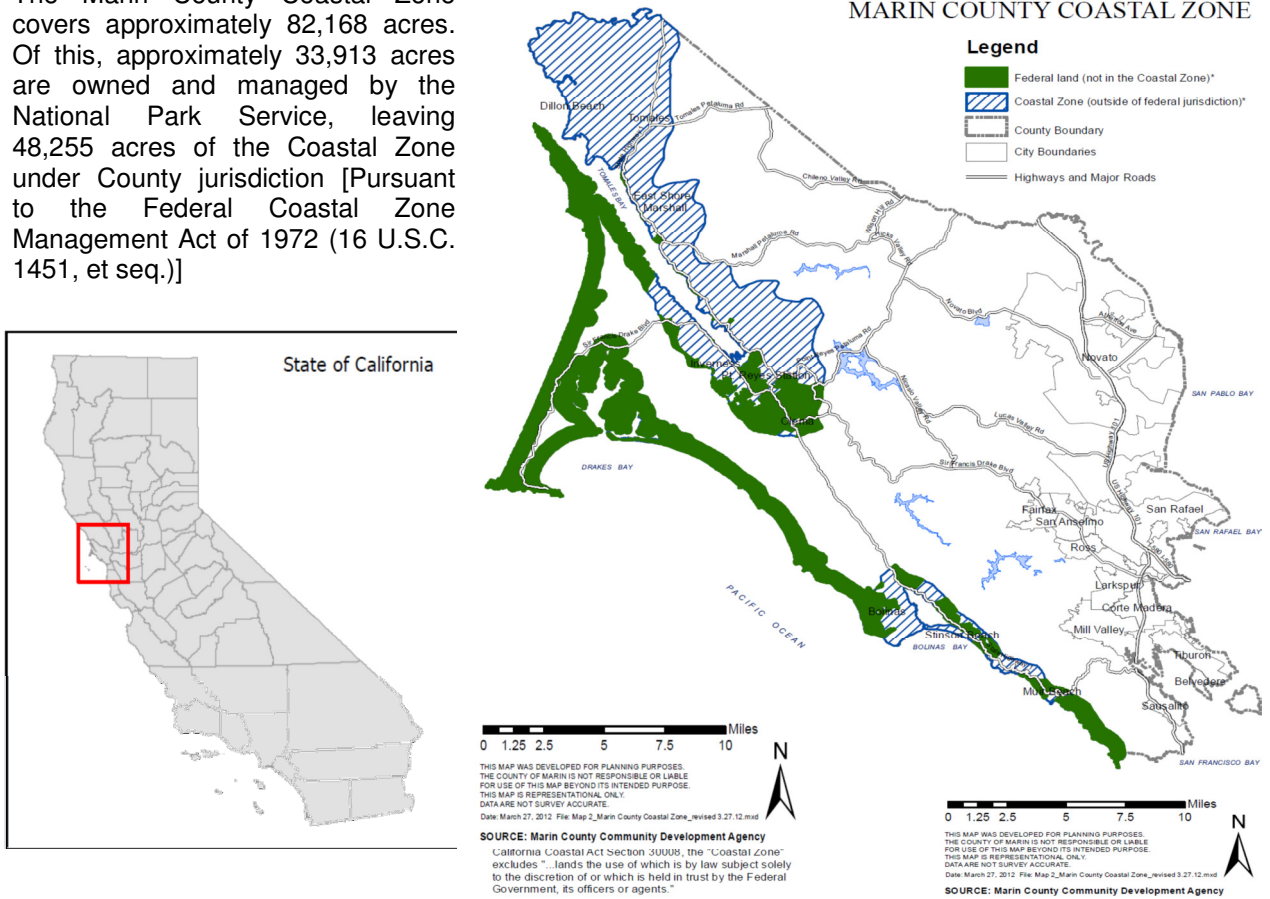


EXECUTIVE SUMMARY

Map 1 & 2. Study Area

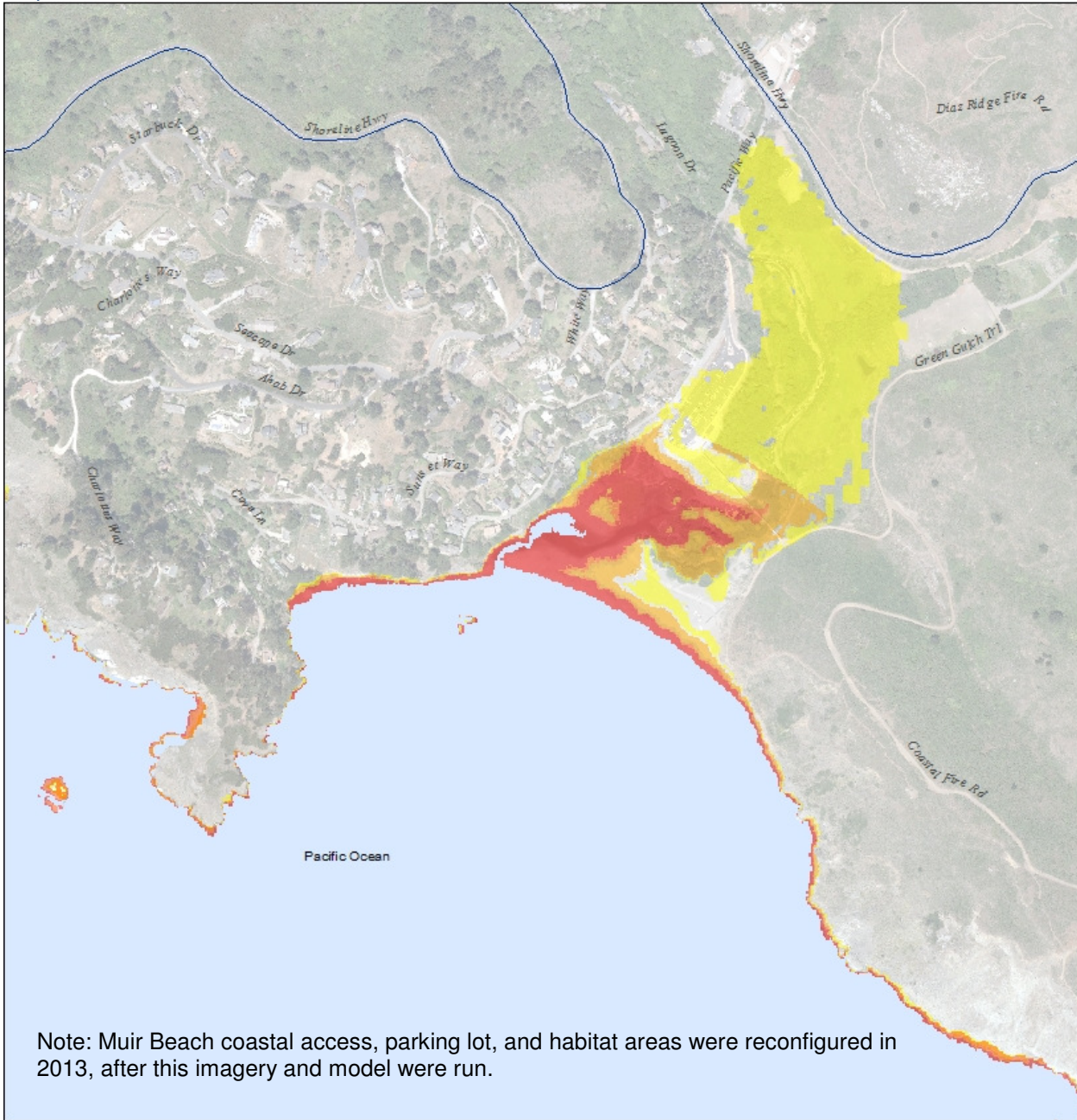
The Marin County Coastal Zone covers approximately 82,168 acres. Of this, approximately 33,913 acres are owned and managed by the National Park Service, leaving 48,255 acres of the Coastal Zone under County jurisdiction [Pursuant to the Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.)]

MAP 2 - Revised 3/27/12
MARIN COUNTY COASTAL ZONE



MAPS

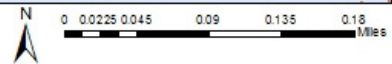
Map 2. Muir Beach Sea Level Rise Scenario



Note: Muir Beach coastal access, parking lot, and habitat areas were reconfigured in 2013, after this imagery and model were run.

Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm



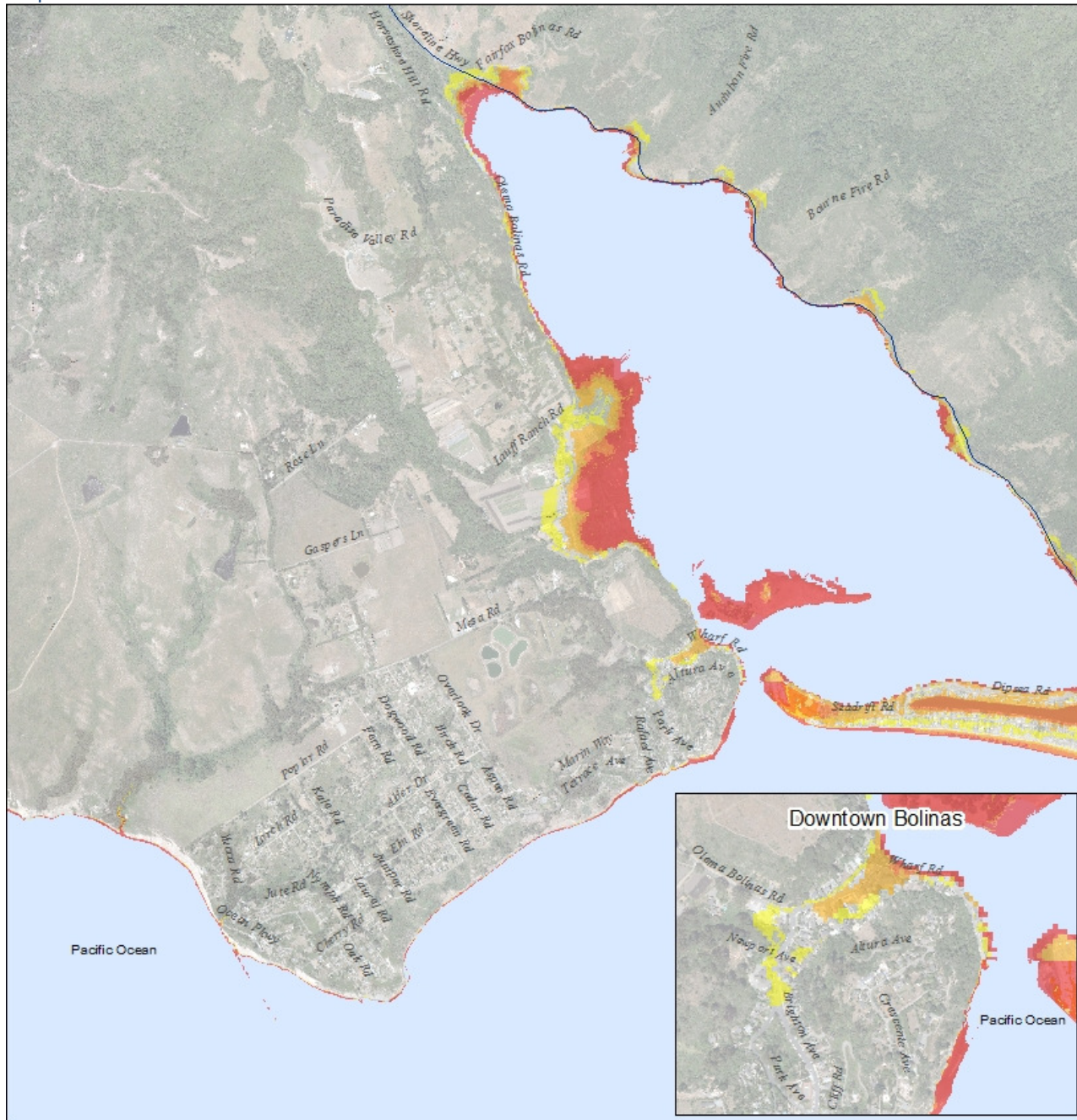
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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

Date: 9/24/2015



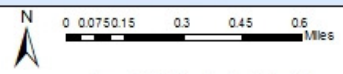
MAPS

Map 4. Bolinas Sea Level Rise Scenarios



Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm



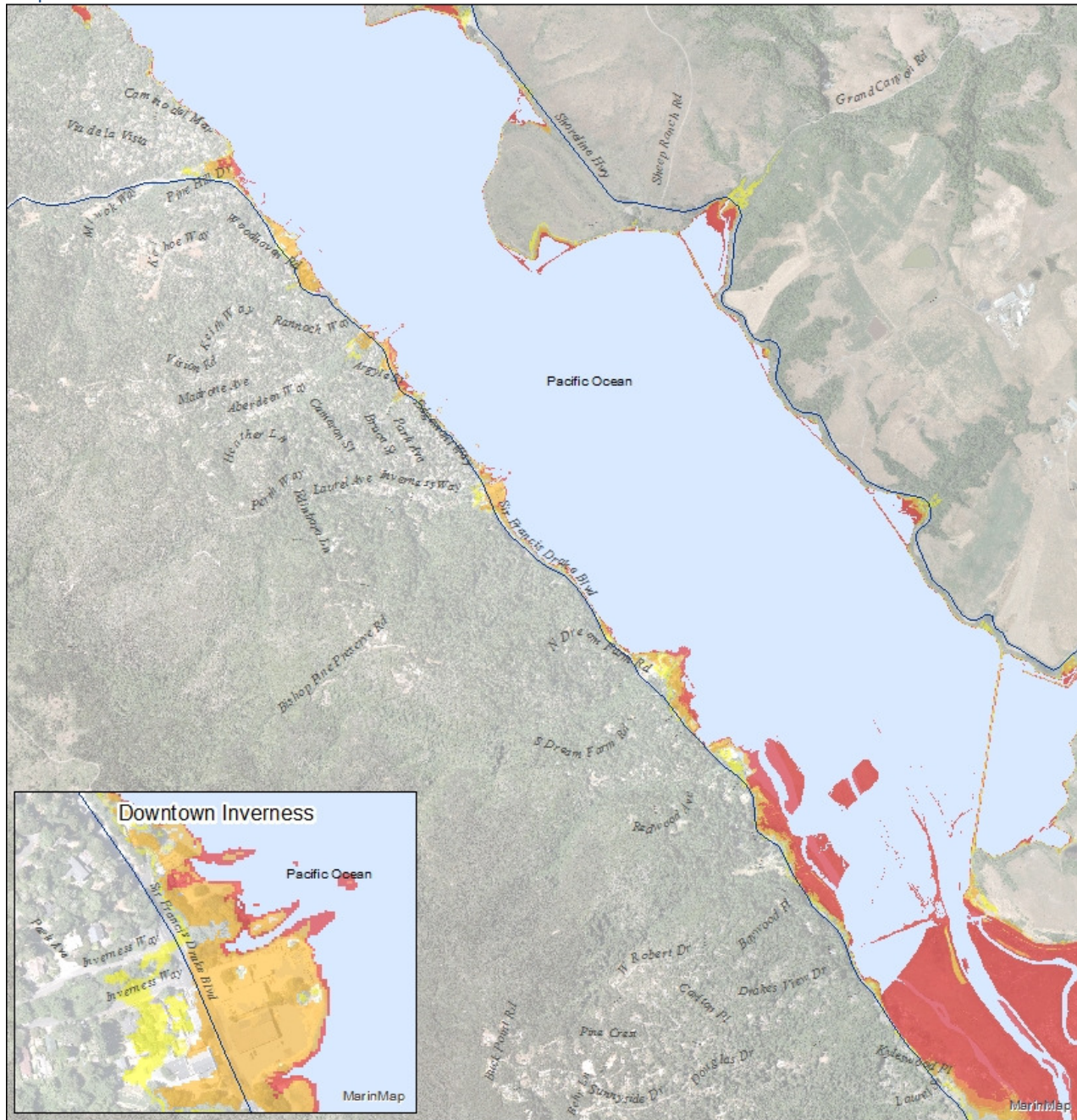
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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

Date: 9/24/2015



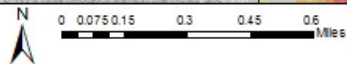
MAPS

Map 5. Inverness Sea Level Rise Scenarios



Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm



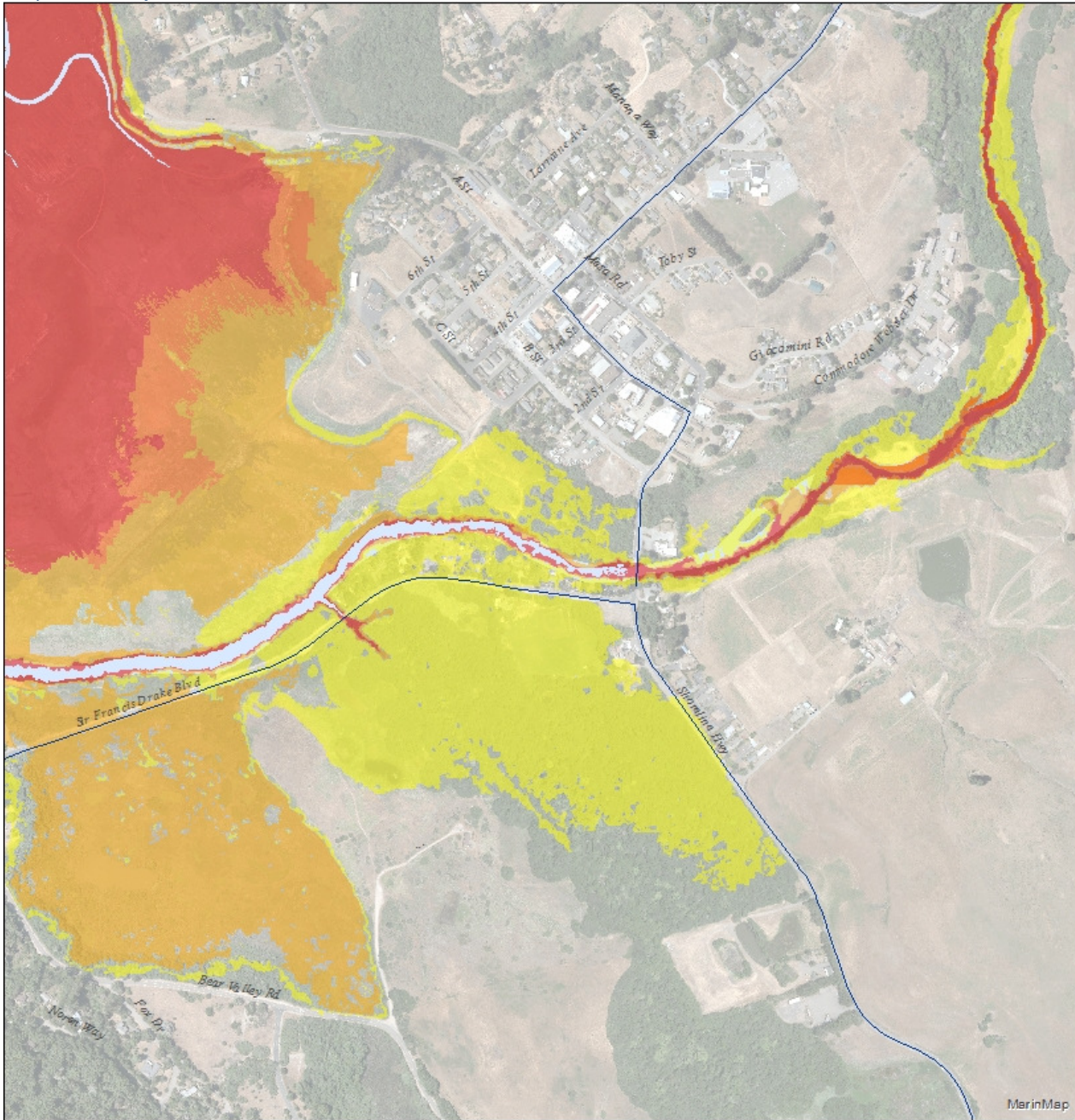
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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

Date: 11/2/2015



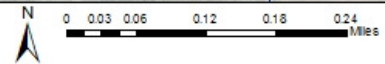
MAPS

Map 6. Pt. Reyes Station Sea Level Rise Scenarios



Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm



Source: Marin Map. Our Coast Our Future
 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.

Date: 9/24/2015



MAPS

Map 7. East Shore Sea Level Rise Scenarios



Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm



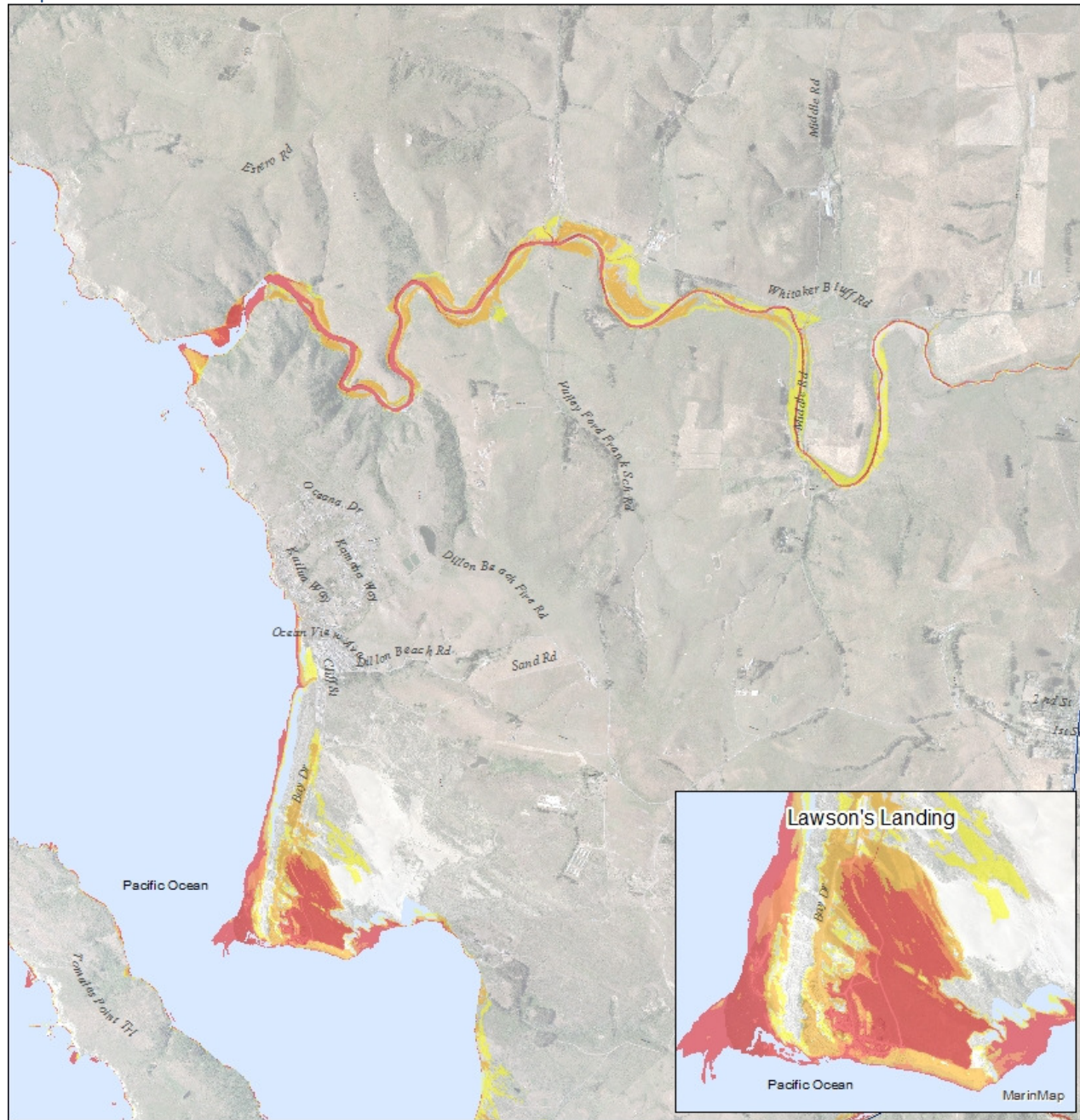
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers herein, make no warranties of the accuracy or completeness of maps and data. Maps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

