



Sea Level Rise and Climate Mitigation Update

Olympia Utility Advisory Committee
November 2, 2023



Agenda

1. Olympia Sea Level Rise Response Collaborative
2. Energize Olympia Heat Pump Pilot Program
3. EV-Ready Parking Standards
4. Comprehensive Plan Update – Climate Element

Olympia Sea Level Rise Response Collaborative

2023 – 2024 Workplan Update



SLR Collaborative 2023 Workplan and Budget

Work Item	Total Cost	Olympia (50%)	LOTT (25%)	Port (25%)
Land Subsidence Survey	\$50,000	\$25,000	\$12,500	\$12,500
Groundwater Study	\$100,000	\$50,000	\$25,000	\$25,000
Public Financing and Governance	\$50,000	\$25,000	\$12,500	\$12,500
Tide Gauge Installation	\$10,000	\$10,000	-	-
Total	\$210,000	\$110,000	\$50,000	\$50,000

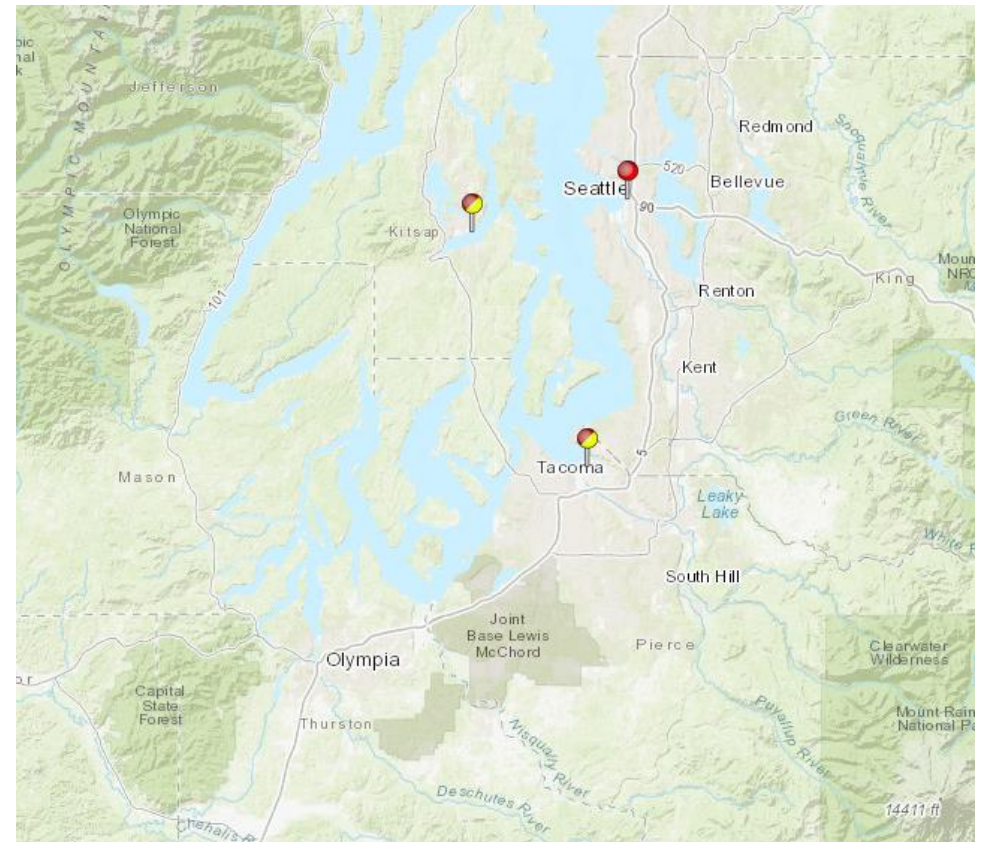
Tide Gauge Installation

Project Lead: City of Olympia

Budget: \$10,000

Project Description

Install a tide gauge at the Port Marine Terminal to improve monitoring of local water level conditions.



