

Coastal Guidance: setting the stage for action

Presented by Lesley Ewing, CCC
CSPBA Coastal Conditions Conference
April 19, 2018
Bodega Bay, CA



Overview – Guiding Questions

1. What is the latest understanding of your topic/location?
2. How has the environment fared over the last 5 years?
3. What are the pressing needs and new pressure points to cause change?
4. What are the policy changes needed and/or adaptation in response to climate change?

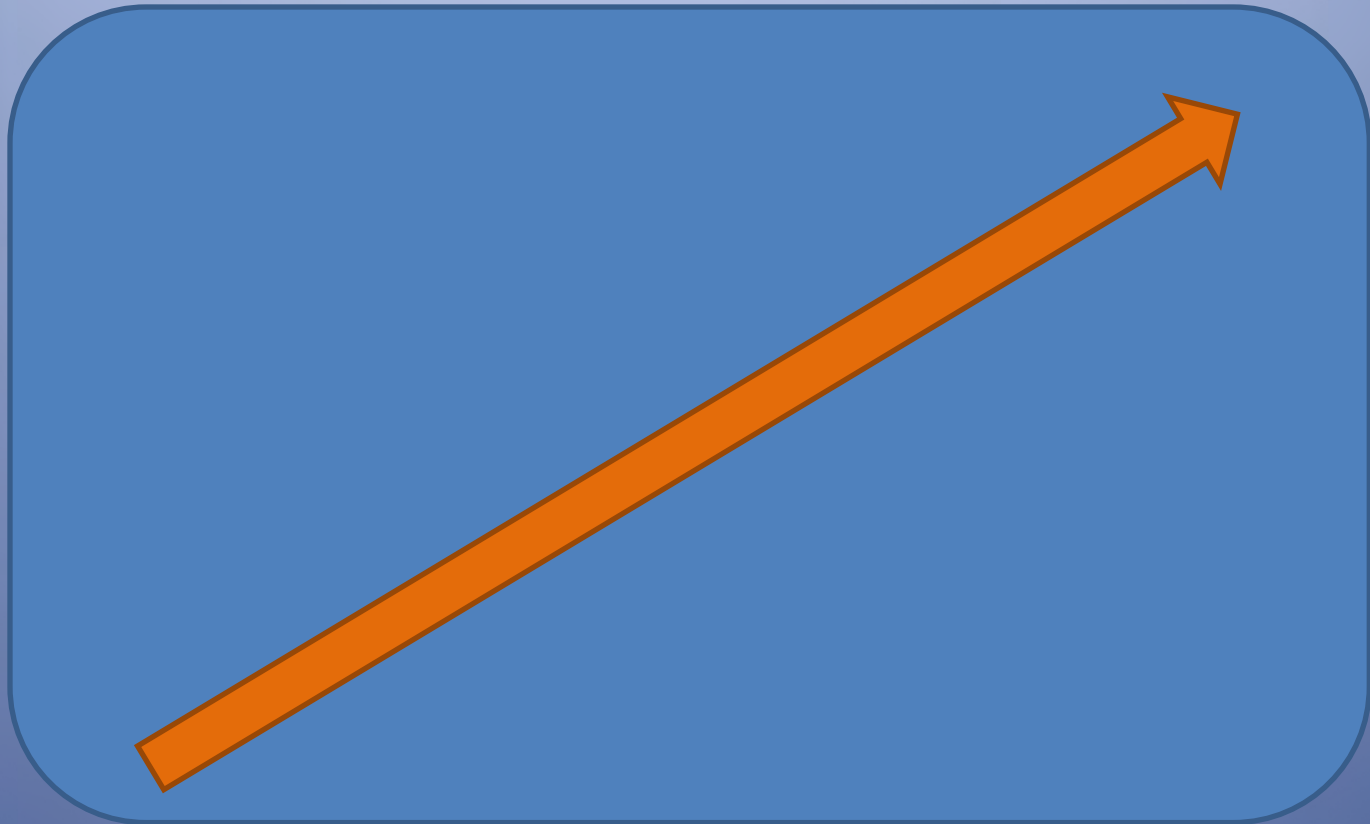


Latest Sea Level Rise Understanding

Over the coming years and decades, sea level will rise

Future
Sea Level

Current
Sea Level



Now

Future



Trends over the past 5 years

SEAWALLS



Decreased footprint, improved visual impact; but more are being built that are being removed

BEACHES



Seasonal changes; many beaches show longer term erosional trend that will increase with rising seas