Date: 9/24/2015



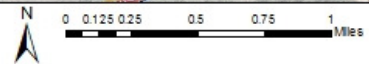
MAPS

Map 8. Dillon Beach Sea Level Rise Scenarios



Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm



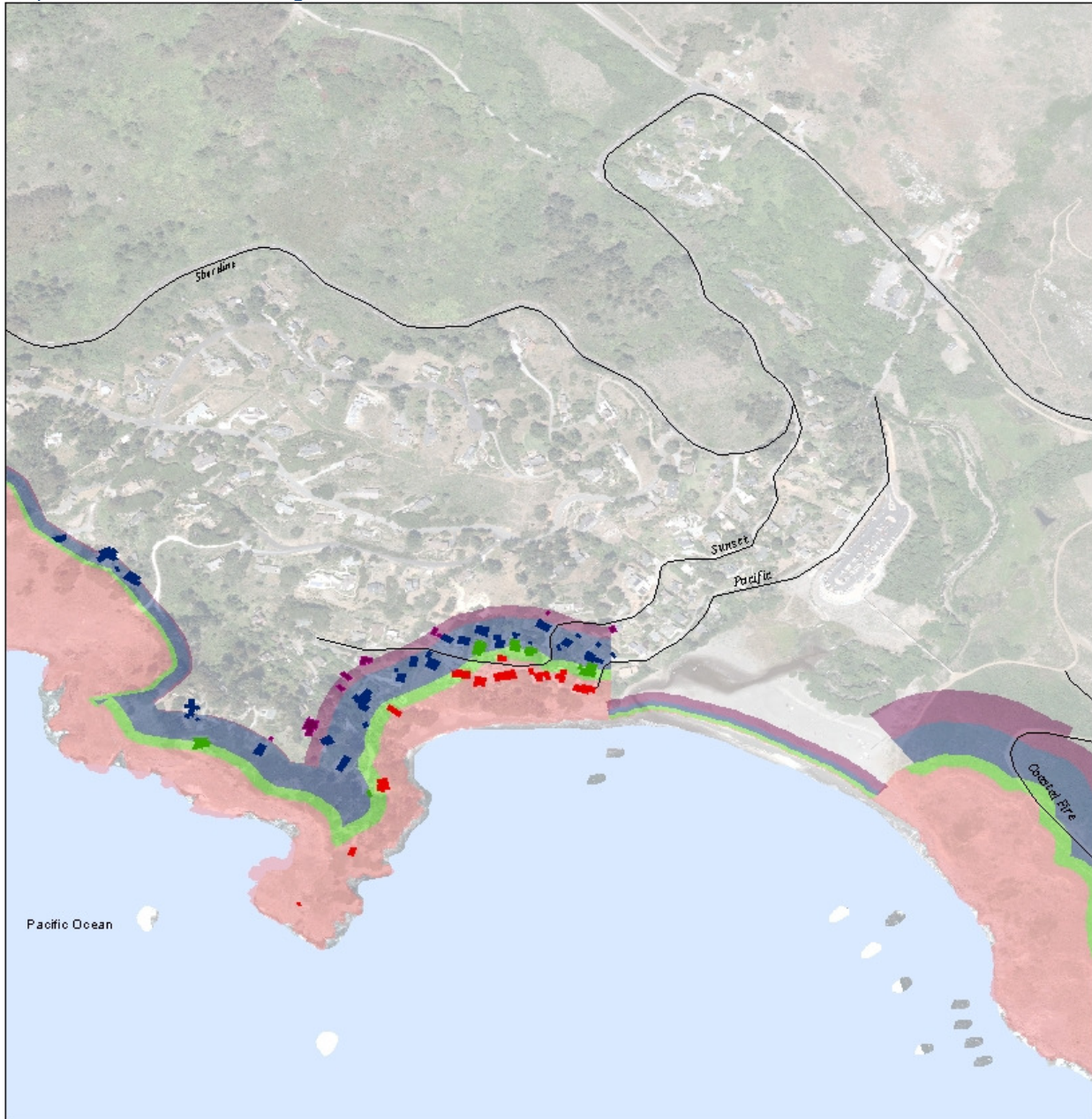
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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

Date: 9/24/2015

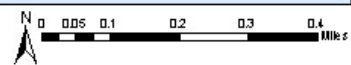


MAPS

Map 10. Muir Beach Buildings Vulnerable to Accelerated Erosion



Accelerated Erosion		Buildings Exposed		Exposed Roads
 Scenarios 1 & 2	 Scenarios 1 & 2			
 Scenario 3	 Scenario 3			
 Scenario 4	 Scenario 4			
 Scenario 5	 Scenario 5			

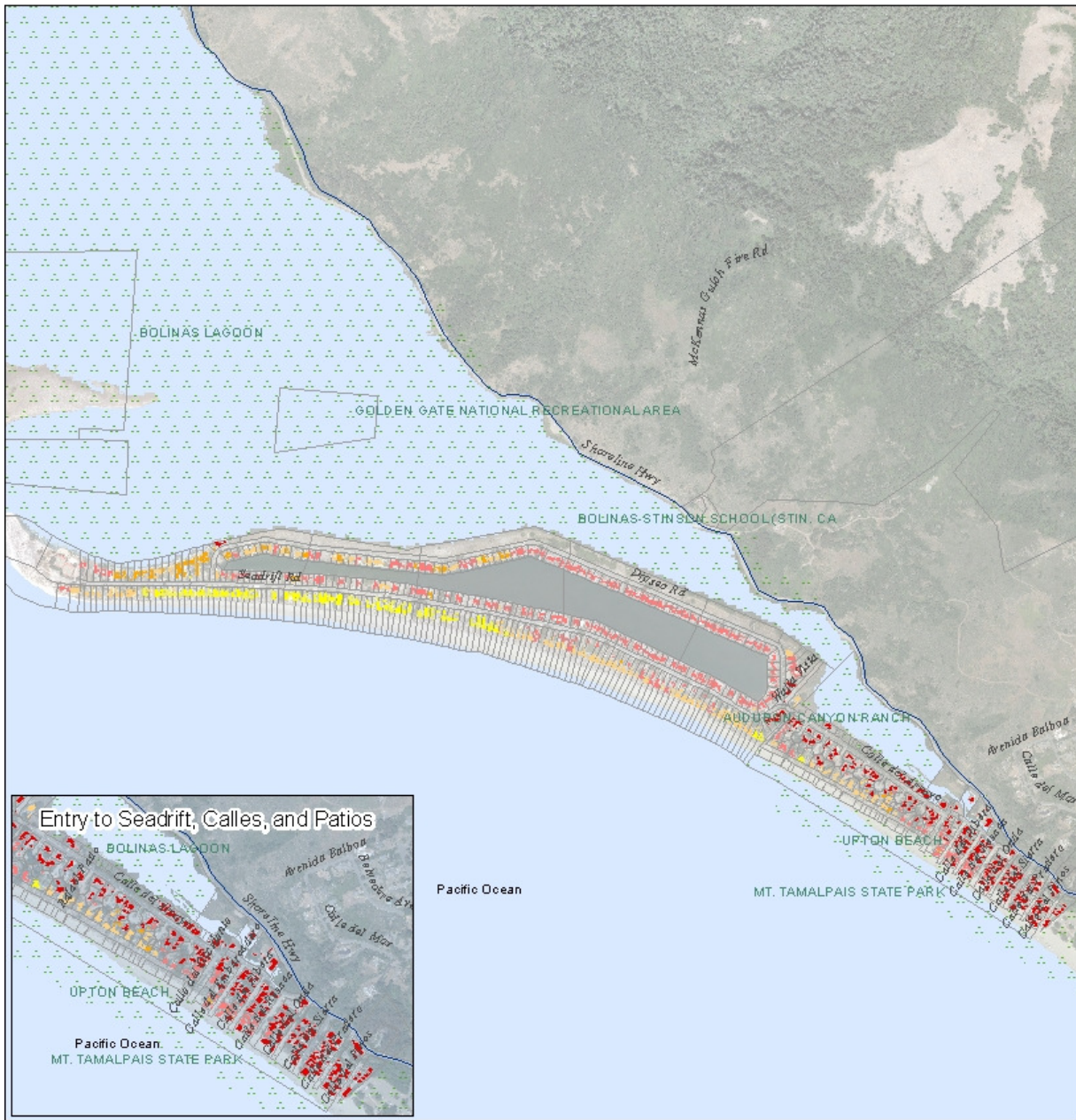


Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers herein, make no warranties of the accuracy or completeness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

Date: 10/2/2015
 COURTESY

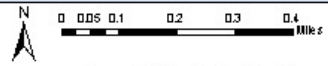
MAPS

Map 11. Stinson Beach Vulnerable Parcels & Buildings



Exposed Buildings

- Scenario 1
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5
- Parcels
- Park Parcels



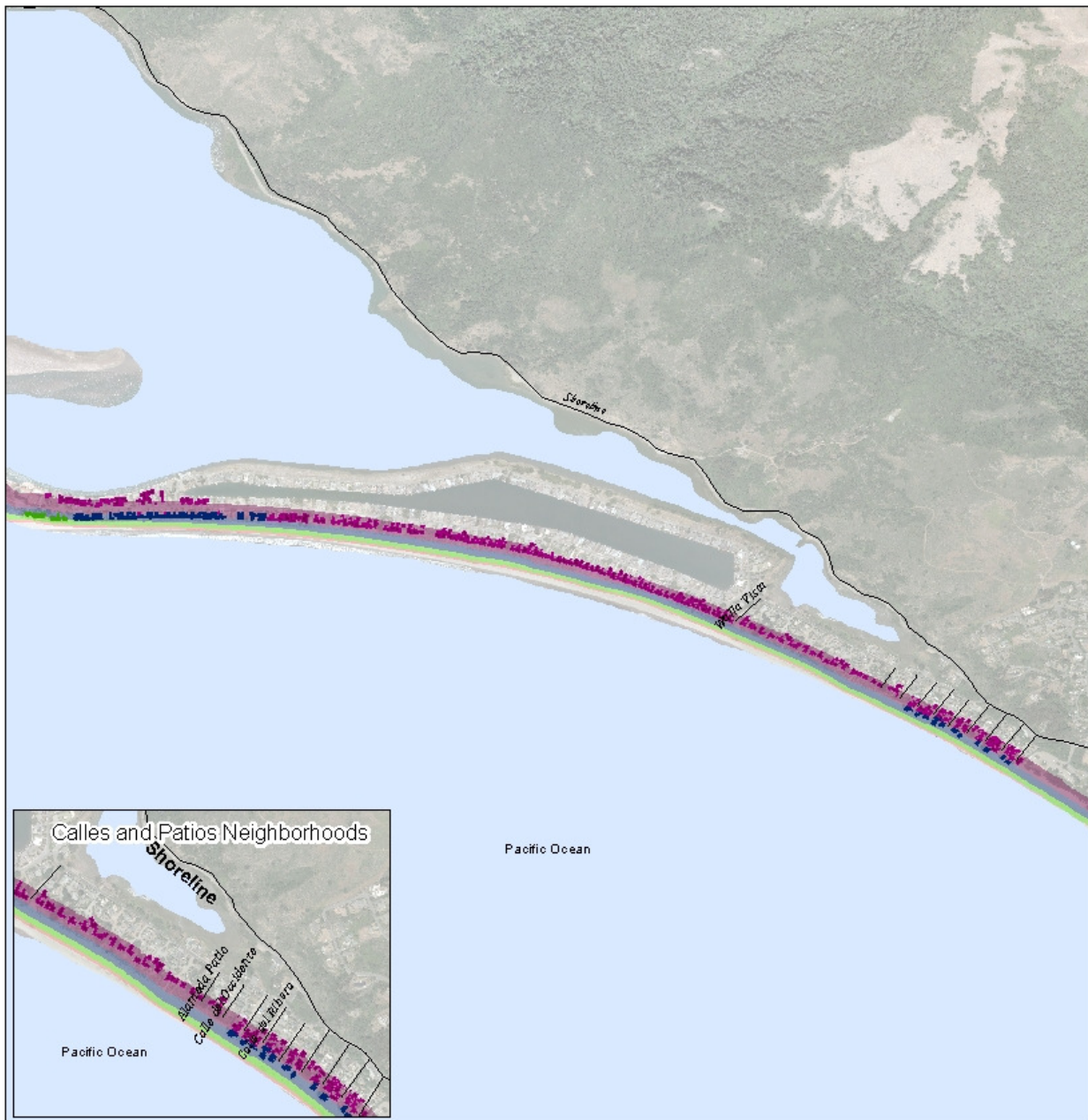
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are prepared for informational purposes only. Local site conditions must be examined. Commercial use is prohibited.

Date: 10/14/2015

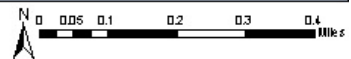


MAPS

Map 12. Stinson Beach Buildings Vulnerable to Accelerated Erosion

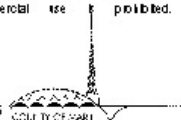


Accelerated Erosion	Buildings Exposed	
Scenarios 1 & 2	Scenarios 1 & 2	Exposed Roads
Scenario 3	Scenario 3	
Scenario 4	Scenario 4	
Scenario 5	Scenario 5	



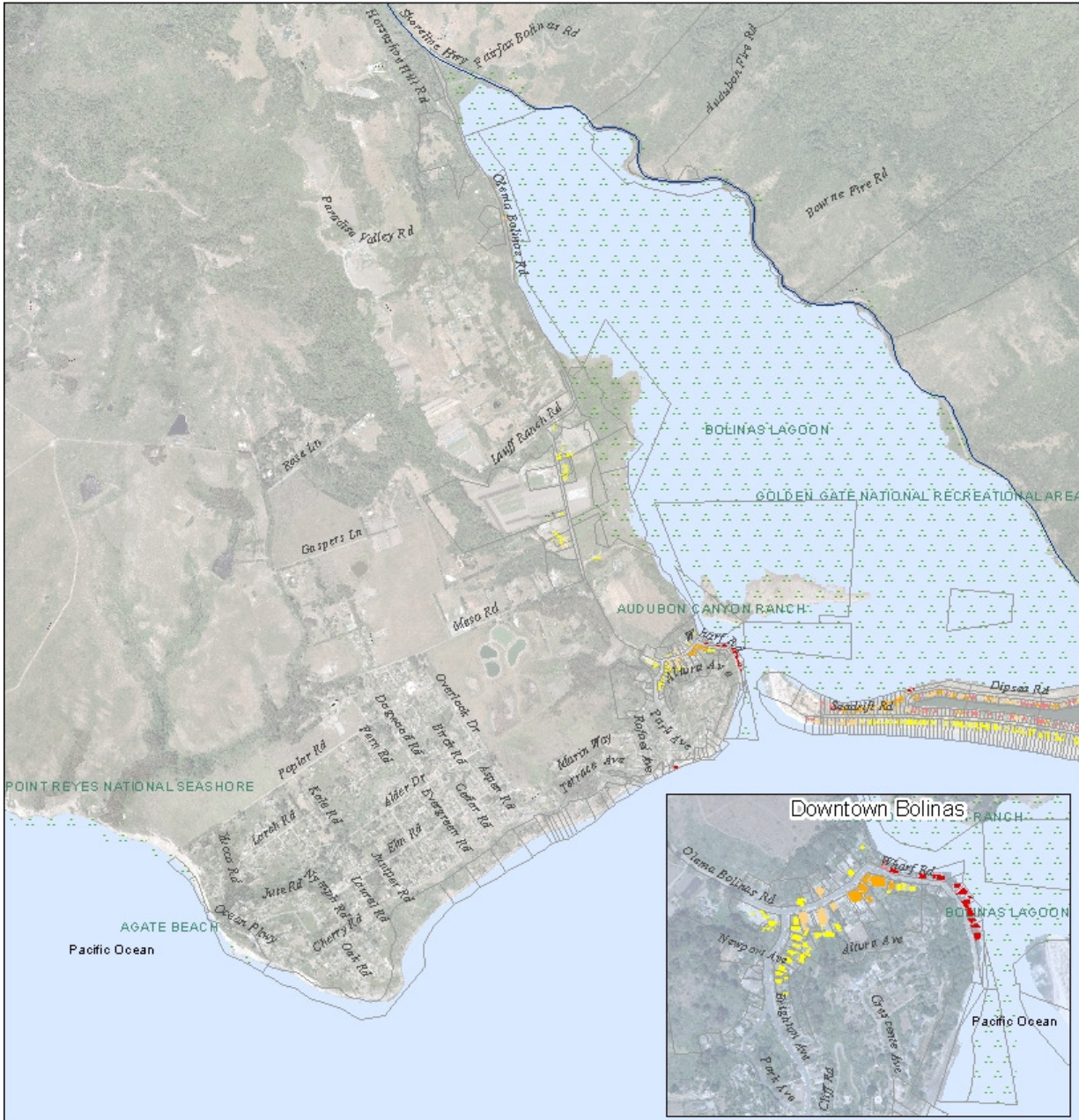
Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers herein make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revisions. Local site conditions must be examined. Commercial use prohibited.

Date: 10/2/2015



MAPS

Map 13. Bolinas Vulnerable Parcels & Buildings



Exposed Buildings

- Scenario 1
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5
- Parcels
- Park Parcels



0 0.075 0.15 0.3 0.45 0.6 Miles

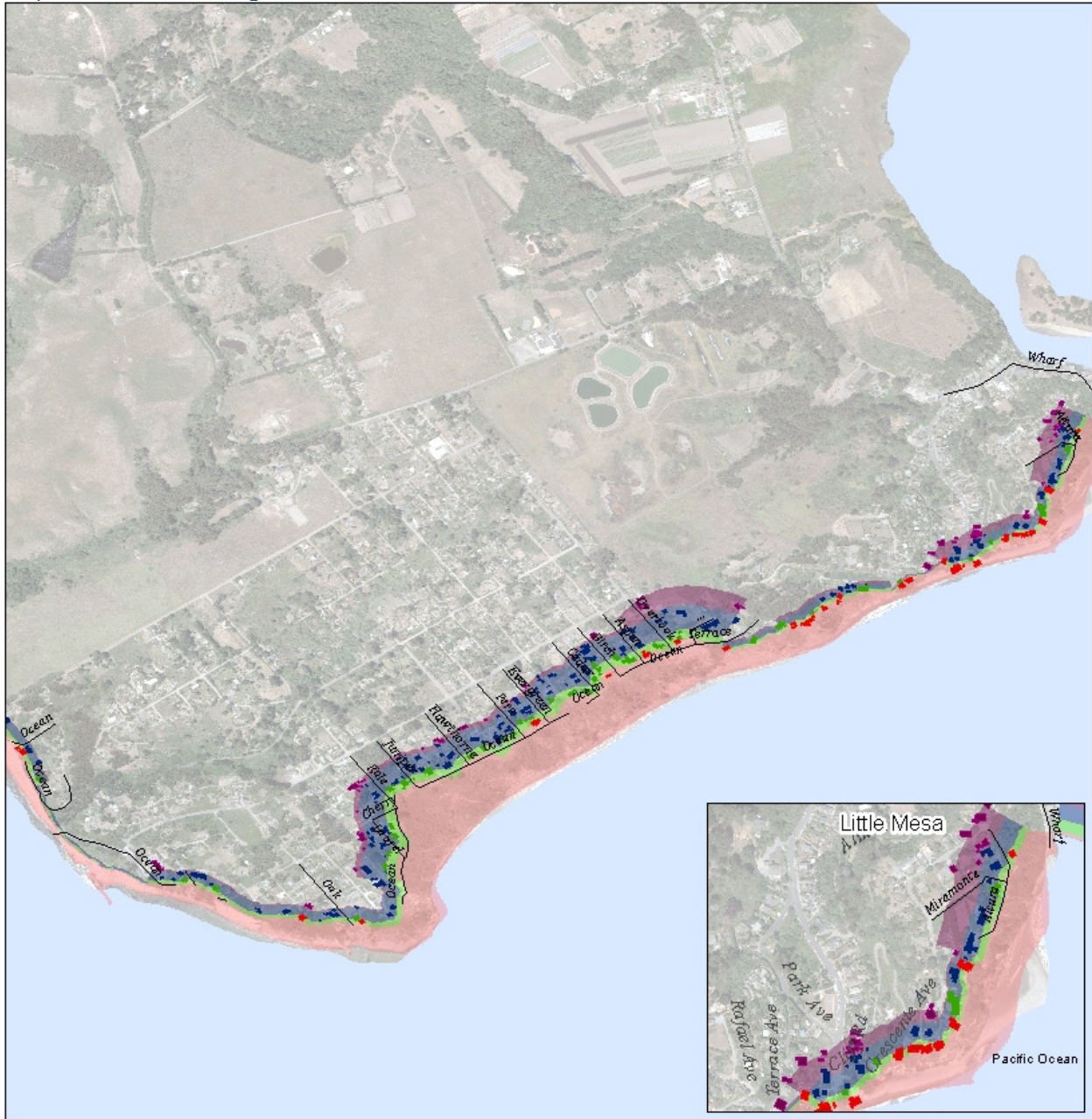
Source: Marlin Map, Onr Coast Over Five
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to identify potential hazardous areas and vulnerable assets. Marlin County, and data provided here, make no warranties of the accuracy or completeness of maps and data. Maps are representations and subject to future revision. Localities could be in the field examined. Commercial use is prohibited.

Date: 10/14/2015

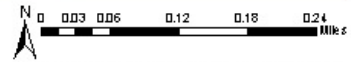


MAPS

Map 14. Bolinas Buildings Vulnerable to Accelerated Erosion

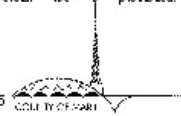


Accelerated Erosion	Buildings Exposed	Exposed Roads
Scenarios 1 & 2	Scenarios 1 & 2	Exposed Roads
Scenario 3	Scenario 3	
Scenario 4	Scenario 4	
Scenario 5	Scenario 5	



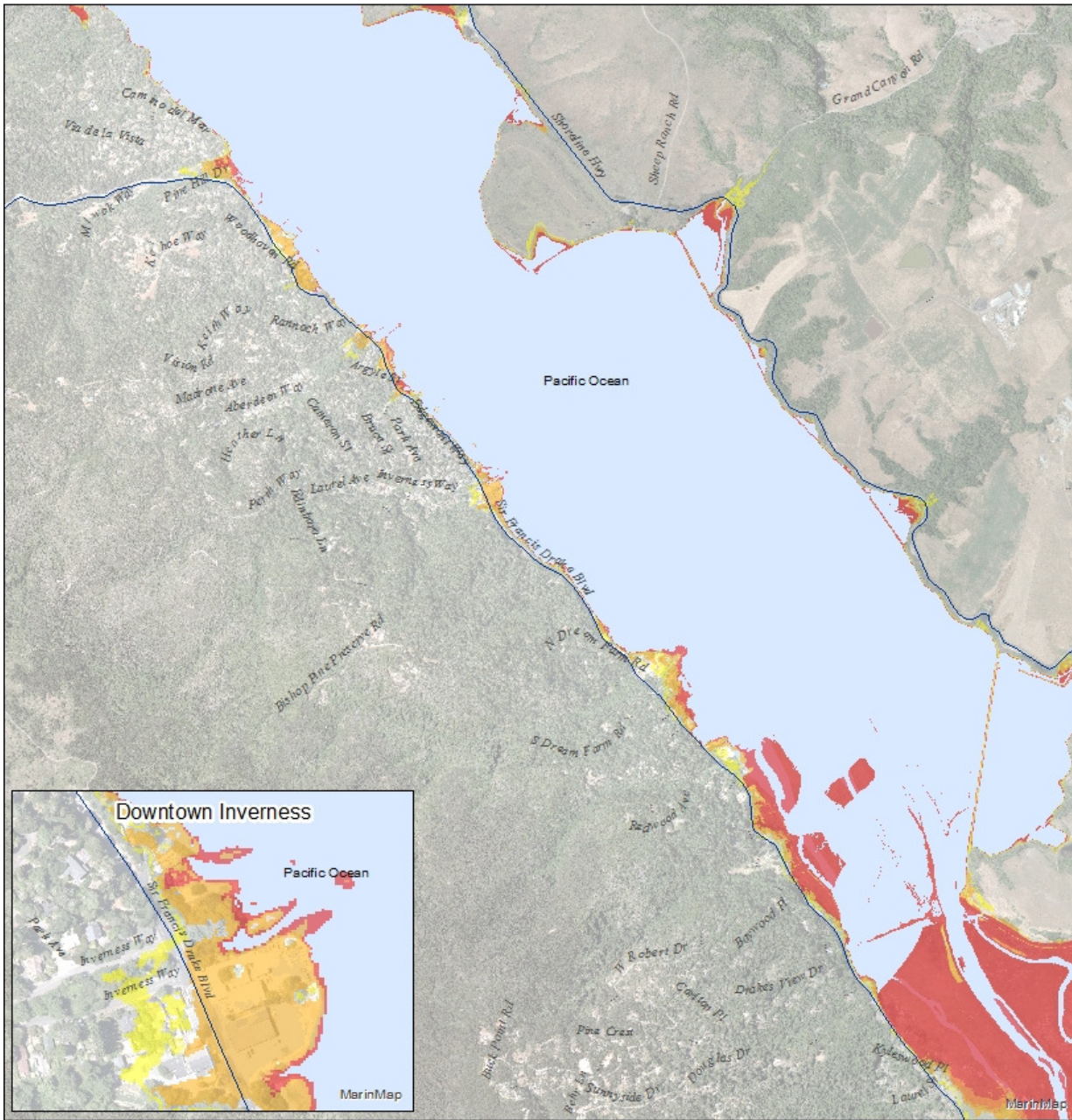
Source: Marsh Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marsh County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revisions. Local site conditions must be examined. Commercial use prohibited.

Date: 10/2/2015



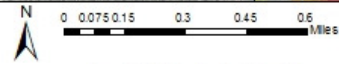
MAPS

Map 15. Inverness Vulnerable Parcels & Buildings



Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm



Source: Merin Map, Our Coast Our Future
 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.

