

How can we adapt Bay shorelines to accommodate rising sea levels?

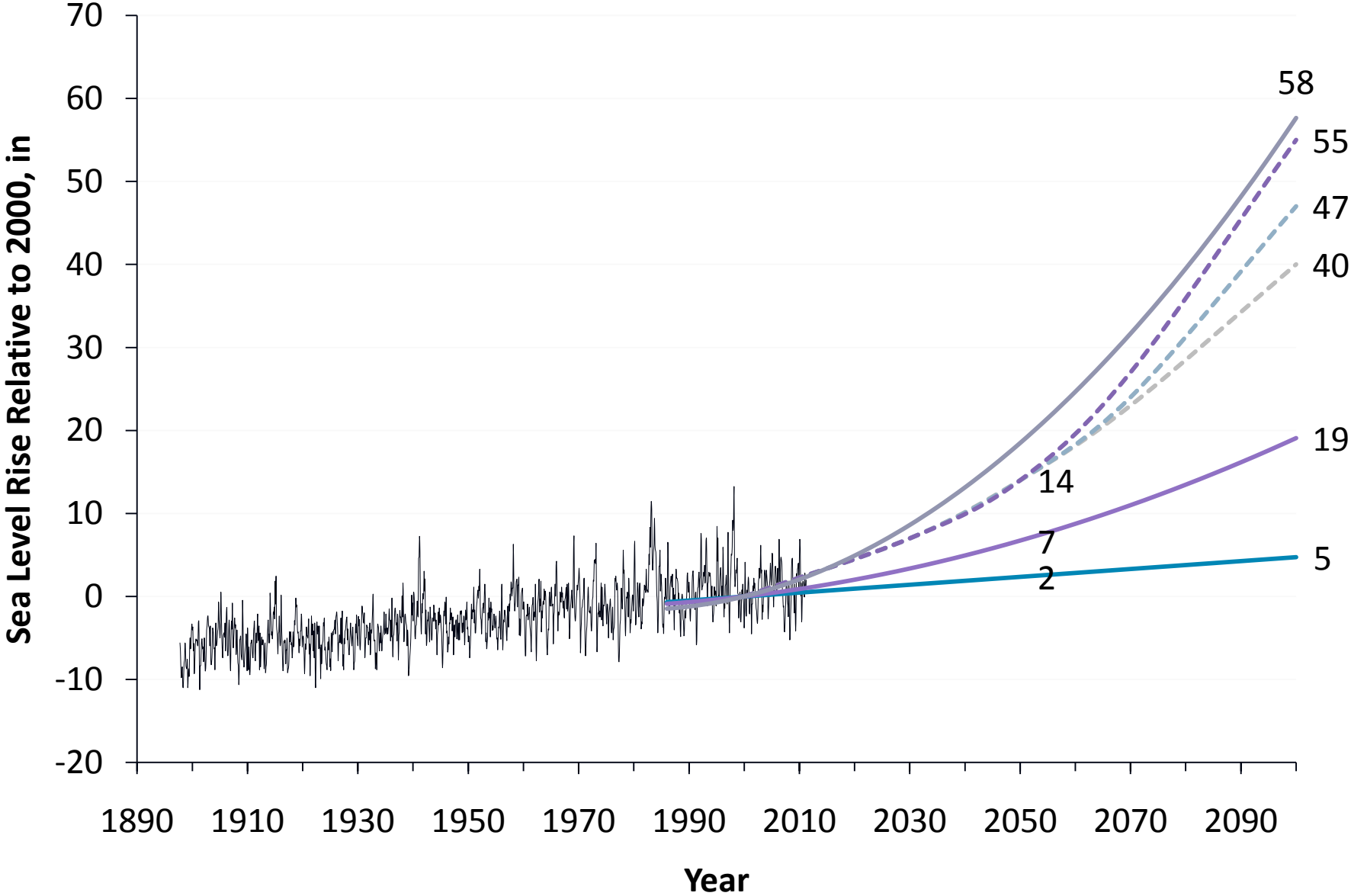
NBWA Conference

Climate Change: How Can We Be Ready?

