

# Hazard Mitigation and Climate Adaption Planning

National Adaptation Forum

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Region X

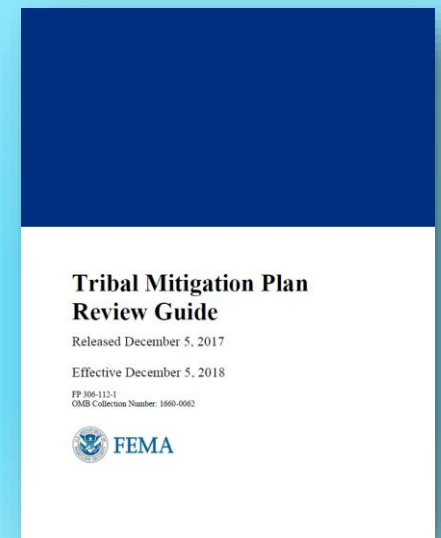
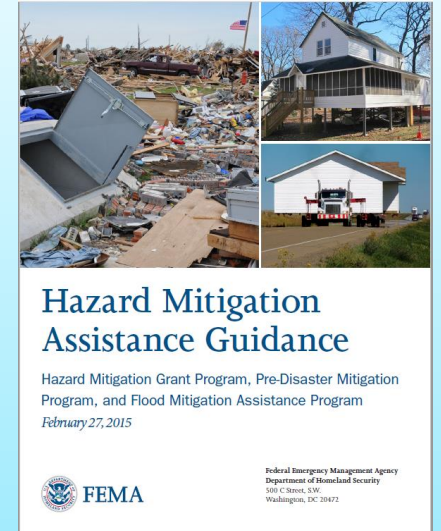
April 23, 2019



FEMA

# Federal Hazard Mitigation Planning

- **Disaster Mitigation Act of 2000**
  - Establishes eligibility for FEMA Hazard Mitigation Assistance (HMA)
  - Requires Tribal, State, and local governments to submit plans to FEMA for review
- **Title 44 Code of Federal Regulations (CFR) 201**
  - Plans shall include information on the probability of future hazard events
  - Requires plan update every five years
- **Hazard Mitigation Assistance Guidance (updated 2015)**
  - Resilience and Climate Change Adaptation Commitment
  - Risk reduction for specific vulnerabilities from natural hazards and climate change
- **Tribal and State Mitigation Plan Review Guide (updated)**
  - Clarifies need to include considerations of future conditions, including long-term changes in weather patterns



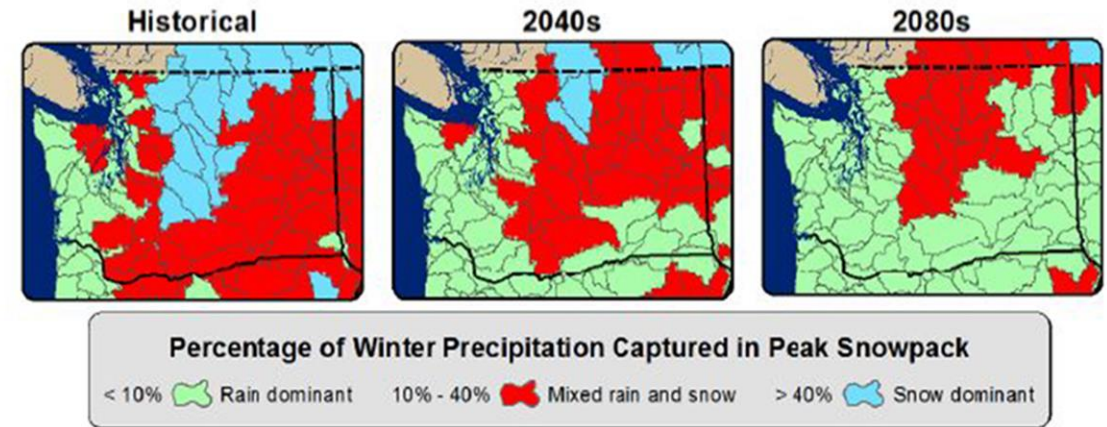


Figure 10-3 Washington State Changes of Hydrology with Warming (Snover et al., 2013)

