

Olympia Sea Level Rise Response Plan Implementation Update

Olympia Sea Level Rise Response Collaborative
June 7, 2024

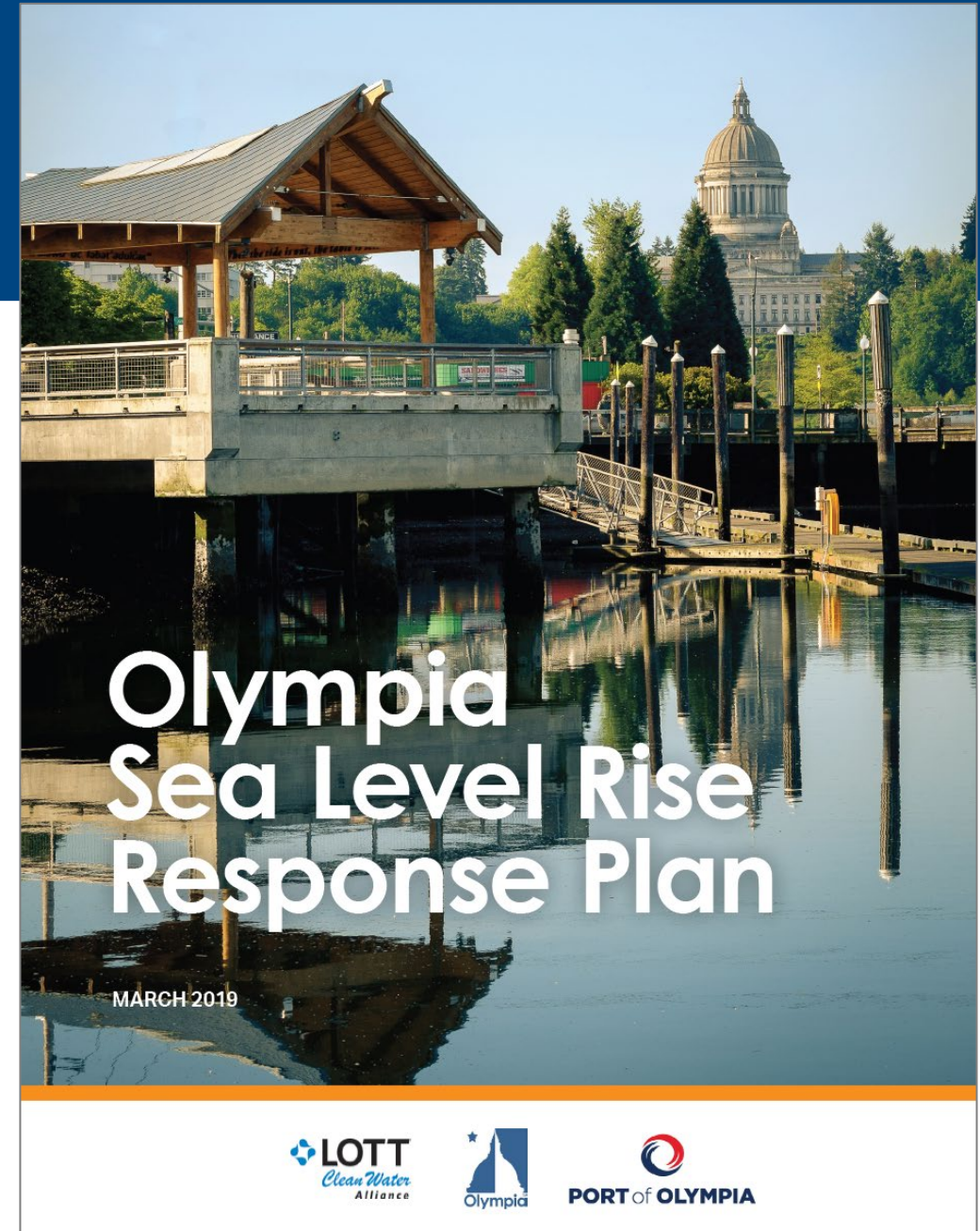


Planning Goal

Develop a formal community plan that prioritizes strategies and investments for best responding to sea rise, while protecting downtown's economic, social and environmental values.

