

### <sup>°</sup> UTILITY ADVISORY COMMITTEE

Sea Level Rise – Response Plan Update February 2, 2017 5:40 pm

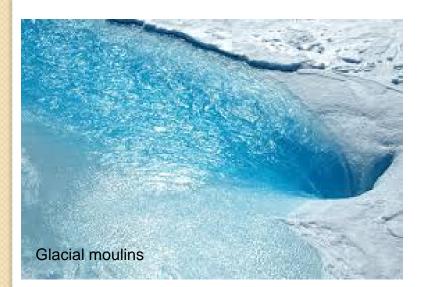
# Sea Level Rise Update



- National Research Council
  - Plan for 24 inches of sea level rise by 2050
  - Plan for 55 inches of sea level rise by 2100
- <1% chance of 72 inches of sea level rise (Kopp 2015)
- <0.1% chance of 96 inches of sea level rise (NOAA 2017)

### Land Ice (glaciers, ice caps, ice sheets)

- Land ice melt is accelerating
- Greatest unknown for sea level rise
- Modeling is improving







## **Utility Bill Insert**



### Sea Level Rise Maps

Visit olympiawa.gov/ sealevelrise to view maps that depict the affects sea level rise will have on Olympia.



Questions? Eric Christensen 360.570.3741 echriste@ci.olympia.wa.us Rising sea levels are becoming a major concern for Olympia.

**Rising Sea Levels** 

Concern for Olympia

Sea levels are rising and will likely continue to do so for years to come. Human activities such as burning fossil fuels and cutting down forests are warming the planet. Ocean waters expand as they warm. In addition, glaciers, ice caps and ice sheets are melting and contributing to sea level rise. Scientists estimate that sea levels could rise 20 to 55 inches by the year 2100. A sea level rise of one foot would flood extensive portions of downtown Olympia.

In early 2017, the City of Olympia will start working with the community to develop a formal Sea Level Response Plan. The Plan's goal is to protect downtown social, economic and environmental values and identify funding needs and timelines. Visit *olympiawa.gov/sealevelrise* to track our progress and provide input.



# **Community Update**





### **Responding to Sea Level Rise**

Sea level rise and changing weather patterns pose a prominent flood risk to our downtown. Join us for an informational meeting.

### **Community Meeting**

Wednesday, February 8, 2017 6:30 - 8:00 p.m. Olympia Center, Multipurpose Room A

## Sea Level Rise Story Map



City of Olympia

### **Rising Sea Levels**

### Two Feet

Low Projected Year: 2100 / Projection: 2083 / High Projected Year: 2058



Olympia's Farmers Market

Key Public Structures AffectedBuildings Affected

### in an Annual Flood

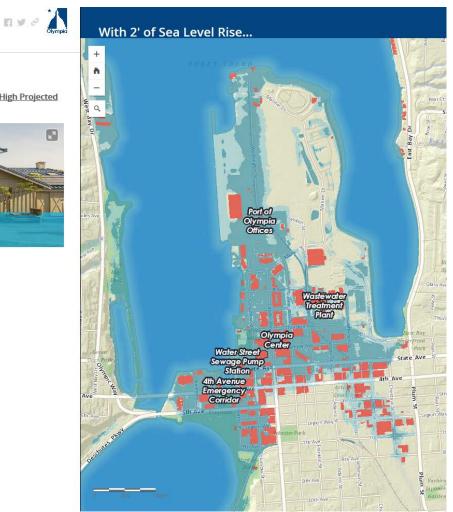
Elevation is 15 feet NAVD88 / 19 feet MLLW

# Parcels Affected: 188 Acres Inundated: 163 Value of Buildings Affected: \$172,445,818 Value of Properties Inundated: \$86,588,400 Miles of Road Inundated: 5.9

### in a 100-year Flood

Elevation is 16 feet NAVD88 / 20 feet MLLW

# Parcels Affected: 290 Acres Inundated: 252 Value of Buildings Affected: \$237,585,557 Value of Properties Inundated: \$142,389,900 Miles of Road Inundated: 8.9



