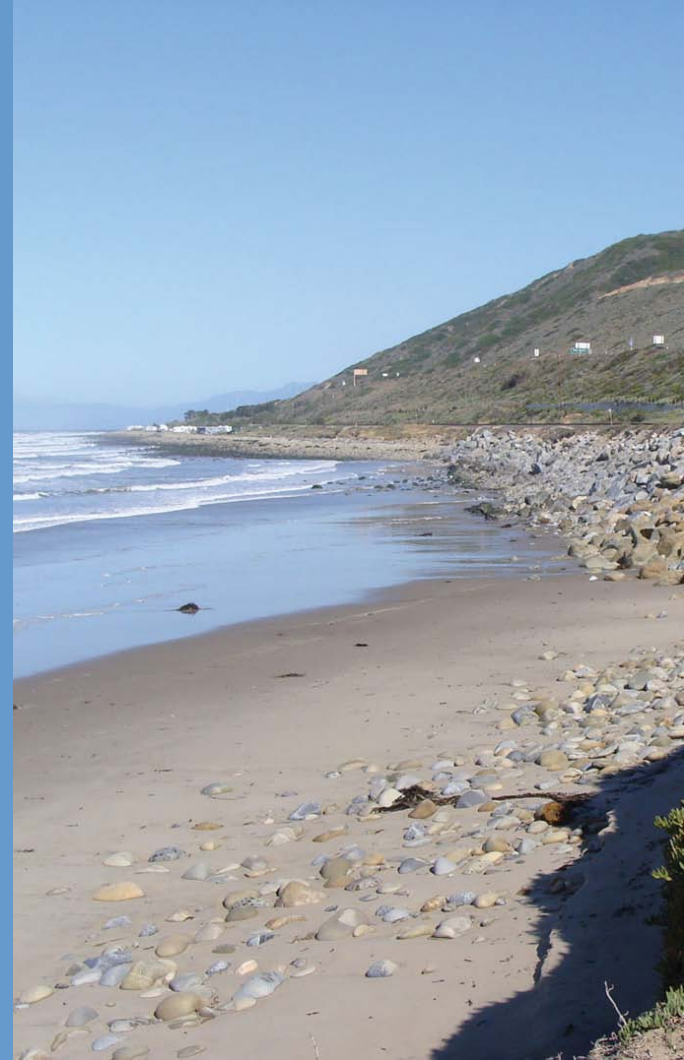


The San Francisco Littoral Cell CRMSP

Draft Implementation Options for Pacifica

*for more information, please contact
Doug George
(see last slide)*

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Questions for the SAG

- How do you view the options?
- What would make the options better/easier to implement?
- How do the options support/disrupt ongoing or new plans?
- Any options we have not considered?



