

**ARCCA** Learning Session

# Navigating Coastal Resilience Strategy Development



Friday, March 30<sup>th</sup> | 1:00 – 2:00 PM PDT

# Learning Session Agenda

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- Webinar Logistics
- Brief overview of ARCCA
- Featured Presentation
- Participant Q&A
- Closing remarks

# About ARCCA

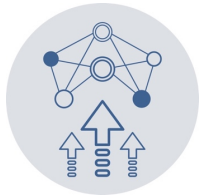
A network of leading regional collaboratives from across California that work together to advance adaptation statewide and increase local capacity to build community resilience.



Growing and facilitating a strong peer-to-peer network



Fostering knowledge exchange and mutual support

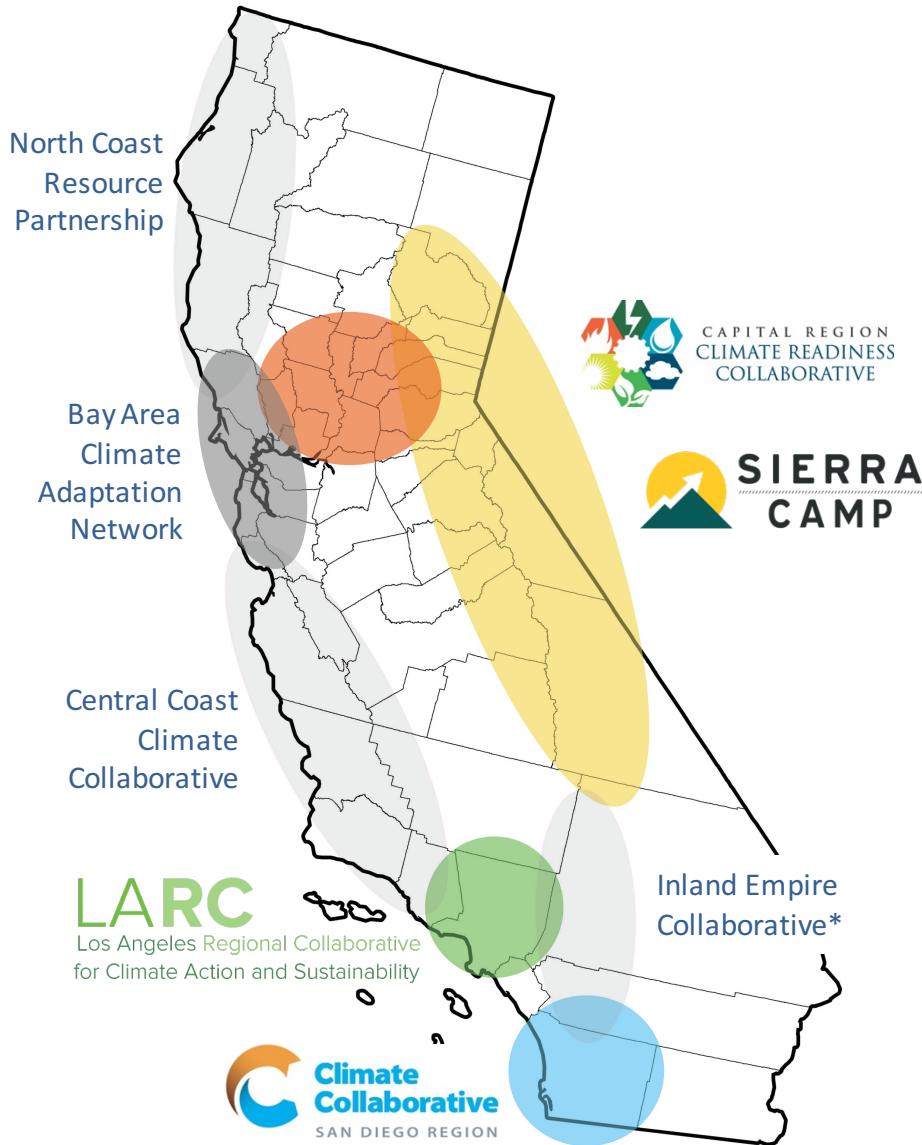


Supporting emerging regional climate collaboratives



Streamlining engagement and coordination with the State

# ARCCA Members



## Coordinator



**Local Government Commission**  
*Leaders for Livable Communities*

## State Liaison



## Affiliates



**Four Twenty Seven**  
Climate Solutions



**Point Blue**  
Conservation Science



**The California State University**  
OFFICE OF THE CHANCELLOR

**GEORGETOWN**  
CLIMATE CENTER

**CADMUS**

# Presenter

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Laura Engeman

Program Manager

Center for Climate Change Impacts & Adaptation

Scripps Institution of Oceanography



# Navigating Coastal Resilience Strategy Development

*Laura Engeman*

*March 30, 2018*





# 27 Members

11 Cities

5 Regional Agencies

4 Universities

4 Non-Profits

San Diego Gas & Electric

The San Diego Foundation





# The San Diego Coast

70  
Miles of Coastline

3.2 Million  
People

8<sup>th</sup>  
Largest City in  
the U.S.