### olympiawa.gov/sealevelrise

## **Request for Qualifications**





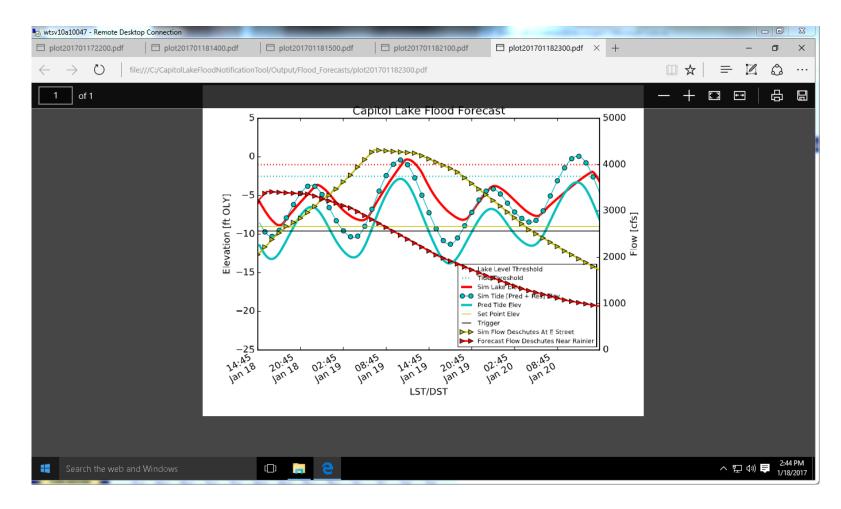
## **Emergency Response**







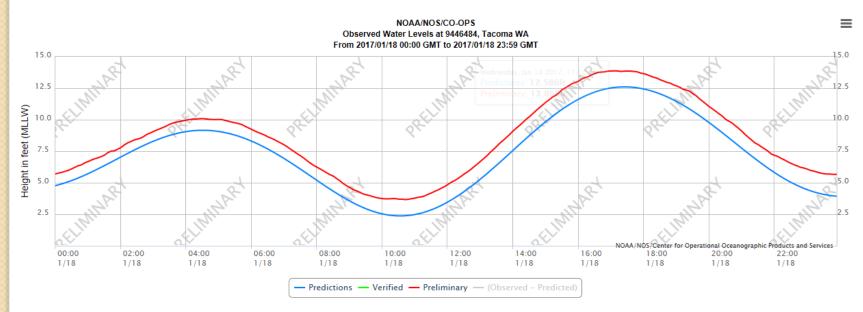




## January 18th Tide



- Low Atmospheric Pressure: 29.3 inches
- Predicted Tide: I 5.6 feet
- Actual Tide: 17.1 feet (Tacoma)











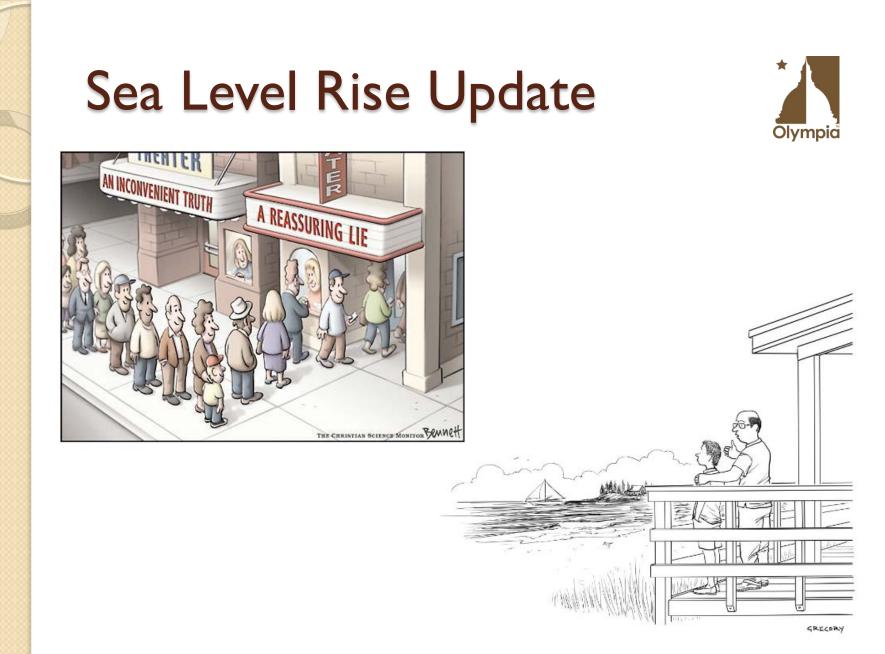




## Atmospheric Pressure



 In the short-term, The increased frequency and severity of low pressure events may play a bigger role in flooding than sea level rise.



"Someday, son, this will all be yours-and underwater."