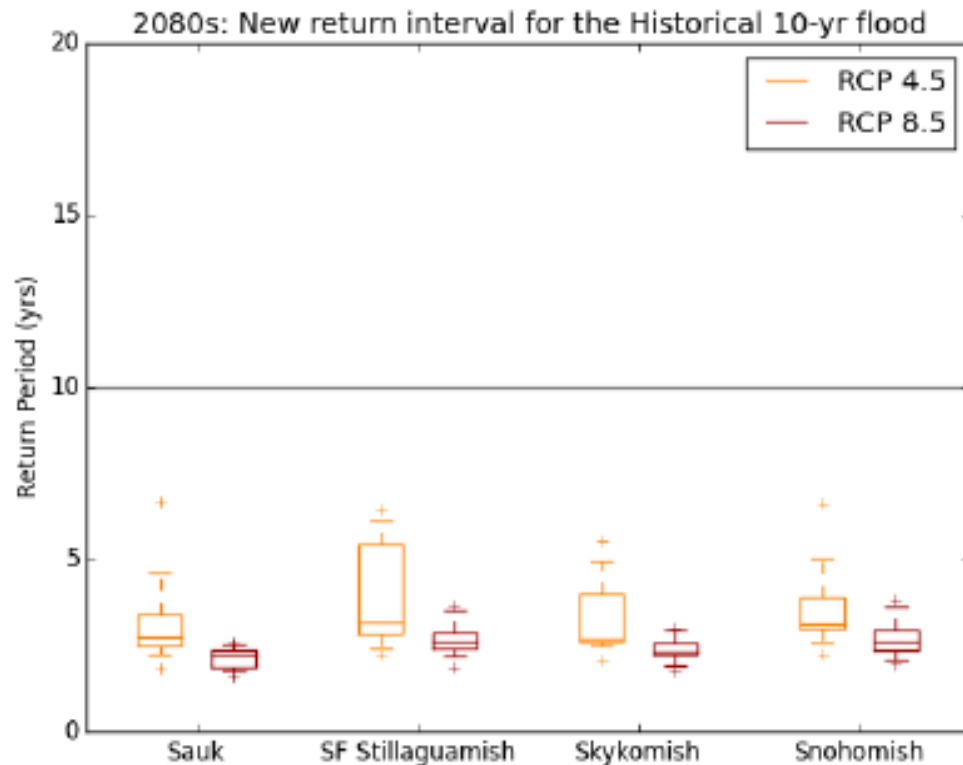
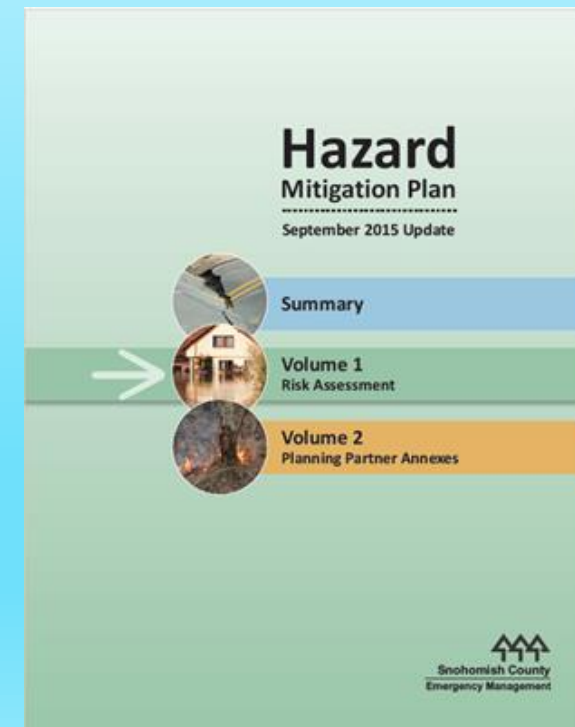


Figure 10-6 2080s: Projected return interval for the Historic 10-Year Flood on Snohomish County Rivers.



## Cal-Adapt temperature projections for the Santa Cruz area

Historical Average:	56.8° F
Low-Emissions Scenario:	60.0° F +3.2° F
High-Emissions Scenario:	62.3° F +5.5° F