The plan identifies:

- SLR Science and Projections
- Vulnerability and Risks
- Adaptation Strategies
- Needed Actions and Next Steps
- Estimated Costs and Resources
- Implementation Schedules



Focus Areas

The SLR Plan identifies adaptation strategies for 4 focus areas:

1. Capitol Lake / Lower Deschutes Watershed
2. Percival Landing and Isthmus
3. Port of Olympia Peninsula
4. Budd Inlet Treatment Plant and Combined Sewer System



Key Assumptions

- An **incremental approach** to protecting downtown is appropriate: near-term, mid-term and long-term actions are provided.
- Given the extensive infrastructure and investments made in our downtown, **wholesale retreat is not a pragmatic strategy** to pursue during the planning horizon.
- Physical adaptation strategies are envisioned for **construction on public property** rather than private property.
- **Coordination and collaboration** across governmental entities, non-profit organizations, and private property owners will be needed.

Phased Approach

- **Near-term actions:** to be implemented between 2019 and 2024 to address existing flood vulnerabilities and low sea level rise (less than 6 inches)
- **Mid-term actions:** to be implemented between 2025 and 2050 to address flood vulnerabilities through mid-century and moderate sea level rise (up to 24 inches)
- **Long-term actions:** to be implemented beyond 2050 to address flood vulnerabilities through end-of-century (up to 68 inches)



Implementation Strategy

Strategy Type / ID	Strategy	Lead Agency	Resources	Time-frame
Informational Strategies				
IN-1	Refine sea level rise and flood monitoring strategy	City of Olympia Public Works	Existing staff with consultants	2019
IN-2	Monitor land subsidence	City of Olympia Public Works	Existing staff with consultants	2019-2024
IN-3	Initiate groundwater study	City of Olympia Public Works & LOTT	Existing staff with consultants	2019-2024
IN-4	Understand future precipitation projections	City of Olympia Public Works	Existing staff	2019
IN-5	Understand liquefaction	City of Olympia Public Works	Existing staff with consultants	2019-2024
IN-6	Understand the implications of FEMA accreditation	City of Olympia Public Works	Existing staff with consultants	2019-2024
IN-7	Model flow rates for individual stormwater outfalls and combined sewer system	City of Olympia Public Works	Existing staff with consultants	2019-2024
IN-8	Survey finished floor elevations on Port properties	Port of Olympia	Consultant	2019-2024
IN-9	Monitor ongoing shoreline erosion along East Bay	Port of Olympia	Existing staff	2019-2024

Table 11: Olympia Potential Sea Level Rise Adaptation Strategies

Olympia Sea Level Rise Response Plan

Near-Term Action Implementation Update

2019-2024

Governance and Informational Strategies

2019-2024

Governance Update (2024-2029)

Collaboration

- The Olympia Sea Level Rise Response Collaborative was formalized in 2021 through an Interlocal Agreement between the City of Olympia, Port, and LOTT. DES, Thurston County, and the Squaxin Island Tribe have joined the Collaborative as non-voting, Associate Members (COL-1).
- The Collaborative developed a governance and organizational structure, including an Executive Committee and Technical Workgroup for ongoing collaboration (COL-2).
- LOTT and the City have periodic emergency preparedness coordination meetings/drills and conduct after-action briefings to ensure smooth communication and action occurs during flooding emergencies (COL-4).

Governance Update (2024-2029)

Finance

- The SLR Collaborative initiated a Funding and Governance Evaluation to investigate long-term public financing mechanisms for sea level rise adaptation (FN-1).
- SLR Collaborative partners applied for federal funding to support design, permitting, and construction of mid-term adaptation strategies (FN-3).

Governance Update (2024-2029)

Informational

- The SLR Collaborative initiated a Groundwater Study to evaluate the influence of sea level rise on groundwater conditions and the potential for future groundwater flooding behind flood barriers (IN-3).
- The SLR Collaborative began to evaluate approaches for monitoring land subsidence throughout the downtown peninsula (IN-2).
- Olympia Stormwater Utility installed a tide gauge at the Port Marine Terminal to provide real-time monitoring of local water levels (supports IN-1).

