

# CLIMATE ADAPTATION AT CALTRANS

DIVISION OF TRANSPORTATION PLANNING

SCAG Resilience & Conservation Subcommittee

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# CALTRANS ORGANIZATION

## Caltrans:

Headquarters + 12 District Offices

HQ Division of Transportation Planning

Office of Air Quality and Climate Change



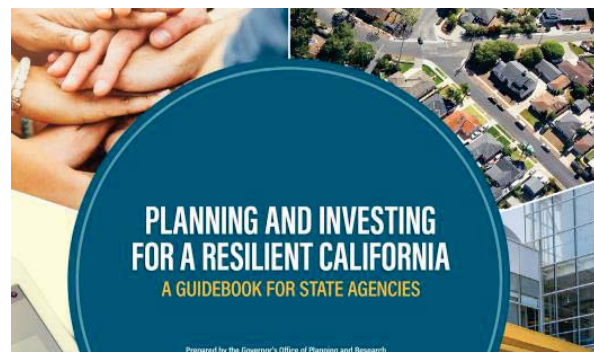
# INSTITUTIONALIZING ADAPTATION AND RESILIENCE

## State direction and leadership:

- Executive Orders → guidance from Governor's Office of Planning & Research
- State Climate Change Assessments
- Regulatory direction: California Coastal Commission (sea level rise)

## Caltrans Implementation through Planning:

- Tools
- Guidance
- New funding programs



## Critical Infrastructure at Risk

Sea Level Rise Planning Guidance for California's Coastal Zone

Final Adopted Guidance  
November 17, 2021





# CLIMATE ADAPTATION TOOLS & GUIDANCE



## Climate Change Vulnerability Assessments

- Identify climate vulnerabilities along the State Highway System
- Gain understanding of the magnitude of climate change impacts statewide through the end of the century.
- 3 Key Deliverables: Summary Report, Technical Report, & ArcGIS Webmap



# ADAPTATION PRIORITY REPORTS

Risk metrics applied for assets exposed to climate hazards.

- Multiple metrics delivered a final cross-hazard score.
  - **Exposure:** Extensiveness, severity, and timing of a hazard's projected impact on an asset.
  - **Consequence:** Condition of exposed asset and sensitivity to damage resulting from projected impact.
- Final Product: 12 District-specific reports evaluating risk for assets

ROADWAYS



BRIDGES



CULVERTS



## WHERE WE'VE BEEN

Foundational climate planning data needs

Project Delivery

2019

2021



Caltrans Climate Change Vulnerability Assessments  
*Foundational data*



Climate Change Adaptation Priority Reports  
*Preliminary risk prioritization*

Project Planning  
Gap: identifying vulnerability and risk → project planning and development



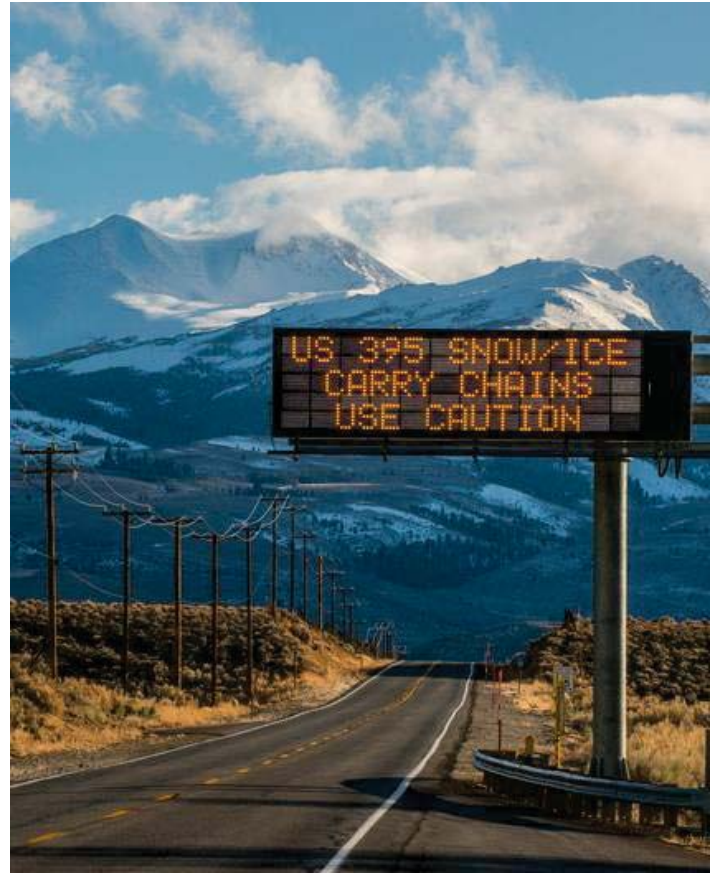
## ADAPTATION PLANNING GUIDANCE

### GUIDANCE

Ensure consideration of climate hazards and adaptation strategies are considered in all stages of planning