Descriptions of Implementation Options



- No Action



- Beach Nourishment

- Multi-purpose Reefs



- Managed Retreat



- Armor



- Allow Natural Processes

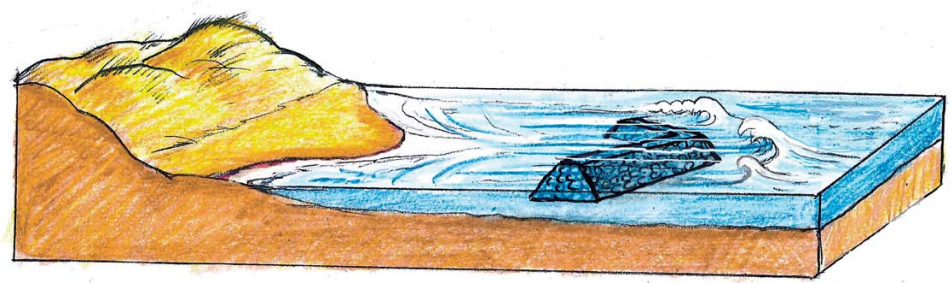




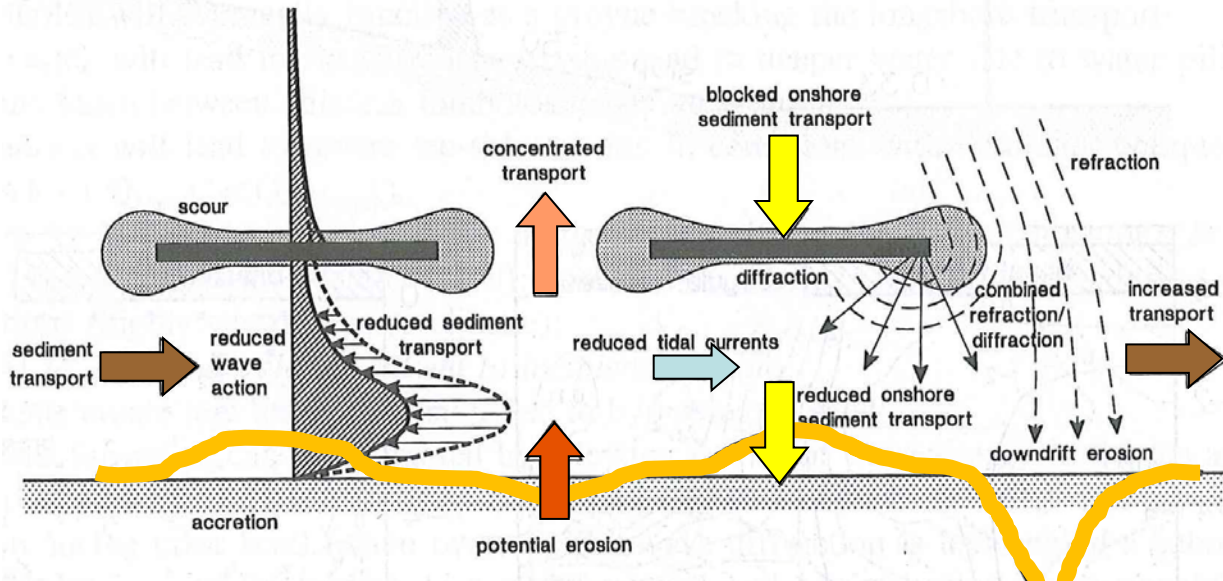
Beach Nourishment

- Placement of sediment-water slurry directly on beach or beach face
- Key questions:
 - Sediment characteristics and sources
 - Longevity

Opportunities	Constraints
Use sediment trapped on land behind dams or removed from regular road maintenance	Transportation of sediment to receiver sites
Rebuild dune habitat	Immediate, short-term biological impacts
	Habitat conversion long-term



Multi-purpose Reefs



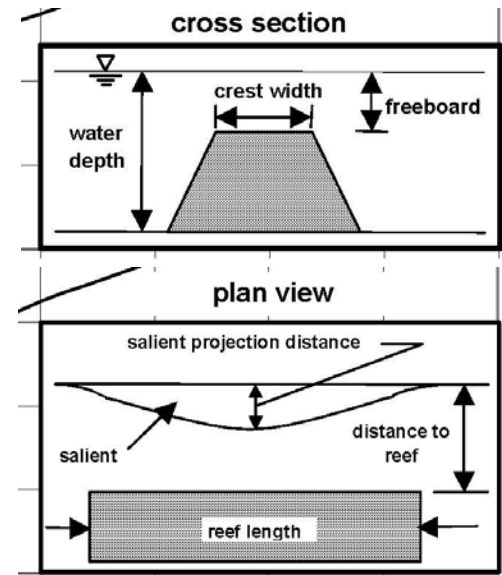
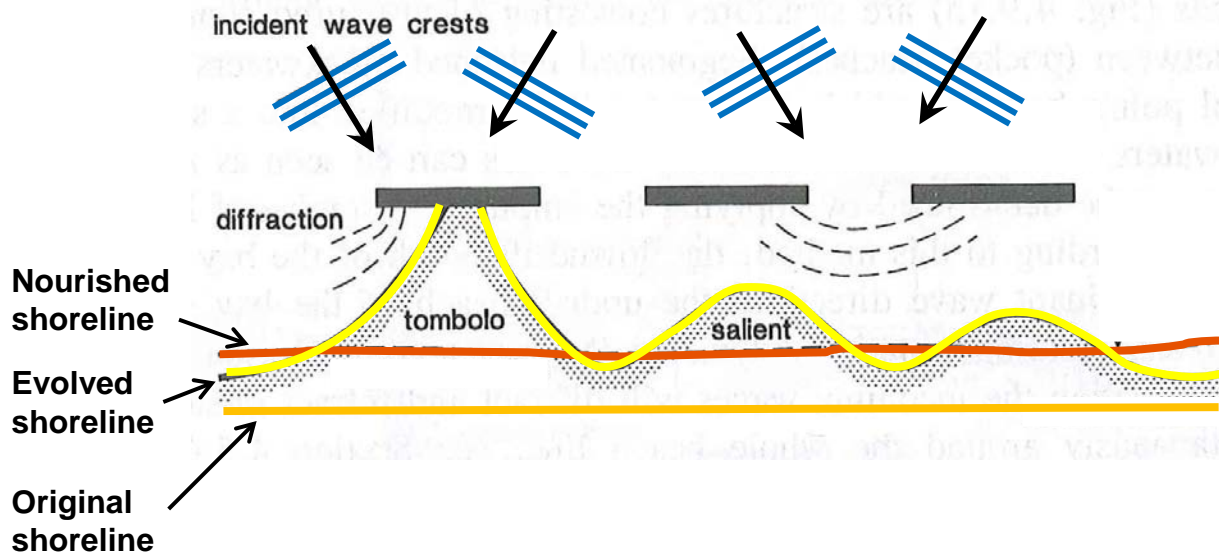
Opportunities

