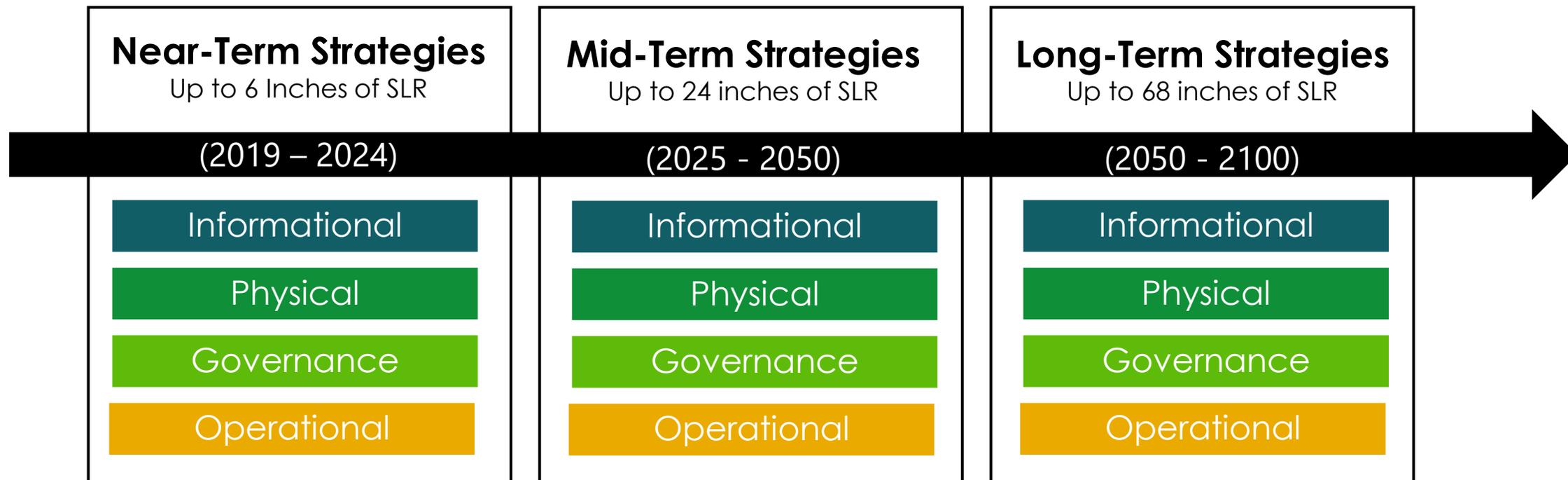
LIVING WITH WATER



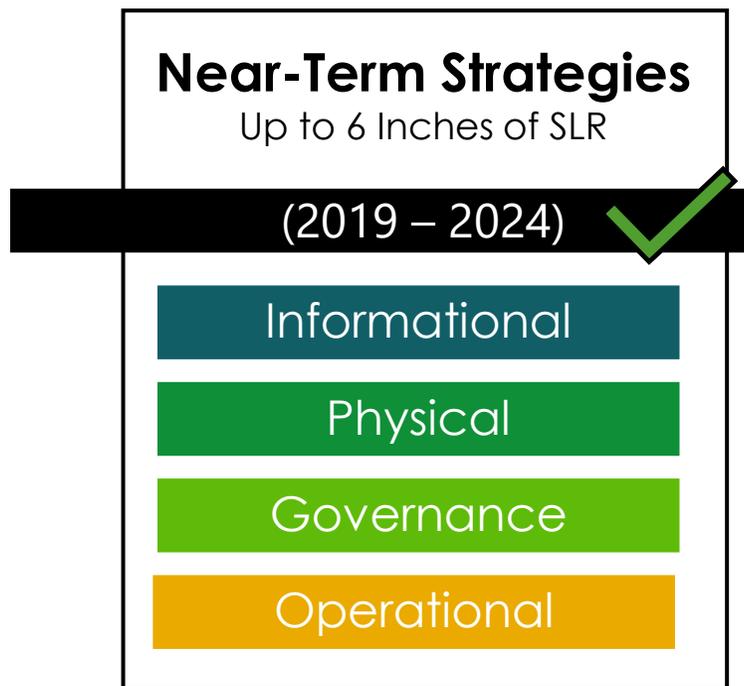
PERMANENT FLOOD PROTECTION



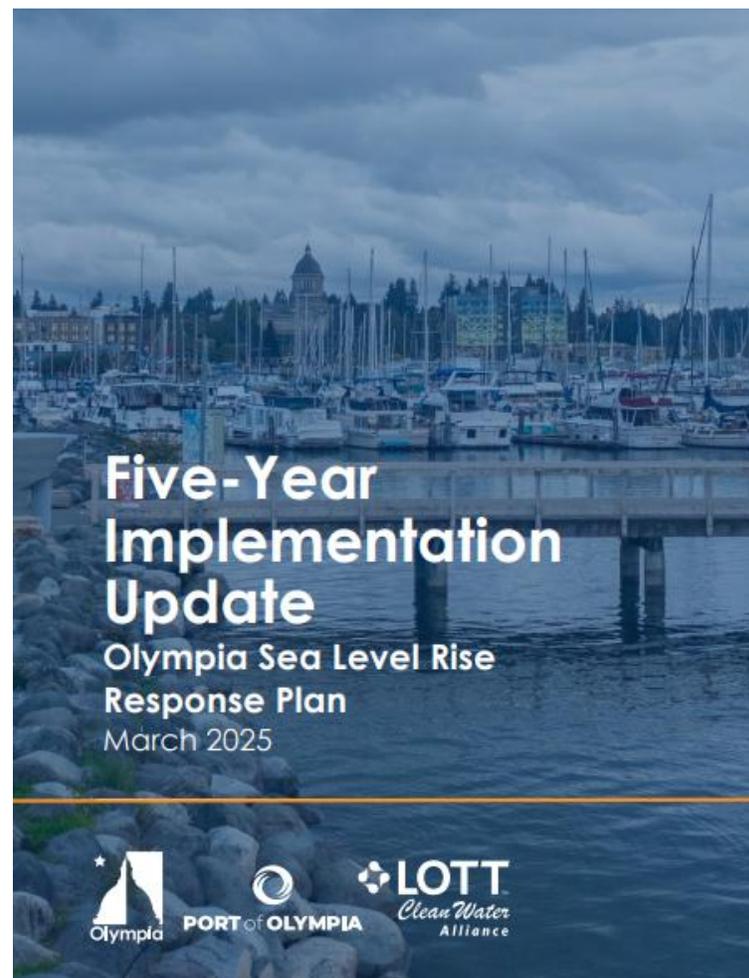
Phased Implementation of Strategies



Implementing Near-Term Strategies



86% Complete!



Looking Back:
Implementing Near-Term Strategies

Near-Term Strategies: Physical

Install backflow prevention on stormwater outfalls and other key pipes.



Near-Term Strategies: Operational

Coordinate winter flood preparedness and response activities to minimize flooding of the combined sewer system.



Near-Term Strategies: Operational

**Coordinate
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Near-Term Strategies: Operational

Coordinate winter flood preparedness and response activities to minimize flooding of the combined sewer system.

[Home](#) , [Community](#) , [Downtown](#) , [Downtown Flooding](#)

Downtown Flooding



When is Downtown at risk of flooding?

Olympia's low-lying shoreline areas near Downtown are susceptible to flooding and inundation in certain situations, such as:

- When Capital Lake and/or the Deschutes River reach flood levels,
- As a result of an earthquake-driven tsunami, or
- When very high tides are predicted (see table below), particularly when these tides align with low barometric pressure, heavy wind and rain, or high lake or waterway levels from local or upstream rains.

These events generally come and go quickly, yet flood waters can rise 18 inches or more above street level in portions of downtown resulting in private property and vehicle damage. Flood depths and areas change based on the weather details of each event. This makes it difficult to anticipate impacts very far in advance.

[View Downtown Flooding Map](#)

Emergency alerts

Sign up to get real-time flooding notifications.

- [Thurston Community Alerts](#)
- [Capitol Campus Email Updates](#)

Sandbag pickup areas

South Quadrant

- W end of 225 Columbia Parking Lot (Percival Landing Parking Lot)
- NE or NE corner of Sylvester St and 4th (Oyster House)
- Parking area S of 601 Water St (State Bathrooms at Heritage Park)

East

- SW Corner of State Ave and Chestnut St

North

- B Ave and Columbia (Budd Bay Café)

Northeast

- Thurston Ave and Adams St (ACME Fuel Station Pumps)