NOAA Water Level Stations
<https://tidesandcurrents.noaa.gov/map/>

Land Subsidence Survey

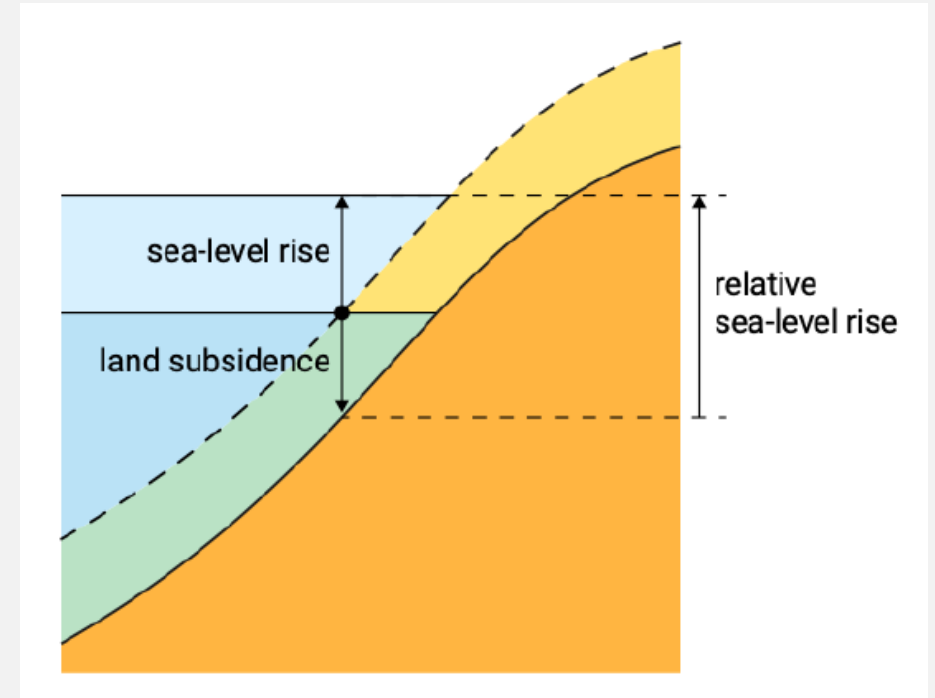
Project Lead: Port of Olympia

Budget: \$50,000

Project Description

Hire a consultant to conduct a satellite land subsidence survey:

- Interferometric Synthetic Aperture Radar (InSAR)
- Requires 3 years of continued monitoring is needed for reliable results.



Groundwater Study

Project Lead: LOTT Clean Water Alliance

Budget: \$100,000

Project Description

Conduct a hydrogeological investigation to evaluate tidal influence on groundwater. Study should:

- Evaluate the feasibility of surface barriers at different sea level rise elevations and at what elevations sheet piling or cut-off walls would become necessary.
- Establish a baseline for quantifying the impacts of SLR on future groundwater elevations and the effectiveness of surface flood barriers.

Public Financing Mechanisms

Project Lead: City of Olympia

Budget: \$50,000

Project Description

Hire a financial consultant to:

- Identify funding mechanisms to finance resilience improvements.
- Identify requests to the State Legislature for funding to support sea level rise planning and strategy implementation.
- Evaluate how costs are to be shared amongst Collaborative Members and the community.
- Facilitate and ad-hoc financial committee.

SLR Collaborative 2024 Workplan and Budget

Work Item	Total Cost	Olympia (50%)	LOTT (25%)	Port (25%)
Land Subsidence Survey (Year 2)	\$50,000	\$25,000	\$12,500	\$12,500
Groundwater Study (Phase 3)	\$50,000	\$25,000	\$12,500	\$12,500
Public Financing and Governance (Phase 2)	\$50,000	\$25,000	\$12,500	\$12,500
Administrative Support	\$30,000	\$15,000	\$7,500	\$7,500
Total	\$180,000	\$90,000	\$45,000	\$45,000

2024 Workplan and Budget

The proposed 2024 workplan includes several Phase 2 and Phase 3 work items to continue implementation of projects started in 2023.

- **Land Subsidence Survey** - Continue satellite land subsidence survey to monitor land subsidence. Three years of continued monitoring is needed for reliable results.
- **Groundwater Study** - Conduct a groundwater gauging event at the end of the wet season and generate a groundwater model to evaluate sea level rise impacts on groundwater levels.
- **Public Financing Committee** - Facilitate ad-hoc financial committee to evaluate potential financing mechanisms identified during Phase 1.



Heat Pump Purchase Program

2023 Pilot





Energize Olympia is...

A ductless heat pump purchasing program that offers exclusive benefits to Olympia residents:

- Financing and incentives
- Installation and free site assessment from vetted installer
- Guidance and customer support
- Free installations for income-qualified households



Energize Olympia is...