### OUTCOME

Key to ensure adaptation strategies and associated climate change costs are incorporated into project planning



## CASE STUDY: PACIFIC COAST HIGHWAY (PCH) CORRIDOR PLANNING

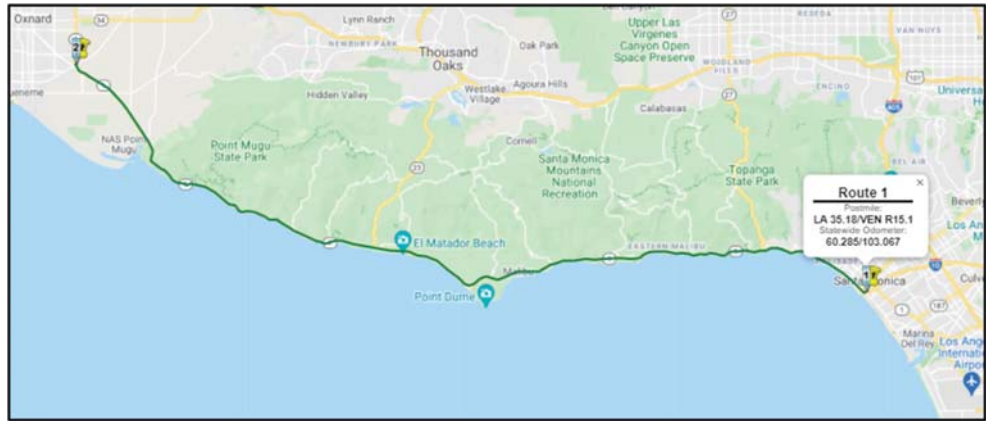


# CASE STUDY: PCH CORRIDOR PLANNING

## Purpose:

Develop Comprehensive Multimodal Corridor Plan for SR-1:

- Climate-related vulnerabilities along the PCH
- Identify opportunities to enhance complete streets elements
- Provide comprehensive list of adaptation strategies for future implementation



**Results:** 1) climate change adaptation concepts and strategies;  
2) conceptual treatment plan utilizing those concepts;  
3) methodology guide assessing the cost benefit of concepts.

PCH Corridor Plan lead by Caltrans District 7

## HOW IT ALL TIES TOGETHER → SYSTEM RESILIENCY



# UPCOMING FUNDING OPPORTUNITIES



## PROTECT Program & SB 198

Promoting Resilient Operations for Transformative, Efficient, Cost-saving Transportation

### PROTECT Formula Funding Program

California: ~\$631 million over 5 years

•**Purpose:** Fund activities that assess and address vulnerabilities to current and future weather events and other natural disasters and changing conditions due to climate change.

•**Eligible projects:** highways and bridges, public transportation facilities, intercity rail, and port facilities including intermodal connectors.

### SB 198: Transportation Climate Adaptation Programs

Created 2 programs to oversee PROTECT funds

#### **Local Transportation Infrastructure Climate Adaptation Project Program:**

- Administered by the California Transportation Commission (CTC)
- Oversees local/regional PROTECT funds
- Requires consideration of climate risk and alignment with State adaptation planning guidance

#### **State Transportation Infrastructure Climate Adaptation Program**



# Sustainable Transportation Planning Grant Program: Climate Adaptation Planning

The Climate Adaptation Planning Grant will allocate **\$50 million** through a one-time funding cycle in **FY 22-23**.

- The grants will support:
  - Identification of transportation-related climate vulnerabilities through development of climate adaptation plans.
  - Project-level adaptation planning to identify adaptation projects and strategies for transportation infrastructure.

## • Who May Apply:

- Primary applicants: transit agencies, local, regional, and tribal governments.
- Sub-applicants: the above as well as community-based/non-profit organizations, universities, and other public entities.

## • Example Project Types:

- Climate Vulnerability and Risk Assessments
- Planning for Extreme Weather Events & Evacuation
- Resilience Improvement Plans (PROTECT Program)
- Technical Feasibility Studies
- Educational Resources and Training



THANK YOU

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