Date: 11/2/2015

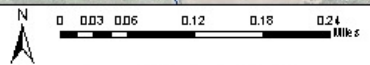
MAPS

Map 16. Point Reyes Station Vulnerable Parcels & Buildings



Exposed Buildings

- Scenario 1
 - Scenario 2
 - Scenario 3
 - Scenario 4
 - Scenario 5
- Parcels
 - Park Parcels



Source: Marin Map, On Coast Off Five
 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 herein make no warranties of the accuracy or completeness of maps and data. Maps are representative and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



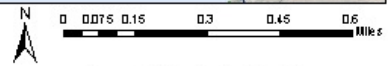
MAPS

Map 17. East Shore Vulnerable Parcels & Buildings



Exposed Buildings

- Scenario 1
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5
- Parcels
- Park Parcels



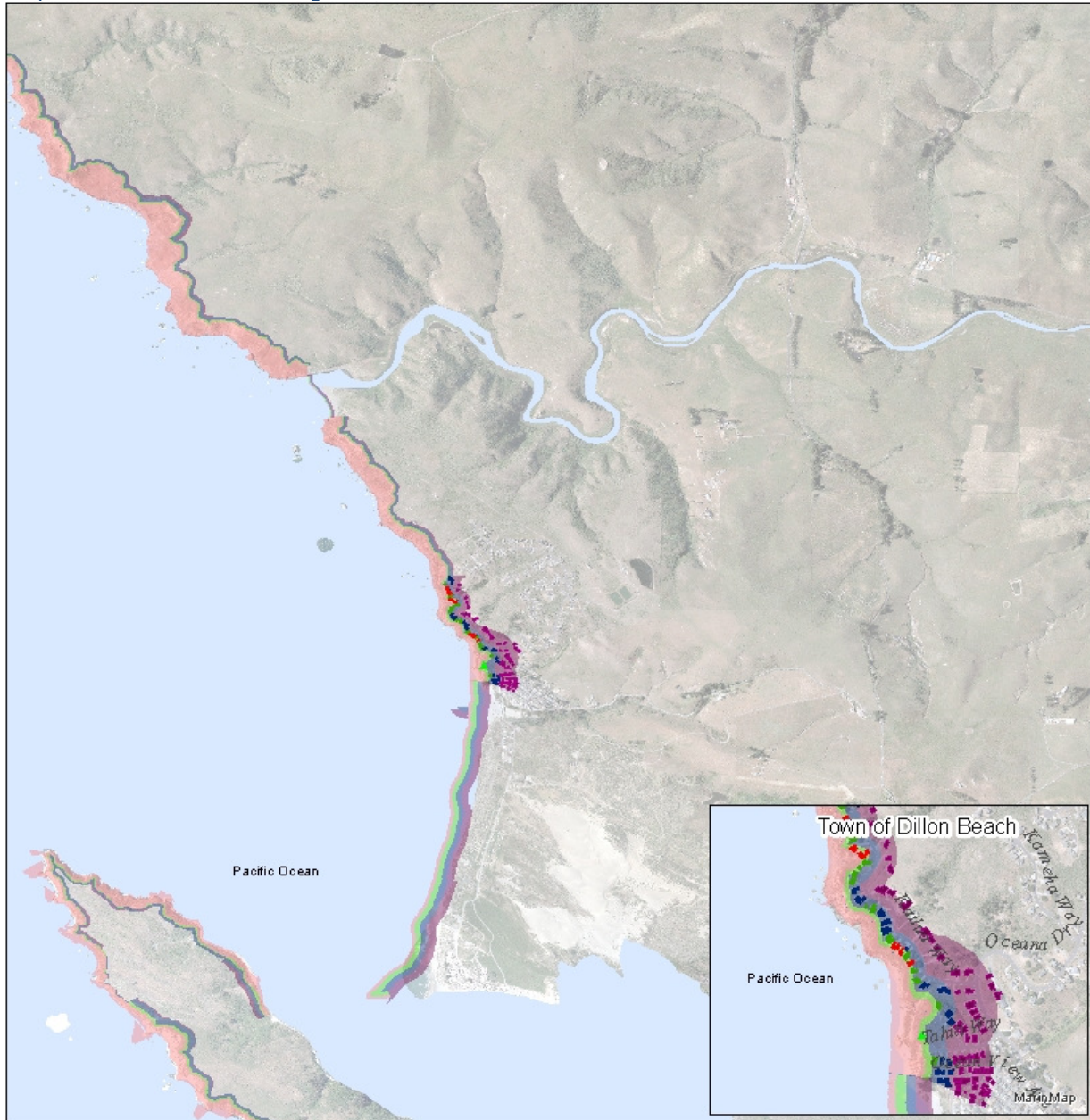
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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

Date: 10/14/2015

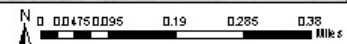


MAPS

Map 18. Dillon Beach Buildings Vulnerable to Accelerated Erosion



Accelerated Erosion		Buildings Exposed		
	Scenarios 1 & 2		Scenarios 1 & 2	 Exposed Roads
	Scenario 3		Scenario 3	
	Scenario 4		Scenario 4	
	Scenario 5		Scenario 5	



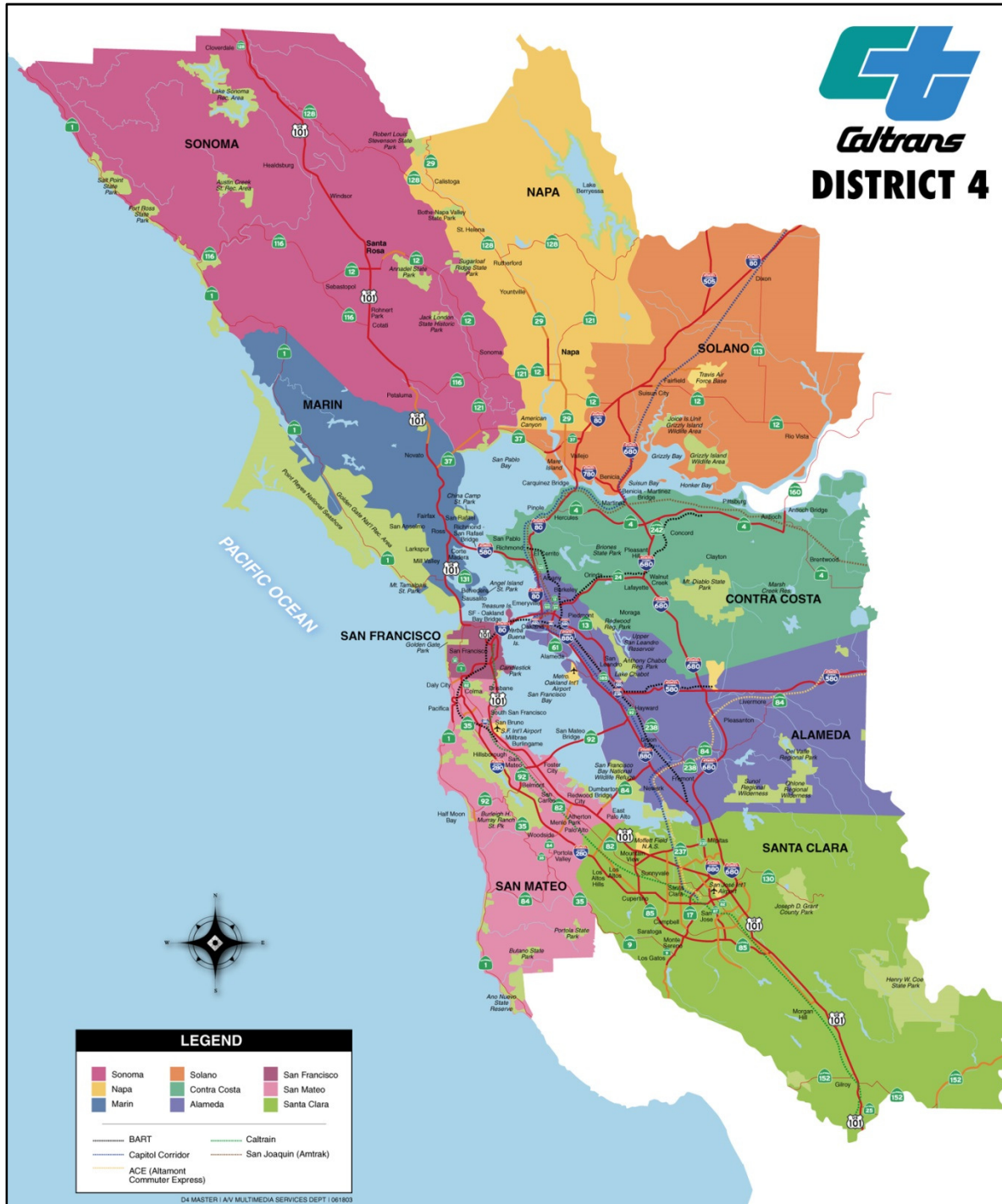
Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers here in, make no warranties of the accuracy or completeness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

Date: 10/2/2015

COURTNEY CARL

MAPS

Map 19. Caltrans District 4








MAPS

Map 20. Stinson Beach Vulnerable Transportation Assets



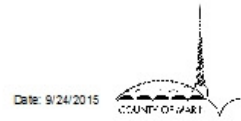
Exposed Roadway

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

-  Boat Launch
-  Fishing Pier
-  Access Point
-  Port
-  Marina



Sources: Our Coast Our Future, Marin Map
 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 provide 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.



MAPS

Map 21. Bolinas Vulnerable Transportation Assets

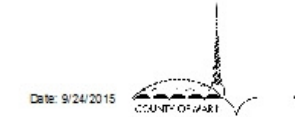


Exposed Roadway

- 10" + Annual storm
 - 10" + 20-year storm
 - 20" + 20-year storm
 - 40" + 100-year storm
 - 80" + 100-year storm
- Boat Launch
 - Fishing Pier
 - Access Point
 - Port
 - Marina

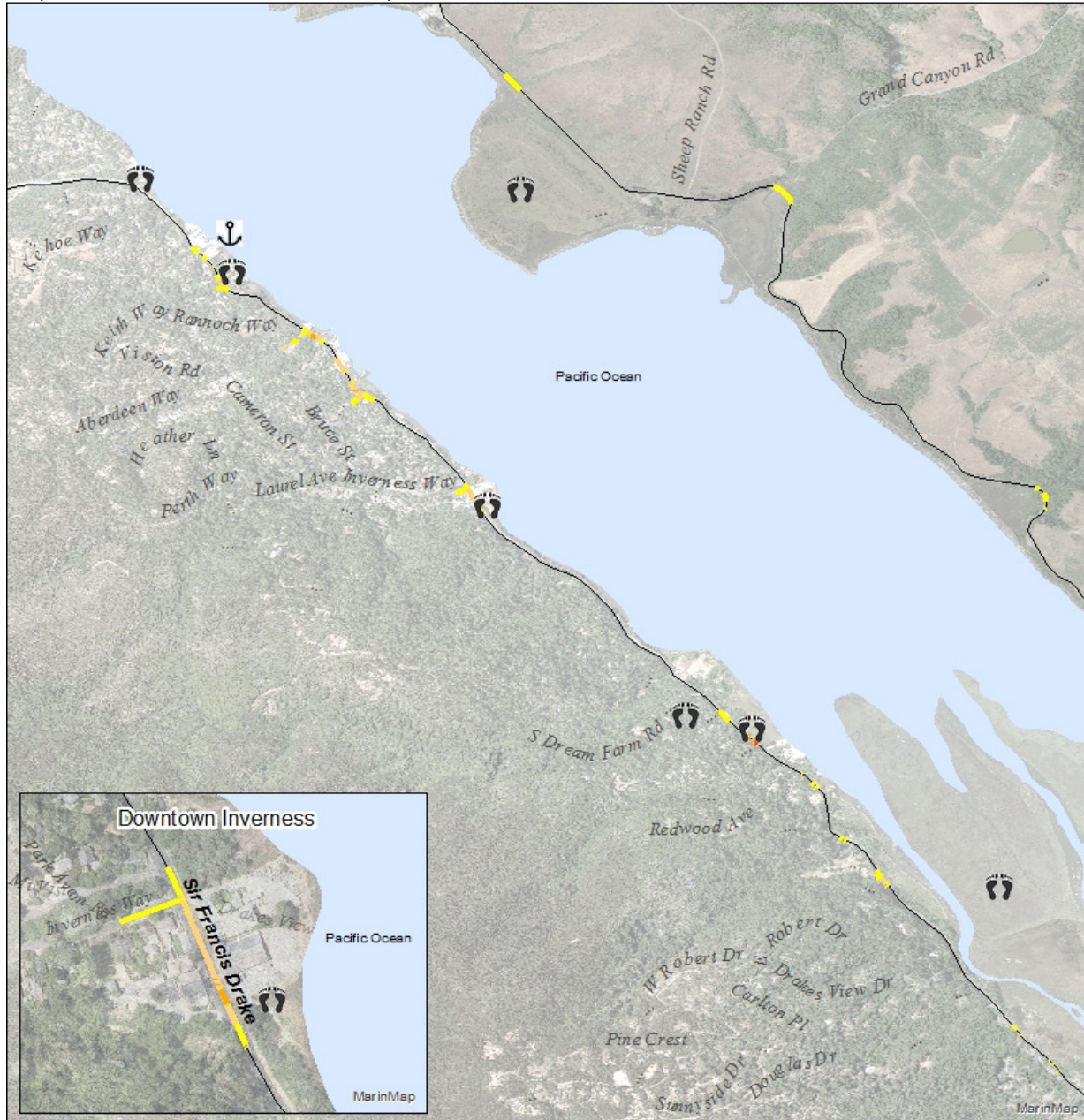


Source: Our Coast Our Future, Marin Map
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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



MAPS

Map 22. Inverness Vulnerable Transportation Assets

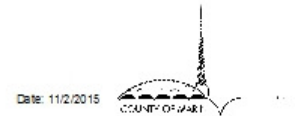


Exposed Roadway

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm
-  Boat Launch
-  Fishing Pier
-  Access Point
-  Port
-  Marina



Sources: Our Coast Our Future, Marin Map
 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.



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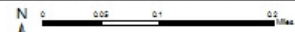
Map 23. Point Reyes Station Vulnerable Transportation Assets



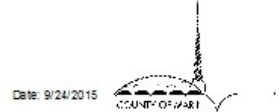
Exposed Roadway

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

- Boat Launch
- Fishing Pier
- Access Point
- Port
- Marina



Sources: Our Coast Our Future, Marin Map
 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 representations and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



MAPS

Map 24. East Shore Vulnerable Transportation Assets



Exposed Roadway

- 10" + Annual storm
 - 10" + 20-year storm
 - 20" + 20-year storm
 - 40" + 100-year storm
 - 80" + 100-year storm
-  Boat Launch
 -  Fishing Pier
 -  Access Point
 -  Port
 -  Marina



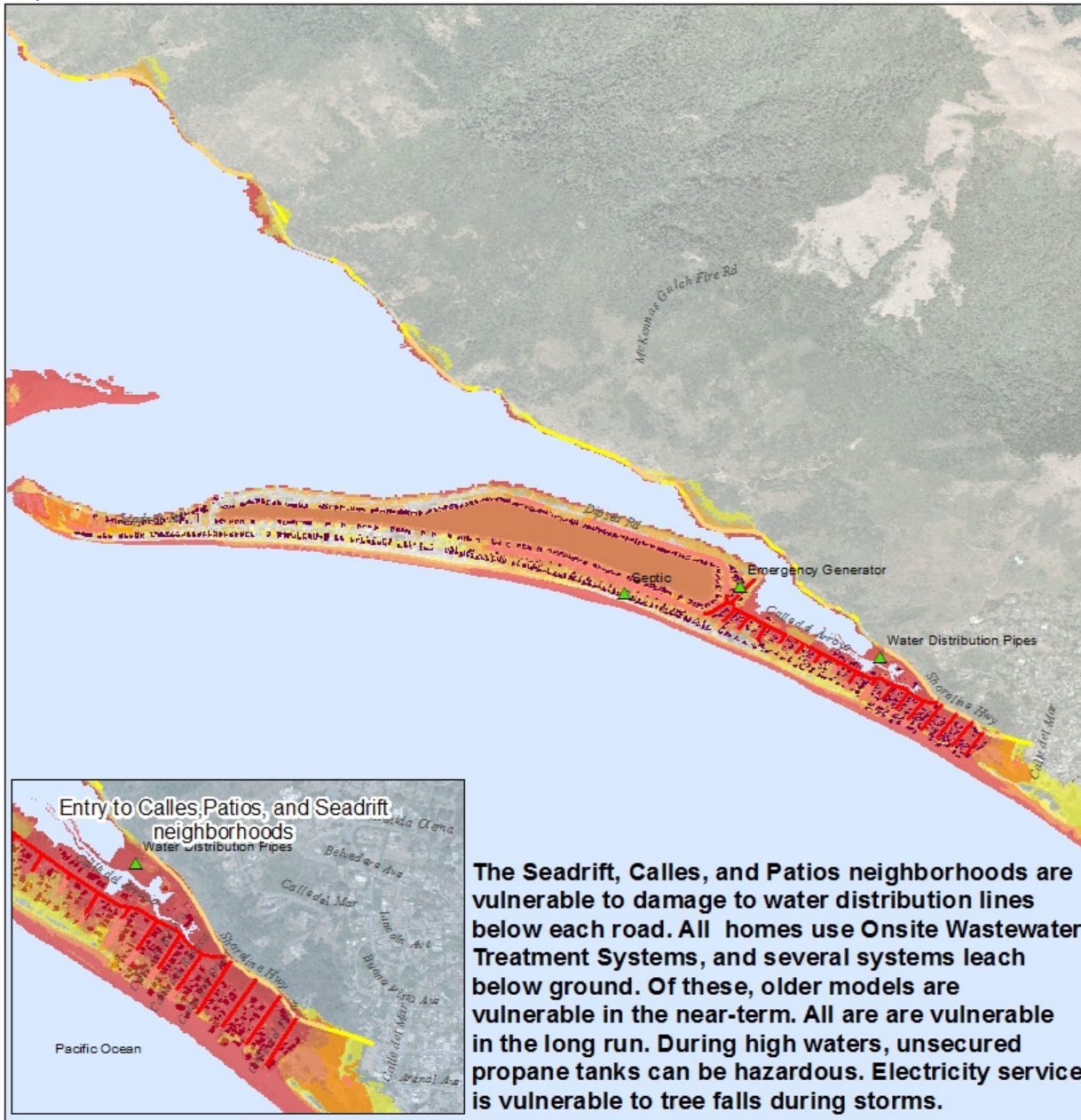
Sources: Our Coast Our Future, Marin Map
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data provide is here in, make no warranties of the accuracy or completeness of maps and data.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

Date: 9/24/2015



MAPS

Map 25. Stinson Beach Vulnerable Utilities



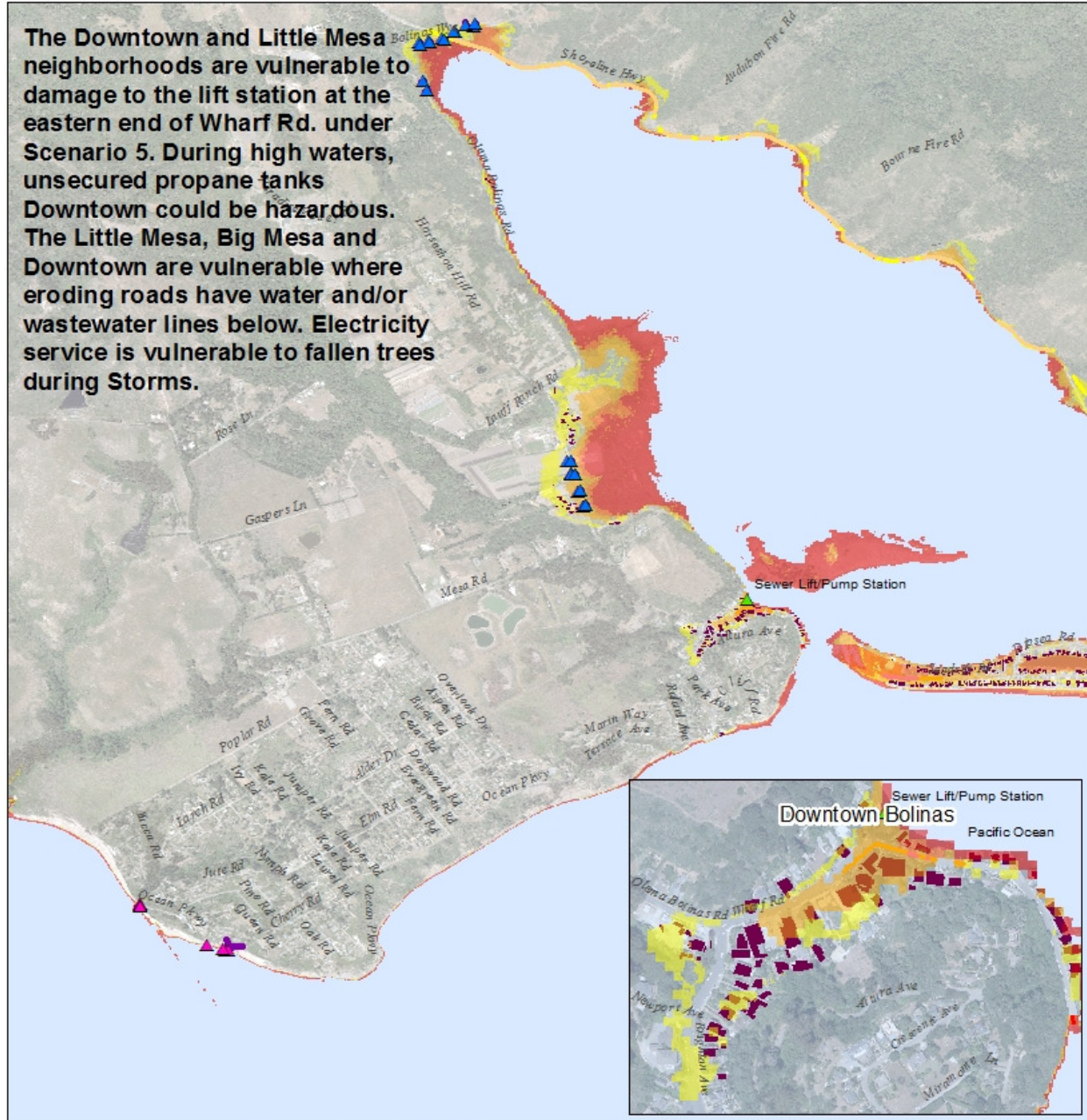
Scenarios	Exposed roads w/ utility lines beneath	Buildings
1 10" SLR + Annual Storm	Scenario 1	Buildings
2 10" SLR + 20-year Storm	Scenario 2	Utilities
3 20" SLR + 20-year Storm	Scenario 3	Culverts
4 40" SLR + 20-year Storm	Scenario 4	Culvert Lines
5 80" SLR + 100-year Storm	Scenario 5	Man Hole, Catch Basin Grate
		Road Side Ditches

Sources: Our Coast Our Future (2014), Marin Map 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.

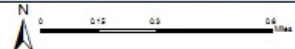
Date: 9/28/2015
 COUNTY OF MARI

MAPS

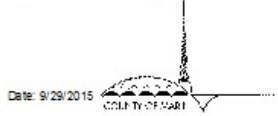
Map 26: Bolinas Vulnerable Utilities



Scenarios	Exposed roads w/ utility lines beneath	Buildings
1 10" SLR + Annual Storm	Scenario 1	Buildings
2 10" SLR + 20-year Storm	Scenario 2	Utilities
3 20" SLR + 20-year Storm	Scenario 3	Culverts
4 40" SLR + 20-year Storm	Scenario 4	Culvert Lines
5 80" SLR + 100-year Storm	Scenario 5	Man Hole, Catch Basin Grate
		Road Side Ditches

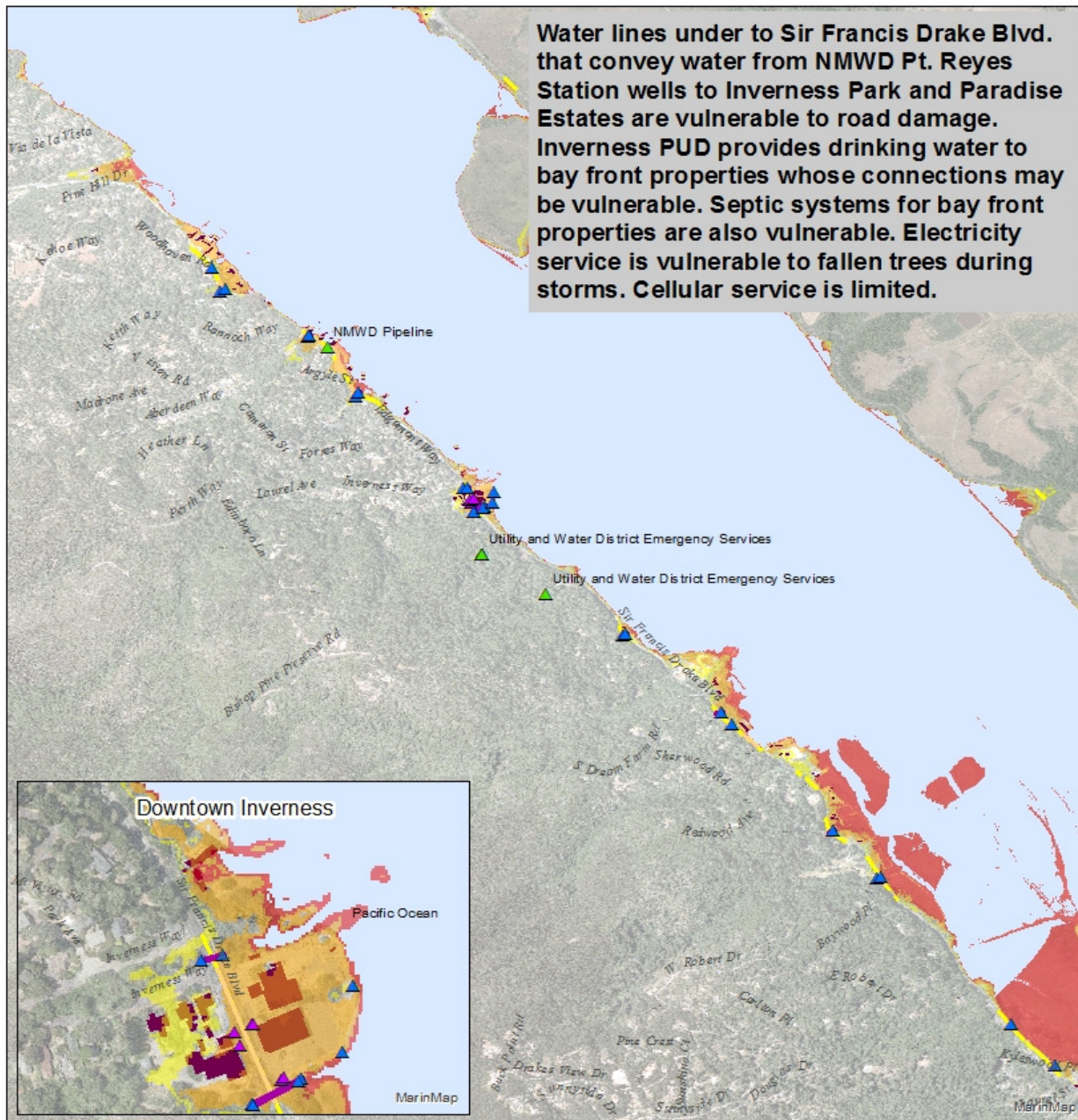


Sources: Our Coast Our Future (2014), Main Map
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Main County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



MAPS

Map 27: Inverness Vulnerable Utilities



Water lines under to Sir Francis Drake Blvd. that convey water from NMWD Pt. Reyes Station wells to Inverness Park and Paradise Estates are vulnerable to road damage. Inverness PUD provides drinking water to bay front properties whose connections may be vulnerable. Septic systems for bay front properties are also vulnerable. Electricity service is vulnerable to fallen trees during storms. Cellular service is limited.