# Only CA Grant Award

\$689,500

NOAA Regional  
Coastal Resilience  
Grant Program

Directly support  
community-based  
coastal hazard  
planning





# 14+ Coastal Resilience Projects

## Across San Diego County

### Coastal Resilience Activities Occurring in San Diego County



Sea Level Rise and Coastal Resilience Efforts

Airport

Carlsbad

Del Mar

Encinitas

Imperial Beach

Navy

Oceanside

San Diego Bay

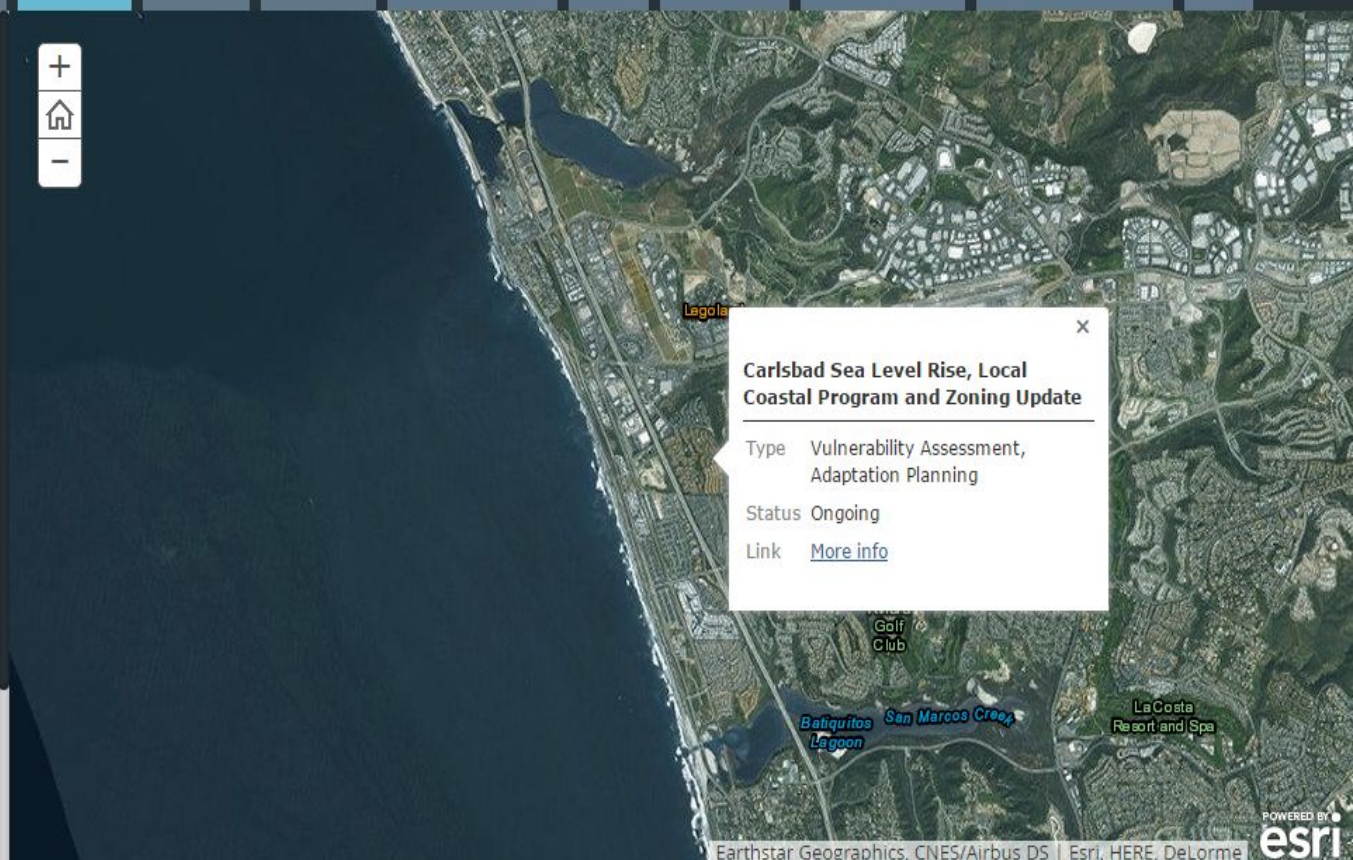
San Diego County



#### City of Carlsbad Sea Level Rise, Local Coastal Program and Zoning Update



The city of Carlsbad's Vulnerability Assessment presents a