

# District Climate Change Vulnerability Assessment

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# Transportation Infrastructure



Ports



Rail



Scenic Routes



Rural Communities



Trails



Rural Routes



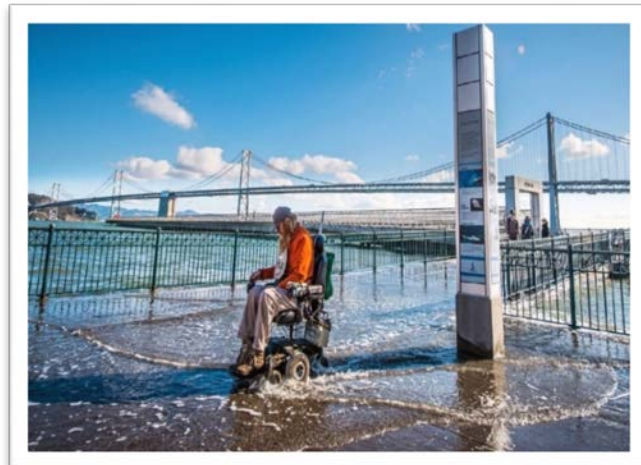
Delta/Wetlands



Airports



# Climate Change Impacts to the Transportation Infrastructure



# Caltrans Climate Change Efforts

Greenhouse  
Gas  
Mitigation

Reduced emissions from  
operations by 24%