Supported by a partnership between:

- City of Olympia (Climate and Housing Programs)
- Community Organizations: Habitat for Humanity & Spark Northwest
- Qualified Installer: CSM Heating, Cooling & Roofing

Funded by:

- City of Olympia, Climate Program
- City of Olympia, Community Development Block Grant
- WSU Community Energy Efficiency Program



Marketing everywhere!



Tabling at Community Events



Community Workshops



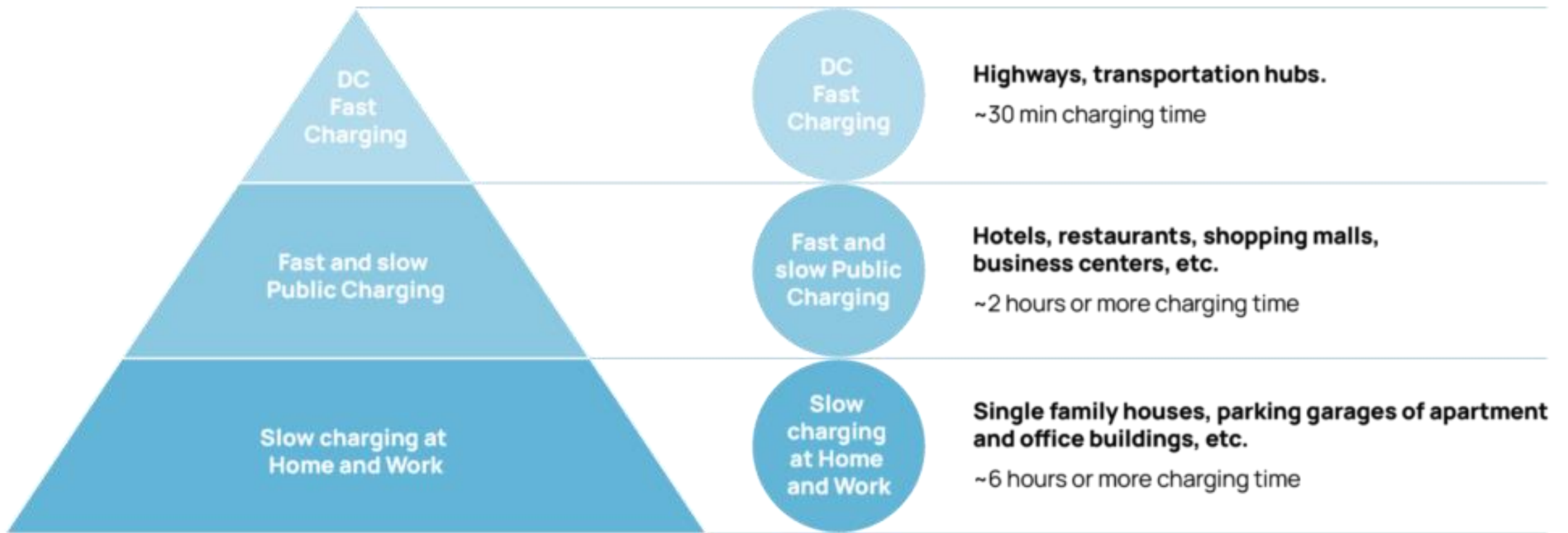
Program Accomplishments

- 10 tabling events
- 5 community workshops (240 participants)
- 3,000 webpage visits
- 66 heat pumps installations, including 18 fully subsidized installations for low- and moderate-income households
- 40+ community members on a waitlist for 2024 program

Electric Vehicle Parking Standards

Preparing for current and future EV charging needs in Olympia.

Where will most EV charging take place?



EV Charging Levels

AC Level 1

Does not require specialized equipment. Primarily used at home, sometimes at work.



AC Level 2

Requires additional charging equipment. Typically used at home, work, and for public charging.

DC Fast Charging

Requires highly specialized high-powered equipment. Typically used for public charging stations, especially along heavy traffic corridors.



Electric Vehicle Parking Standards

Guiding Principles

- **EV ownership will grow significantly over the next decade.**

On March 25, 2022, Washington State Governor Jay Inslee signed into law SB 5974, also known as Move Ahead Washington, which requires that by 2030, all new cars registered in the state be powered by electricity.

- **Most EV charging occurs at home.**

70-80% of drivers charge at home, and EV ownership is higher among those with home charging. Residents of multifamily buildings are typically unable to install home charging on their own.