Petaluma, April 13, 2012

Jeremy Lowe, ESA PWA

San Francisco Bay Sea Level Rise 1900 -2100





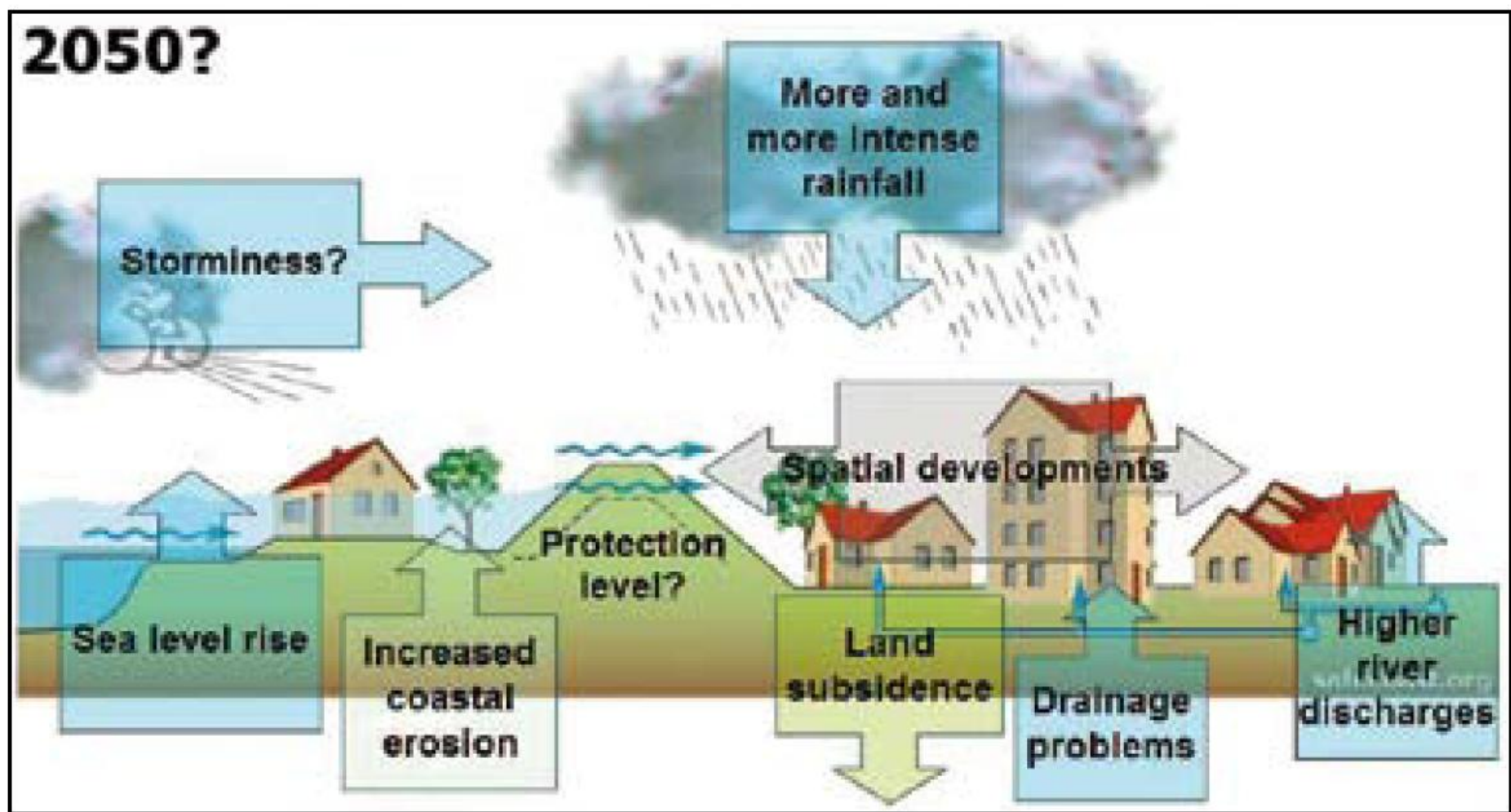
6.5ft NAVD - King Tide, January 2011

5.9ft NAVD – MHHW