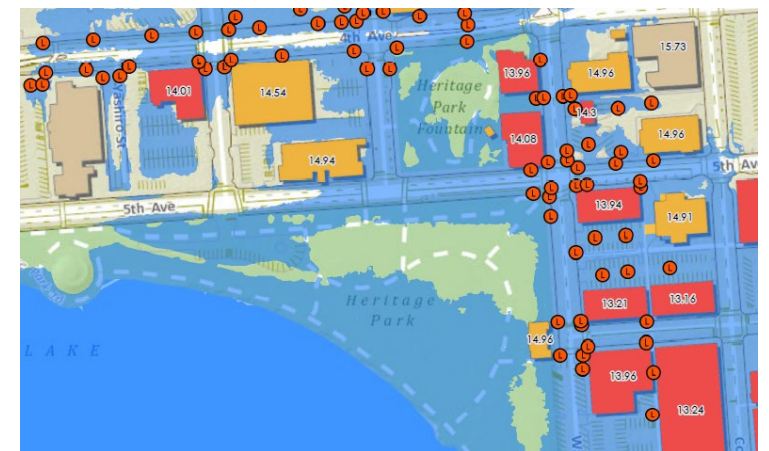
Operational and Physical Response Strategies

2019-2024

City of Olympia

Emergency Preparedness and Response

- Olympia's Storm and Surface Water Utility continues to monitor weather patterns to prepare for and respond to potential flooding events. Response activities include deploying sandbags, portable pumps, and sealing catch basins.
- Utility staff have placed markers at combined system catch basins to facilitate placement of magnets (or seals) over such combined catch basins during flooding events.



City of Olympia

Community Outreach

- In 2023, the City expanded its emergency preparation efforts by working with Thurston County to establish an alert system that allows downtown businesses/residents to sign up to receive alerts in case of downtown flooding.
- Stormwater Utility Staff also conducted emergency preparedness outreach to downtown businesses and residents (ED-7).



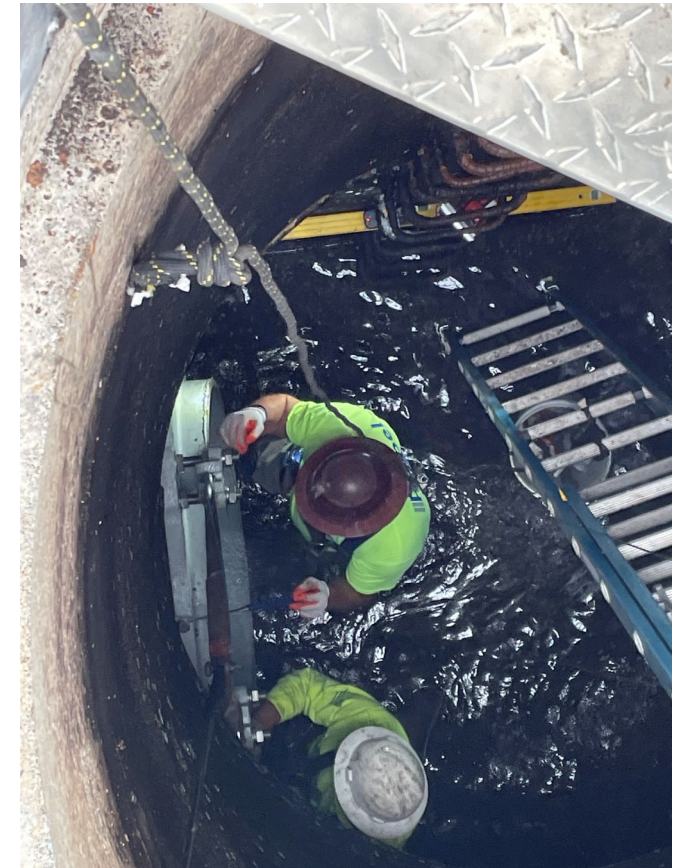
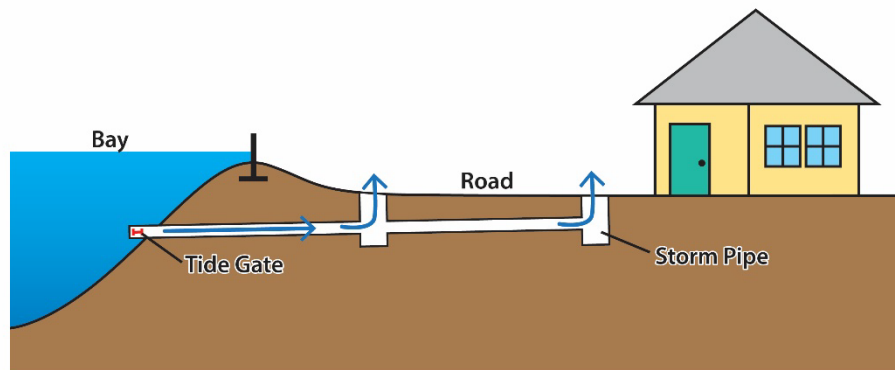
Bud Inlet Flood
Advisories