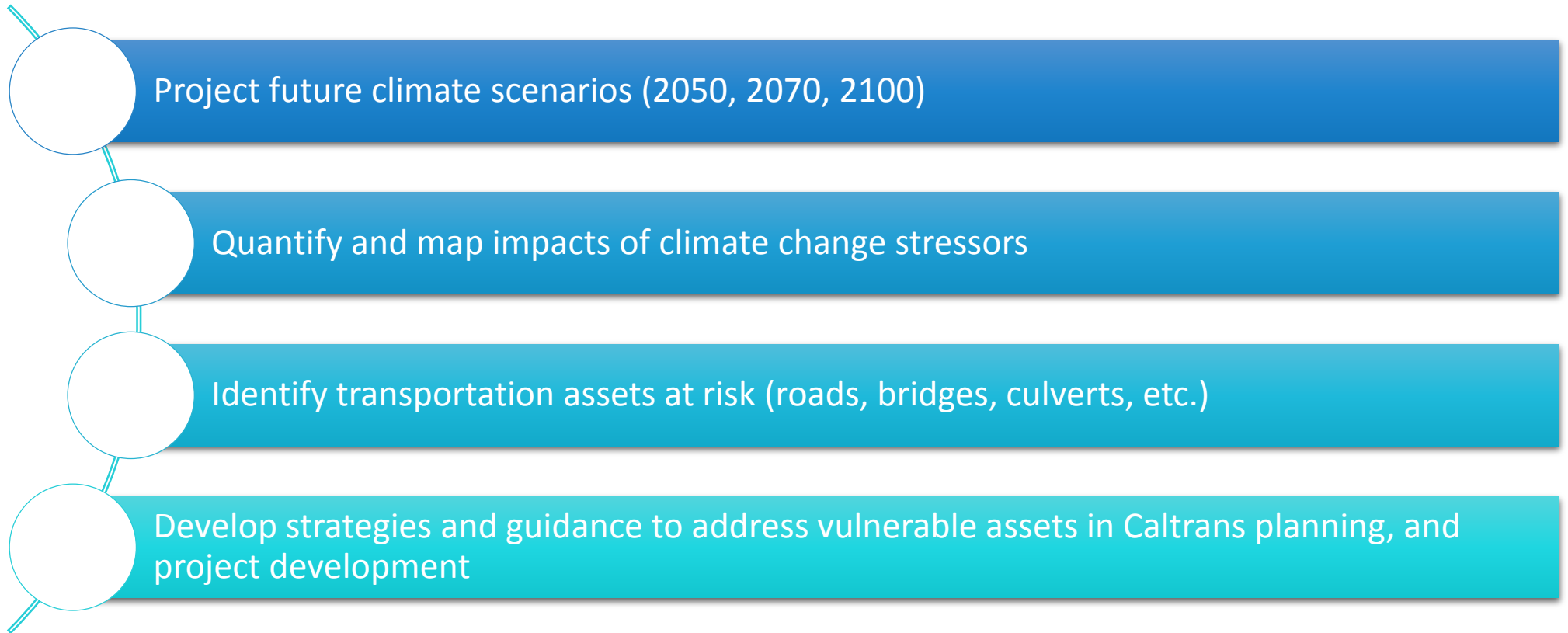
Climate  
Change  
Adaptation

Guidance and research  
on incorporating climate  
change into projects

Climate Change  
Vulnerability  
Assessments



# Scope of Climate Change Vulnerability Assessment Studies





# Vulnerability Assessment Study – Delivery Schedule

## District 1

- Completed

## District 4

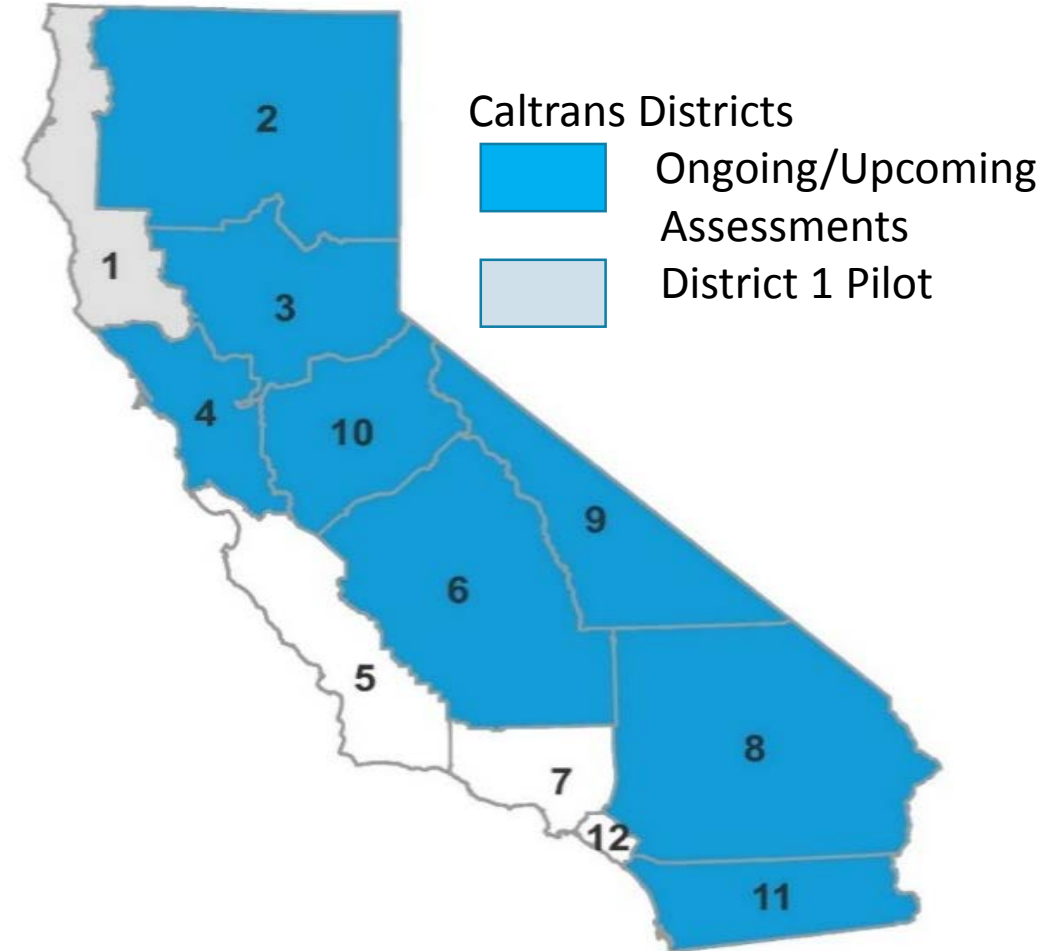
- February 2017

## Districts 2, 9, 3, 8, 6, 10 & 11

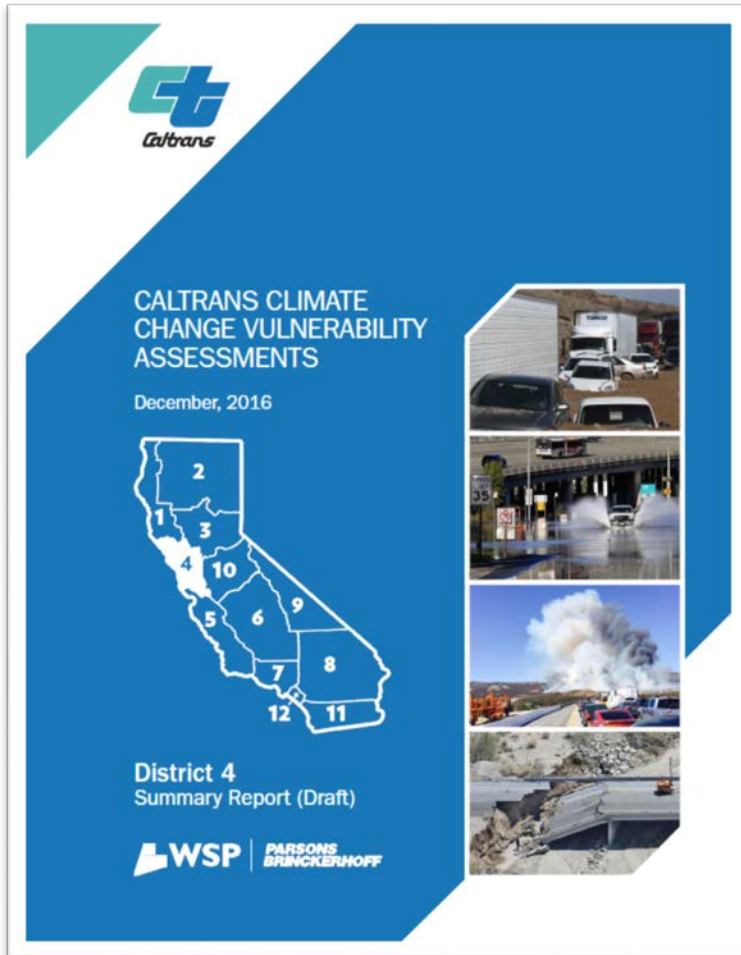