Carlsbad-specific sea level rise analysis to support and update the city's Local Coastal Program and Zoning Ordinance. The assessment evaluates the degree to which important community assets are susceptible to, and unable to, accommodate adverse effects of projected sea level rise. The assessment identifies the assets that are likely to be impacted and the causes and components of each asset's vulnerability.



#### Carlsbad Sea Level Rise, Local Coastal Program and Zoning Update

Type Vulnerability Assessment, Adaptation Planning

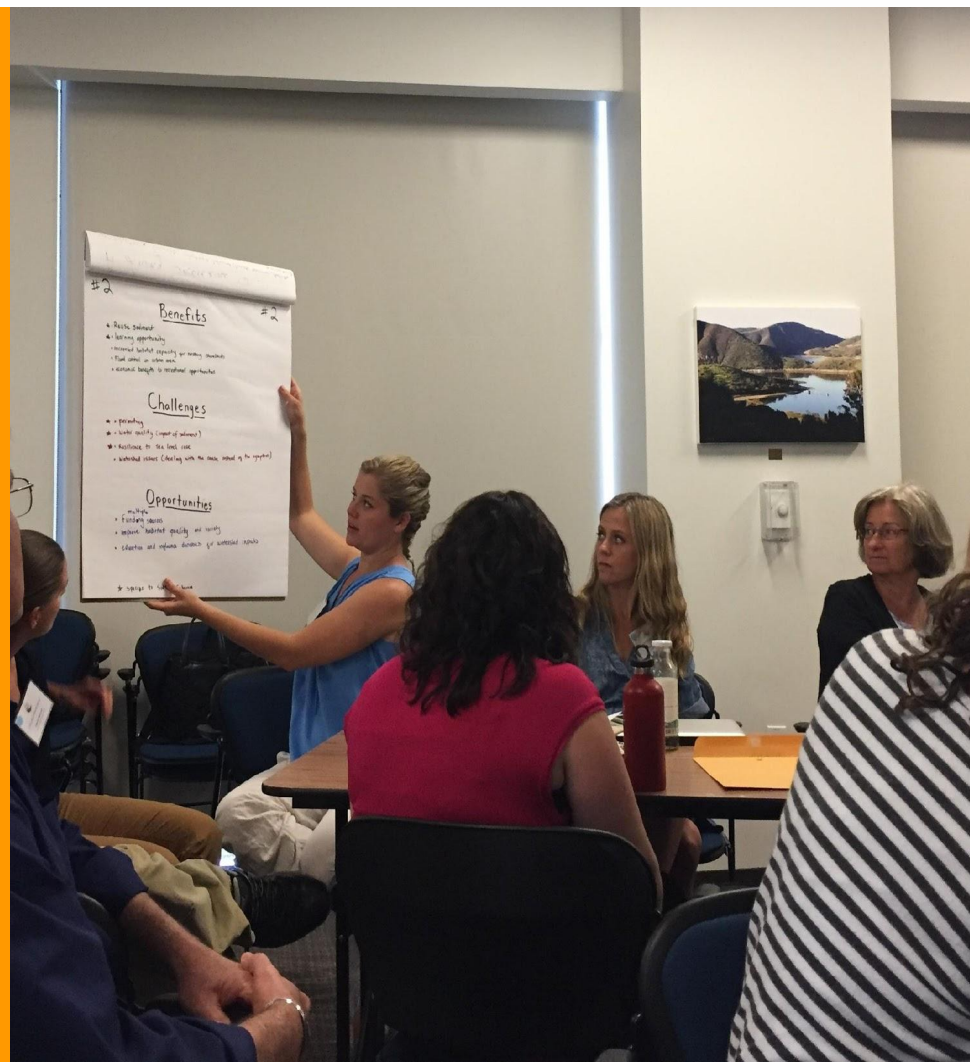
Status Ongoing

Link [More info](#)