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In July 2017, the CA Coastal Commission and CEMEX reached agreement to shut down the last active beach sand mine in the US

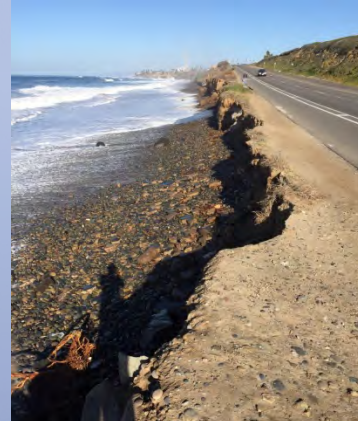


Trends over the past 5 years

STORMS



Pismo Beach, Photo Credit Cassidy Teufel



Carlsbad, Photo Credit Gabe Buhr

RESTORATION PROJECTS



Seal Beach, Photo CA Coastal Records

2015/16 El Niño caused some largest measured shoreline retreat. Greater frequency of large storms in possible in future

Nourishment projects, wetland restoration, lagoon enhancement, thin layer sediments. Soon to come -- living shoreline.

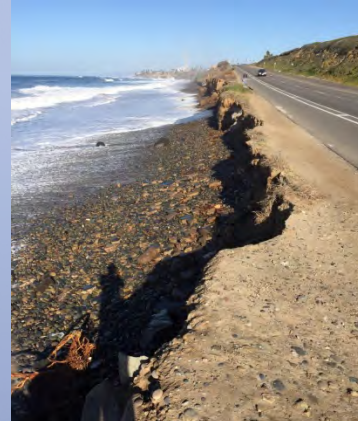


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Photoshop image of Living Shoreline, Cardiff State Beach, from Moffatt-Nichol

Coming Soon: vegetated dune at Cardiff; undertaken as a living shoreline project to protect PCH from flooding.



Points for Change



CALIFORNIA COASTAL COMMISSION SEA LEVEL RISE POLICY GUIDANCE

*Interpretive Guidelines for Addressing
Sea Level Rise in Local Coastal Programs
and Coastal Development Permits*



Sunset Beach, Photo by Mario Fernandez



Chula Vista, Photo by Lisa Cox



San Francisco, Photo by Mike Baird



Arcata, Photo by Humboldt Baykeeper

UNANIMOUSLY ADOPTED – AUGUST 12, 2015

Time Period *	North of Cape Mendocino	South of Cape Mendocino
by 2030	-2 – 9 in (-4 – +23 cm)	2 – 12 in (4 – 30 cm)
by 2050	-1 – 19 in (-3 – +48 cm)	5 – 24 in (12 – 61 cm)
by 2100	4 – 56 in (10 – 143 cm)	17 – 66 in (42 – 167 cm)

* with year 2000 as a baseline



More Recent Points for Change



CALIFORNIA COASTAL COMMISSION RESIDENTIAL ADAPTATION POLICY GUIDANCE

*Interpretive Guidelines for Addressing Sea
Level Rise in Local Coastal Programs*



Oceanside



King Salmon



Ventura



Solana Beach

Photo Credit: Mary Matella

MARCH 2018

REVISED



CALIFORNIA COASTAL COMMISSION STATEWIDE SEA LEVEL RISE VULNERABILITY SYNTHESIS



Arcata | Humboldt Baykeeper



Ventura | David Powdrell



Oceanside | Dan Jarvis



Solana Beach | Coastal Resources Project

DECEMBER 31, 2016

This product was funded with qualified outer continental shelf oil and gas revenues by the Coastal Impact Assistance Program of the Fish and Wildlife Service, U.S. Department of the Interior

All available on the Commission's Web Site

Adaptation Needed for Climate Change

- Continue with the good things we are doing now
 - Prudent land use planning to avoid hazards
 - Hazard avoidance & Hazard Setbacks
 - Conservation easements
 - Protection efforts
- Repurpose things that we are doing now
 - Habitat Restoration
- Thin-layer augmentation
 - Oyster Reefs, sea grasses & Kelp
 - Living Shorelines
 - Beach and Dune Nourishment
 - Offshore Reef Enhancement
- Rely upon new or totally new things
 - Levitating home pods
 - Roadless transportation
 - Local, non-fossil fuel energy generation



Conclusions

There will be time to deal with climate change..... But there will not be a better time. There will only be worse times.”

David Remnick, No More Magical Thinking, New Yorker, 19Nov2012.

- Thought for the Day -

Two of the greatest assets to have in life are patience and wisdom.

