



## **SEA LEVEL RISE ADAPTATION STRATEGY FOR SAN DIEGO BAY** *Implications for San Diego International Airport*

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**ICLEI – Local Governments for Sustainability**

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# Evidence of Sea Level Rise in San Diego Bay

## Records and Evidence

- Recorded San Diego Bay Levels/Elevations
- King Tides and Storm Events
- Recorded Damage to Piers, Moorings and Marinas

## Climate Adaptation Strategy Research

- A Regional Wake-Up Call - 2050 Study
- Comprehensive Regional Assessment of Climate Change Impacts to San Diego County

## Modeled SD Bay Scenarios in 2050 and 2100

- Inundation
- Flooding / Severe Storm Event

## References and Links to Studies

- San Diego Foundation – [www.sdfoundation.org](http://www.sdfoundation.org)
- ICLEI - [www.icleiusa.org](http://www.icleiusa.org)

# Adaptation Strategy for San Diego Bay

## Planning process for Adaptation Strategy

- Steering Committee and Stakeholders Working Group assembled to contribute to Adaptation Strategy

## Convene land use and resource agencies

## Coordinate both scientific resources and planning resources

## Technical Advisory Committee

- Entities willing to volunteer their expertise in topic areas central to the planning process.

# Adaptation Strategy for San Diego Bay

## Existing Conditions Report

- Documents San Diego Bay landscape and the science of climate change and sea level rise

## Vulnerability Assessment

- Evaluates how sea level rise will impact various sectors and systems in the region and how impaired or resilient those systems will be

## Policy Recommendations

- Jurisdictions and regional agencies can consider adopting through existing planning processes

