

Marin County Sea Level Rise Adaptation Planning

Marin BayWAVE update to the Marin Climate & Energy Partnership

August 4, 2016

Scope of work

- Task 1: Model and scenario selection
- Task 2: Collaborative with local SLR efforts
- Task 3: Vulnerability Assessment
- Task 4: Public and agency involvement
- Task 5: Early action items

BayWAVE Scenarios

CO2F Model	Sea level rise	100 year return
Near term	35 cm (14 in)	48 in (12 ft)
Mid term	50 cm (20 in)	60 in (15 ft)
Long term	100 cm (39 in)	80 in (20 ft)



Early Actions

Adaptation Toolkit

Develop the plan for the adaptation measures and implement them along with other measures.

Asset Inventory



Risk Matrix



Local Hazard Mitigation Plan

Coordinate with other local governments to develop a hazard mitigation plan.

Collaboration and public involvement

Collaboration

Work with local SLR efforts and other agencies to coordinate and share information.



Public and Agency Involvement

Engage the public and agencies in the planning process to ensure that their needs and concerns are addressed.



Vulnerability Assessment

- Identified the areas impacted by the SLR scenarios along the bay shoreline.
- Identified all the assets, structures and property owners within the inundation area.
- Vulnerability report to show the impacts by city, town, and assets.



Assets

Facilities and buildings, historic and archeological resources, infrastructure, environmental resources, agriculture, parks and recreation, historic and cultural resources, and other assets.

Alex Westhoff, planner
Chris Choo, principal planner
www.MarinSLR.org

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BayWAVE Scenarios

CO2F Model	Sea level rise	100 year return
Near term	35 cm (14 in)	48 in (12 ft)
Mid term	50 cm (20 in)	60 in (15 ft)
Long term	65 cm (26 in)	75 in (19 ft)



Early Actions

Adaptation Toolkit

Develop the plan on the adaptation measures and guidelines on implementation along with the plan.

Asset Inventory



Risk Matrix



Local Hazard Mitigation Plan

Coordinate with existing local hazard mitigation plan.

Collaboration and public involvement

Collaboration

Work closely with local SLR efforts and agencies.



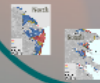
Public and Agency Involvement

Engage the public and agencies in the planning process.



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Scope of work

Task 1: Model and scenario selection

Task 2: Collaboration with local SLR efforts

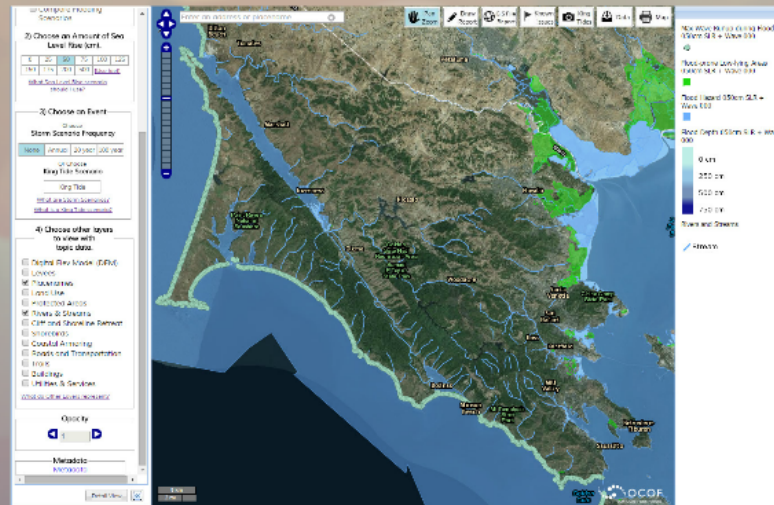
Task 3: Vulnerability Assessment

Task 4: Public and agency involvement

Task 5: Early Action items

BayWAVE Scenarios

OCOF Model	Sea level rise	100 year storm
Near term	25 cm (10 in)	46 in (3.8 ft)
Mid term	50 cm (20 in)	56 in (4.7 ft)
Long term	150 cm (60 in)	96 in (8 ft)



<http://data.prbo.org/apps/ocof/>

Collaboration and public involvement

Collaboration

Staff: local and regional efforts, across departments and agencies

Regional: Coordination with San Mateo, Crissy Field, and City of Benicia Vulnerability Assessment efforts, larger Bay Area sea level rise efforts

Funding: Discussing opportunities for grants and collaboration



Public and Agency Involvement

- Policy, Technical, and Executive Committees to guide the program and provide input
- Targeted outreach to youth and impacted communities
- Respond to public requests for presentations