tcalert.org

City of Olympia

Physical Adaptation Strategies

- Since 2018, Olympia's Storm and Surface Water Utility installed 24 tide gates on stormwater outfalls to prevent marine flooding through the stormwater system.



LOTT

Operations at Budd Inlet Treatment Plant

- LOTT treatment plant staff have established a robust operating procedure for high flow/storm events that is continually refined (BITP-3).
- LOTT coordinates routinely with Puget Sound Energy to ensure the Thurston Substation (essential to BITP operations) is not vulnerable to flooding and sea level rise (BITP-4).



LOTT

Flood-Proofing

- LOTT installed a concrete stub wall in the southwest corner of the plant perimeter in 2022 and purchased deployable flood barriers in 2023 for areas susceptible to flooding (BITP-5).
- When upgrading or installing new facilities, project design and construction includes raising elevations where feasible to protect against future sea level rise (BITP-6).



High Flow Management

- Completion of a major plant upgrade in 2023 increased available flood storage capacity in the plant by over 1 million gallons (BITP-7).
- Rehabilitation of the Centrate Building, currently underway, will result in 22 mgd more of primary treatment to greatly improve ability to manage extreme flows (BITP-7).
- Planning and coordination for upsizing of the North Outfall Pipeline is underway (BITP-8).



Port

- Install backflow preventers on two peninsula stormwater discharges
- One is installed
- The Second backflow preventer to be installed Summer 2024