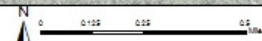
Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm

Exposed roads w/ utility lines beneath

- Scenario 1
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5

- Buildings
- Utilities
- Culverts
- Culvert Lines
- Man Hole, Catch Basin Grate
- Road Side Ditches



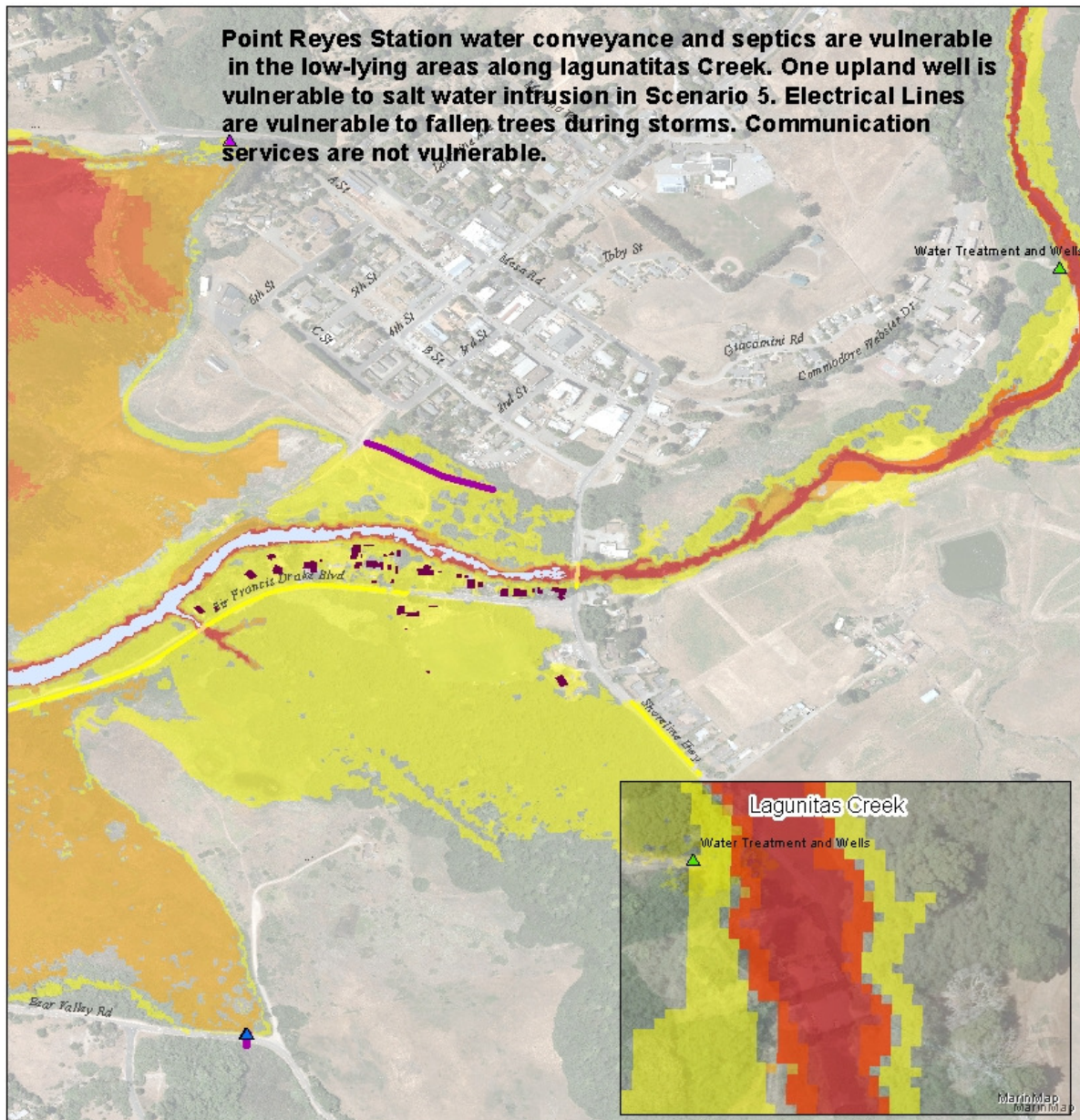
Sources: Our Coast Our Future (2014), Marin Map
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representations and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.

Date: 11/2/2015



MAPS

Map 28: Pt. Reyes Station Vulnerable Utilities



Scenarios	Exposed roads w/ utility lines beneath	
1 10" SLR + Annual Storm	Scenario 1	Buildings
2 10" SLR + 20-year Storm	Scenario 2	Utilities
3 20" SLR + 20-year Storm	Scenario 3	Culverts
4 40" SLR + 20-year Storm	Scenario 4	Culvert Lines
5 80" SLR + 100-year Storm	Scenario 5	Man Hole, Catch Basin Grate
		Road Side Ditches

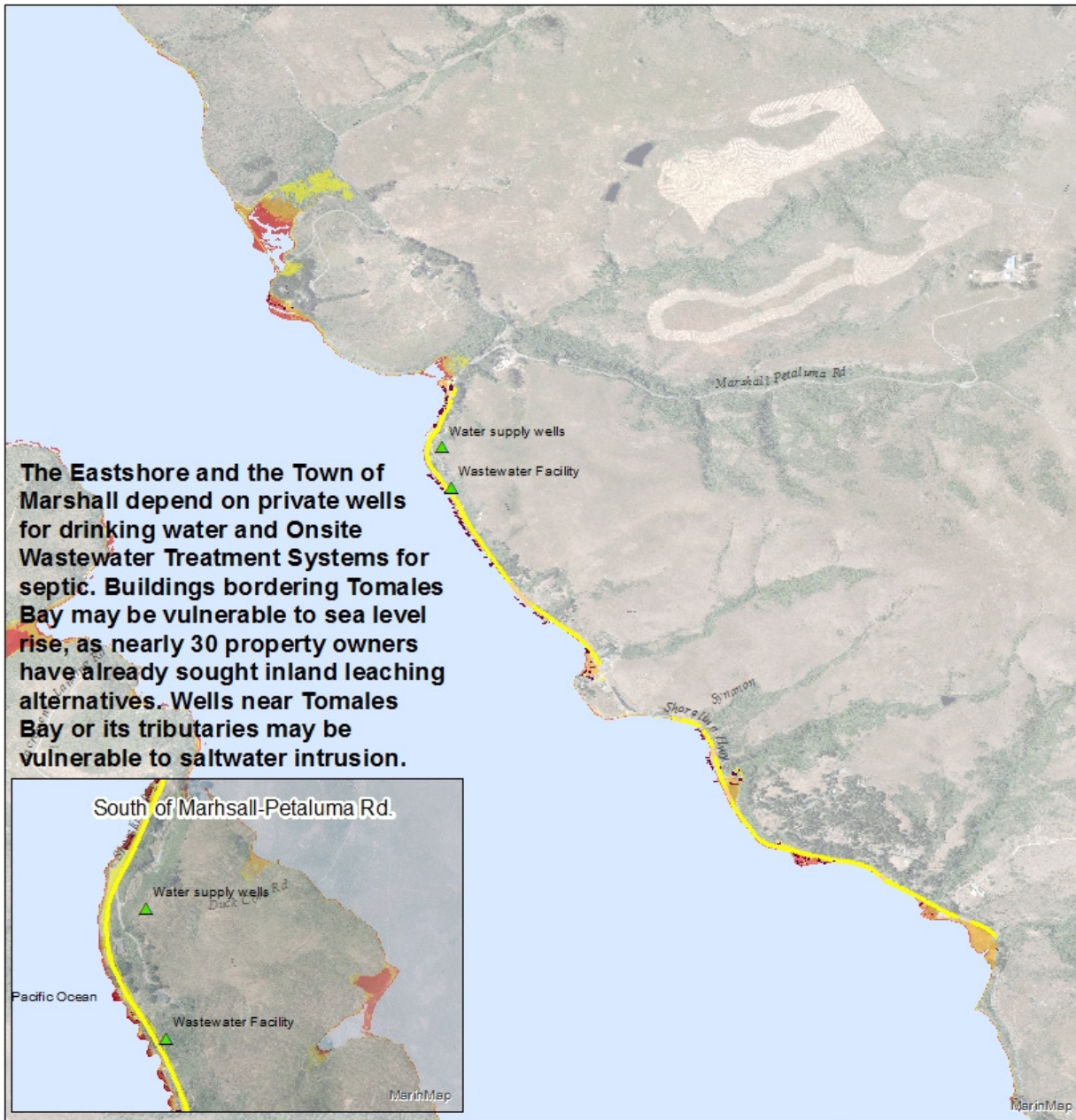
Sources: OTC Coast Office (2014), Marin Map

 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, make no warranties of the accuracy or completeness of maps and data. Maps are prepared for informational purposes only. Localities should be examined. Commercial use is prohibited.

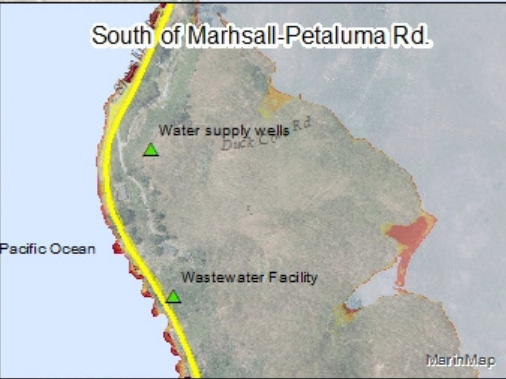
 Date: 10/14/2015

MAPS

Map 29: East Shore Vulnerable Utilities



The Eastshore and the Town of Marshall depend on private wells for drinking water and Onsite Wastewater Treatment Systems for septic. Buildings bordering Tomales Bay may be vulnerable to sea level rise, as nearly 30 property owners have already sought inland leaching alternatives. Wells near Tomales Bay or its tributaries may be vulnerable to saltwater intrusion.



Scenarios		Exposed roads w/ utility lines beneath	
1	10" SLR + Annual Storm	Scenario 1	Buildings
2	10" SLR + 20-year Storm	Scenario 2	Utilities
3	20" SLR + 20-year Storm	Scenario 3	Culverts
4	40" SLR + 20-year Storm	Scenario 4	Culvert Lines
5	80" SLR + 100-year Storm	Scenario 5	Man Hole, Catch Basin Grate
			Road Side Ditches

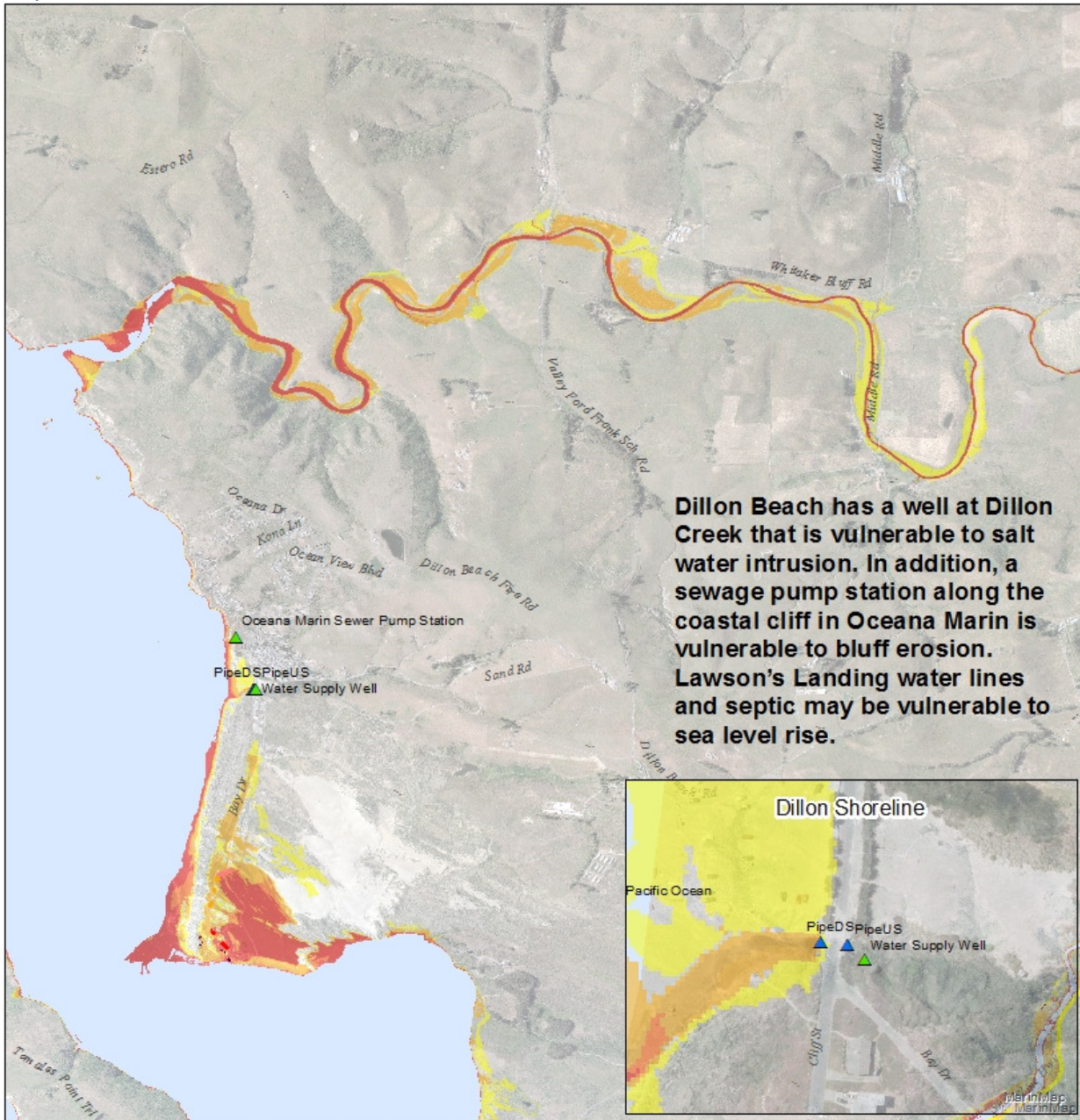


Sources: Our Coast Our Future (2014), Marin Map
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



MAPS

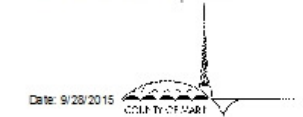
Map 30: Dillon Beach Vulnerable Utilities



Scenarios		Exposed roads w/ utility lines beneath	
1	10" SLR + Annual Storm	Scenario 1	Buildings
2	10" SLR + 20-year Storm	Scenario 2	Utilities
3	20" SLR + 20-year Storm	Scenario 3	Culverts
4	40" SLR + 20-year Storm	Scenario 4	Culvert Lines
5	80" SLR + 100-year Storm	Scenario 5	Man Hole, Catch Basin Grate
			Road Side Ditches

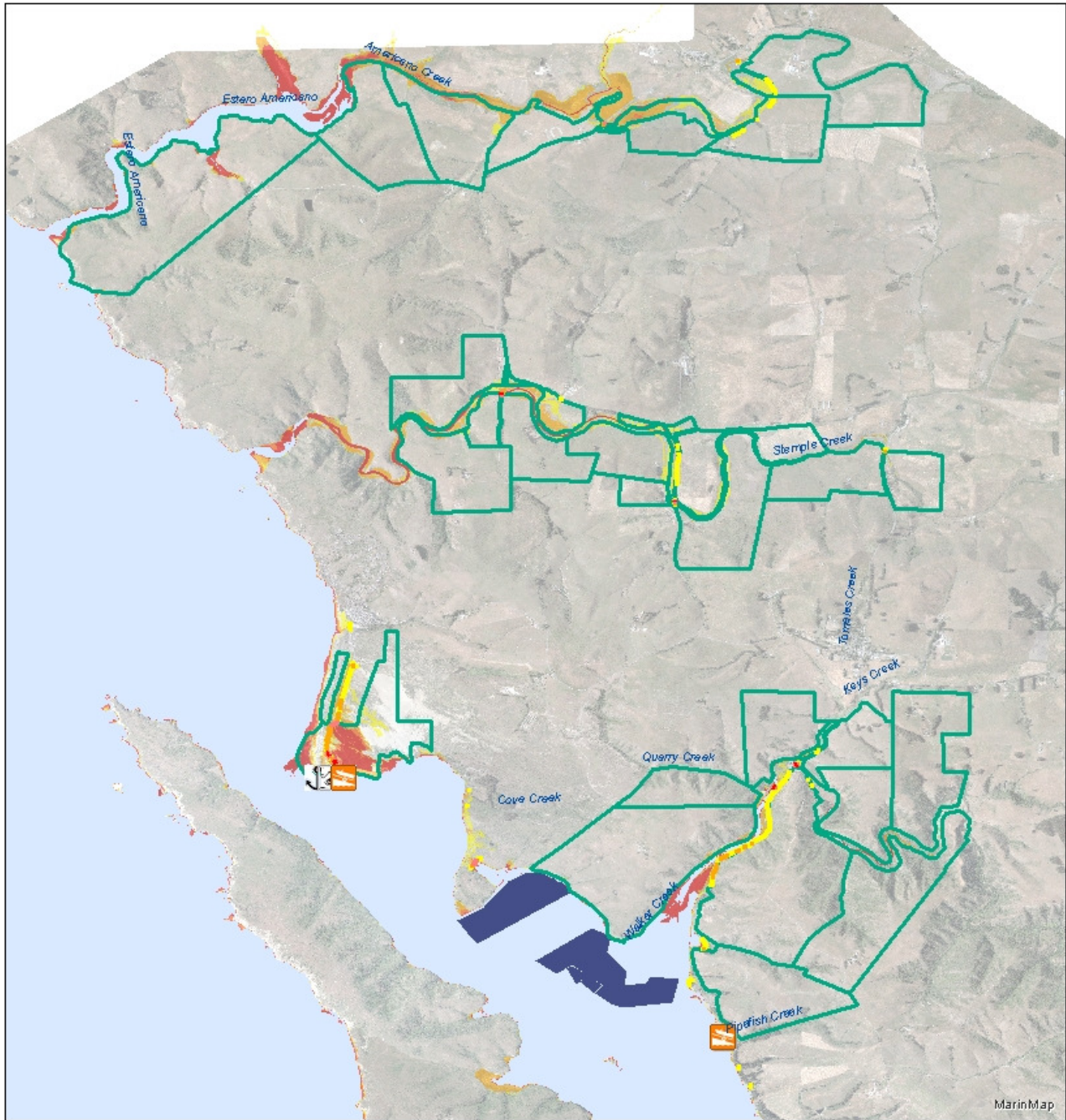


Sources: Our Coast Our Future (2014), Marin Map
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



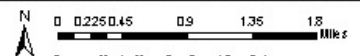
MAPS

Map 31. North of Nick's Cove (East Shore) Vulnerable Working Lands



Scenarios	Exposed Roads	Infrastructure
1 10" SLR + Annual Storm	10" + Annual storm	Aquaculture
2 10" SLR + 20-year Storm	10" + 20-year storm	Agricultural Parcels
3 20" SLR + 20-year Storm	20" + 20-year storm	Boat Launch
4 40" SLR + 20-year Storm	40" + 100-year storm	Fishing Pier
5 80" SLR + 100-year Storm	80" + 100-year storm	

- Port
- Marina



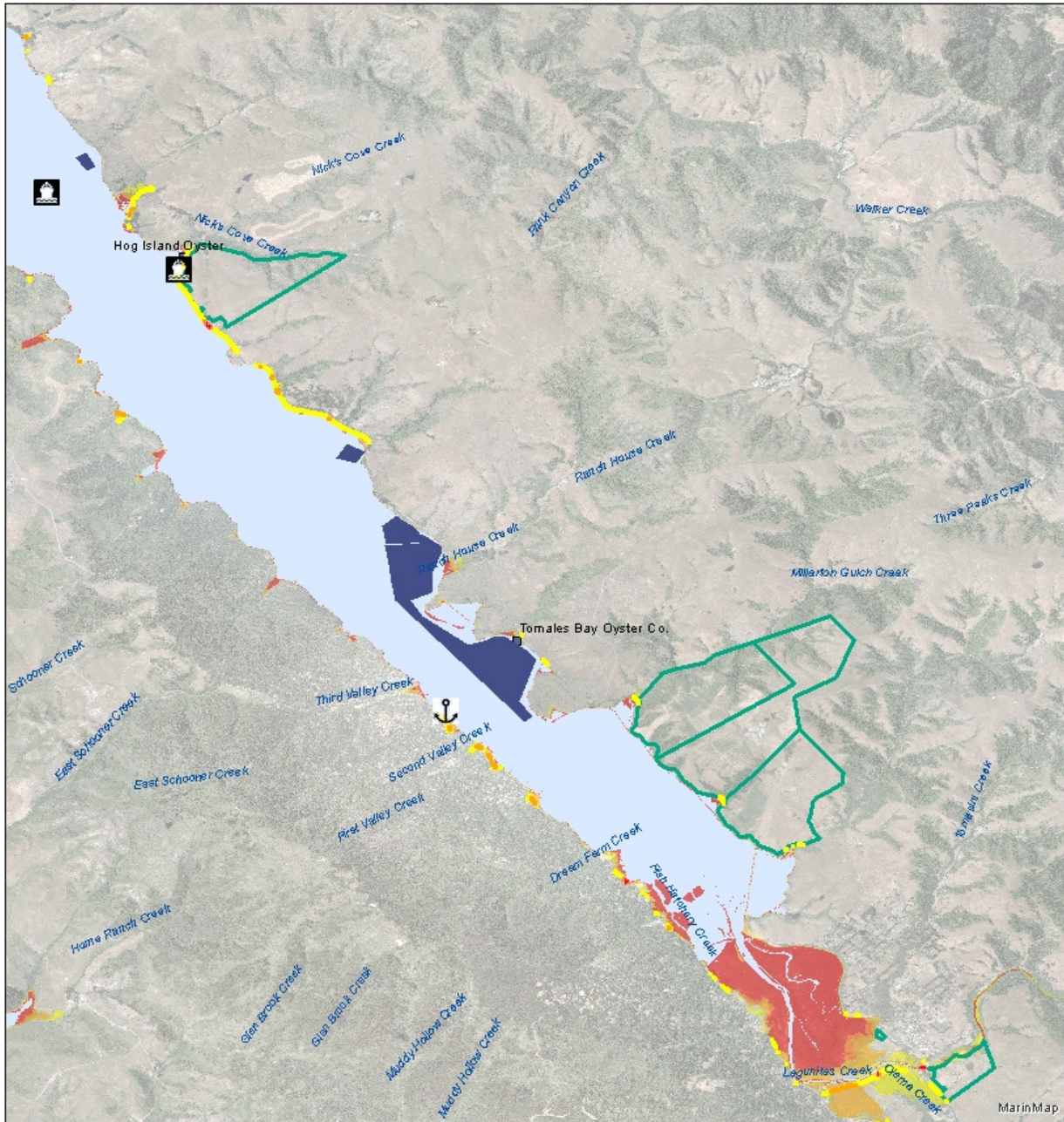
Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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

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MAPS

Map 32: South of Nick's Cove (East Shore) Vulnerable Working Lands



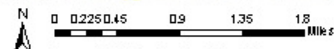
Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm

Exposed Roads

- 10" + Annual Storm
- 10" + 20-year Storm
- 20" + 20-year Storm
- 40" + 100-year Storm
- 80" + 100-year Storm

- Aquaculture
- Agricultural Parcels
- Boat Launch
- Fishing Pier
- Port
- Marina

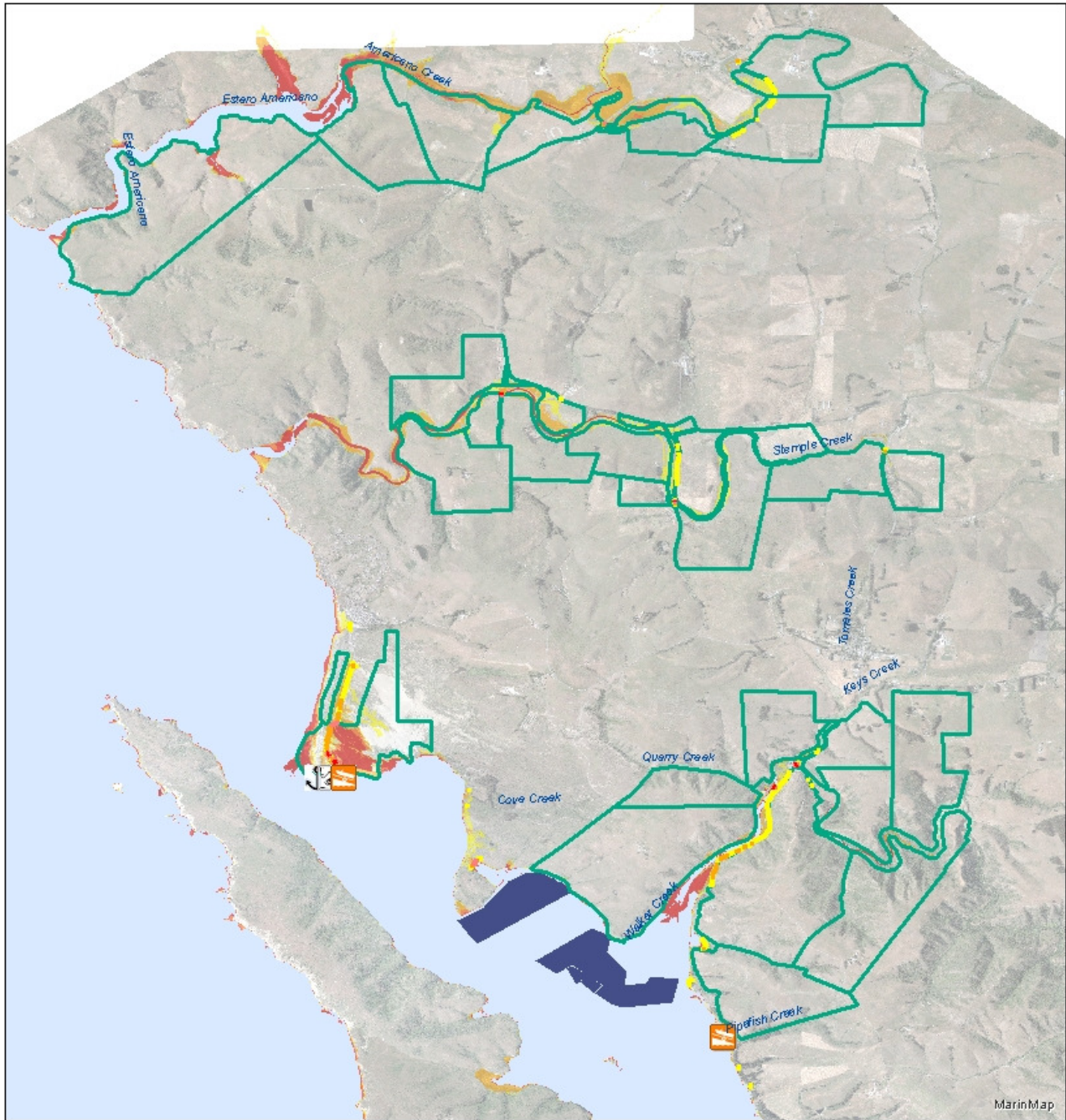


Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are presented for informational purposes only. Locations could be as in the examined. Commercial use is prohibited.