- By the end of 2017

## Districts 5, 7 & 12

- Pending sea-level rise data by the US Geological Survey



# Draft Climate Change Vulnerability Report District 4 - San Francisco Bay Area



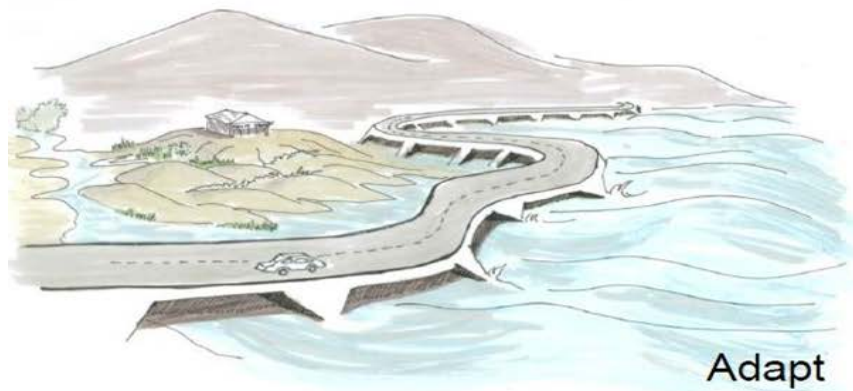
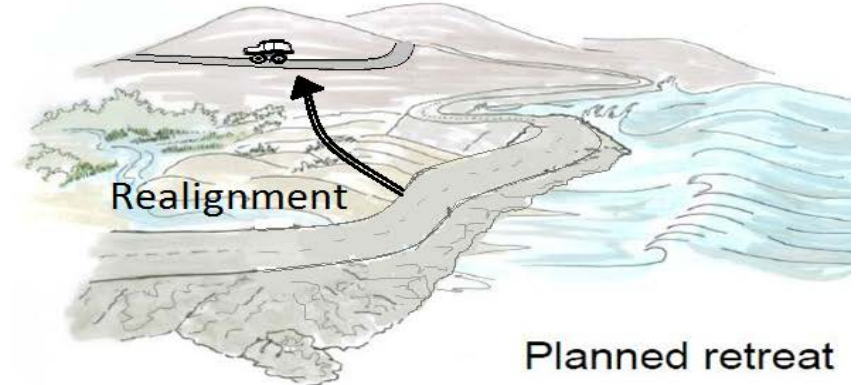
Report Includes:

- Sea-level rise projections
- Maps (data) for each climate stressor
- Identification of vulnerable roadway
- Case-study example of project-level analysis