Sea Level Rise Response + Deschutes Estuary Restoration

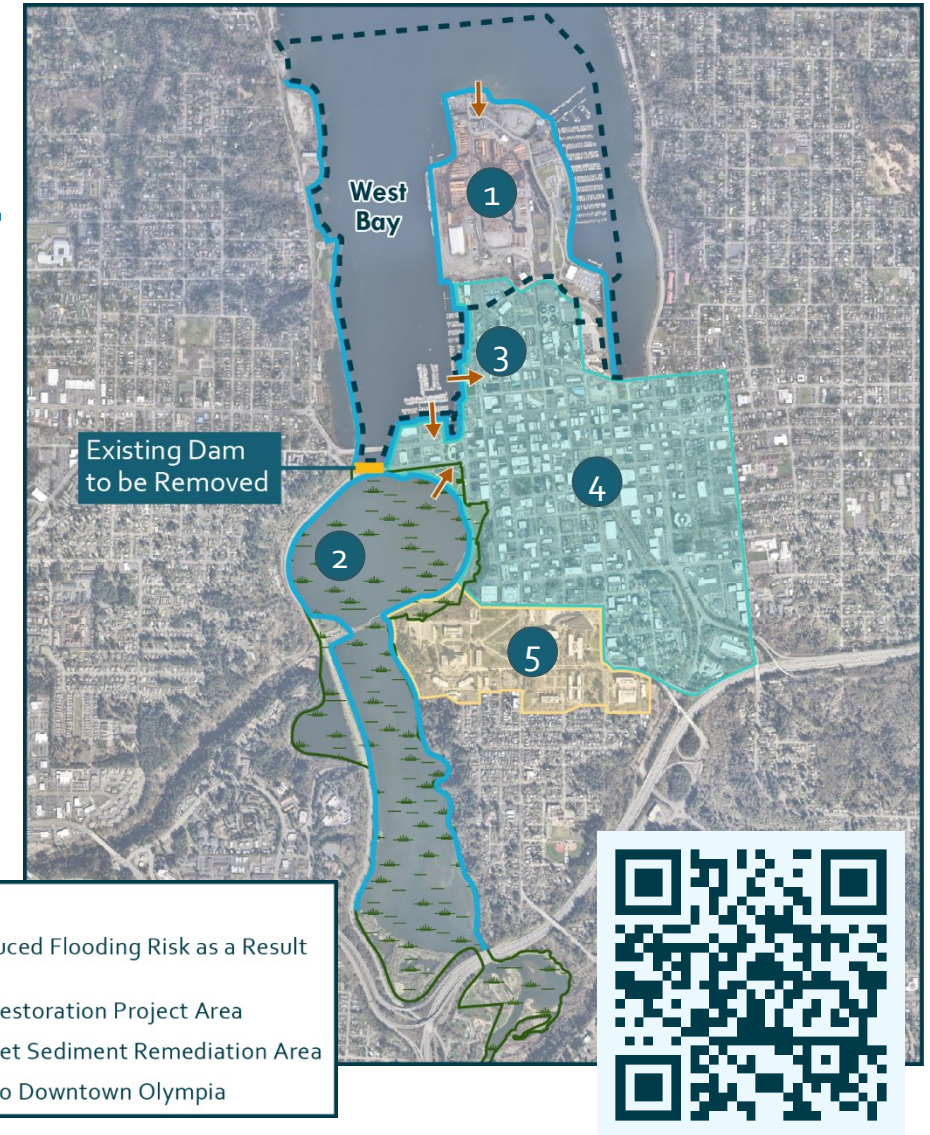
DES

- DES will incorporate near- and mid-term actions as a part of the Deschutes Estuary Restoration plan. Actions include:
 - Minor landscaping at key locations to raise ground elevation (CL-2).
 - Construction of a new wall or berm (CL-3).
 - Elevation and/or relocation of the Capital Lake path (CL-3).
 - May include natural elements such as living shorelines, floodable landscapes, etc.

Restoring Habitat and Increasing Climate Resiliency

A multi-jurisdictional effort to coordinate major coastal resilience activities in South Puget Sound

- 1 **Port of Olympia:** Founded in 1922, the Port of Olympia comprises a commercial center and marine terminal.
- 2 **Future Deschutes Estuary:** Currently a human-made lake, the State will remove the 5th Avenue Dam and the area will be restored as part of the 260-acre Deschutes Estuary Restoration Project.
- 3 **Percival Landing:** The 3.38-acre City of Olympia waterfront park is used for community events, public moorage, and open spaces with public art.
- 4 **Downtown Olympia:** Houses over 450 independent businesses and over 1,900 residents.
- 5 **Washington State Capitol Campus:** Completed in 1928, the campus overlooks South Puget Sound, with historic buildings designed by Wilder and White.



Project Overview



Primary Benefits

FISH & WILDLIFE



Restores the natural transition **between freshwater and saltwater** favorable to salmon and advances recovery for Orca and Chinook salmon

WETLANDS



Establishes over **85 acres of salt marsh habitat** and **100 acres of estuarine habitat**, which is rare and preferred forage and rearing habitat for salmon

CLIMATE RESILIENCY



Increases climate resiliency **across the City of Olympia** by reducing maximum flood elevations by up to 1 foot compared to with the dam in place

WATER QUALITY



Addresses chronic water quality violations by improving dissolved oxygen conditions in Budd Inlet, which is important for fish and aquatic life

PUBLIC SERVICES & UTILITIES



Avoids increased regulatory burden and associated costs for **LOTT Clean Water** and other treatment plants and replaces stormwater outfalls

TRANSPORTATION



Constructs a new **5th Avenue Bridge** with separated vehicle, bike, and pedestrian lanes and increases non-vehicular mobility in the corridor

ECONOMICS



Potentially reduces cost of cleanup led by the **Port of Olympia** by depositing "good" quality sediment over areas of low contamination downstream