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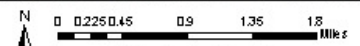
MAPS

Map 33. North of Nick's Cove (East Shore) Vulnerable Working Lands

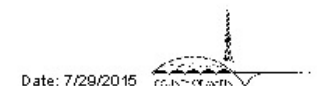


Scenarios	Exposed Roads	
1 10" SLR + Annual Storm	10" + Annual storm	Aquaculture
2 10" SLR + 20-year Storm	10" + 20-year storm	Agricultural Parcels
3 20" SLR + 20-year Storm	20" + 20-year storm	Boat Launch
4 40" SLR + 20-year Storm	40" + 100-year storm	Fishing Pier
5 80" SLR + 100-year Storm	80" + 100-year storm	

- Port
- Marina

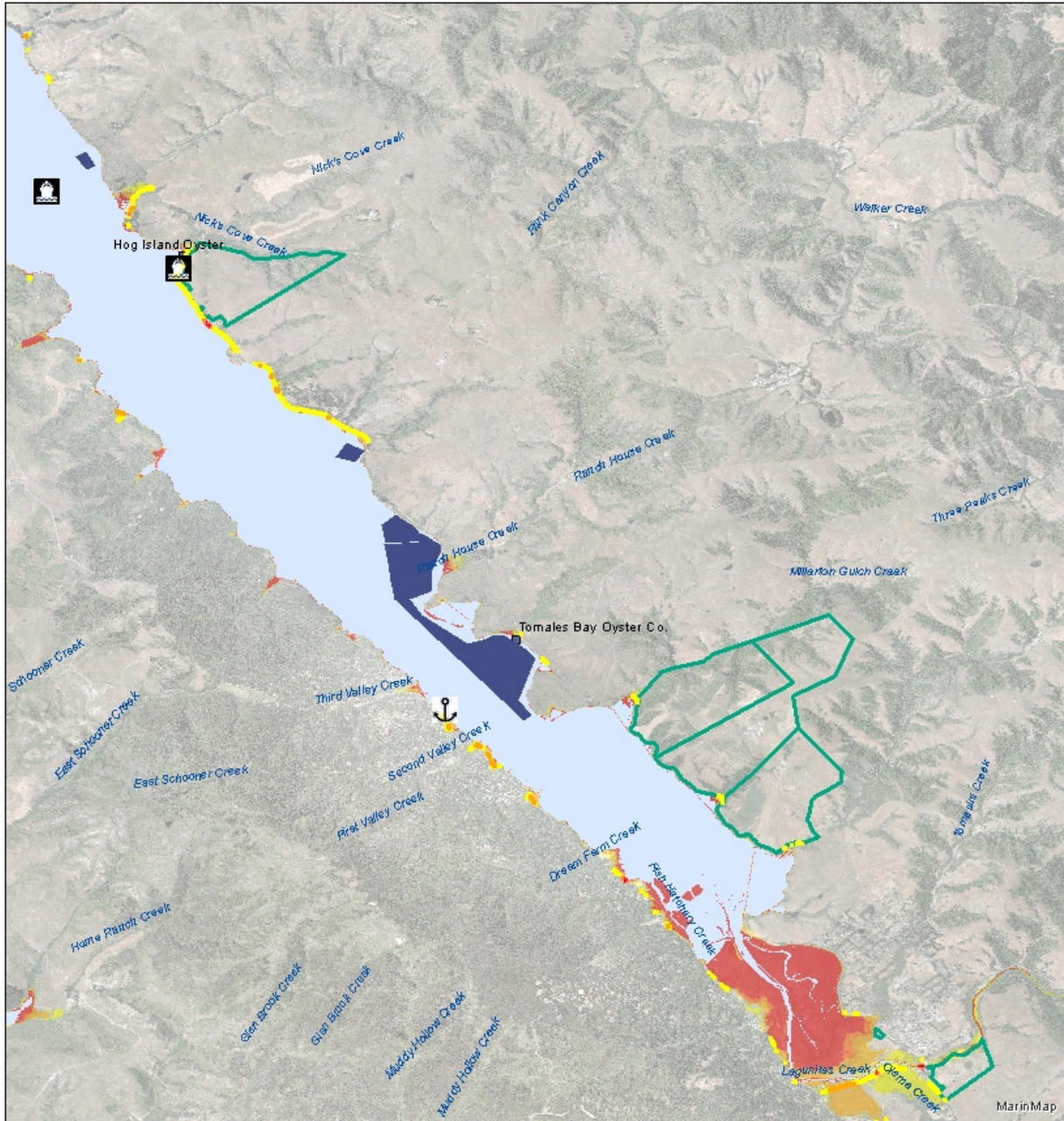


Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps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



MAPS

Map 34: South of Nick's Cove (East Shore) Vulnerable Working Lands



Scenarios

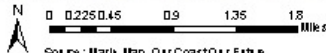
- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm

Exposed Roads

- 10" + Annual Storm
- 10" + 20-year Storm
- 20" + 20-year Storm
- 40" + 100-year Storm
- 80" + 100-year Storm

- Aquaculture
- Agricultural Parcel
- Boat Launch
- Fishing Pier

- Port
- Marina

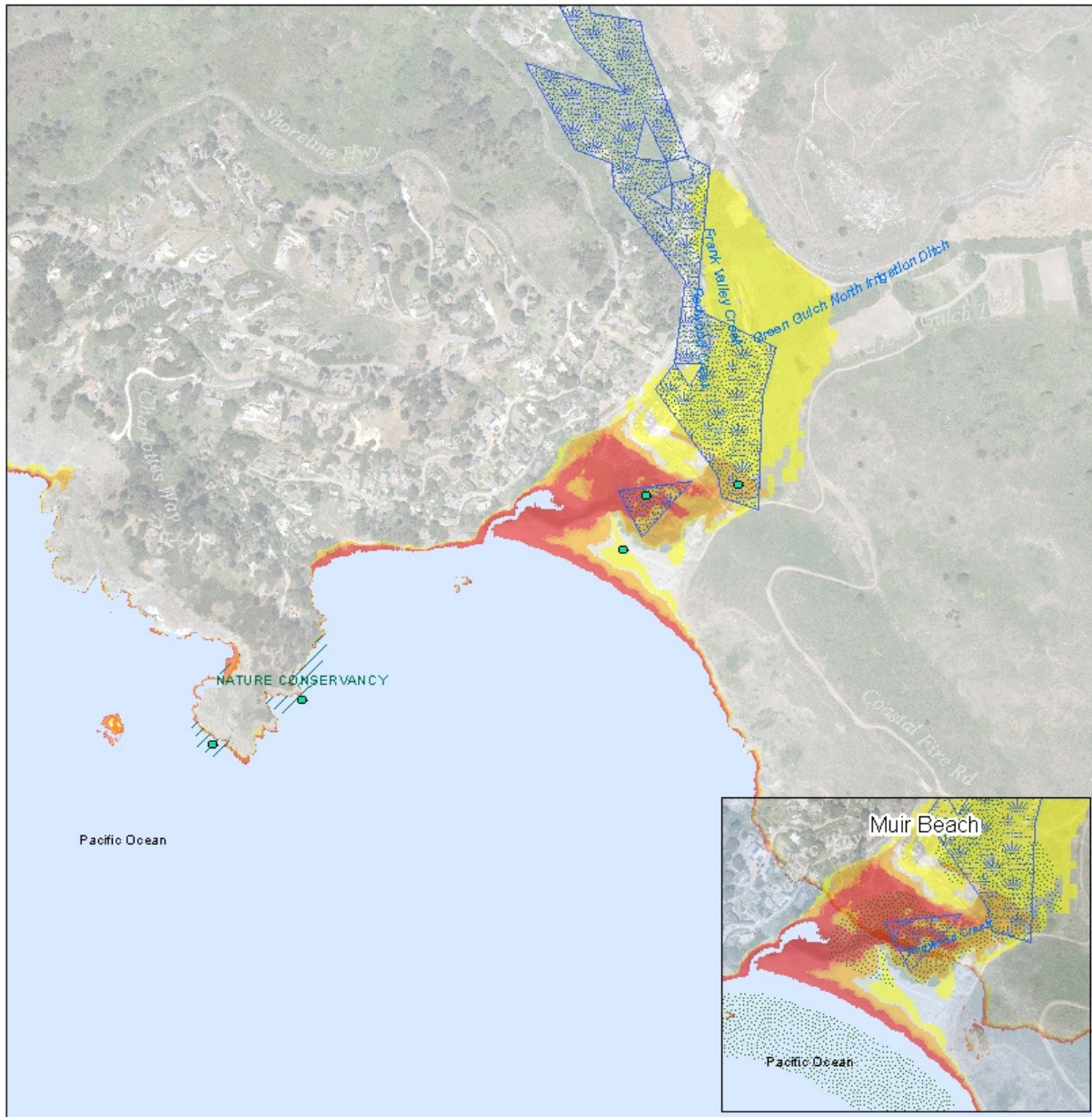


Source: Marin Map, Our Coast Our Future
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazards and areas at risk. Marin County and data providers herein make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.

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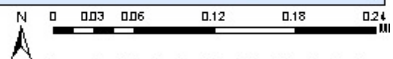
MAPS

Map 35. Muir Beach Vulnerable Natural Resource Assets



Scenarios

- | | | | |
|---|--------------------------|---------------------------|-------------------|
| 1 | 10" SLR + Annual Storm | ● Natural Resource Assets | 🦅 Seabird Colony |
| 2 | 10" SLR + 20-year Storm | ▨ Park Parcels | 🐾 Mammal Haul Out |
| 3 | 20" SLR + 20-year Storm | ▨ Wetland | |
| 4 | 40" SLR + 20-year Storm | ▨ Estuary | |
| 5 | 80" SLR + 100-year Storm | ▨ Marsh | |



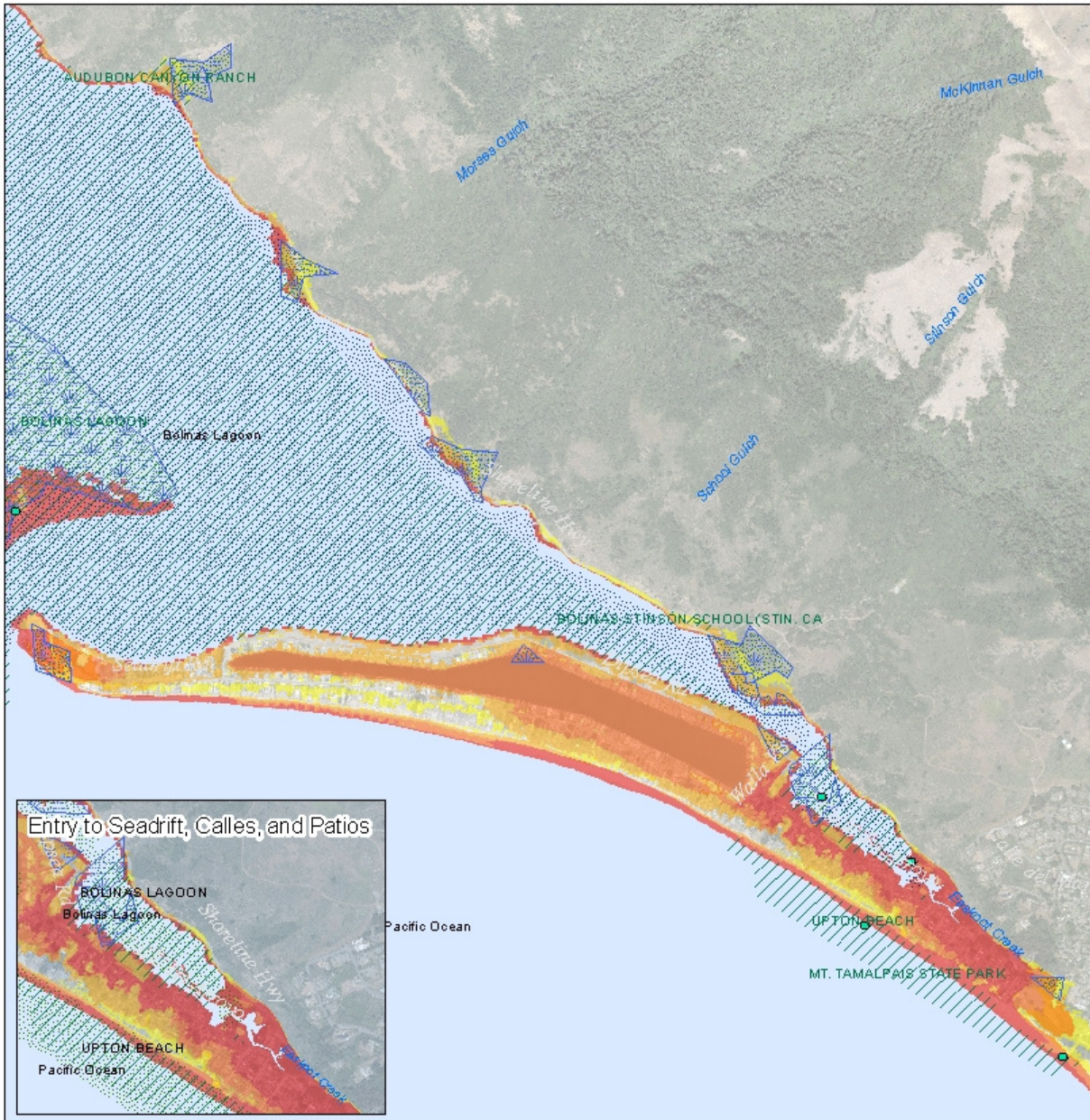
Source: Maria Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Maria County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are prepared in good faith and to the best of our knowledge. Local file conditions must be examined. Commercial use is prohibited.

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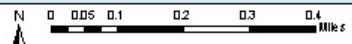
MAPS

Map 36. Stinson Beach Vulnerable Natural Resources



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|-----------------|
| 1 | 10" SLR + Annual Storm | ■ | Natural Resource Assets | 🦅 | Seabird Colony |
| 2 | 10" SLR + 20-year Storm | ▨ | Park Parcels | 🐾 | Mammal Haul Out |
| 3 | 20" SLR + 20-year Storm | ▩ | Wetland | | |
| 4 | 40" SLR + 20-year Storm | ▧ | Estuary | | |
| 5 | 80" SLR + 100-year Storm | ▦ | Marsh | | |



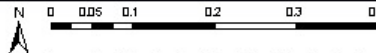
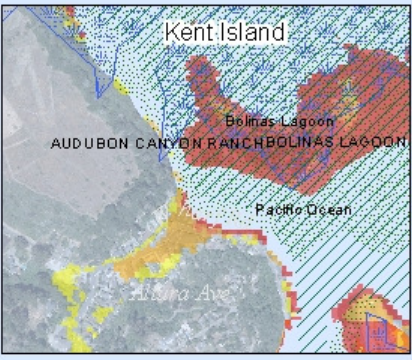
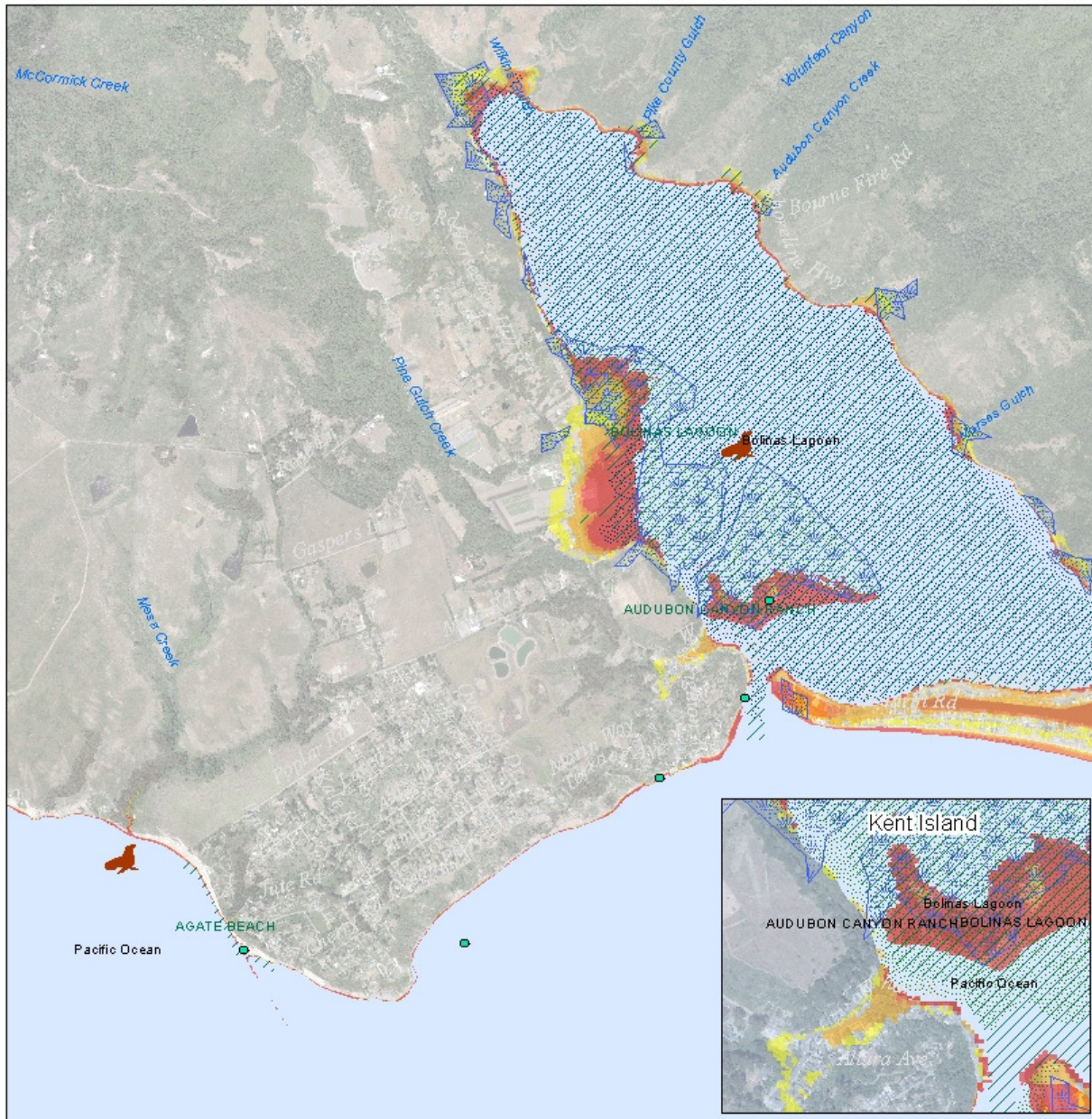
Source: Marin Map, Our Coast Our Future, Department of Public Works
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

Date: 7/29/2015



MAPS

Map 37. Bolinas Vulnerable Natural Resources



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|-----------------|
| 1 | 10" SLR + Annual Storm | ● | Natural Resource Assets | 🦅 | Seabird Colony |
| 2 | 10" SLR + 20-year Storm | ▨ | Park Parcels | 🦊 | Mammal Haul Out |
| 3 | 20" SLR + 20-year Storm | ▨ | Wetland | | |
| 4 | 40" SLR + 20-year Storm | ▨ | Estuary | | |
| 5 | 80" SLR + 100-year Storm | ▨ | Marsh | | |

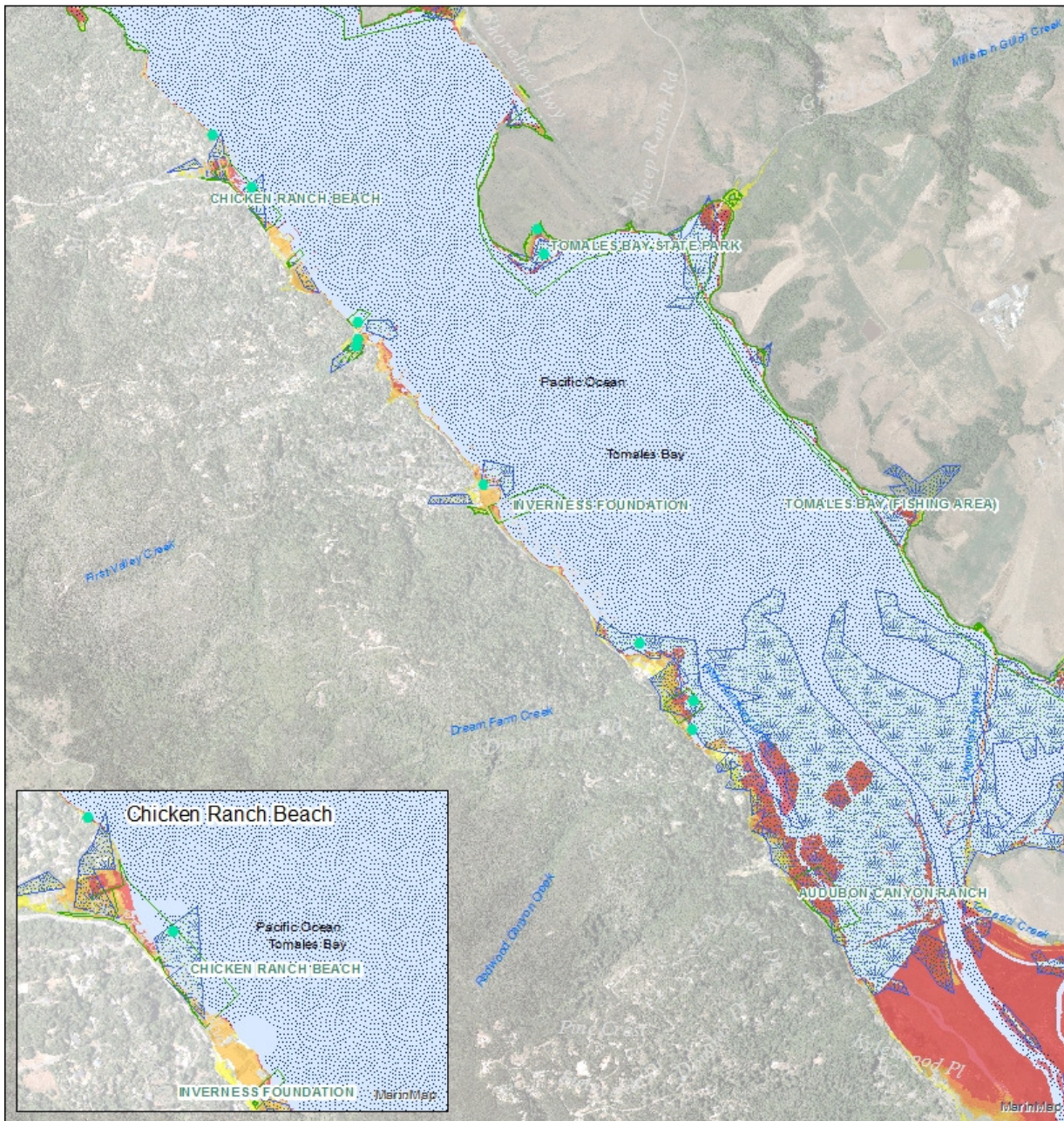
Source: Marin Map, Our Coast Our Future, Department of Public Works
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here, make no warranties of the accuracy or completeness of maps and data. Maps are presented as a guide only and do not constitute a liability. Localities could be in need to be examined. Comments are prohibited.