0.6ft increase ~ 2010 - 2030

Photo: Yanna B, 01/30/10

Drivers for future flood risks



Inundation



Frank's Dump West - New Year's Eve 2005
8.9 ft tides; 40mph westerly winds

Photo: Mark Taylor

Storm drainage



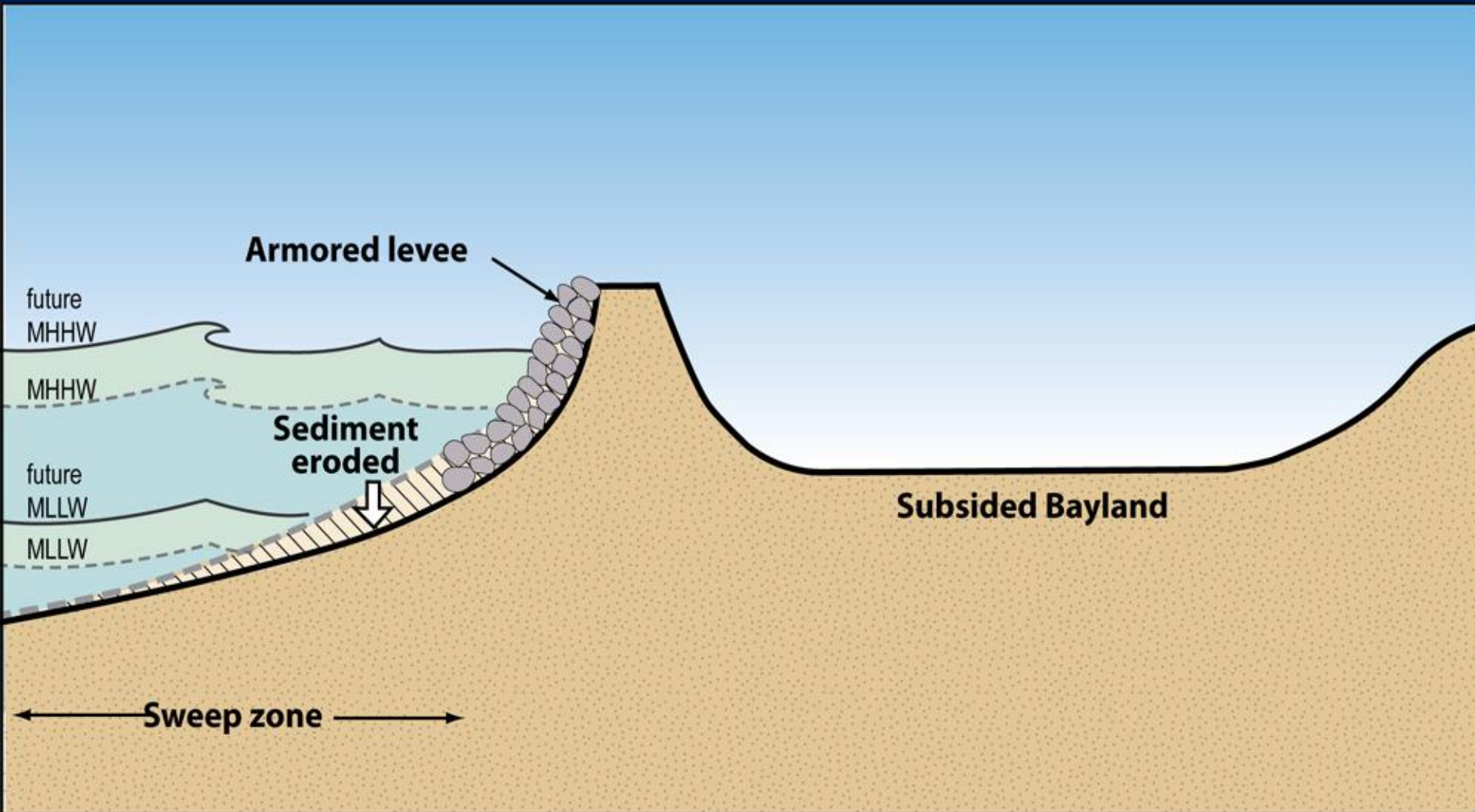
Erosion



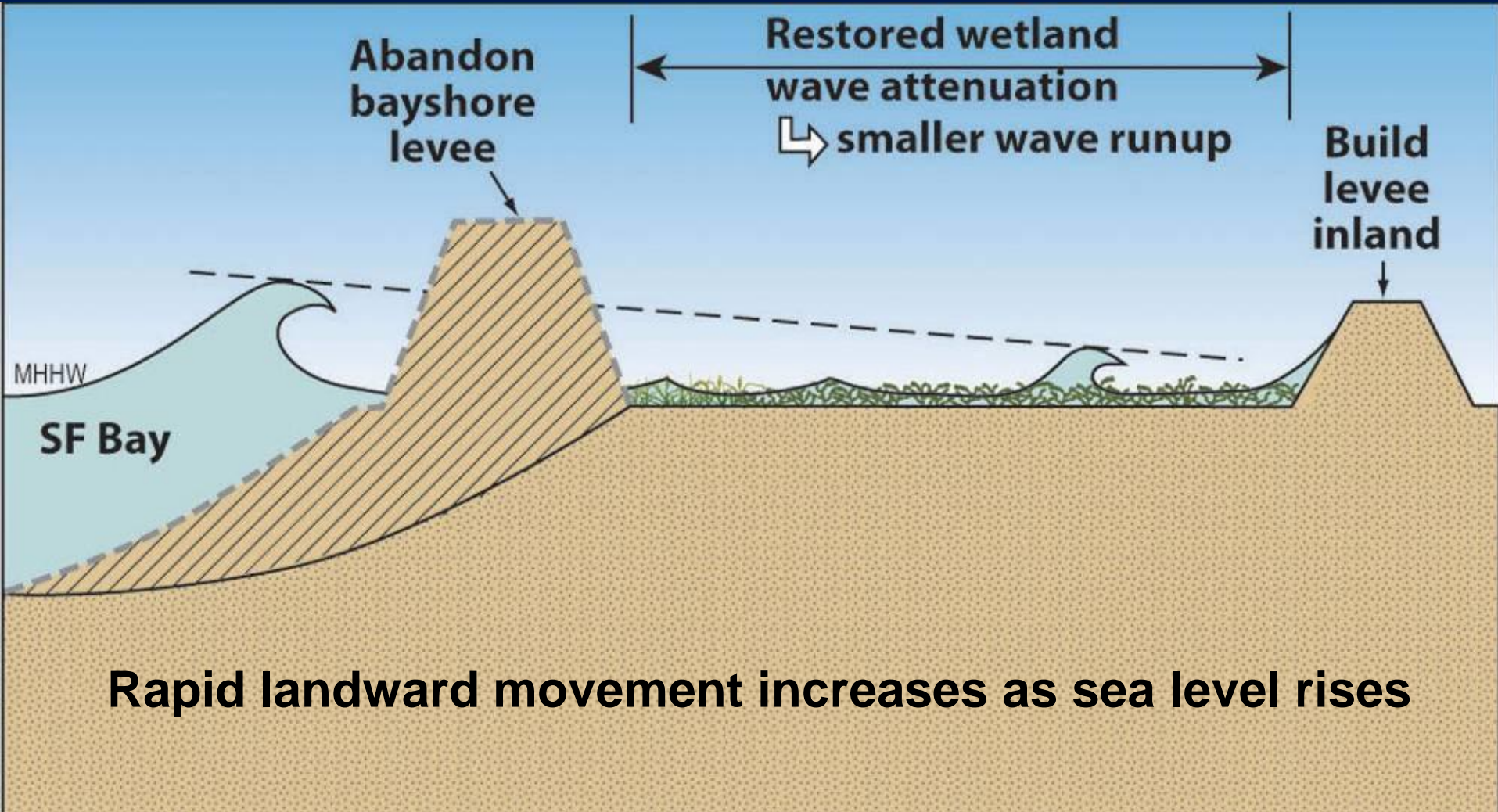
Hayward Marsh - New Year's Eve 2005
8.9 ft tides; 40mph westerly winds