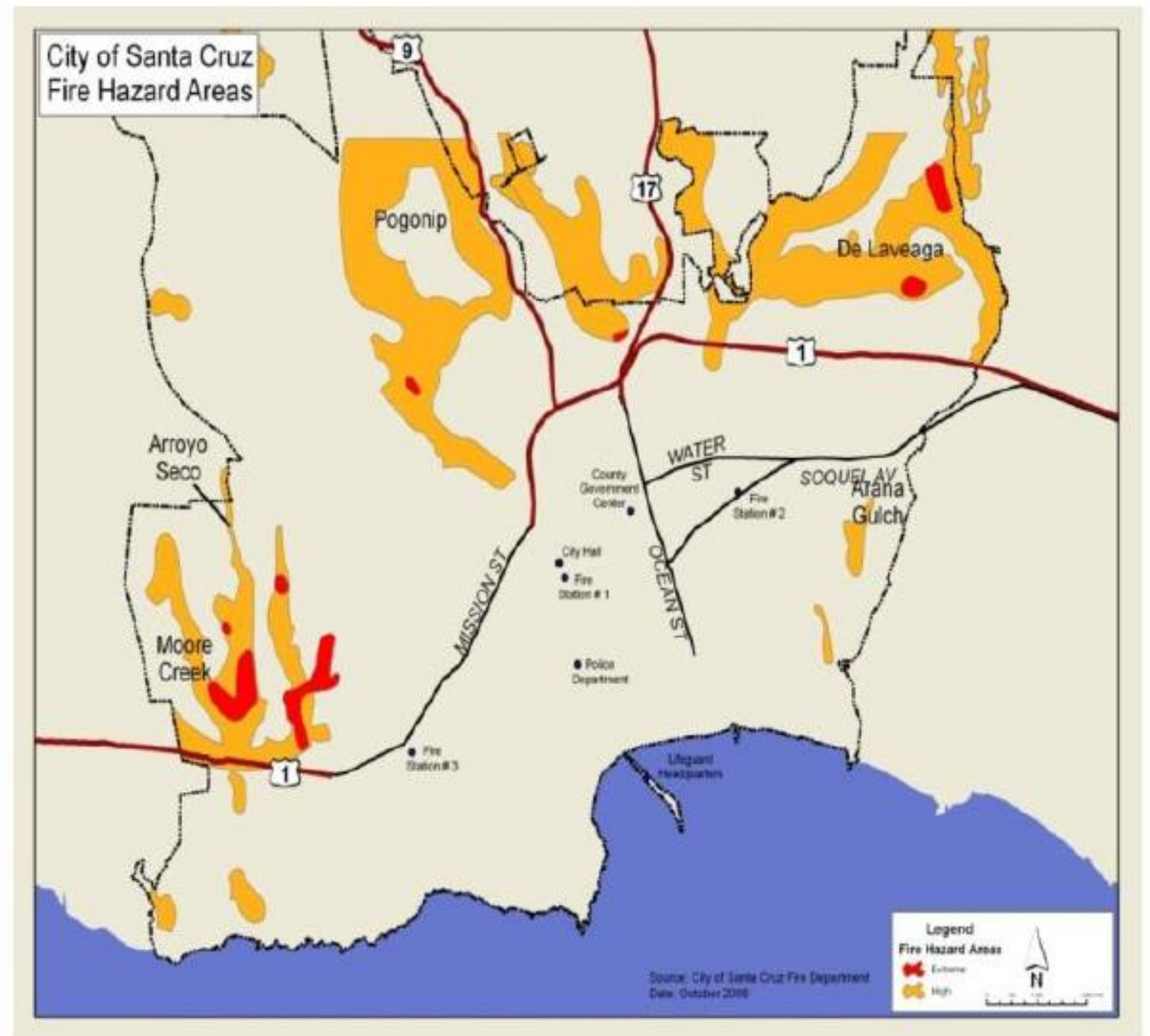
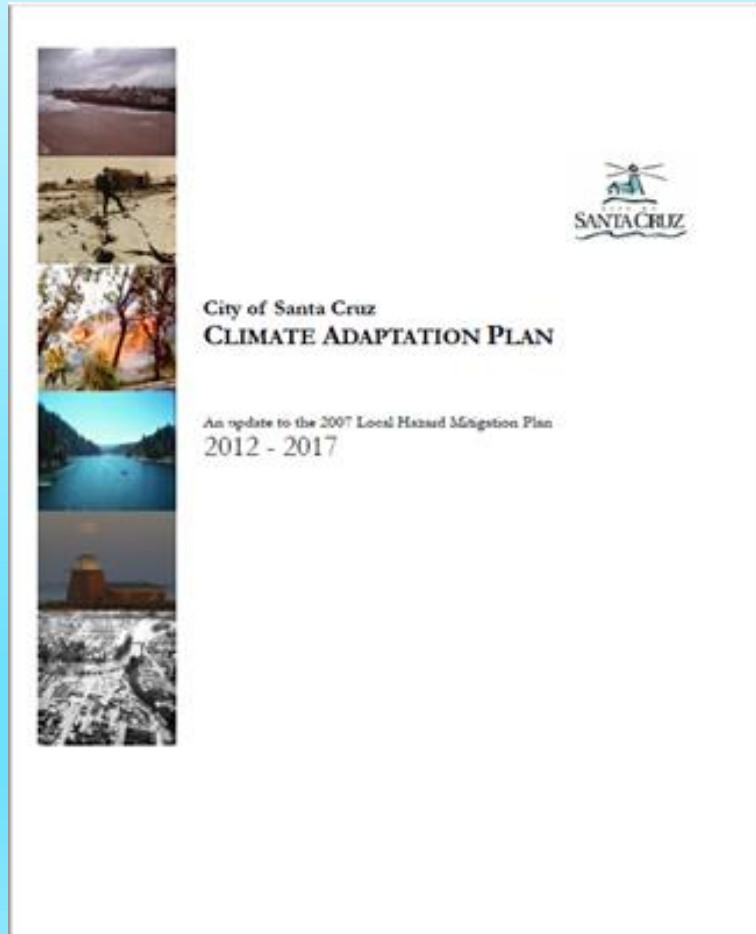


