Rising Tides, Urban Coasts and Natural Resources – Solution Room

9th National Summit on Coastal and Estuarine Restoration and Management
December 10, 2018   Long Beach, CA
# Meet the Facilitators

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Objectives

• Alternative session format
• Peer to peer solution exchange
• Draw on multi-disciplinary expertise at conference
• Promote creative thinking on complex issues
Solution Room Format

15 min  Overview of typical coastal settings in Southern California

45 min  Organize into multi-disciplinary groups
  • Bluff-backed
  • Sandy beach & low-lying backshore

Identify challenges and propose solutions
Develop adaptation pathways

30 min  Full room discussion
Typical Coastal Settings of Southern California

Open Coast - Bluff Backed
San Clemente, CA

Open Coast – Sandy Beach
Venice Beach, CA

Estuarine – Developed
Long Beach, CA
Coastal Resources of San Clemente

- High value real estate
- LOSSAN Railroad
- Marine Safety Building
- Beaches
- Hard & Soft bottom habitat
- Pier
Coastal Hazards in San Clemente

Storm Waves

Chronic Erosion

Storms in 1983 El Niño (OC Register)

Erosion at North Beach, January 2017 (OC Register)
Chronic Erosion + SLR = Coastal Squeeze

“Coastal Squeeze”

- Present conditions
- Intermediate SLR
- Advanced SLR
SLR Thresholds:

+0.8ft (25cm) Beach Loss

+3.3ft (100cm) Railroad

+4.9ft (150cm) Bluff Erosion

CoSMoS Results:

Storm erosion

Shoreline
SLR Adaptation – difficult trade offs to consider

- **Present Conditions**
  - Submerged
  - Intertidal
  - Dry Beach

- **Intermediate SLR**
  - Loss of Dry Beach
  - Narrow Intertidal

- **Advanced SLR**
  - No Dry Beach
  - No Intertidal

- **Present Conditions**
  - Submerged
  - Intertidal
  - Dry Beach

- **Intermediate SLR**
  - Profile shifts inward
  - Bluff erosion potential

- **Advanced SLR**
  - Landward Migration
  - Good for beaches, not for development

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Coastal Resources of Venice Beach

- High value real estate
- Beaches
- Hard & Soft bottom habitat
- Boardwalk
- Recreation Center
Coastal Hazards in Venice Beach

Storm related erosion damage

Storms in 1983 El Niño

County lifeguard headquarters

Storm related flooding

1983 Flooding in Venice Beach at Washington Blvd (Fred Barthel)
Sea Level Rise Hazards in Venice Beach

Low lying topography at increased risk of flooding

Beach erosion due to sea level rise
Group Discussion

• Organize into multi-discipline groups
• Peer to peer exchange of ideas
• Resources:
  • Printed Maps
  • Laptop – OCOF / google earth
  • Facilitator
Final Discussion

• Review most interesting points of each discussion group
• Any cross cutting themes?
• Major challenges and solutions at each location