Photo: Mark Taylor

Hold the Line



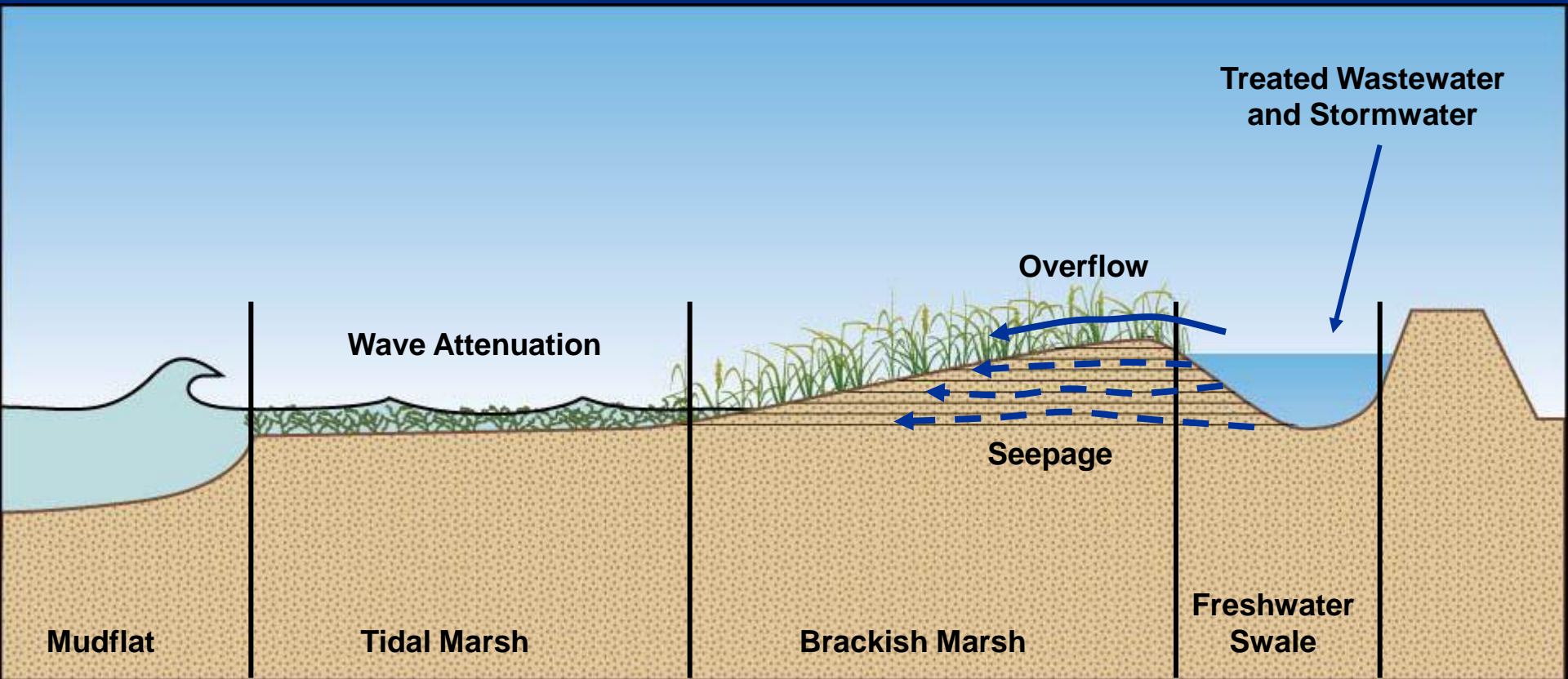
Realign



Opportunities



Upland/Transitional Ecotone



A Future Shoreline?