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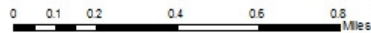
MAPS

Map 38. Inverness Vulnerable Natural Resources



Scenarios

- | | | | |
|---|--------------------------|---------------------------|---------|
| 1 | 10" SLR + Annual Storm | ● Natural Resource Assets | Wetland |
| 2 | 10" SLR + 20-year Storm | ▭ Parks | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 Seabird Colony | Marsh |
| 4 | 40" SLR + 20-year Storm | 🐾 Mammal Haul Out | |
| 5 | 80" SLR + 100-year Storm | | |



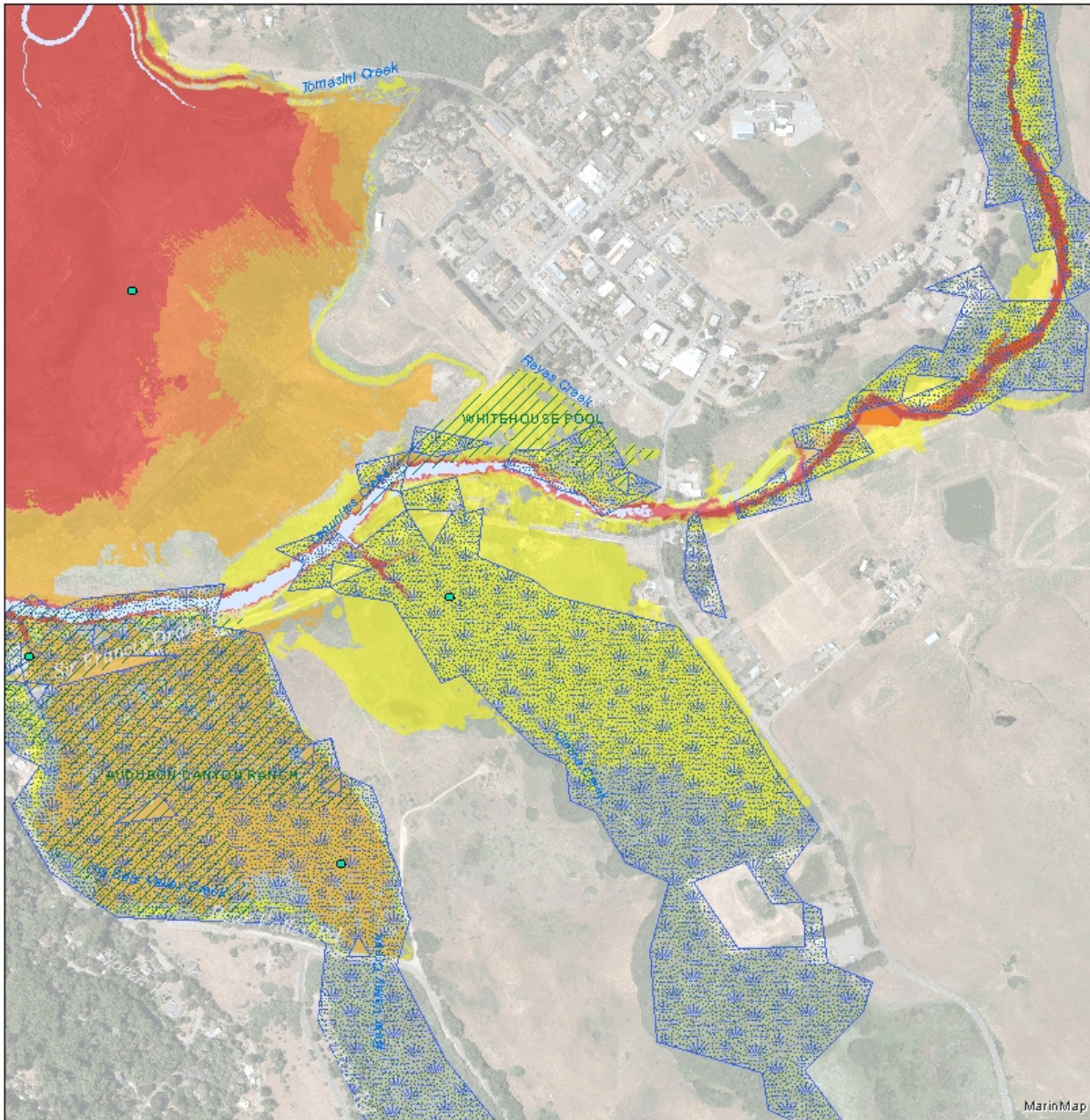
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

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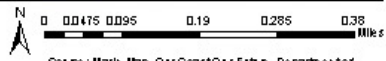
MAPS

Map 39. Point Reyes Station Vulnerable Natural Resources



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|-----------------|
| 1 | 10" SLR + Annual Storm | ● | Natural Resource Assets | 🦅 | Seabird Colony |
| 2 | 10" SLR + 20-year Storm | ▨ | Park Parcels | 🐾 | Mammal Haul Out |
| 3 | 20" SLR + 20-year Storm | ▨ | Wetland | | |
| 4 | 40" SLR + 20-year Storm | ▨ | Estuary | | |
| 5 | 80" SLR + 100-year Storm | ▨ | Marsh | | |



Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 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 make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to change without notice. Local site conditions must be examined. Commercial use is prohibited.

Date: 7/29/2015



MAPS

Map 40. East Shore Vulnerable Natural Resources



Scenarios

- 1 10" SLR + Annual Storm
 - 2 10" SLR + 20-year Storm
 - 3 20" SLR + 20-year Storm
 - 4 40" SLR + 20-year Storm
 - 5 80" SLR + 100-year Storm
- Natural Resource Assets
 - Park Parcels
 - Wetland
 - Estuary
 - Marsh

- Seabird Colony
- Mammal Haul Out



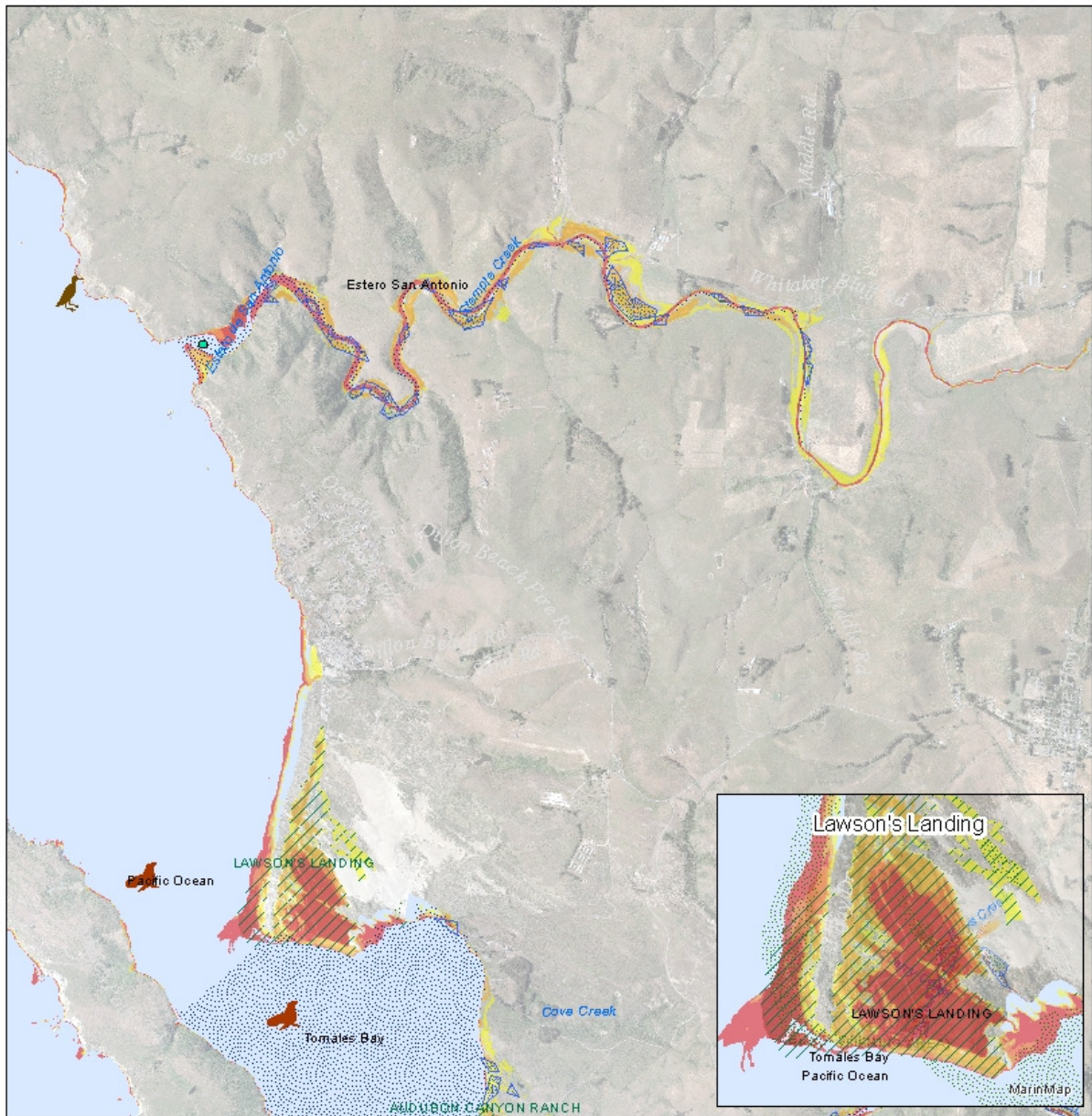
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Localized conditions may not be examined. Commercial use is prohibited.

Date: 7/29/2015



MAPS

Map 41. Dillon Beach Vulnerable Natural Resource Assets



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|-----------------|
| 1 | 10" SLR + Annual Storm | ● | Natural Resource Assets | 🦅 | Seabird Colony |
| 2 | 10" SLR + 20-year Storm | ▨ | Park Parcels | 🐾 | Mammal Haul Out |
| 3 | 20" SLR + 20-year Storm | ▨ | Wetland | | |
| 4 | 40" SLR + 20-year Storm | ▨ | Estuary | | |
| 5 | 80" SLR + 100-year Storm | ▨ | Marsh | | |

0 0.015 0.15 0.3 0.45 0.6 Miles

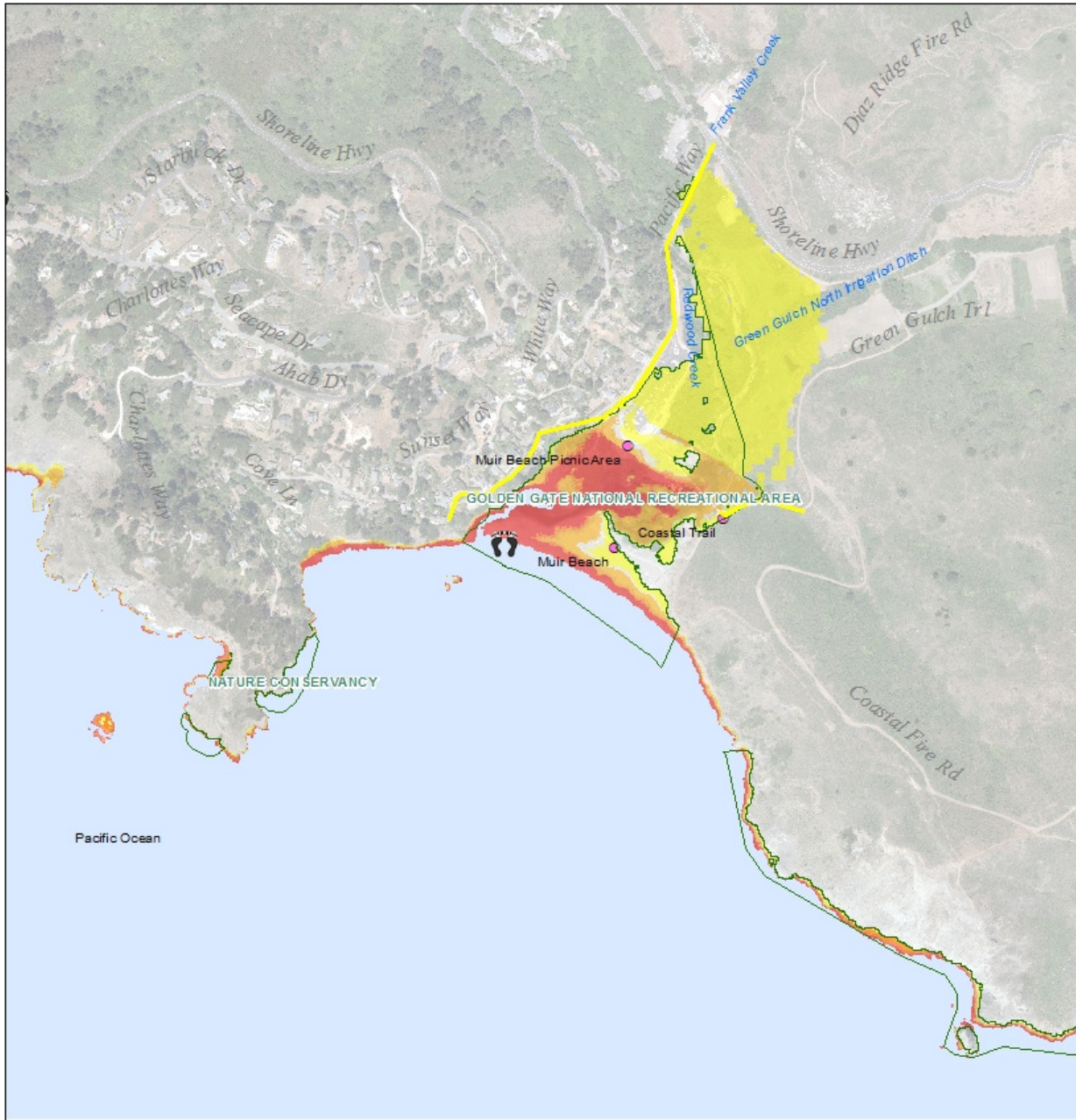
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazards or areas and vulnerable assets. Marin County and data providers here do not make any warranties of the accuracy or completeness of maps and data. Maps are representative and subject to future revisions. Local site conditions must be examined. Commercial use is prohibited.

Date: 7/29/2015



MAPS

Map 42. Muir Beach Vulnerable Recreation Assets



Scenarios

- | | | |
|---|--|--------------------------|
| 1 | | 10" SLR + Annual Storm |
| 2 | | 10" SLR + 20-year Storm |
| 3 | | 20" SLR + 20-year Storm |
| 4 | | 40" SLR + 20-year Storm |
| 5 | | 80" SLR + 100-year Storm |

Exposed Roads

- | | |
|--|--------------------------|
| | 10" SLR + Annual Storm |
| | 10" SLR + 20-year Storm |
| | 20" SLR + 20-year Storm |
| | 40" SLR + 20-year Storm |
| | 80" SLR + 100-year Storm |

- Recreation Asset
- Public Boat Launch
- Public Fishing Pier
- Public Access Point
- Public Port
- Public Marina

0 0.02250.045 0.09 0.135 0.18 Miles
 Sources: Our Coast Our Future, Marin Map, California Coastal Commission

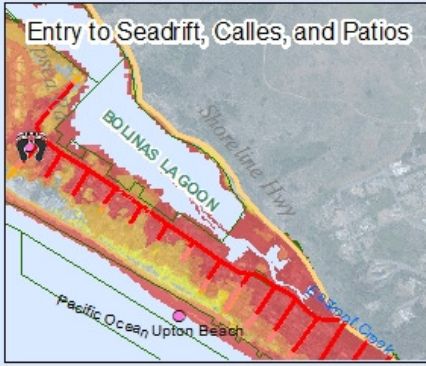
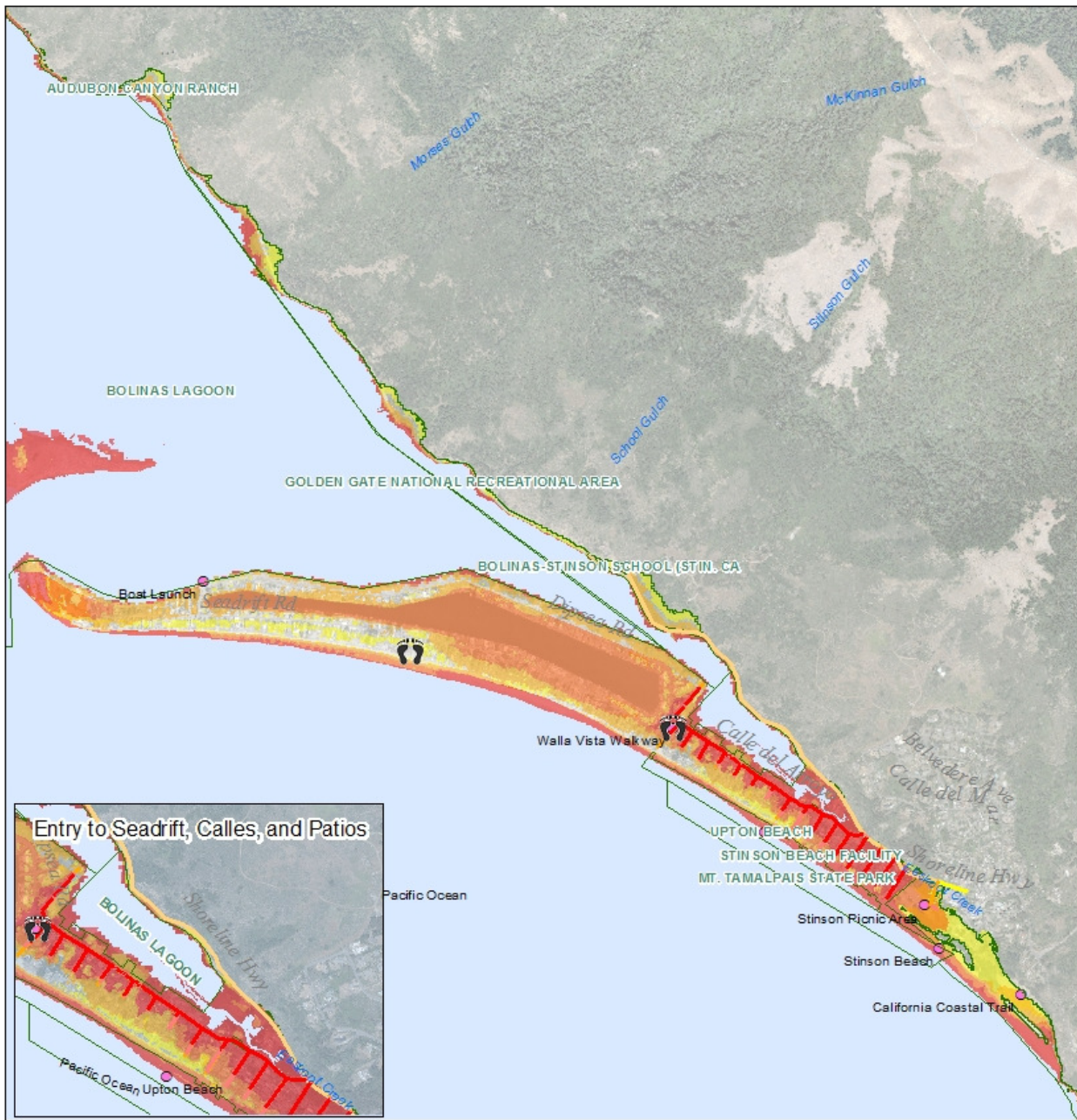
Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future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

Date: 10/19/2015



MAPS

Map 43. Stinson Beach Vulnerable Recreational Assets



Scenarios

- | | | |
|---|--------------------------|--------------------------|
| 1 | 10" SLR + Annual Storm | 10" SLR + Annual Storm |
| 2 | 10" SLR + 20-year Storm | 10" SLR + 20-year Storm |
| 3 | 20" SLR + 20-year Storm | 20" SLR + 20-year Storm |
| 4 | 40" SLR + 20-year Storm | 40" SLR + 20-year Storm |
| 5 | 80" SLR + 100-year Storm | 80" SLR + 100-year Storm |

Exposed Roads

- | |
|--------------------------|
| 10" SLR + Annual Storm |
| 10" SLR + 20-year Storm |
| 20" SLR + 20-year Storm |
| 40" SLR + 20-year Storm |
| 80" SLR + 100-year Storm |

- Recreation Asset
- Public Fishing Pier
- Public Access Point
- Public Port
- Public Marina
- Public Boat Launch

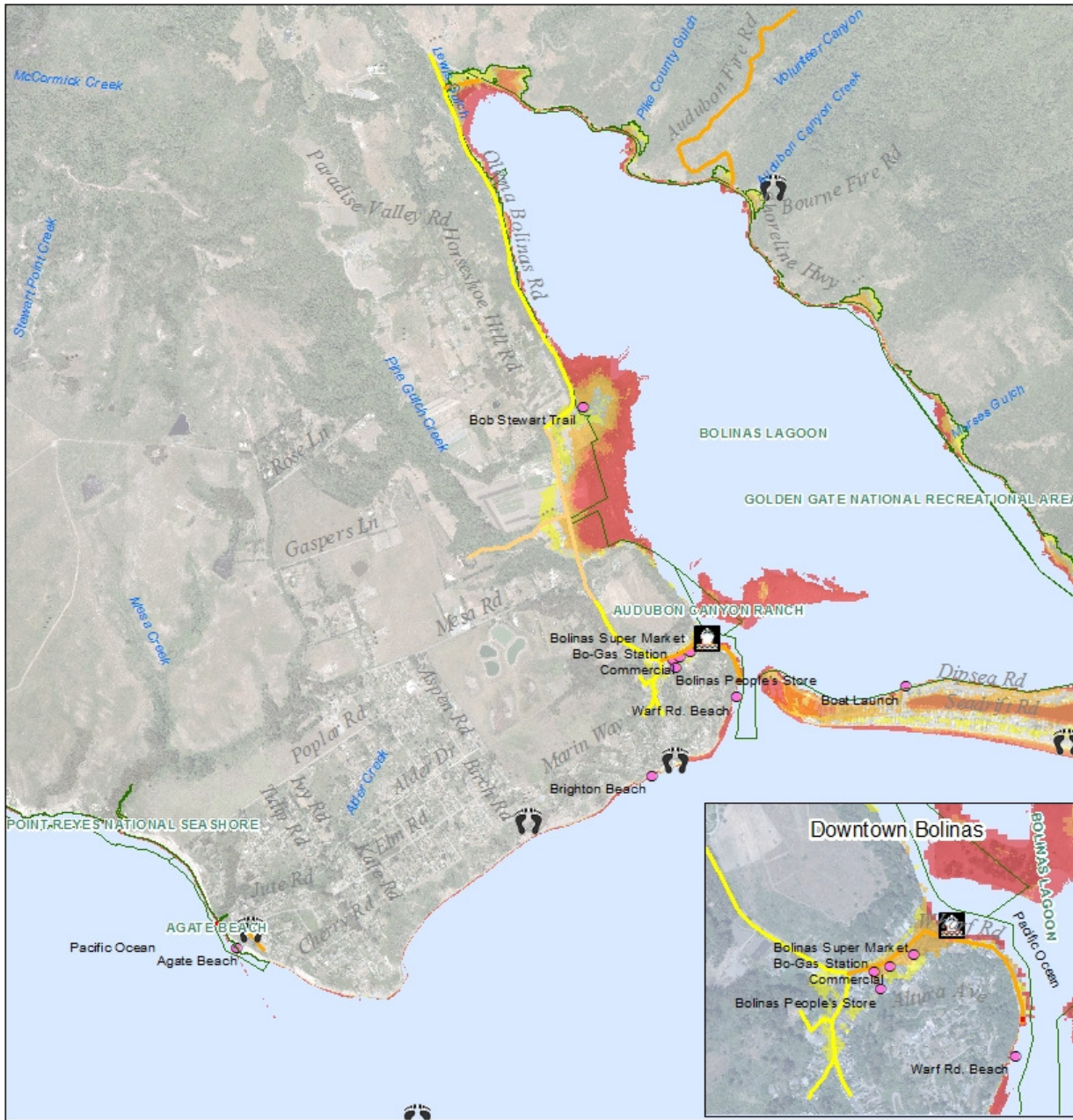
Scale: 0 0.05 0.1 0.2 0.3 0.4 Miles
 Source: Our Coast Our Future, Marin Map, California Coastal Commission

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 provided 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.