RESTORATIVE JUSTICE



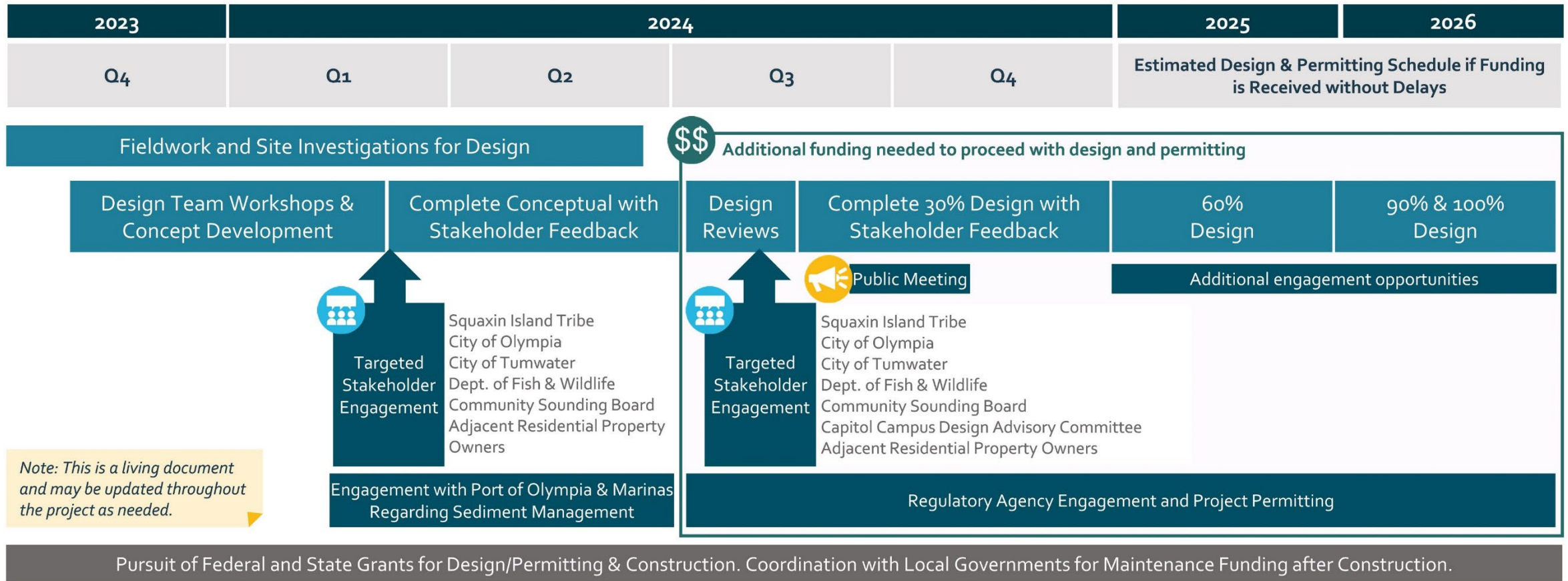
Makes significant progress toward restoring a landscape that has cultural and spiritual significance to the Squaxin Island Tribe



DEPARTMENT OF ENTERPRISE SERVICES

DESCHUTES ESTUARY
Restoration Project

Current Design Schedule & Key Milestones



2025-2026 Draft Workplan

Proposed Projects

2025-2026

- **Monitoring:** Develop a sea level rise and flood monitoring strategy (2025).
- **Subsidence Survey:** Install a geodetic array to monitor land subsidence throughout the downtown peninsula (2025).
- **Funding and Financing:** Evaluate funding and financing mechanisms to fund mid-term and long-term adaptation strategies. Conduct financial modeling to assess revenue levels needed to finance SLR adaptation strategies (2025).
- **Funding and Financing:** Conduct public outreach and develop recommendations for a long-term public financing mechanism (2026).
- **Capital Planning:** Develop guidelines for the Collaborative Partners to consider, plan, and design for sea level rise and increasing precipitation intensity in capital projects (2026).

Proposed Projects

2025-2026

- **Grant Funding:** Pursue State and Federal Funding to advance the design, permitting, and construction of mid-term adaptation strategies.
- **Communications and Outreach:** Update the sea level rise website and continue community outreach on sea level rise and flooding preparedness strategies.
- **Administrative Support:** Facilitate the Executive Committee and Technical Workgroup meetings and coordinate implementation of the Collaborative's annual workplan.