FIGURE 10: URBAN/WILDLAND FIRE HAZARD AREAS





Source: City of Olympia, Water Resources.

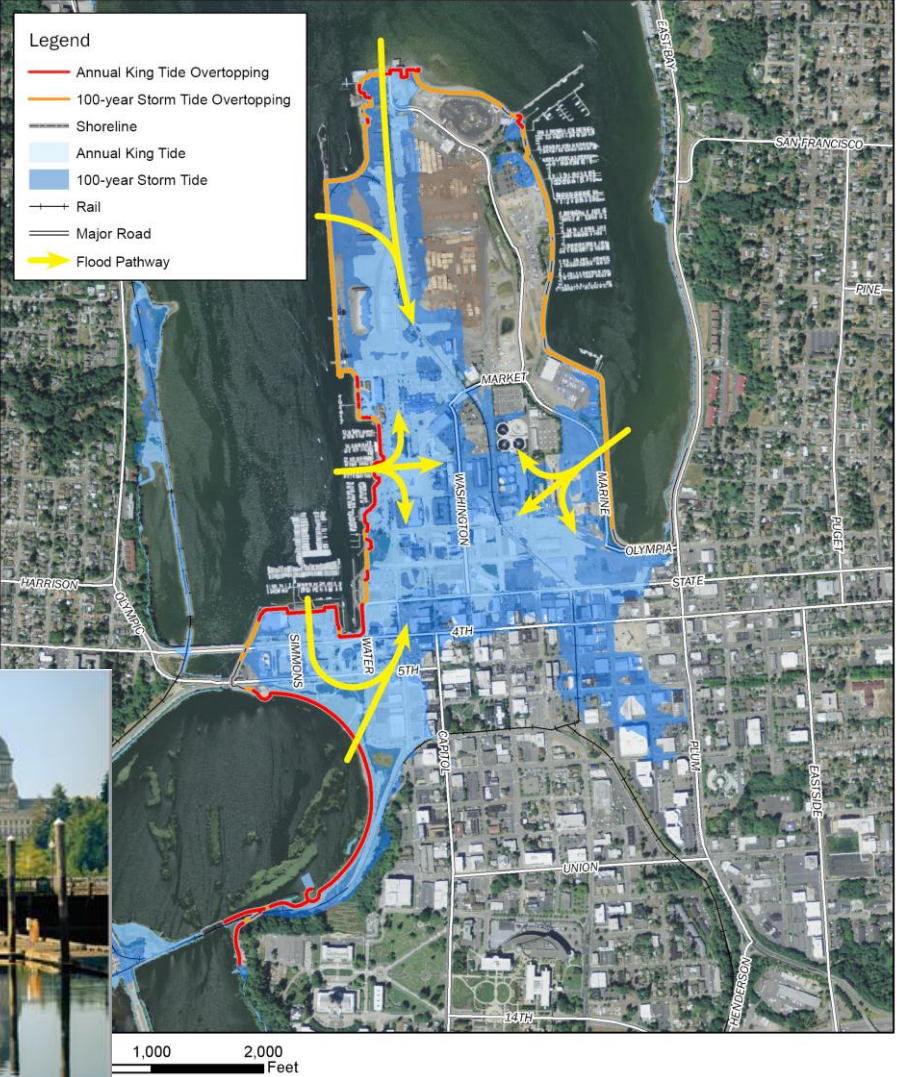
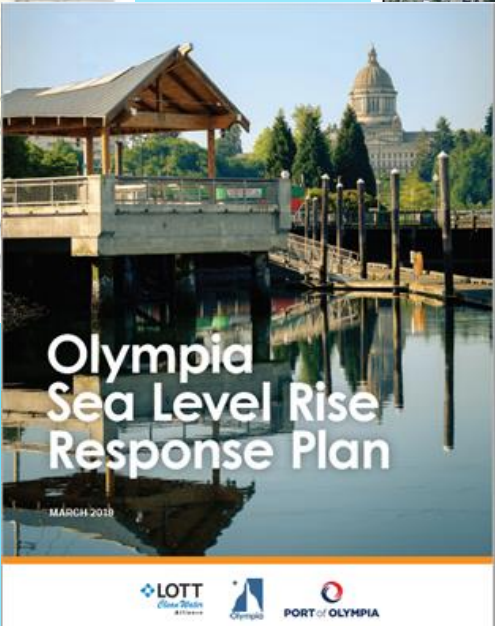
Area: Olympia