Date: 10/19/2015

MAPS

Map 44. Bolinas Vulnerable Recreational Assets



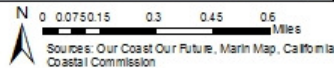
Scenarios

- | | | |
|---|--------------------------|--------------------------|
| 1 | 10" SLR + Annual Storm | 10" SLR + Annual Storm |
| 2 | 10" SLR + 20-year Storm | 10" SLR + 20-year Storm |
| 3 | 20" SLR + 20-year Storm | 20" SLR + 20-year Storm |
| 4 | 40" SLR + 20-year Storm | 40" SLR + 20-year Storm |
| 5 | 80" SLR + 100-year Storm | 80" SLR + 100-year Storm |

Exposed Roads

- | | | | | |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| 10" SLR + Annual Storm | 10" SLR + 20-year Storm | 20" SLR + 20-year Storm | 40" SLR + 20-year Storm | 80" SLR + 100-year Storm |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|

- Recreation Asset
- Public Fishing Pier
- Public Access Point
- Public Port
- Public Marina
- Public Boat Launch



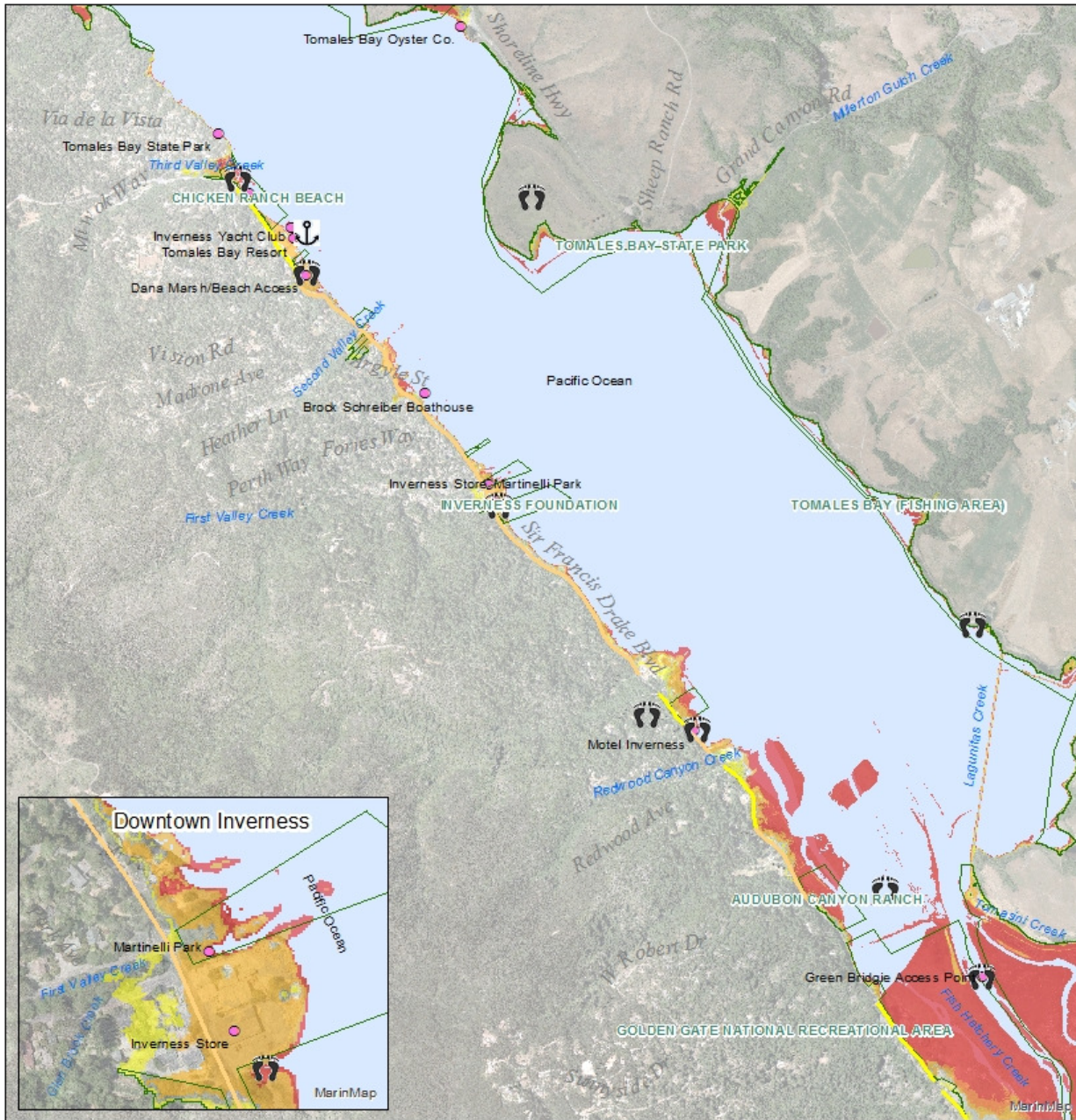
Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers herein, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future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

Date: 10/19/2015



MAPS

Map 45. Inverness Vulnerable Recreational Assets



Scenarios

- | | | |
|---|--------------------------|--------------------------|
| 1 | 10" SLR + Annual Storm | 10" SLR + Annual Storm |
| 2 | 10" SLR + 20-year Storm | 10" SLR + 20-year Storm |
| 3 | 20" SLR + 20-year Storm | 20" SLR + 20-year Storm |
| 4 | 40" SLR + 20-year Storm | 40" SLR + 20-year Storm |
| 5 | 80" SLR + 100-year Storm | 80" SLR + 100-year Storm |

Exposed Roads

- Recreation Asset
- Public Boat Launch
- Public Fishing Pier
- Public Access Point
- Public Port
- Public Marina

0 0.075 0.15 0.3 0.45 0.6 Miles
 Sources: Our Coast Our Future, Marin Map, California Coastal Commission

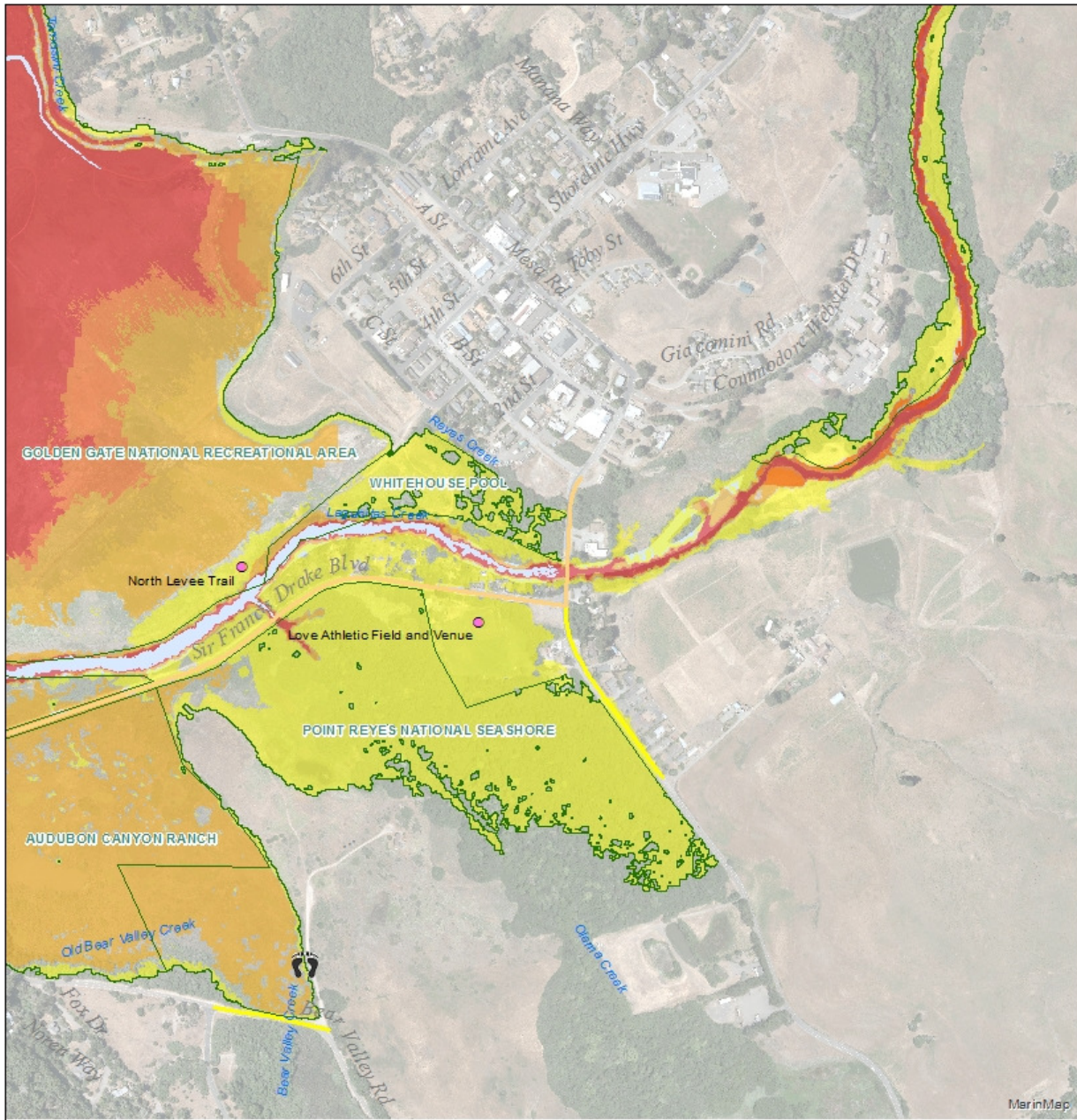
Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data provided here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future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

Date: 11/2/2015



MAPS

Map 46. Point Reyes Vulnerable Recreational Assets



Scenarios

- 1 10" SLR + Annual Storm
- 2 10" SLR + 20-year Storm
- 3 20" SLR + 20-year Storm
- 4 40" SLR + 20-year Storm
- 5 80" SLR + 100-year Storm

Exposed Roads

- 10" SLR + Annual Storm
- 10" SLR + 20-year Storm
- 20" SLR + 20-year Storm
- 40" SLR + 20-year Storm
- 80" SLR + 100-year Storm

- Recreation Asset
- Public Boat Launch
- Public Fishing Pier
- Public Access Point
- Public Port
- Public Marina

0 0.02750055 0.11 0.165 0.22 Miles
 Sources: Our Coast Our Future, Marin Map, California Coastal Commission

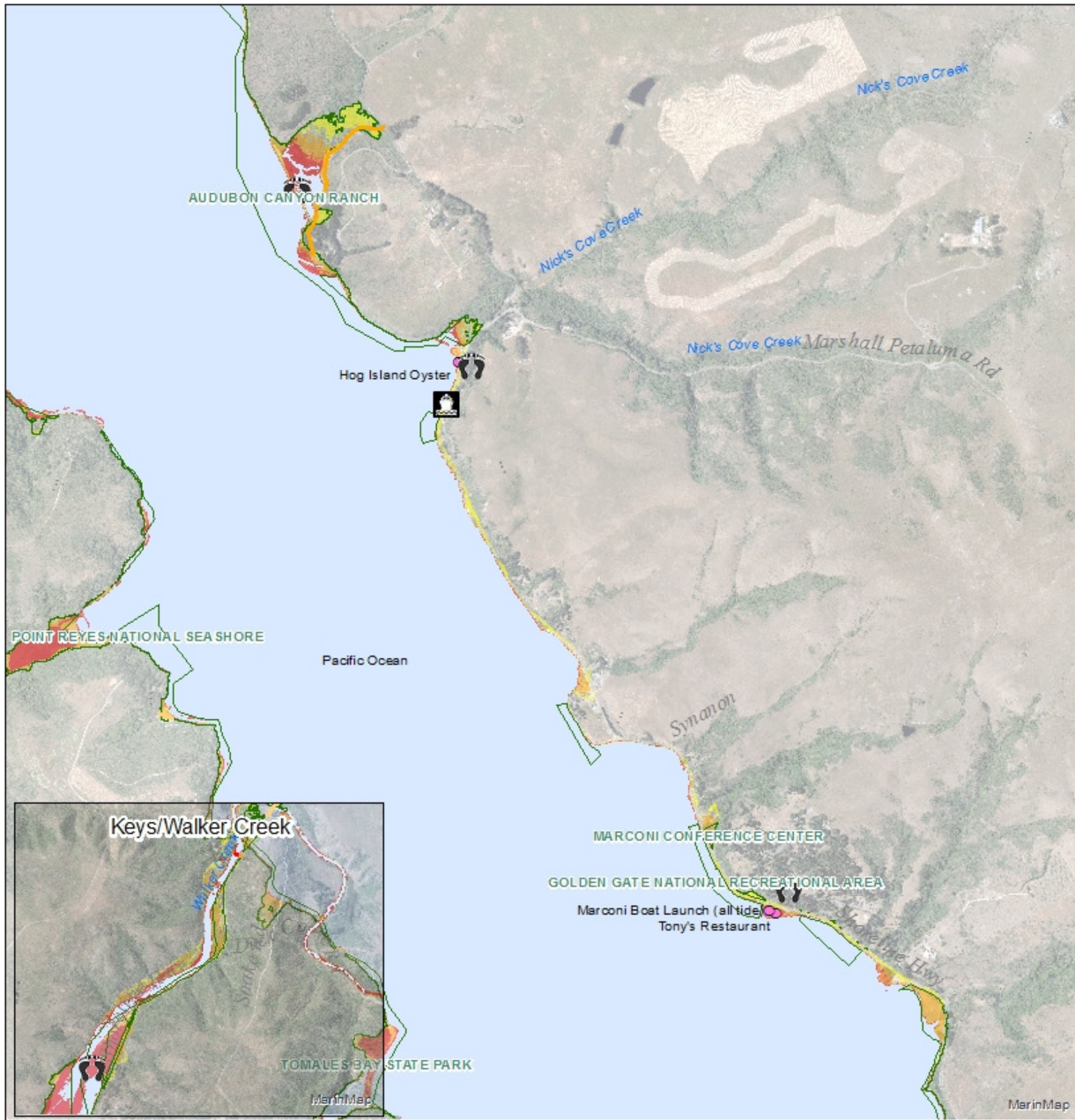
Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future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

Date: 10/19/2015



MAPS

Map 47. East Shore Vulnerable Recreational Assets



Scenarios

- | | | | |
|---|--------------------------|---------------|--------------------------|
| 1 | 10" SLR + Annual Storm | Exposed Roads | 10" SLR + Annual Storm |
| 2 | 10" SLR + 20-year Storm | Exposed Roads | 10" SLR + 20-year Storm |
| 3 | 20" SLR + 20-year Storm | Exposed Roads | 20" SLR + 20-year Storm |
| 4 | 40" SLR + 20-year Storm | Exposed Roads | 40" SLR + 20-year Storm |
| 5 | 80" SLR + 100-year Storm | Exposed Roads | 80" SLR + 100-year Storm |

- Recreation Asset
- Public Fishing Pier
- Public Access Point
- Public Port
- Public Marina
- Public Boat Launch

0 0.05 0.1 0.2 0.3 0.4 Miles
 Sources: Our Coast Our Future, Marin Map, California Coastal Commission

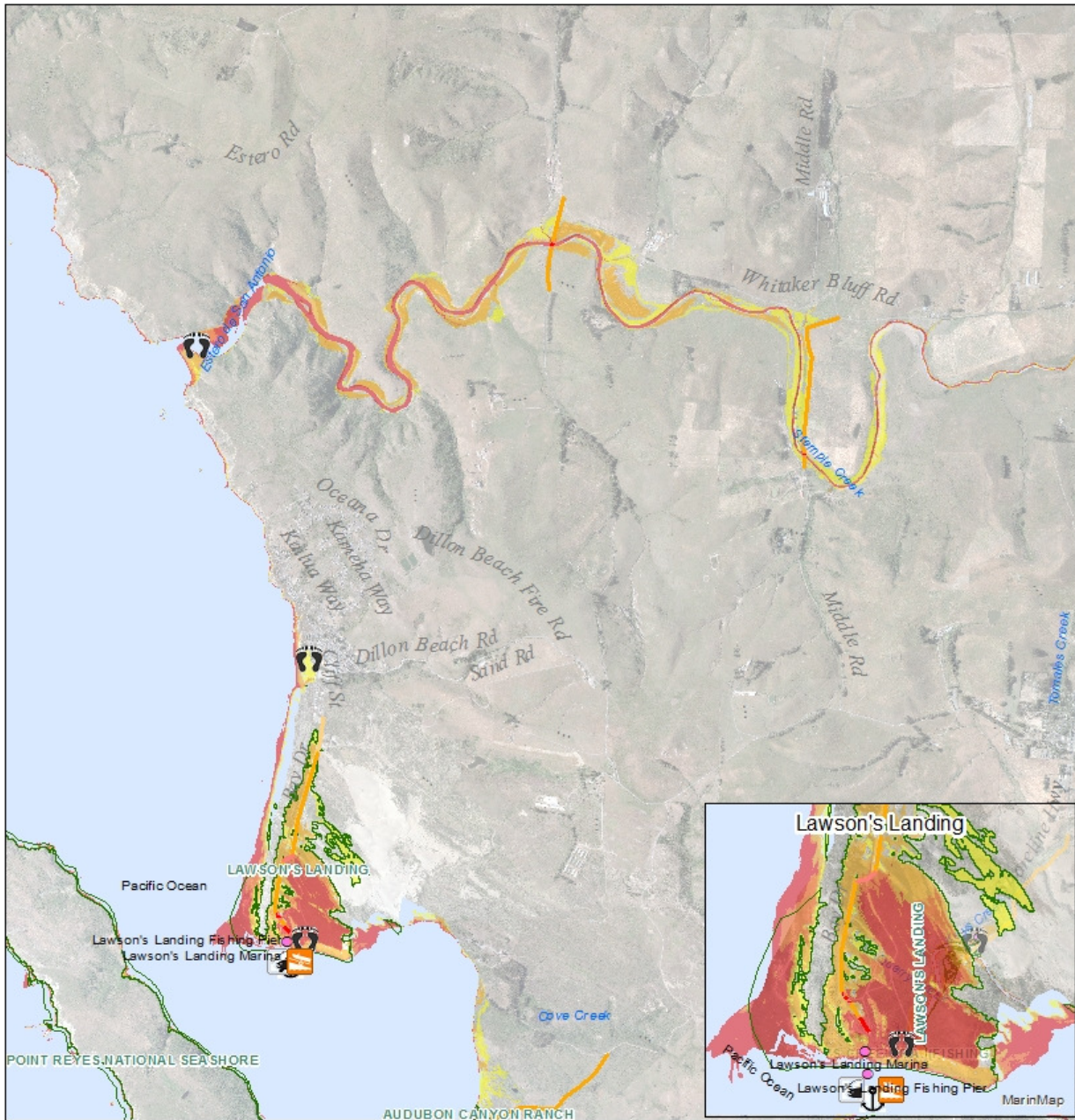
Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers herein, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future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

Date: 10/19/2015



MAPS

Map 48: Dillon Beach Vulnerable Recreation Assets



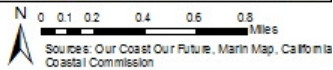
Scenarios

- | | | |
|---|--------------------------|--------------------------|
| 1 | 10" SLR + Annual Storm | 10" SLR + Annual Storm |
| 2 | 10" SLR + 20-year Storm | 10" SLR + 20-year Storm |
| 3 | 20" SLR + 20-year Storm | 20" SLR + 20-year Storm |
| 4 | 40" SLR + 20-year Storm | 40" SLR + 20-year Storm |
| 5 | 80" SLR + 100-year Storm | 80" SLR + 100-year Storm |

Exposed Roads

- | | | | | |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| 10" SLR + Annual Storm | 10" SLR + 20-year Storm | 20" SLR + 20-year Storm | 40" SLR + 20-year Storm | 80" SLR + 100-year Storm |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|

- Recreation Asset
- Public Fishing Pier
- Public Access Point
- Public Port
- Public Marina
- Public Boat Launch



Sources: Our Coast Our Future, Marin Map, California Coastal Commission
 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.

Date: 10/19/2015



MAPS

Map 49: Stinson Beach Vulnerable Emergency Service Assets



**Exposed roads w/
evacuation routes**

- Scenario 1 ▲ Emergency Services
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5



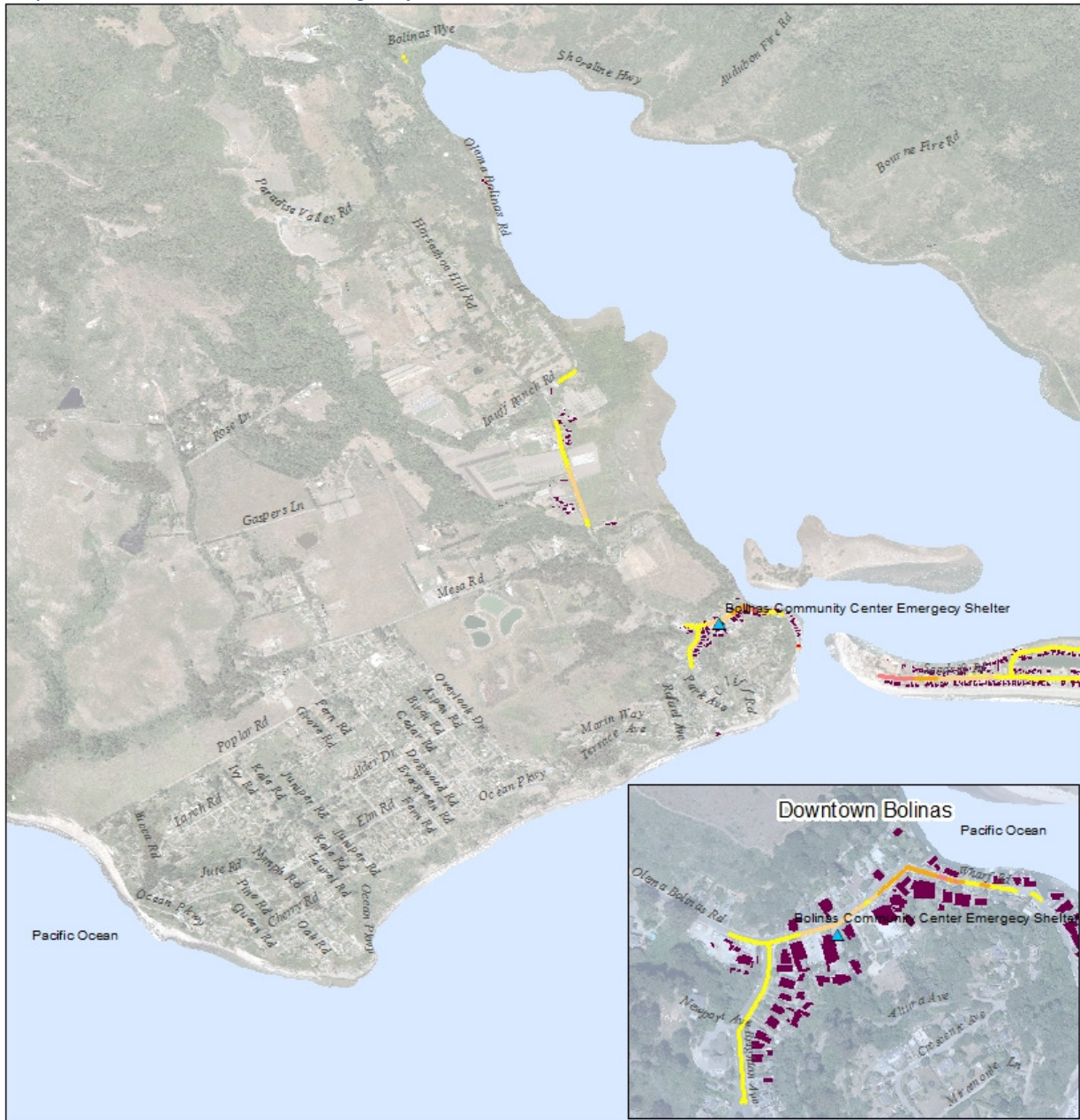
Sources: Our Coast Our Future Flood Map (2014), Main Map, Marin County Tsunami Annex 01/15
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties 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.

Date: 9/30/2015



MAPS

Map 50: Bolinas Vulnerable Emergency Service Assets



**Exposed roads w/
evacuation routes**

- Scenario 1 ▲ Emergency Services
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5

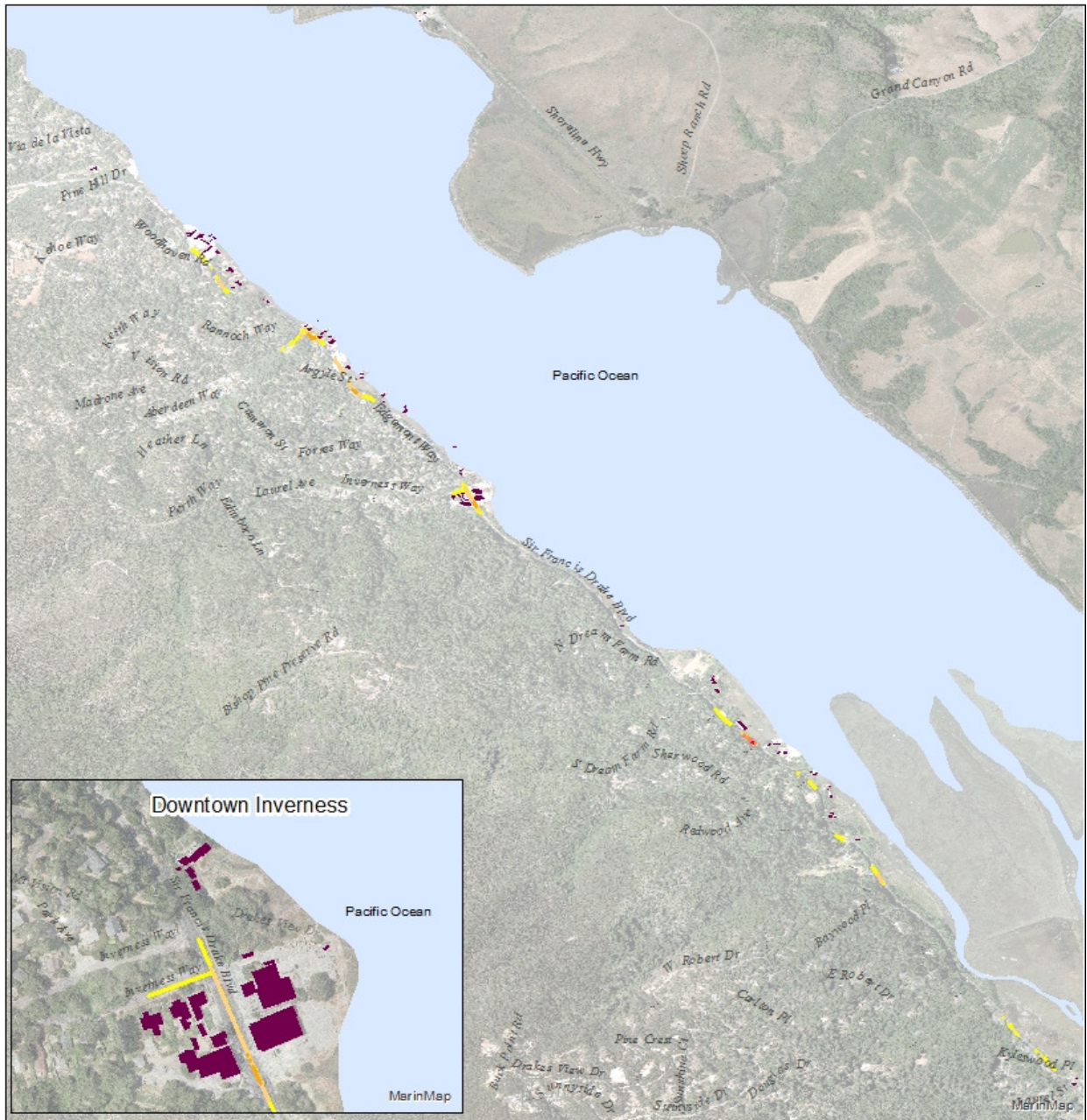
Sources: Our Coast Our Future Flood Map (2014),
 Main Map, Marin County Tsunami Annex 01/15
 Disclaimer: Vulnerability Assessment maps, tables,
 etc. can be used as a resource to help identify
 potential hazardous areas and vulnerable assets.
 Marin County, and data providers here in, make no
 warranties 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.