Olympia Seafood

- W end of 405 Columbia

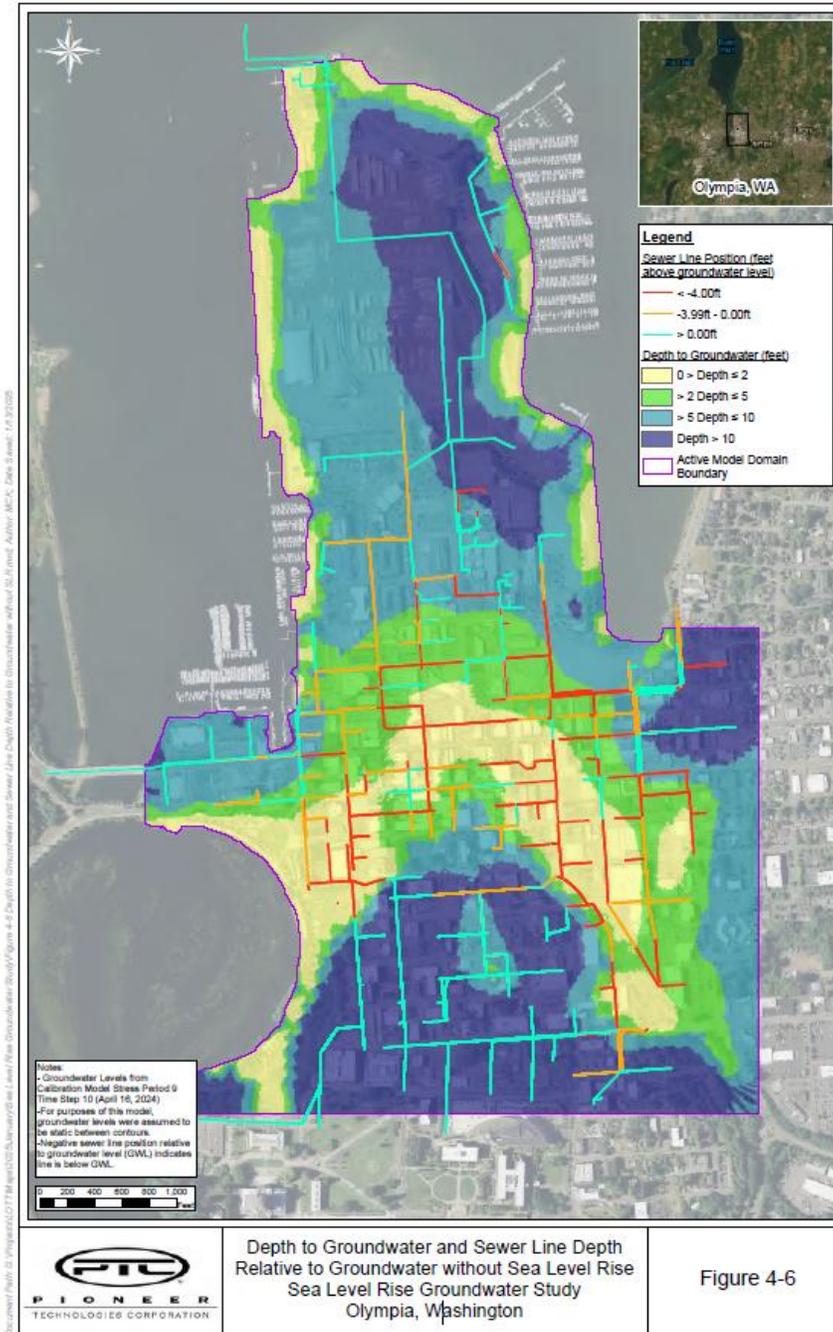
Near-Term Strategies: Informational

Investigate and implement long-term public financing mechanism.



Near-Term Strategies: Informational

Complete study determining impacts of sea level rise on groundwater.