- Create new habitat
- Enhance surf opportunities
- Increase sediment retention

Constraints

- High energy coastline
- Not been done in CA on scale necessary for SF Lit Cell CRSMP

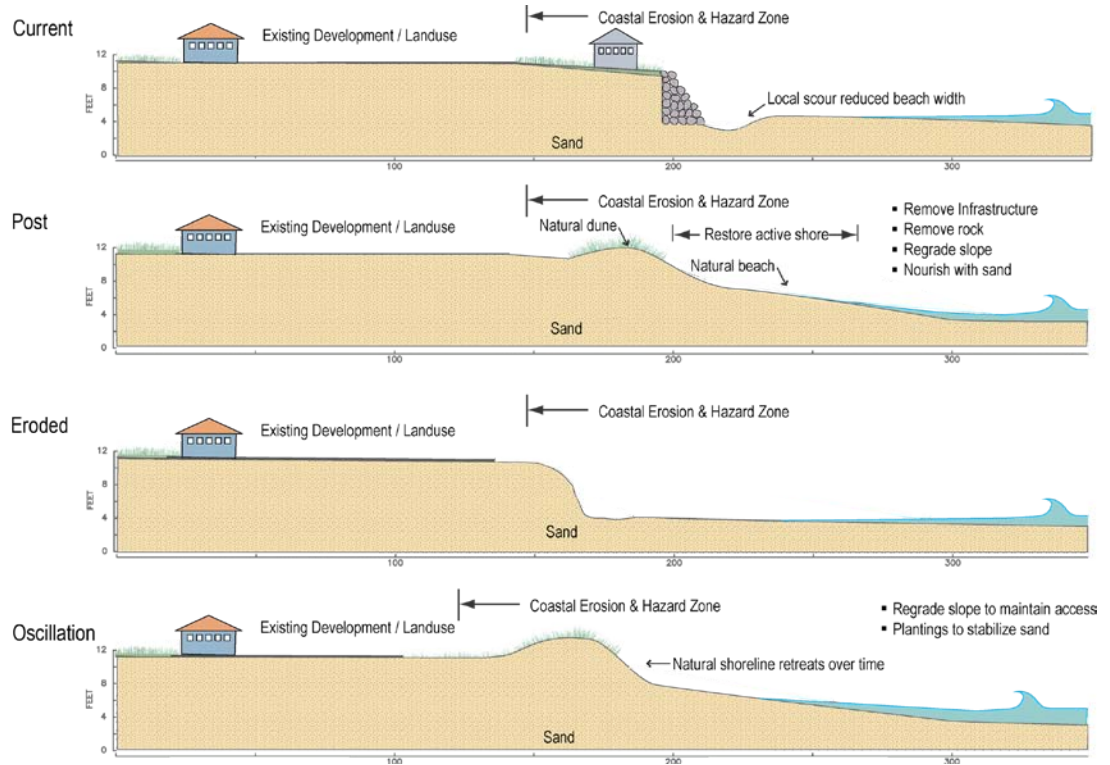
Nourishment + Reefs



Opportunities	Constraints
<p>Increase longevity of sand placement</p> <p>(plus previously identified opportunities for each)</p>	<p>Multiple alterations to local environment</p> <p>(plus previously identified constraints for each)</p>

Managed Retreat

Pacifica State Beach Managed Retreat and Estuary Restoration



Opportunities

Restoration of natural shoreline cycles and habitats

Utilize geology (go-n-slow)

Removal/reduction of development in risk zones

Prior investments in armoring

Constraints

Expense

Political will

Property rights

Existing armoring

Pacifica Reaches Implementation Options (as of June 6, 2012)

Manor District, Beach Blvd:

Opt 1 – 2.2 million yd³ Beach Nourishment

Opt 2 – Beach Nourishment + Reefs

Opt 3 – Managed Retreat

Sharp Park:

Opt 1 – Allowed Erosion of Levee

Opt 2 – 0.6 million yd³ Beach Nourishment

Opt 3 – Multi-purpose Reef

Opt 4 – Hybrid of all options

Hidden Cove: No Action

Rockaway Cove:

Opt 1 – 0.25 million yd³ Beach Nourishment

Opt 2 – Managed Retreat

Linda Mar:

Opt 1 – 0.7 million yd³ Beach Nourishment

Opt 2 – Managed Retreat

Opt 3 – Managed Retreat + cobble on beach

Shelter Cove: No Action



Feedback from SAG

- Deadline of **July 4** for feedback
 - Email
 - Call
 - Meeting at ESA PWA or your office
- Contact information for Project Manager
 - Email dgeorge@esassoc.com
 - Call 415-262-2325
 - Snail mail or in person meeting at ESA PWA
 - 550 Kearny St, Suite 900, San Francisco



Thanks!