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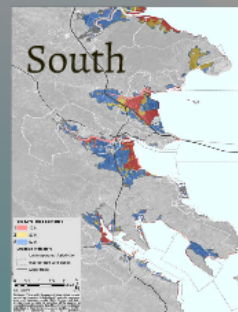
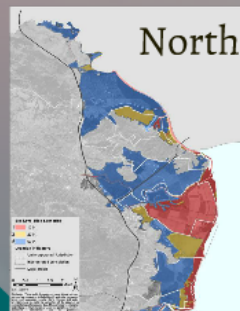






Vulnerability Assessment

- Identified the areas impacted by the SLR scenarios along the bay shoreline
- Identified all the asset managers and property owners within the inundation area
- Vulnerability report to show the impacts by city, town, and asset



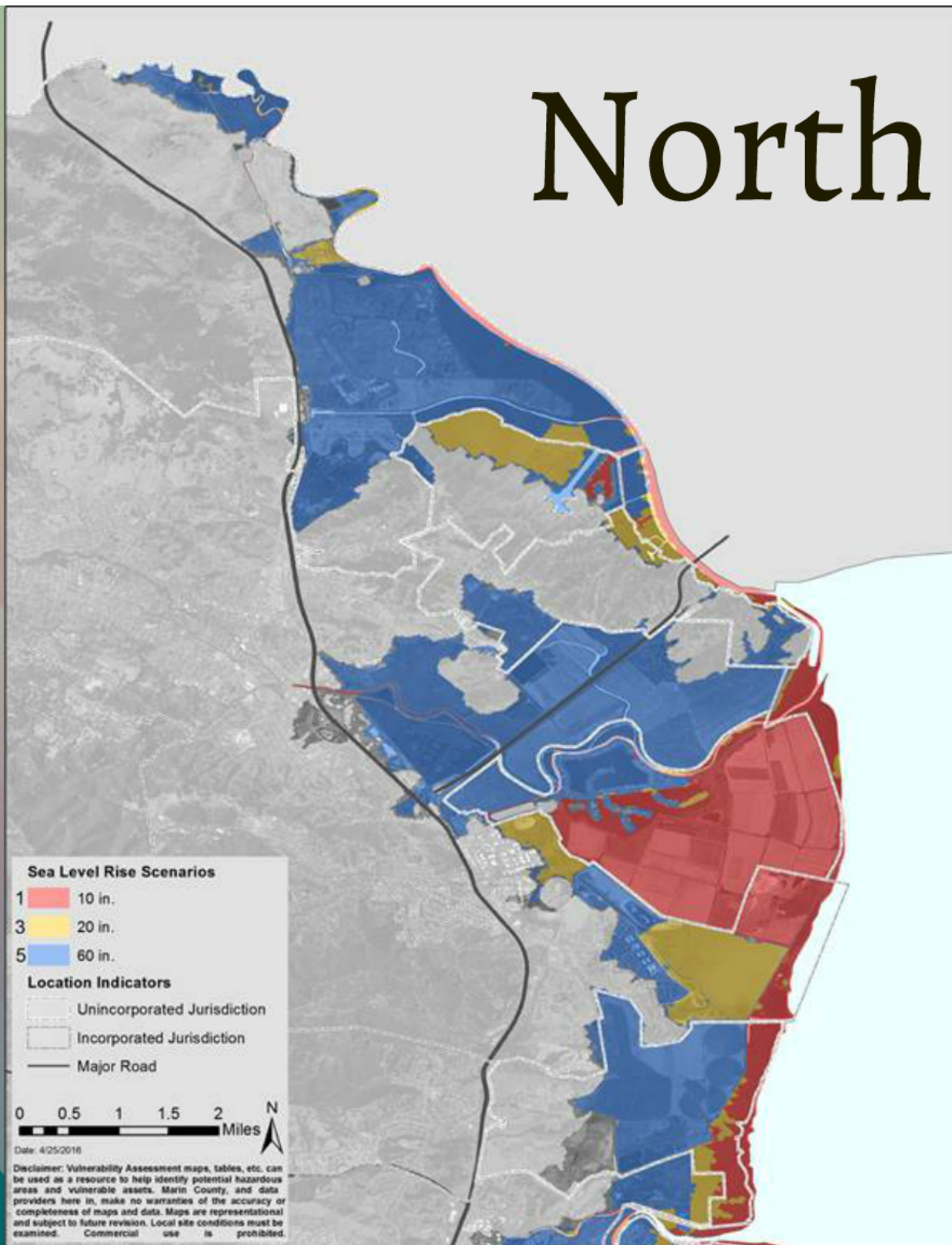
8,360
parcels
exposed

105
asset
managers

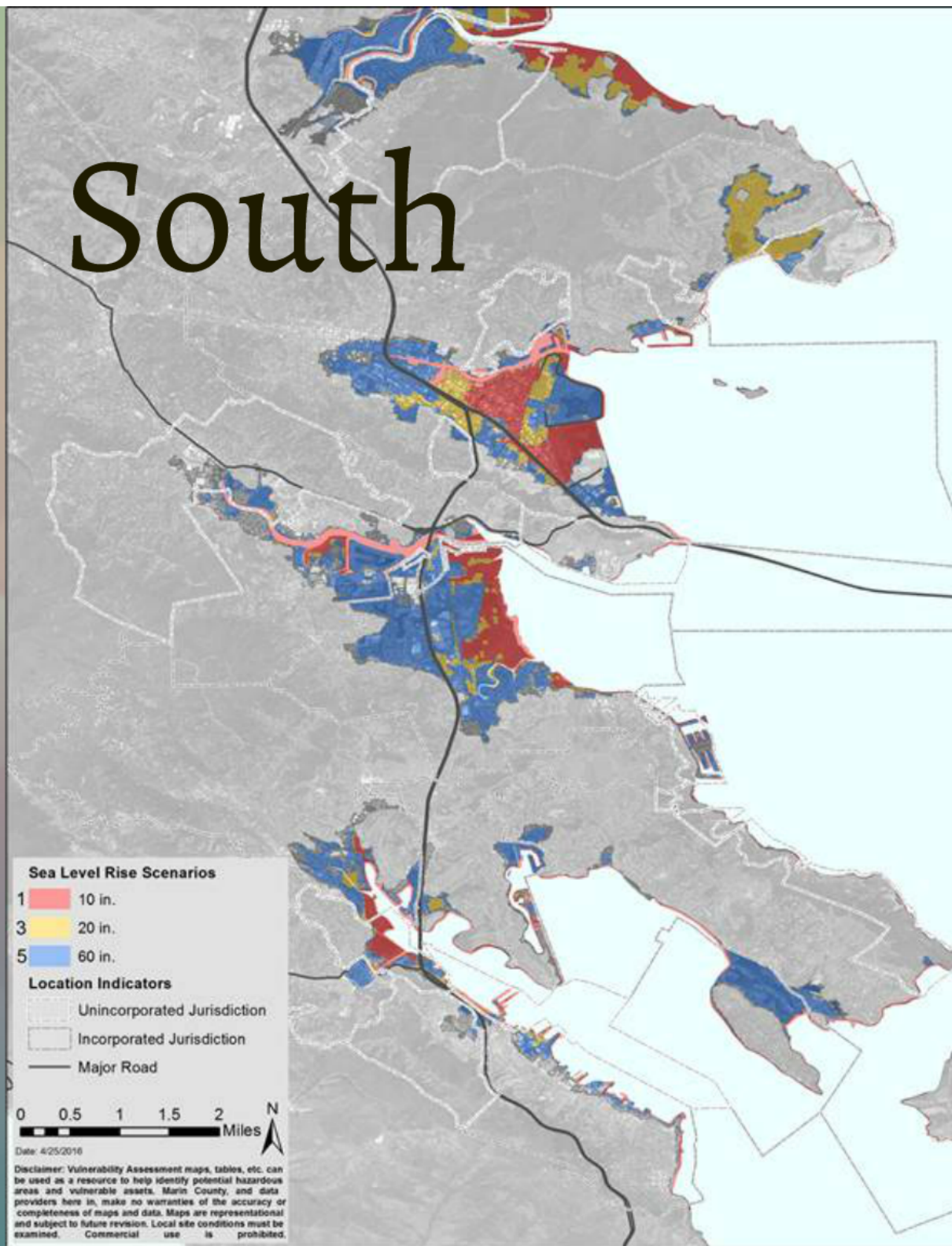
Ass

Parcels and
Roads and
Water, wastewater, storm
telecomm
Agric
Habitats a
Recreation an
Emergen
Cultural

North



South



Sea Level Rise Scenarios

- 1 10 in.
- 3 20 in.
- 5 60 in.

Location Indicators

- Unincorporated Jurisdiction
- Incorporated Jurisdiction
- Major Road

0 0.5 1 1.5 2 Miles

Date: 4/25/2016

Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



**8,360
parcels
exposed**

**105
asset
managers**

property

cts by city,

Assets

Parcels and buildings

Roads and waterways

Water, wastewater, stormwater, gas, electricity, and
telecommunications

Agriculture

Habitats and wildlife

Recreation and public access

Emergency services

Cultural resources

Early Actions

Adaptation Toolkit

Develop fact sheets on the adaptation measures and guidance on implementation along our shoreline

Local Hazard Mitigation Plan

Coordinate early warnings during flood events with our countywide hazard plan

Aramburu Beach

Addressing erosion from wind and waves by building beach using rock, trees, and sediment



Bothin Marsh

Build wetlands to increase flood protection, create habitat, and be resilient to sea level rise. Develop an approach with the regulatory agencies to reuse sediment to better prepare wetlands for rising tides



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Local Hazards

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