## Adaptation Strategy

- Assemble the work in a narrative planning document

# Vulnerabilities of SAN



## Sea Level Rise Planning Scenarios

### 2050 Daily Conditions

Mean high tide in 2050 with 0.5 meters of sea level rise

### 2050 Extreme Event

100-year extreme high water event + 0.5 meters

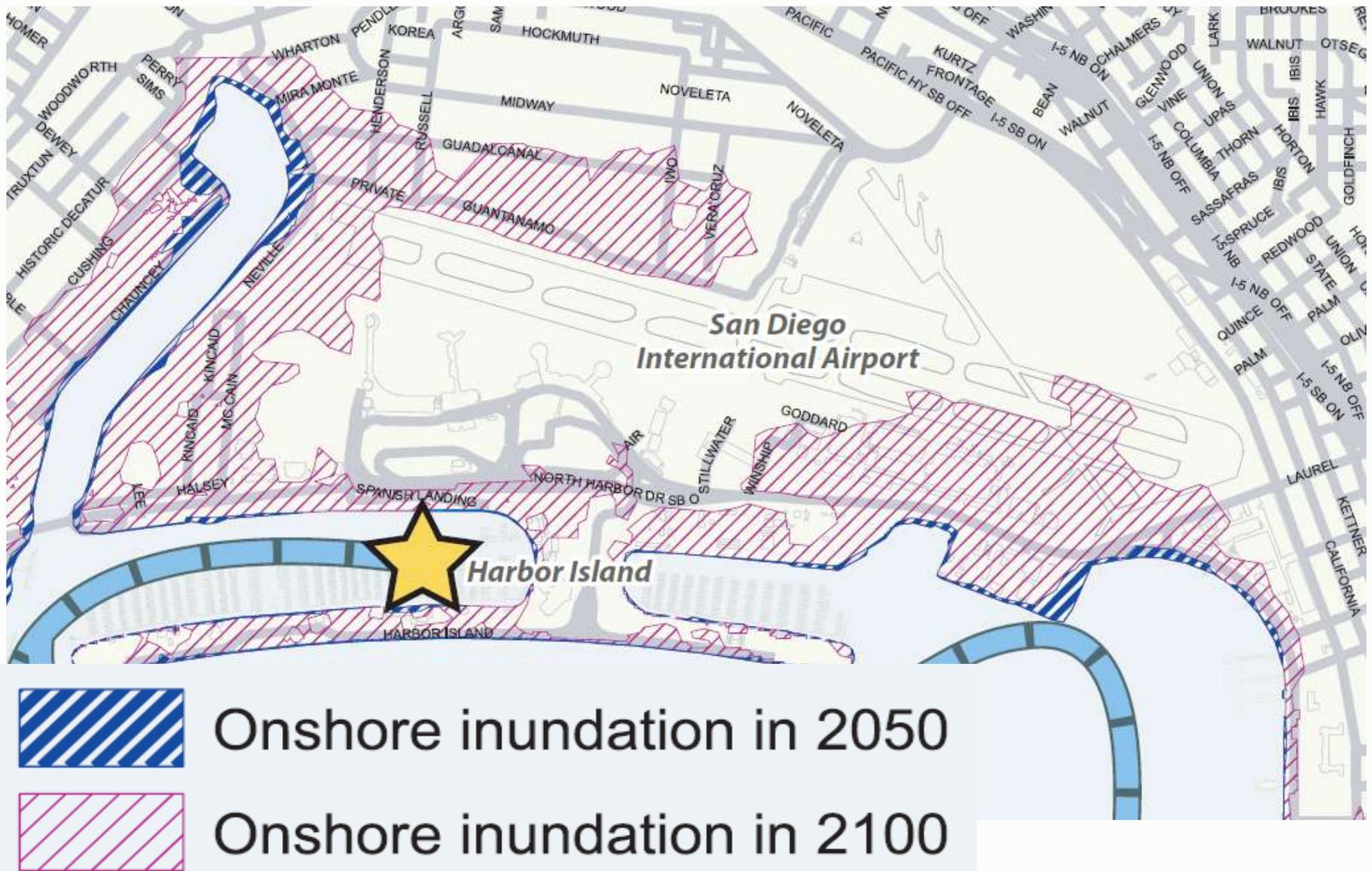
### 2100 Daily Conditions

Mean high tide with 1.5 meters of sea level rise

### 2100 Extreme Event

100-year extreme high water event + 1.5 meters

# Vulnerabilities of SAN



Storm Drains  
inundated

Runway approach lights at west  
end Navy Boat Channel

Primary ground access floods –  
North Harbor Drive

Runway/Airfield ovals  
flood at east end

# Adaptation Strategies for Sea Level Rise

## Hard Structures

- Seawall, Revetment, Bulkhead, Sea Dike

## Soft Structures

- Beach Nourishment, Wetlands, Green Infrastructure

## Withdrawal

- Buffers, Setbacks & Zoning, Managed Retreat

## Accommodation

- Raised Ground Level, Raised Foundations, Floodable Development, Floating Structures

## Create regional working group

- Comprising of staff representing public agencies around SD Bay to implement Adaptation Strategy and lead education/outreach

## Establish a regional research agenda

- Advancing understanding of sea level rise impacts, vulnerabilities and adaptation responses in the San Diego region

## Engage regulatory agencies for consistent guidance

- Advocating regulatory guidance on how to address sea level rise impacts in development permitting

## Engage Federal Emergency Management Agency (FEMA)

- Encouraging the incorporation of future risk from sea level rise into non-regulatory maps associated with Flood Insurance Studies

## Incorporate adaptation into local and regional plans

- Institutionalize or mainstream sea level rise adaptation into relevant local and regional plans and projects

## Utilize guidance provided by the CA Climate Action Team

- Consistently utilizing guidance in developing sea level rise assumptions for planning purposes

## Incorporate into site-specific plans or capital projects

- Performing more detailed vulnerability assessments at a site-specific level as plans or capital projects are undertaken

## Develop decision-making frameworks in communities

- Developing decision-making frameworks for implementing management practices in communities vulnerable to inundation or regular flooding

## Resources:

- ICLEI – Local Governments for Sustainability



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

- The San Diego Foundation



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