### The City of Olympia Annex to the Hazards Mitigation Plan for the Thurston Region

Table of Contents

Title Page and Table of Contents	1
Adopting Resolution	3
Community Profile	5
City of Olympia Plan Development Process	7
City of Olympia Risk Assessment	13
City of Olympia Mitigation Initiatives	39
City of Olympia Implementation of the National Flood Insurance Program	53
Public Comment Summary	59

Olympia-2 | Hazard Mitigation Plan  
December 2018



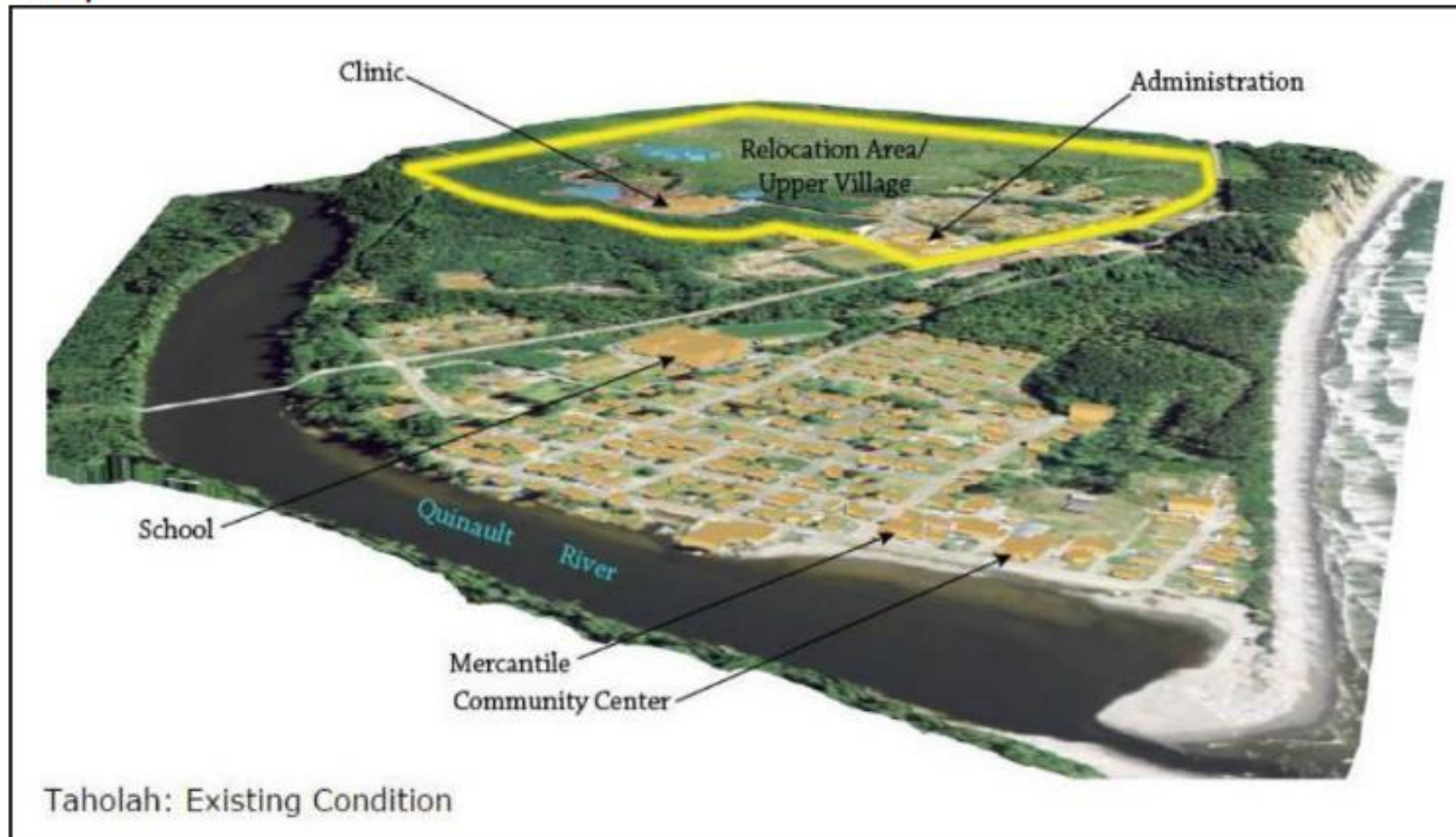
1,000 2,000 Feet

**OLYMPIA SLR RESPONSE PLAN**  
Projected Flooding 24" Sea Level Rise  
AECOM



# Quinault Indian Nation – Taholah Village Relocation

Figure 12-1. Map of Existing Condition from Taholah Village Relocation Master Plan (QIN 2016)



# Questions?

- What department in a jurisdiction would best lead a Hazard Mitigation/Climate Adaptation Planning effort?
- Is there leadership support for mobilizing resources and getting all stakeholders involved and addressing climate adaptation?
- What information is needed to identify, prioritize and get support for effective mitigation/climate adaptation strategies?
- How can the community acquire the information?
- Has a scope of work and cost estimate been developed to acquire the information?

# Support Tools

Adaptation Clearinghouse: <http://www.adaptationclearinghouse.org/>

Alaska Climate Change Information: <https://climatechange.alaska.gov/>

Alaska Sea Grant: <https://seagrant.uaf.edu/map/climate/>

Climate Adaptation Knowledge Exchange: <http://www.cakex.org/>

Oregon Climate Change Research Institute: <http://www.occri.net/>

Oregon DLCDC Planning for Climate Change:

