

# Olympia Sea Level Rise Response Collaborative: Executive Committee Briefing

## Long-Term Sea Level Rise Monitoring and Metrics for Adaptive Management

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### Background & Purpose

The Olympia Sea Level Rise Response Collaborative, have advanced a critical next step in Olympia's sea level rise (SLR) response – a Sea Level Rise Monitoring Plan. The Plan establishes a framework to monitor evolving climate and environmental conditions and translate those data into actionable decisions to guide the implementation of future SLR adaptation actions.

While Collaborative partners have long collected environmental and monitoring data for various purposes, formal data collection and tracking protocols specifically for SLR adaptation was a key gap.

This Plan establishes a framework for how to connect changing conditions on the ground to when—and how—to act.

### Why This Approach Was Needed

Sea level rise presents a unique planning challenge for Olympia because:

- Infrastructure investments require long lead times (5–15+ years)
- Future conditions are uncertain and continuously evolving

This Plan introduces an adaptive management framework, where decisions are guided by observed conditions and defined thresholds (“trigger points”) rather than static assumptions (e.g., sea level rise projections tied to defined time horizons). In practice, this means that Collaborative partners can better align planning, design, funding, and construction of SLR adaptation projects to mitigate increasing risk.

### Stakeholder Engagement: Grounding the Plan in Practice

A defining feature of this work was a structured, cross-departmental engagement process designed to ensure the approach is not only technically sound, but also operationally feasible.

Through 10 targeted interviews with City departments, the Port, LOTT, and state partners, the project team achieved the following:

- Mapped how staff currently monitor conditions, respond to flooding, and plan capital projects
- Identified opportunities to embed SLR monitoring into existing workflows (e.g., inspections, maintenance, data collection, emergency response)
- Assessed data availability, documentation practices, and coordination gaps
- Explored risk tolerance, including what levels of disruption, damage, or service impacts are considered unacceptable

This process confirmed that Olympia already collects substantial data, but that information is often fragmented across departments and not consistently linked to decision-making.

### Sea Level Rise Mapping Updates

The project also refined the Collaborative's understanding of future conditions by evaluating local vertical land motion (subsidence), estimated at approximately -2 to -4 mm/year. Olympia's SLR projections were also updated using the best available, recent science (NOAA 2022) with adjustments to make the data specific to Olympia's shoreline. Updated projections indicate:

- 12–18 inches of SLR by 2050
- 41–66 inches of SLR by 2100

June 5, 2026

### **Monitoring Plan: From Data to Decisions**

The Monitoring Plan provides the missing link between data and action by establishing:

- Coordinated monitoring across partners, using existing inspections, data systems, and flood response activities as a foundation
- Standardized metrics, translating raw observations into indicators of changing risk
- Trigger points, defining when conditions exceed acceptable thresholds and action is needed
- Integration with capital planning timelines, ensuring identification of early signals to plan and fund major projects

This approach enables proactive, evidence-based decision-making, supporting more effective prioritization of limited resources.