December 2022 King Tides

A test of our near-term strategies



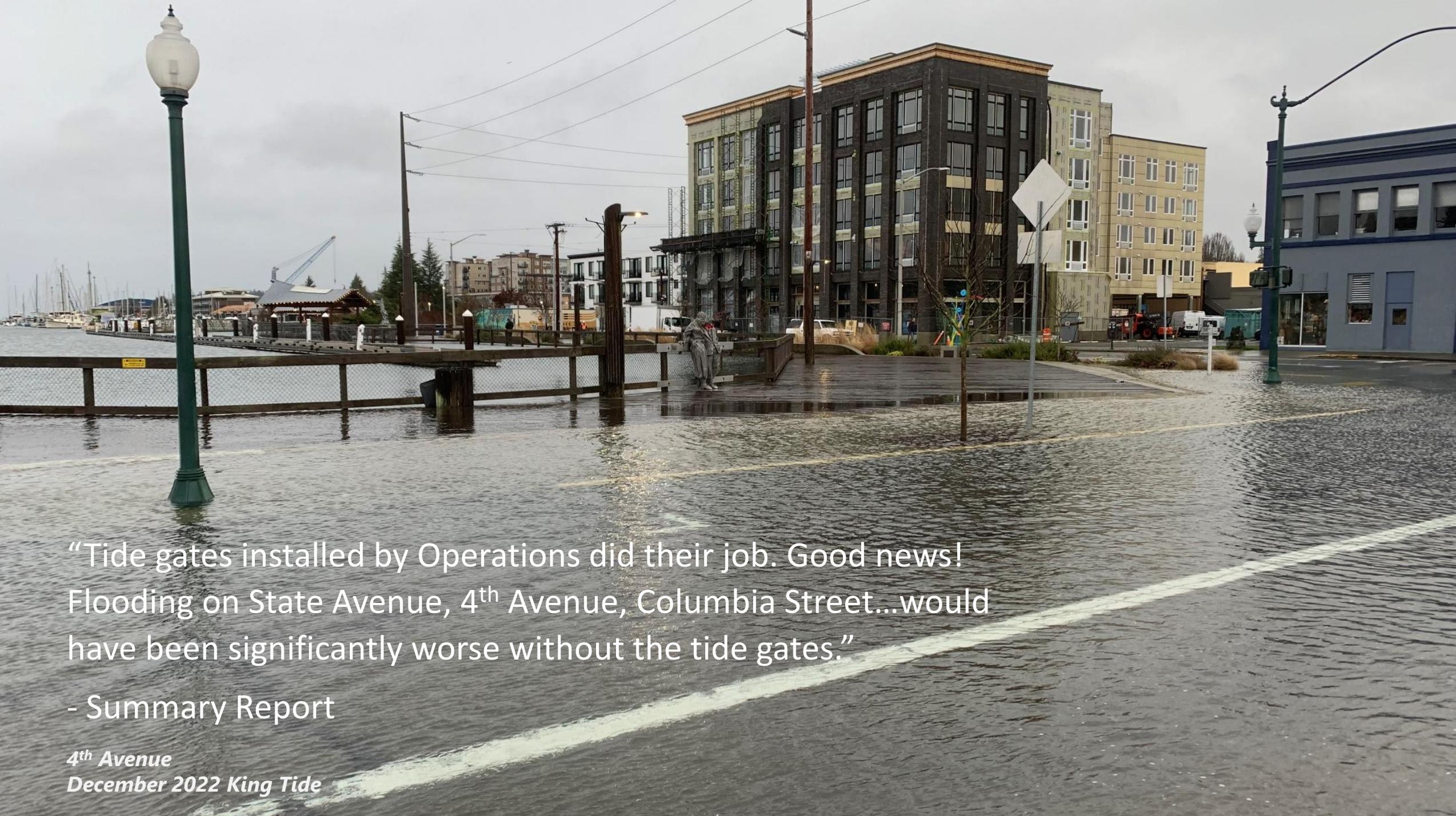
NO LEFT
TURN



“Significant effort was made to sandbag the Oyster House which did not flood.”

– Summary Report

*Olympia Oyster House
December 2022 King Tide*



“Tide gates installed by Operations did their job. Good news!
Flooding on State Avenue, 4th Avenue, Columbia Street...would
have been significantly worse without the tide gates.”