# Regional Work Group

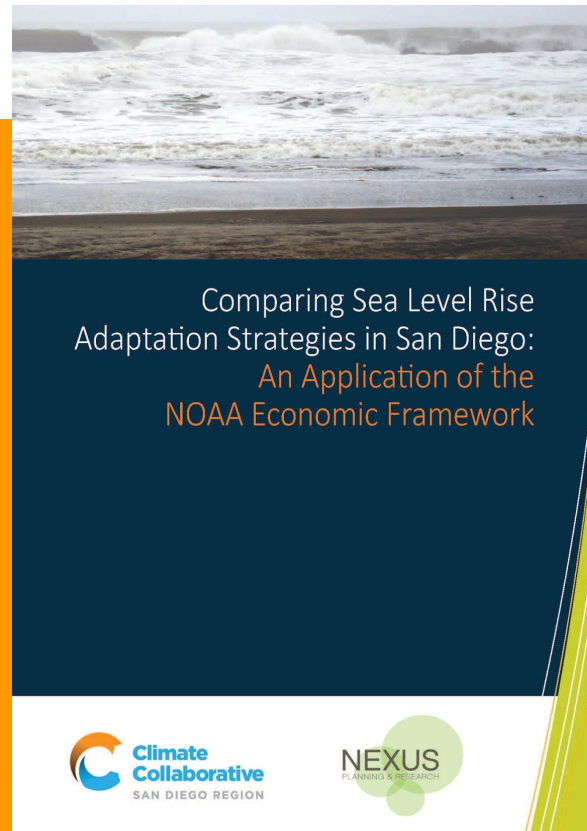
- Local/ Regional/State / Navy Engagement
- Local Science & Scientists
- Regional Consistency & Coordination
- ID Regional Needs & Opportunities