2025-2026 Staff Liaison Budget Approval Extension

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Administrative Support

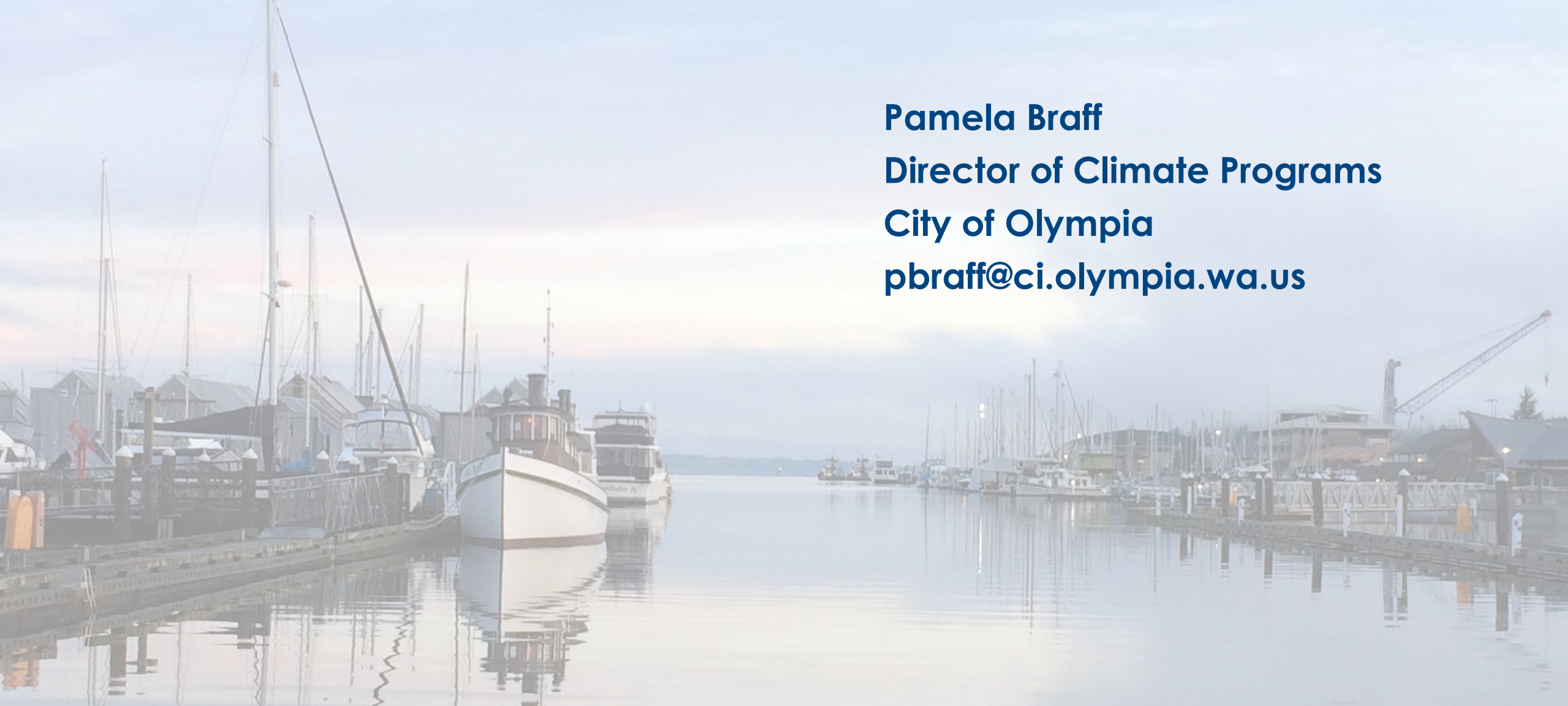
Background

- ILA establishes a staff Liaison position to help administer and facilitate the Collaborative.
 - Administrative support for the Executive Team and other Collaborative Committees (e.g., meeting logistics, agenda setting, public notice, record keeping).
 - Implementation of the Collaborative's annual work plan.
 - Additional tasks to be determined.
- The ILA states that initially, City of Olympia staff will fill the Liaison position, and each Member will contribute funds to defray the Liaison costs incurred by the City.
- Executive Committee is required to approve funding for the subsequent year's budget for the Liaison costs, by August 31, for the subsequent year. (The next Executive Committee meeting is scheduled for September 6).

Administrative Support

Action

- Staff recommend extending the deadline for approval of the 2024 Sea Level Rise Collaborative Liaison budget to the next Executive Committee meeting on September 6, 2023.



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