- **Multifamily & workplace charging helps fill the EV-charging equity gap.**

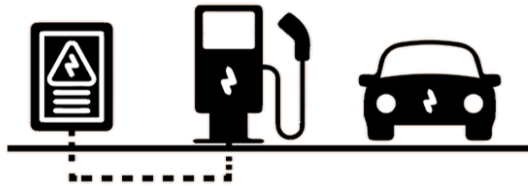
Employees with workplace charging are 6x more likely than the average worker to drive an EV.

EV-Ready Parking

EV Ready parking standards enable newly constructed and significantly renovated parking spaces to include, or be easily and affordably converted to, EV charging stations in the future.

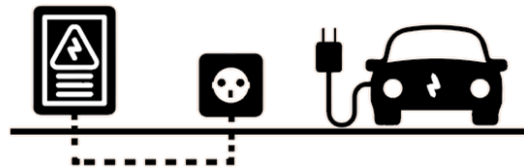
EVSE* Installed

Install a minimum number of Level 2 EV charging stations.



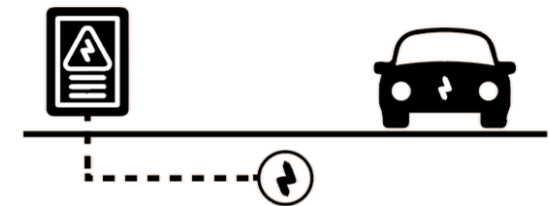
EV Ready

Run wiring through conduit, with an outlet or terminal box.



EV Capable


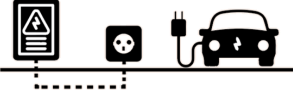
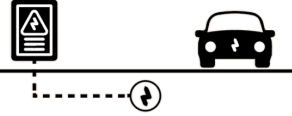
Install electrical panel capacity and run conduit to parking spaces.



**Electric Vehicle Supply Equipment*

Electric Vehicle Parking Standards

Ordinance No. 7367

Type of Building or Use	EVSE Parking (Level 2 Charging) 	EV-Ready Parking 	EV-Capable Parking 
Nonresidential (Group A, B, E, F, H, I, M, and S occupancies under Building Codes)			
	10% of total parking spaces	10% of total parking spaces	10% of total parking spaces
Residential (Group R occupancies under Building Codes)			
Buildings that do not contain more than two dwellings	Not required	One for each dwelling	Not required
Dwelling units with private garages	Not required	One for each dwelling	Not required
All other Group R occupancies	10% of total parking spaces	25% of total parking spaces	65% of total parking spaces

Electric Vehicle Parking Standards

Ordinance No. 7367

Reductions may be provided for the following scenarios:

- When changes would be required on the utility provider side of point of service
- Apartments when 50% or more of the units are Affordable Housing
- Assembly and Educational building occupancies when these requirements would increase costs by more than 10%
- Retrofits that are not substantial improvements or do not modify parking areas

Comprehensive Plan

Climate Element Update

New: Comprehensive Plan Climate Element

- **HB 1181 adds a climate goal to the Growth Management Act (GMA)** and requires local comprehensive plans to have a climate element with resilience and greenhouse gas emissions mitigation sub-elements.
- **The resilience sub-element must include goals and policies to improve climate preparedness, response and recovery efforts.** This is mandatory for all counties and cities fully planning under the GMA and encouraged for others.
- Climate elements must **maximize economic, environmental, and social co-benefits and prioritize environmental justice** to avoid worsening environmental health disparities.
- **The greenhouse gas emissions sub-element must include goals and policies to reduce emissions and vehicle miles traveled.** This sub-element is mandatory for the state's 11 largest counties and the cities within those counties.

	Q1			Q2			Q3			Q4		
OBJECTIVES + GOALS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Form Climate Policy Advisory Team and Develop Community Engagement Strategy.												
Develop Climate Element Vision and Values.												
GHG Reduction Sub-element: Develop GHG Inventory Management Plan.												
GHG Reduction Sub-element: Finalize GHG Inventory and Emissions Reduction Targets.												
GHG Reduction Sub-element: Draft goals and policies.												
GHG Reduction Sub-element: Finalize and integrate goals and policies.												
Resilience Sub-element: Audit plans and policies.												
Resilience Sub-element: Assess vulnerability and risk.												
Resilience Sub-element: Draft goals and policies.												
Resilience Sub-element: Finalize and integrate goals and policies.												



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