- Summary Report

*4th Avenue
December 2022 King Tide*

Looking Forward:
Planning Mid-Term Strategies

A linked, integrated system

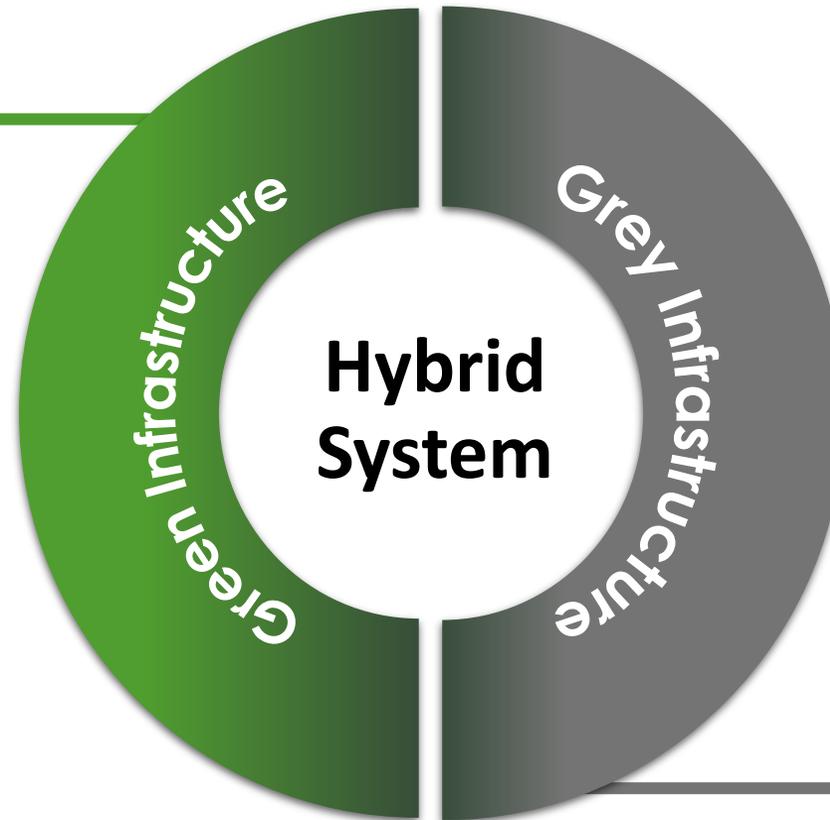
Nature-based solutions and low impact development

- Upstream
- Along the shoreline

Living Shorelines



Raised Landscaping



Raised Streets



Flood Walls



Flood mitigation and critical infrastructure protection

- Permanent
- Temporary

Percival Landing Design Mid-Term Strategies: 24" of SLR by 2050



Ongoing and Upcoming Work for Mid-term Strategy Implementation

What's Next? 2025-26 Work Plan

- Update SLR website and outreach (**completed**)
 - Refine Sea Level Rise and Flood Monitoring Strategy and Evaluate Vertical Land Motion (**contracted**)
 - Understand the Implications of FEMA Accreditation (**finalize in Q3**)
 - Develop Guidelines to Incorporate Sea Level Rise Considerations into Capital Planning (**start in Q3**)
 - Staff-level coordination for mid-term strategies on City property (**start in Q3**)
 - Investigate Long-term Public Financing Mechanisms (**on pause**)
 - Pursue State and Federal Funding (**ongoing**)
-

FEMA Accreditation Recommendation

FEMA Accreditation Benefits

- **Main Beneficiary:** property owners within the existing special flood hazard zones
- **Benefits:** Property owners are no longer required to pay for flood insurance. Reduced federal restrictions in future development.

Notes:

1. Total insurance benefits for affected properties is currently unknown.
2. Private property owners may elect to maintain flood insurance, even if it is not required.