# Adaptation Approaches



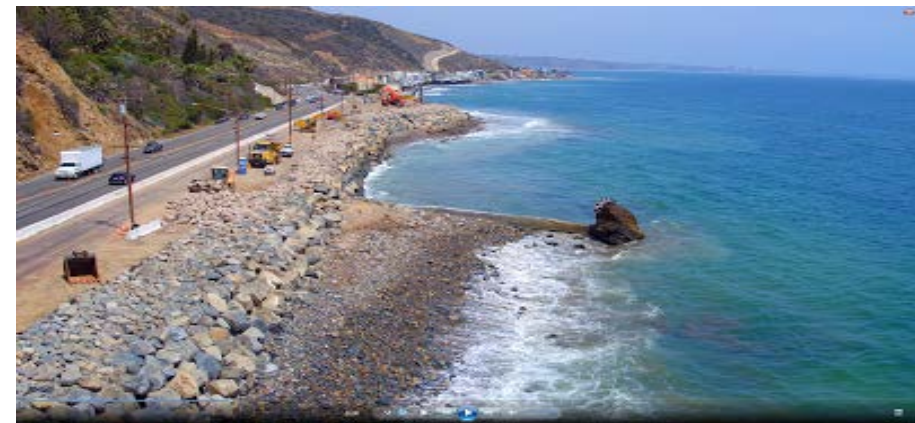
# Caltrans Example of Defend



Rock slope protection along 101

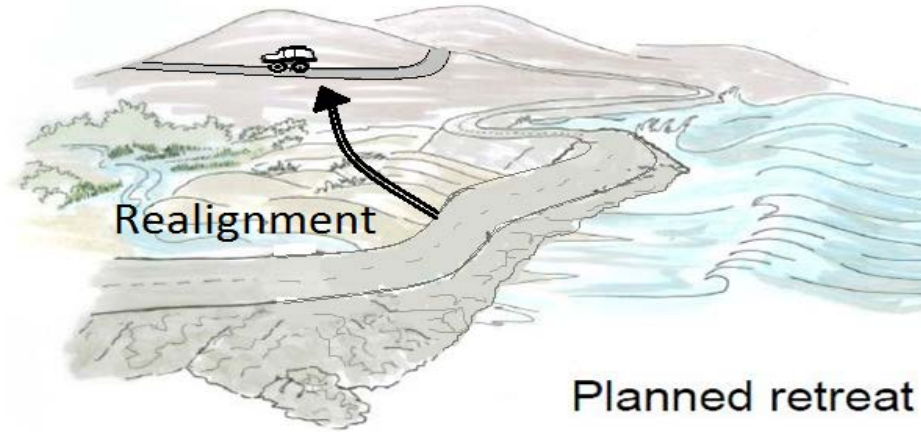


Major erosion event along 101 in need of repair



Seawall protecting 1 in Malibu

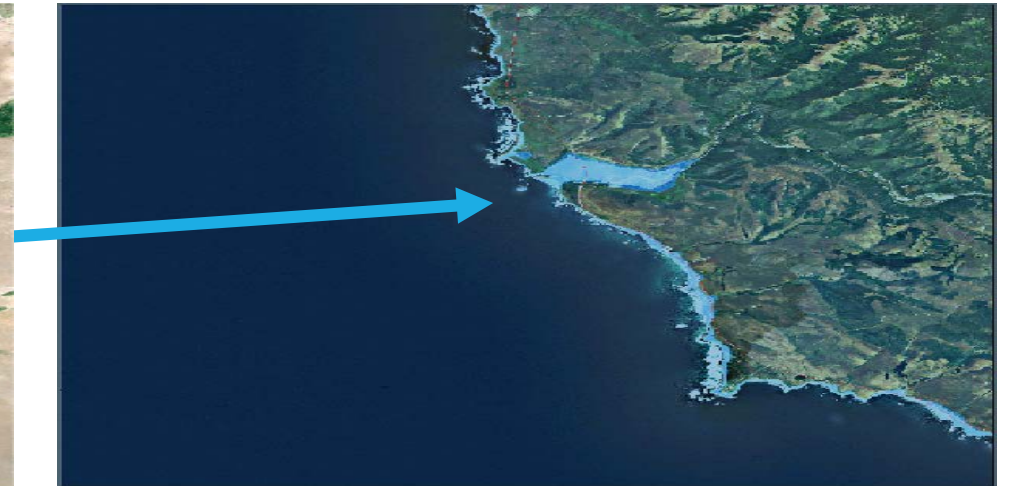
# Caltrans Example of Planned Retreat



Storm surge on State Highway 1 near Piedras Blancas



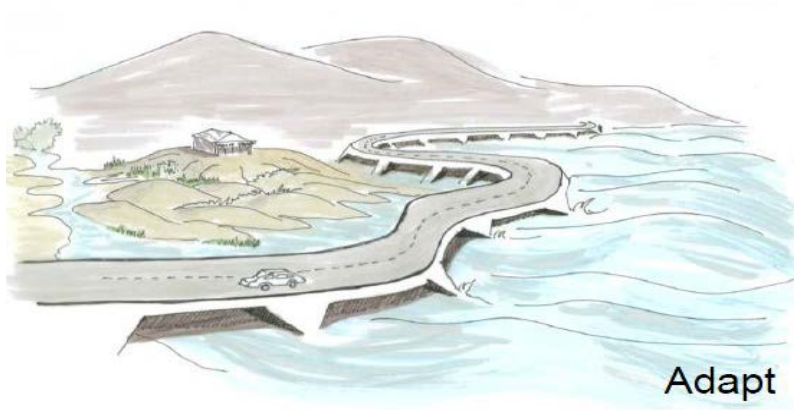
3-mile Realignment to protect HWY from erosion





# California Sea Rise Adaptation Efforts Elkhorn Slough

This project is exploring green infrastructure techniques for coastal highway resilience along the Pacific Coast Highway (Hwy 1) along Elkhorn Slough in Monterey County.



# Questions?

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