<http://www.oregon.gov/LCD/CLIMATECHANGE/Pages/index.aspx>

Oregon State University Climate Impacts Research Consortium: <http://pnwcirc.org/circteam>

NOAA Digital Coast: <https://coast.noaa.gov/digitalcoast/>

U.S. Dept. of Housing & Urban Development Climate Resources:

[https://portal.hud.gov/hudportal/HUD?src=/program\\_offices/economic\\_development/resilience/about](https://portal.hud.gov/hudportal/HUD?src=/program_offices/economic_development/resilience/about)

U.S. Resilience Toolkit: <https://toolkit.climate.gov/>

UW Climate Impacts Group: <https://cig.uw.edu/>

WA Coastal Hazards Resilience Network: <http://www.wacoastalnetwork.com/>



# Resources

## DOCUMENTS

- **Local Mitigation Planning Handbook**  
<http://www.fema.gov/library/viewRecord.do?id=7209>
- **Mitigation Ideas** <http://www.fema.gov/library/viewRecord.do?id=6938>
- **Local Mitigation Planning Guidance** <https://www.fema.gov/media-library/assets/documents/23194>
- **Tribal Multi-Hazard Mitigation Planning Guidance**  
<http://www.fema.gov/media-library/assets/documents/18355>
- **California HMP & Climate Adaptation Guidance**  
<http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/hazard-mitigation-planning/california-climate-adaptation>
- **ICLEI: “Integrating Hazard Mitigation & Climate Adaptation Planning”**  
<http://icleiusa.org/wp-content/uploads/2015/08/Integrating-Hazard-Mitigation-and-Climate-Adaptation-Planning.pdf>

## TRAINING

- **Climate Adaptation Training Opportunities**
- <https://toolkit.climate.gov/training-courses>

## WEBSITE

- **FEMA Mitigation Planning**  
<https://www.fema.gov/hazard-mitigation-planning>

