

OLYMPIA SEA LEVEL RISE RESPONSE PLAN - OVERVIEW

Downtown Olympia is the social, cultural, historic and economic core of the city. The 450-acre downtown area contains vital infrastructure such as Olympia City Hall, the Budd Inlet Treatment Plant, the Port of Olympia marine terminal, and the emergency vehicle corridor between west and east Olympia.

While our downtown's extensive shoreline helps make Olympia an extraordinary city, it also makes us vulnerable to flooding. Damaging floods in downtown Olympia last occurred in the 1970s. In the coming decades, sea level rise will bring more frequent and severe flooding downtown and could cause appreciable property damage and loss of public services. With just 12 inches of sea level rise, a 100-year flood event could occur every other year.

It is this current and future flooding risk that brought the City of Olympia (City), the Port of Olympia (Port) and the LOTT Clean Water Alliance (LOTT), collectively referred to as Project Partners, together to develop this Sea Level Rise Response Plan (Plan).

The Plan provides comprehensive strategies for minimizing, preventing and adapting downtown to sea level rise in both the near and long-term to fulfill each of the Project Partner's unique needs.

The Project Partners are confident that with community, stakeholder and other agencies' support, downtown can be protected. The threat of sea level rise can be managed technically and financially in the decades ahead.

PLAN ORGANIZATION AND CONTENT

In early 2017, the Project Partners' planning and technical staff were tasked by their respective elected officials to *develop a formal community plan that prioritizes strategies and investments for best responding to sea level rise, while protecting downtown's economic, social, and environmental values.*



The planning process and resultant Plan meet this mandate, while acknowledging that implementation and adapting to changing conditions and new information will be essential to our success.

Chapter 1 serves as the introduction to the Plan and planning process.

Protecting and improving our downtown is central to the City's comprehensive plan, land use decisions, and development strategies.

Plan development followed sea level rise adaptation best practices and leveraged experiences and lessons learned from other cities, ports and wastewater treatment facilities throughout the country.

Chapter 2 summarizes engagement and outreach activities.

Stakeholder engagement was extensive and crucial to each step of the adaptation planning process.

Chapter 3 provides an overview of sea level rise science and projections.

The Plan includes Olympia-specific most likely (36 inches) and high-range (68 inches) projections for the year 2100. These values take into account that downtown Olympia may subside (sink) as much as 8 inches by 2100.

Chapter 4 presents the findings of a vulnerability and risk assessment of flooding and sea level rise impacts on key assets and services located in downtown Olympia. The assessment evaluated the exposure of downtown assets to existing and future coastal flooding scenarios. The results of the assessment formed the basis for prioritizing and phasing the Plan's adaptation strategies.

Chapter 5 details the Plan's proposed approach to adapting to sea level rise.

Key assumptions that informed the Plan's approach to adaptation include:

- 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.
- Our physical adaptation strategies are envisioned for construction on public rather than private property.
- Coordination and collaboration across governmental entities, non-profit organizations and private property owners will be needed.

Physical and operational strategies are presented in **Chapter 6**.

Physical strategies address flood vulnerabilities through physical modifications to the landscape or individual assets in order to make them less vulnerable to flooding.

Operational strategies address flood vulnerabilities through operations and maintenance activities such as establishing traffic detours or placing sandbags.

While the shoreline adaptation strategies in the Plan are valid from a present day engineering perspective, they are conceptual and will continue to be refined as we learn more, work with others, and evolve as a community.

Governance and **informational** strategies are presented in **Chapter 7**.

Governance strategies address flood vulnerabilities through policies, plans, coordination, guidelines and regulations.

Informational strategies address data knowledge gaps in our understanding of flood vulnerabilities.

Key governance and informational strategies include:

- Develop a governance structure and organization for managing our response.
- Investigate long-term financing mechanisms.
- Develop and implement a sea level rise community and stakeholder strategy.
- Continue regional efforts to develop an overarching climate change policy.