FEMA Accreditation Costs

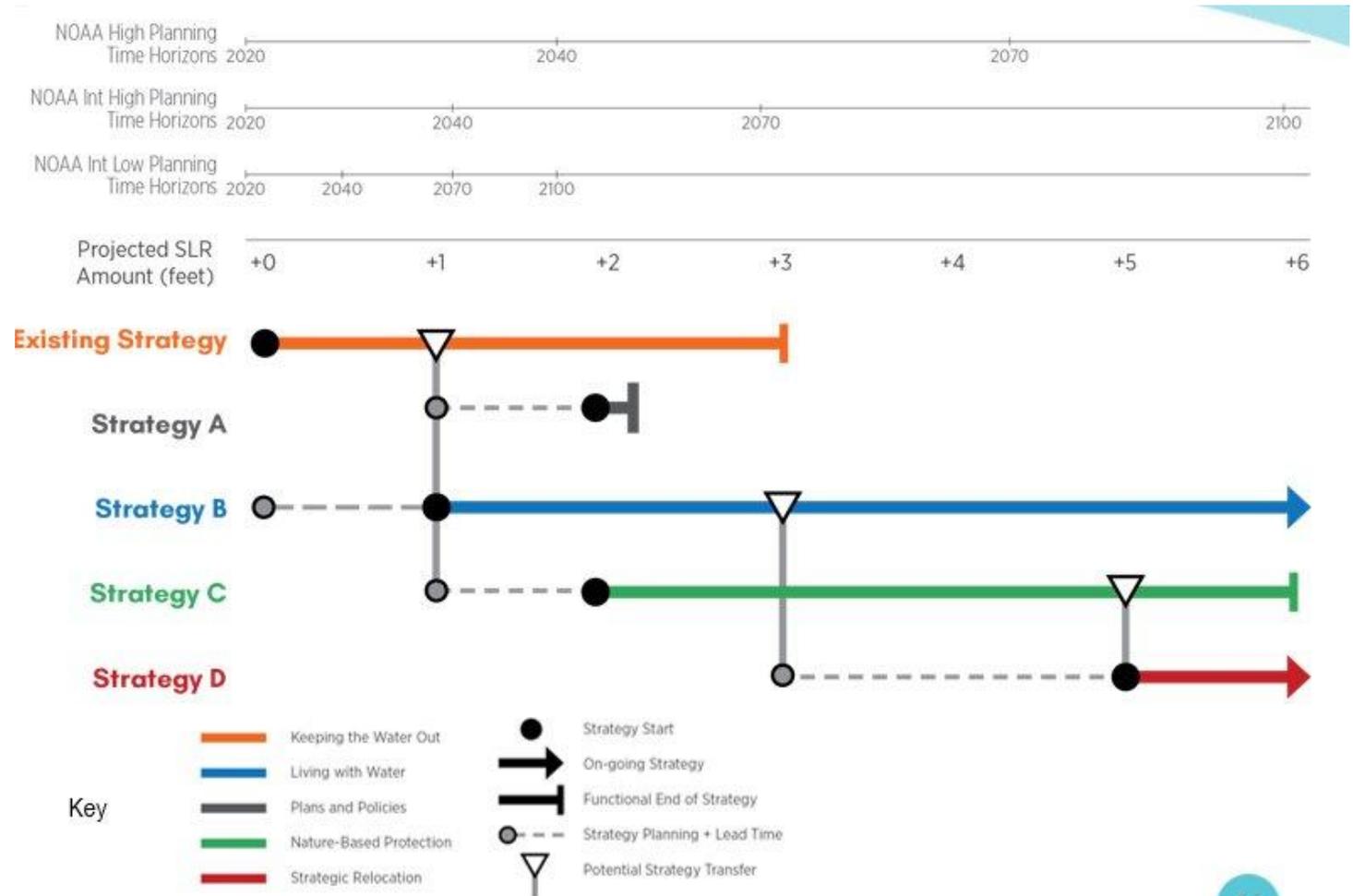
- **Capital Costs:** All capital projects are paid for by the project partners (the City, the Port, and LOTT)
- **O&M Costs:** Operations and maintenance of flood mitigation structures and their accreditation is paid for by the project partners
- **Administrative Costs:** Applying for and maintaining accreditation managed by the project partners
- Possibility of “false sense of security”



Trigger Points for Adaptive Management

Developing trigger points will help inform when to **begin planning, seek funding for, and implement capital projects.**

The outcomes of this work will provide a **data-driven foundation** to guide decisionmakers in determining the **timing, pace, and prioritization** of sea level rise adaptation.



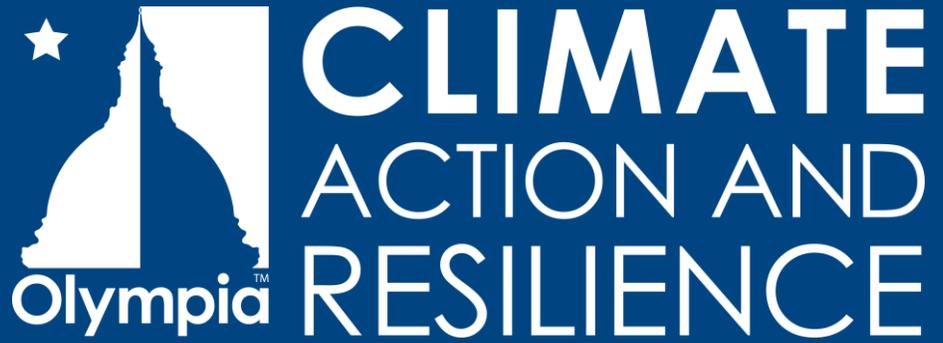
Graphic credits: AECOM

Sea Level Rise Walking Tours

Led a summer walking tour series, sharing with the public our previous work completing the near-term strategies and discussing future plans.

Well-attended and well-received!





Any questions?

Thank you!

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