SAN JOSE/
SANTA CLARA
WATER POLLUTION
CONTROL PLANT



2012



**San Jose/Santa Clara
WPCP**

Alviso

2057



Main breaches

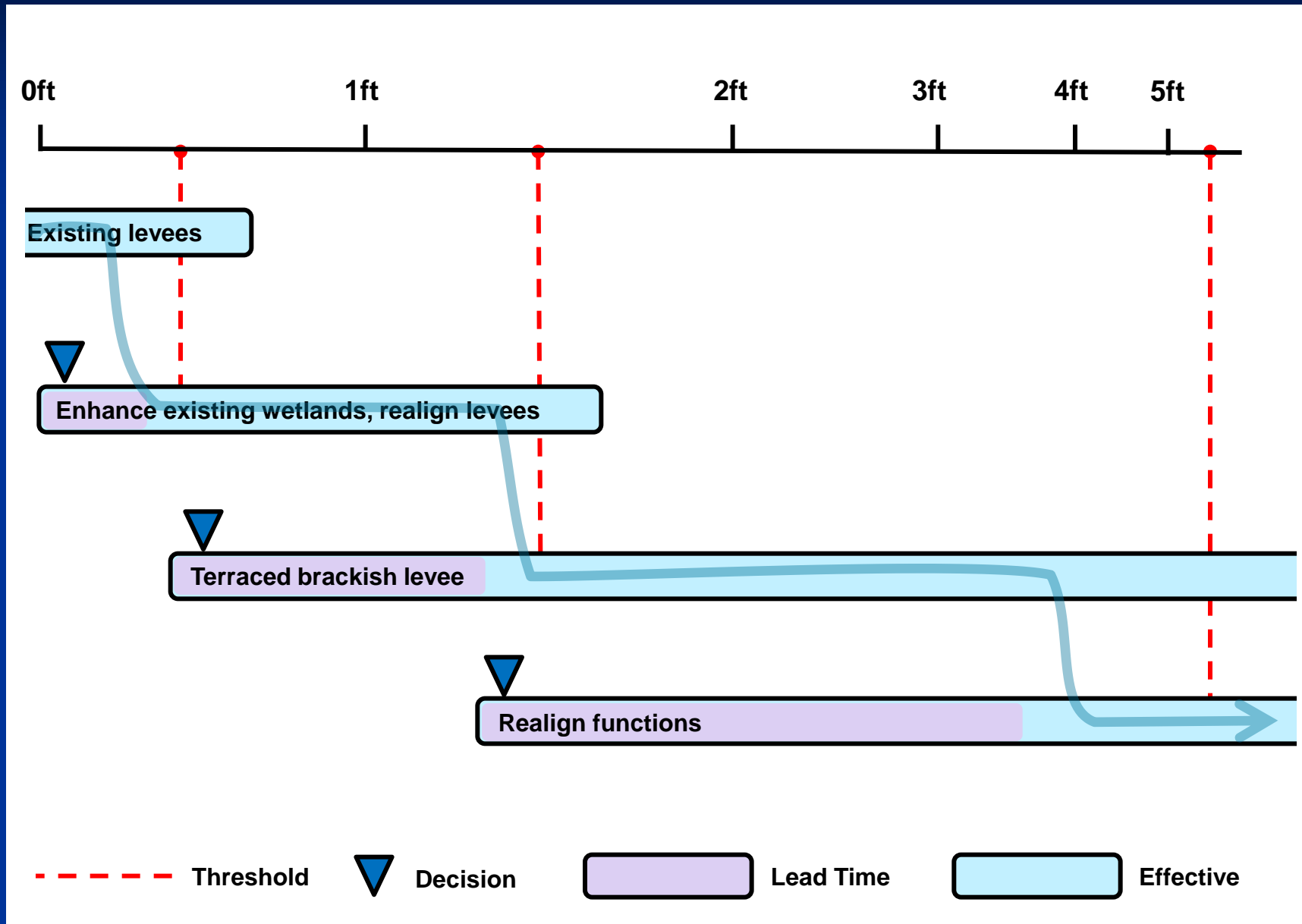


Upland/transitional ecotone



Lower outboard levee

An Adaptation Strategy?



A Demonstration Project?

