Marin’s Response to the Vulnerability of Natural Resources
Marin County’s Vulnerability Assessment Along the Bay Shoreline

Bothin Marsh: Identifying Problems and Looking for Solutions

Prototyping Pilot Projects Along Marin’s Shoreline

Deer Island Basin: Sediment Re-Use

McInnis Marsh Restoration Project
FLOOD RISK AND PUBLIC LANDS IN MARIN COUNTY

10 inches of sea level rise plus the King Tide
Bothin Marsh, Southern Marin

- Mill Valley Sausalito Multiuse Path
- Most Heavily Used Park Facility
- Former Railroad Right of Way that Bisects Marsh
BOTHIN MARSH HABITAT

- Wetlands on the Fringe of Richardson Bay
- Endangered Species Habitat, Ridgway’s Rail and Saltmarsh Harvest Mouse
**Bothin Marsh Flooding**

- Regularly Floods during King Tides and storm conditions
- Multiuse Path Floods
PILOT PROJECTS IN MARIN COUNTY

- Projects on public lands benefit habitat restoration, flood, sea level rise
- Marin County can be used as a living lab to understand what works and where
- Develop designs and monitor them for effectiveness
NOVATO CREEK TIDAL RESTORATION, DEER ISLAND BASIN

- Beneficial sediment reuse for SLR without mitigation
- Sediment placed on future levee alignment
NOVATO CREEK TIDAL RESTORATION, DEER ISLAND BASIN
NOVATO CREEK TIDAL RESTORATION, DEER ISLAND BASIN
PILOT BEACH PROJECTS FOR SHORELINE EROSION
PILOT BEACH PROJECTS FOR SHORELINE EROSION
PILOT PROJECT BEACH SITES

• Demonstrate engineered beaches as a viable approach to shoreline erosion
SEA LEVEL RISE

• Projected to be 4.7 to 24 inches by 2050
• Levee Overtopping at Current Sea Levels
• Levees are about 100 years old and were not engineered
POTENTIAL SEA LEVEL RISE IMPACTS

- Damage to Golf Course
- Flooding of Water Treatment Plant
- Loss of Levee Top Trails
- Destruction of Endangered Species Habitat
PROJECT GOALS

• Address issues related to sea level rise
• Protect and improve habitat for special-status species
• Provide area to accommodate the movement of marsh habitat as sea level rises
• Protect existing park and water treatment facilities
• Maintain and improve public access along the Bay Trail Alignment
PREFERRED ALTERNATIVE

- Remove all Levees
- Breach into Gallinas and Miller Creeks
- Construct a Horizontal Levee at Golf Course
- Re-Use of Gallinas Creek Dredge Material
Thank You

Please visit MarinSLR.org and MarinWatersheds.org

**LIZ LEWIS**, Planning Manager
Department of Public Works
LizLewis@marincounty.org

**CHRIS CHOO**, Principal Watershed Planner
Department of Public Works
CChoo@marincounty.org

**JAMES RAIVES**, Senior Open Space Planner
Marin County Parks
JRaives@marincounty.org