# Prioritizing Adaptation Strategies

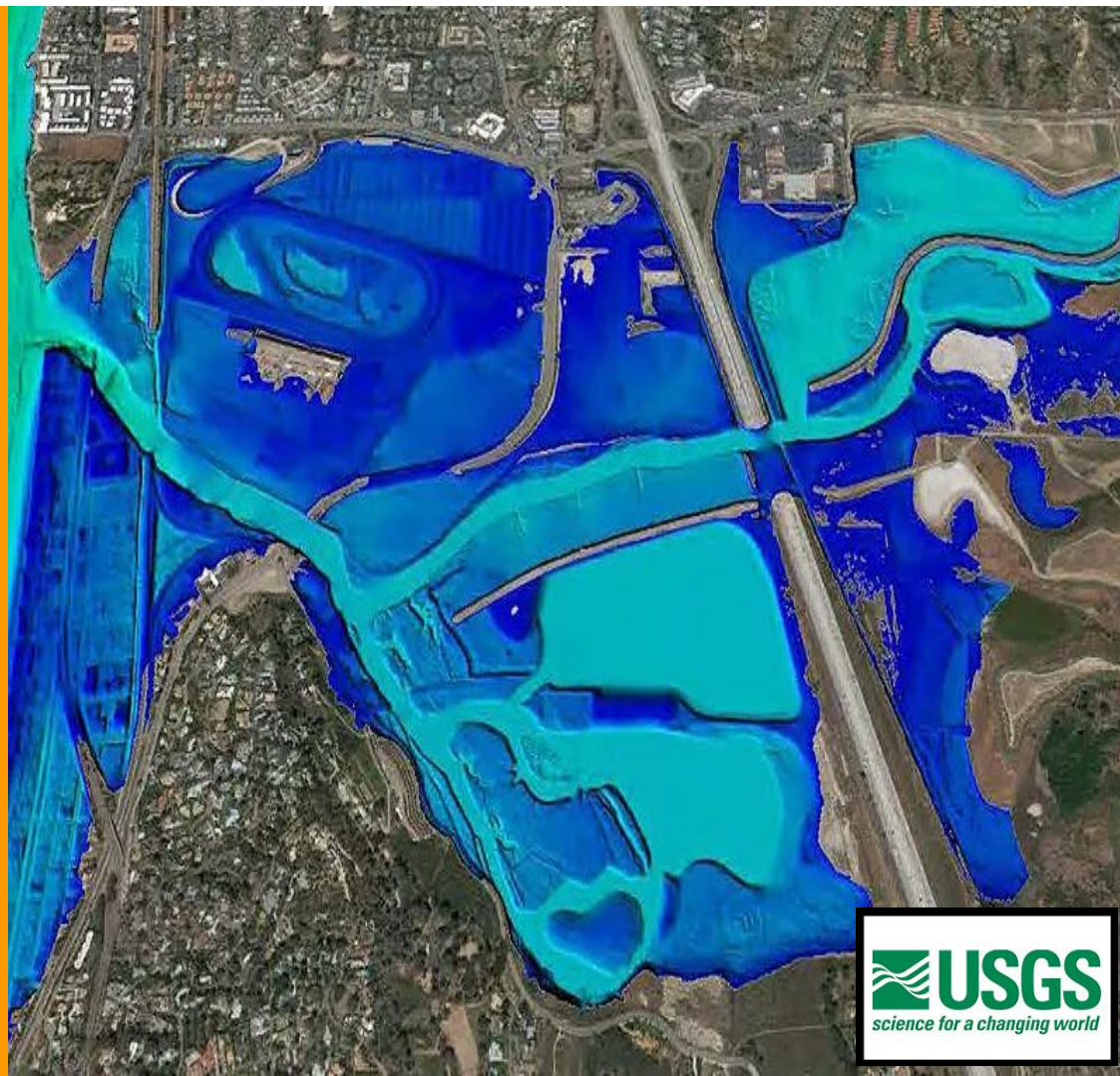
- SLR Scenario Education
- Cost-Benefit Framework
- Legal Analysis
- Policy Considerations





# Immediate Needs

- Land Use & development policies/ ordinances
- Trigger Policies & Financing Plan
- Risk Education





# Test Driving Scenarios and Trade-offs

## Bluff Adaptation Plan Framework

### Triggers

SLR (ft):

0'

1'

2'

3'

5.5'

RR:

15' - 110'

0' - 60'

0' - 35'

0' - 5'

0'

1st Row\*:

40' - 170'

0' - 130'

0' - 110'

0' - 65'

0'

4th Row\*:

270' - 450'

195' - 325'

155' - 290'

120' - 260'

10' - 210'

Lead time:

Bluff Top  
Offset

Protect

5-10 yrs

Beach nourishment

5-15 yrs

BMPs (e.g. access, veg, irrigation)

Retreat - Phase 1

15-20 yrs

Relocate railroad

Retreat - Phase 2

15-20 yrs

Remove structures



# Exploring Soft & Natural Solutions

- Sediment Management
- Living Shorelines For Southern CA





# Near Term Needs

- CIP Priorities
- Regional Infrastructure Re-Alignment Plans
- Hazard Mitigation & Vulnerable Pop Investments
- Open Data re: Observations





# 10 year + Horizon

- FINANCING!
- Relocation of public assets
- Phase 2-3  
Scenarios more development & started





**Climate  
Collaborative**  
SAN DIEGO REGION

[www.resilientcoastlines.org](http://www.resilientcoastlines.org)

# Thank You!

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- Resilient Coastlines Project of Greater San Diego
  - [resilientcoastlines.org](https://resilientcoastlines.org)
- Upcoming ARCCA Learning Sessions
  - Adaptation Clearinghouse Beta Testing (4/18)
  - Learn more at [arccacalifornia.org/resources/learning-sessions](https://arccacalifornia.org/resources/learning-sessions)
- New ARCCA Resources
  - 2018 Legislative Tracking: [arccacalifornia.org/2018-legislative-tracking](https://arccacalifornia.org/2018-legislative-tracking)
  - Roadmap to Transportation Resilience: [arccacalifornia.org/roadmap-to-resilience](https://arccacalifornia.org/roadmap-to-resilience)