Chapter 8 provides high level costs for the Plan's physical strategies by focus area and response time period. Project cost assumptions are also presented.

Estimated total costs range from \$190M to \$350M. Costs will be spread out over decades and shared by the Project Partners and the community. Funding may come from a mix of federal, State, County and City sources.

Chapter 9 includes the full list of adaptation strategies by type, phasing and focus area. Implementation will begin in 2019 focusing on:

- Coordinating emergency response.
- Installing stormwater tide gates and valves.
- Formalizing collaboration and a governance structure.
- Initiating the Shoreline Master Program update.
- Refining the sea level rise and flood monitoring strategy.
- Monitoring new research on future conditions precipitation.

Monitoring is a central component of Plan implementation. **Chapter 10** summarizes an approach to monitoring local environmental conditions, new sea level rise research and science, and storm event response.

There is uncertainty regarding the rate of sea level rise. Monitoring sea levels in Puget Sound is needed to ensure that flood protection projects are initiated before flood risks reach an unacceptable level.

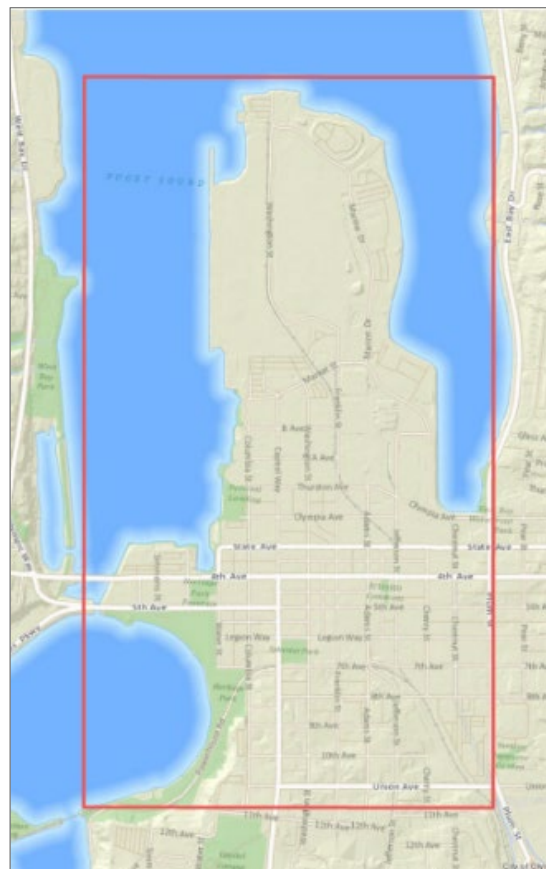
FUTURE OF DOWNTOWN OLYMPIA

Planning to protect our downtown from sea level rise is a local government responsibility. This Plan provides a proactive and thoughtful path forward, but it is only an initial, incremental step and modest investment in preparing for sea level rise.

Proactive and thoughtful adaptation to sea level rise will be needed in the decades ahead to not only protect, but also to enhance our downtown. There is a lot of work to do to make our downtown stronger, safer and more vital. The preservation of downtown Olympia will require the community's support and attention.

THE IMPORTANCE OF GOVERNMENT STRATEGIES

Without effective governance, the Sea Level Rise Response Plan is of little value to our community. The Project Partners understand the critical importance of establishing the governmental and financial structure to support the timely implementation of this Plan. The Plan will be implemented over many decades and diligence needs to be sustained.



Olympia Sea Level Rise Response Plan Project Area

IMPORTANCE OF PARTNERSHIPS

“Whenever feasible, adaptation planning efforts should be long term, comprehensive, and integrated across entities. Closely coordinating adaptation planning efforts and pooling resources can help to tap into efficiencies of scale and can support the design of multi-function projects that can qualify for a wider range of funding sources.”

Source: *Paying for Climate Adaptation in California: A Primer for Practitioners*, October 2018. AECOM