Date: 9/30/2015



MAPS

Map 51: Inverness Vulnerable Emergency Service Assets



**Exposed roads w/
evacuation routes**

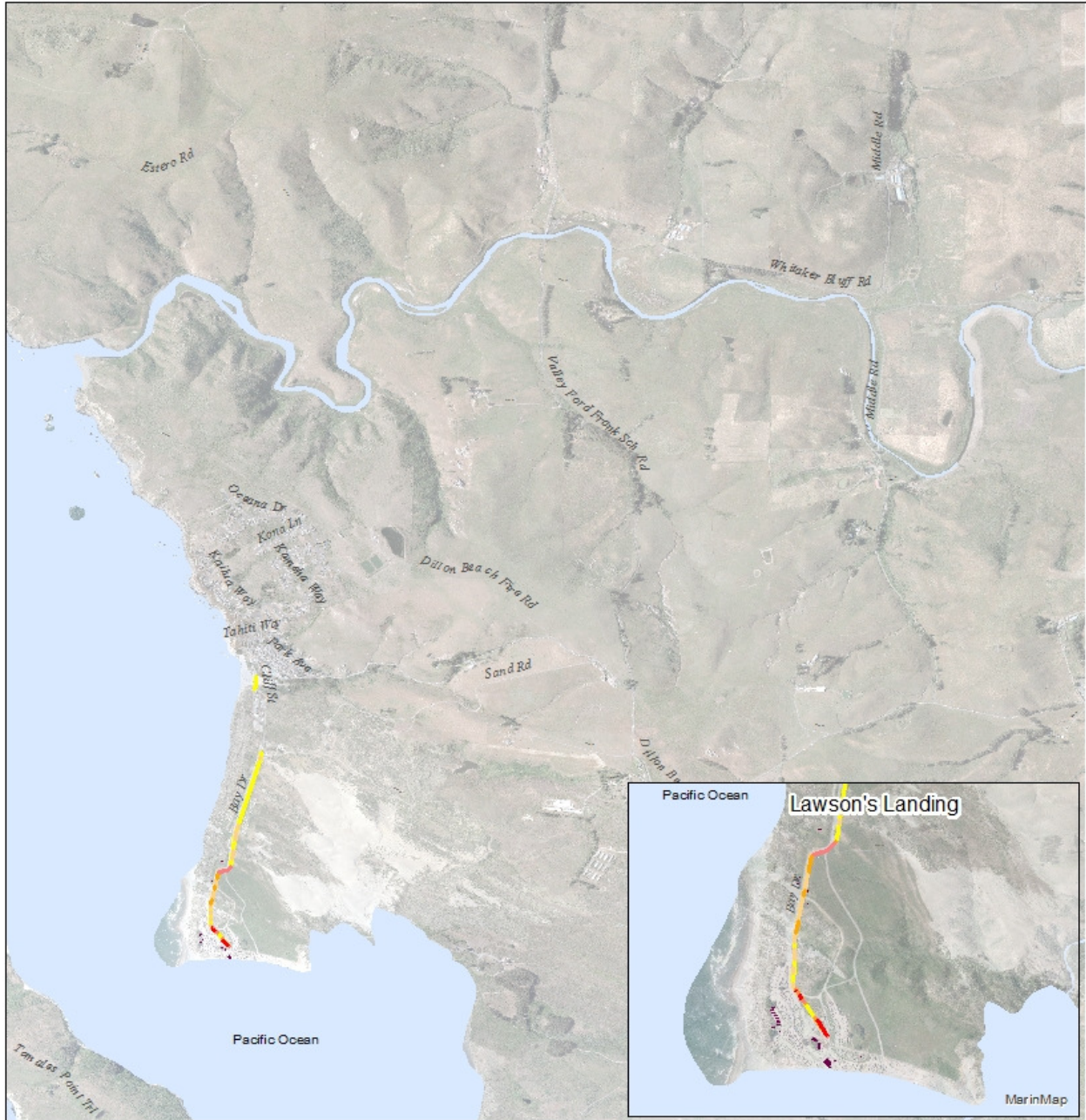
- Scenario 1 ▲ Emergency Services
- Scenario 2 Buildings
- Scenario 3
- Scenario 4
- Scenario 5

Sources: Our Coast Our Future Flood Map (2014),
 MarinMap, Marin County Tsunami Annex 01/15
 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.

Date: 11/2/2015

MAPS

Map 52. Dillon Beach Vulnerable Emergency Service Assets



**Exposed roads w/
evacuation routes**

- Scenario 1 ▲ Emergency Services
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5

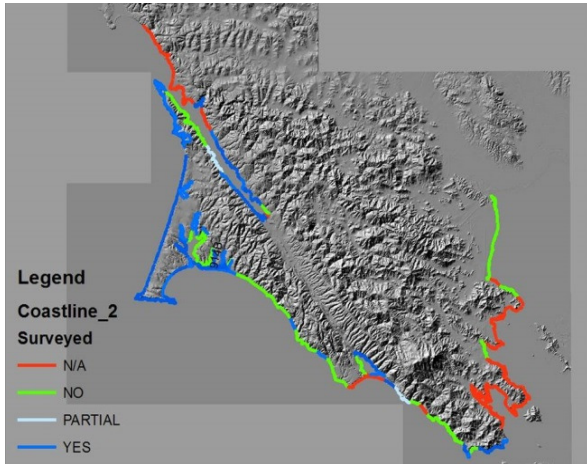


Source: Our Coast Our Future Flood Map (2014), Marin Map, Marin County Tsunami Annex 01/15
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties 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.

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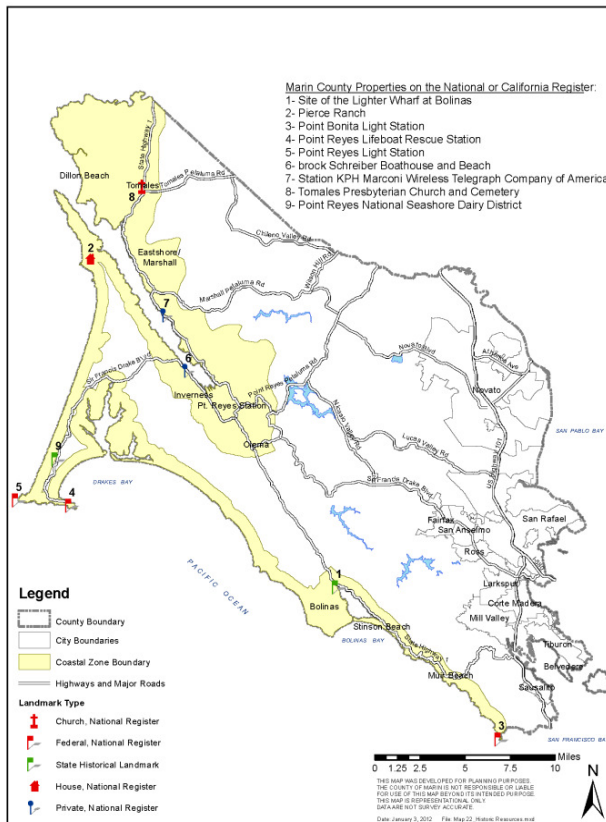
MAPS

Map 53. Archaeological Surveying in Marin County



Source: Anthropological Studies Center, 2015

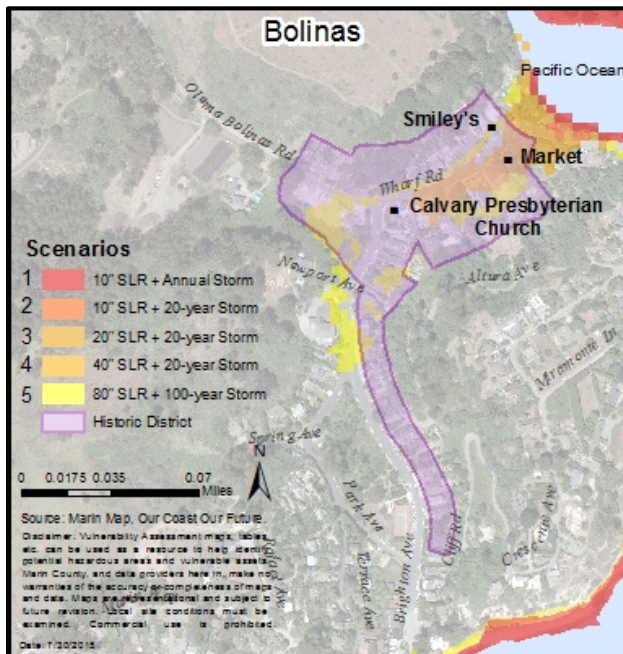
Map 54. Historic Resources



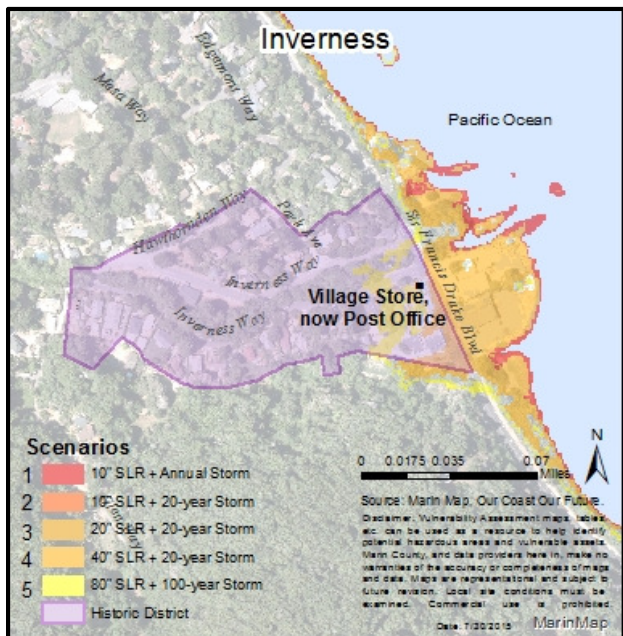
Credit: Marin County Local Coastal Program Land Use Plan Proposed Amendments, 2013

MAPS

Map 55. Bolinas Historic District

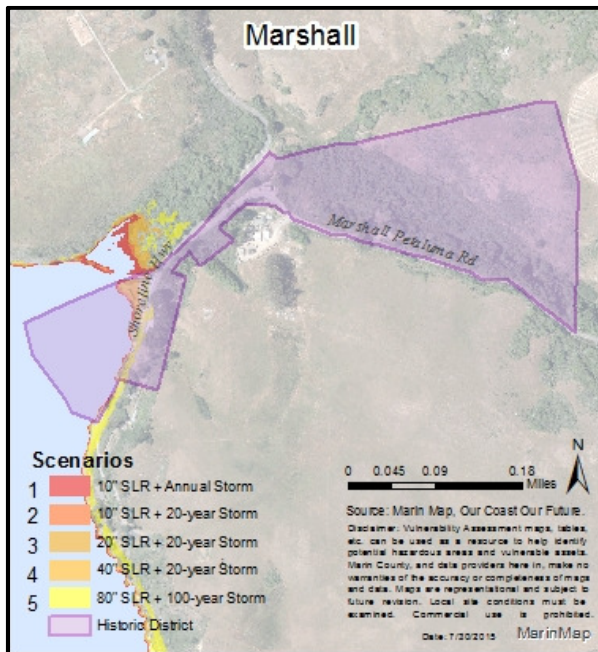


Map 56. Inverness Historic District

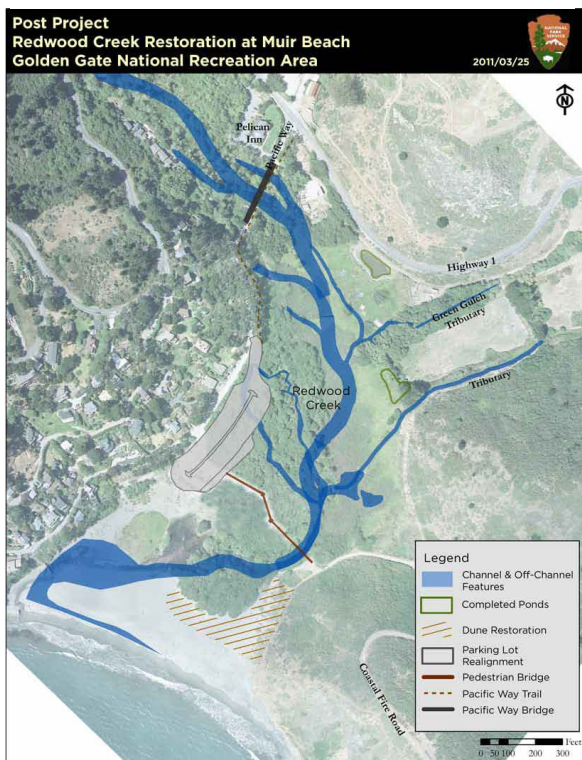


MAPS

Map 57. Marshall Historic District



Map 60. Muir Beach Restoration Project



Source: NPS, 2011

MAPS

Map 61. Muir Beach Vulnerable Developed Assets



Exposed Roads

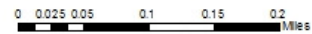
- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

* Roads may also have utility pipes underneath, are used for recreation, and serve as emergency access in some locations.

- Agricultural Parcels
- Aquaculture
- Buildings
- Parcels
- Parkland
- Historic District

- Commercial
- Education
- Emergency
- ▲ Food
- ▲ Government Service
- Historic
- Institutional
- Recreation
- Residential
- Transportation
- ▲ Utilities

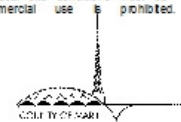
- Boat Launch
- Fishing Pier
- Access Point
- Pot
- Marina



Source: Marin Map, Our Coast Our Future, CA Coastal Commission

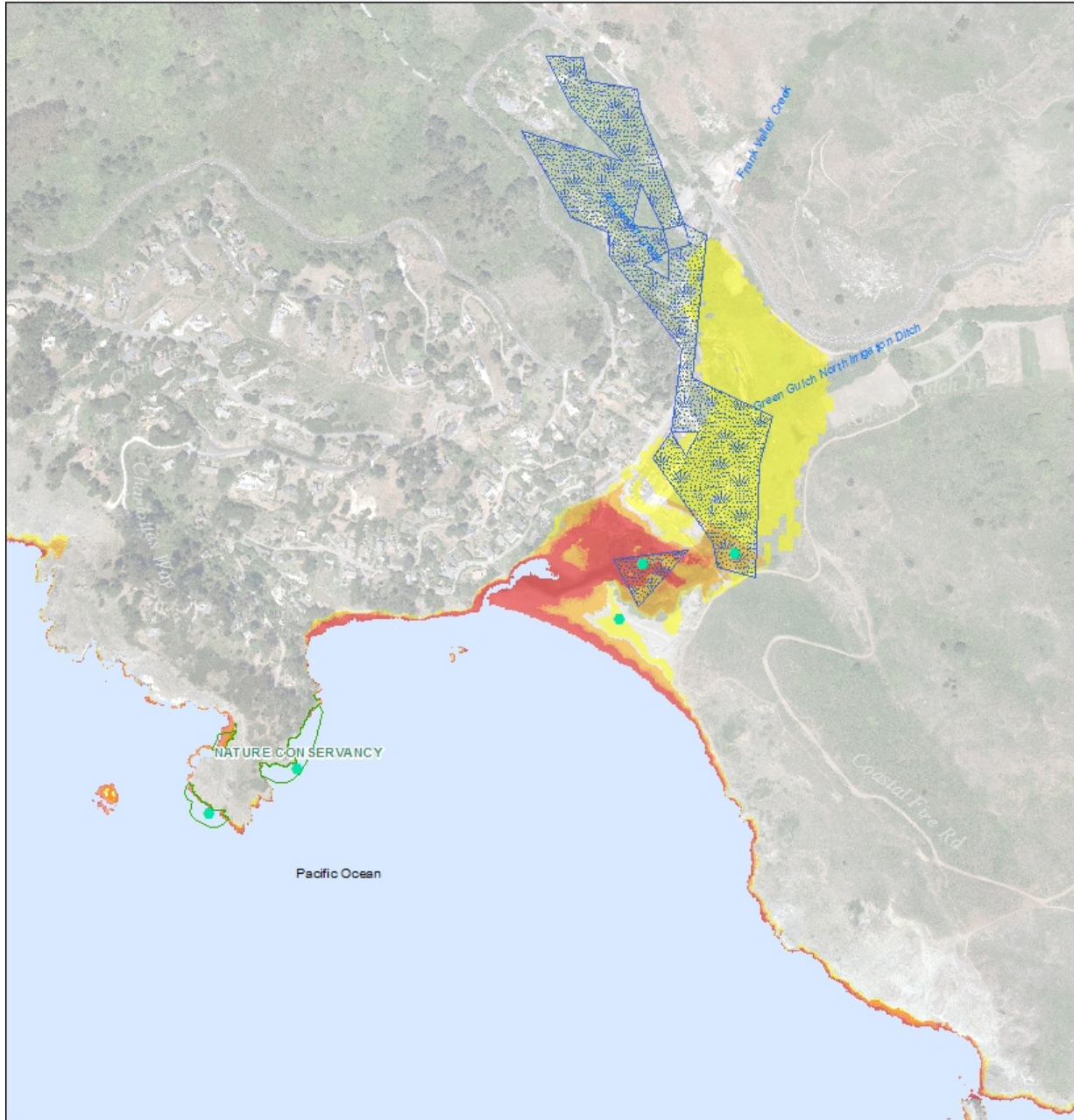
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Date: 10/19/2015



MAPS

Map 62. Muir Beach Vulnerable Natural Resource Assets



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|---------|
| 1 | 10" SLR + Annual Storm | ● | Natural Resource Assets | ▨ | Wetland |
| 2 | 10" SLR + 20-year Storm | □ | Parks | ▨ | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 | Seabird Colony | ▨ | Marsh |
| 4 | 40" SLR + 20-year Storm | 🐾 | Mammal Haul Out | | |
| 5 | 80" SLR + 100-year Storm | | | | |

0 0.03 0.06 0.12 0.18 0.24 Miles



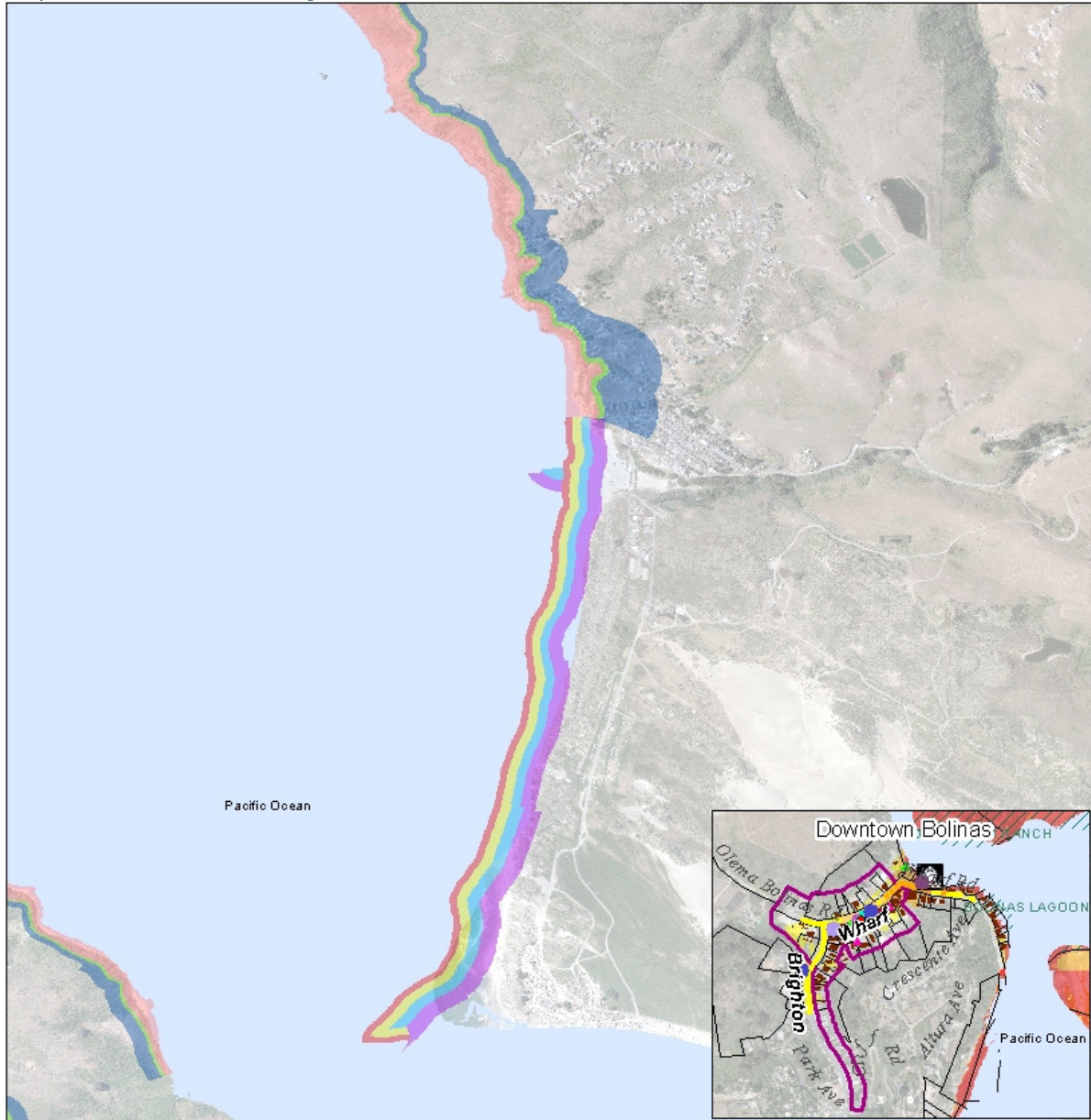
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

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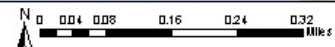


MAPS

Map 63. Muir Beach Buildings Vulnerable to Accelerated Erosion



Shoreline Erosion	Bluff Erosion
■ Scenarios 1 & 2	■ Scenarios 1 & 2
■ Scenario 3	■ Scenario 3
■ Scenario 4	■ Scenario 5
■ Scenario 5	

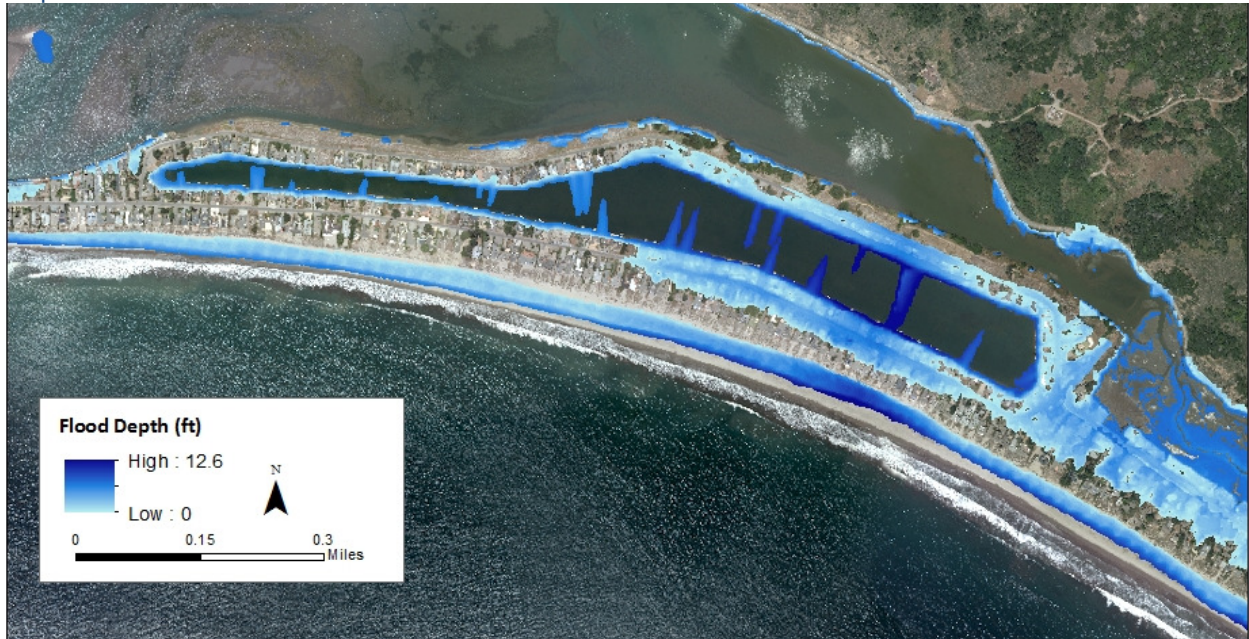


Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

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MAPS

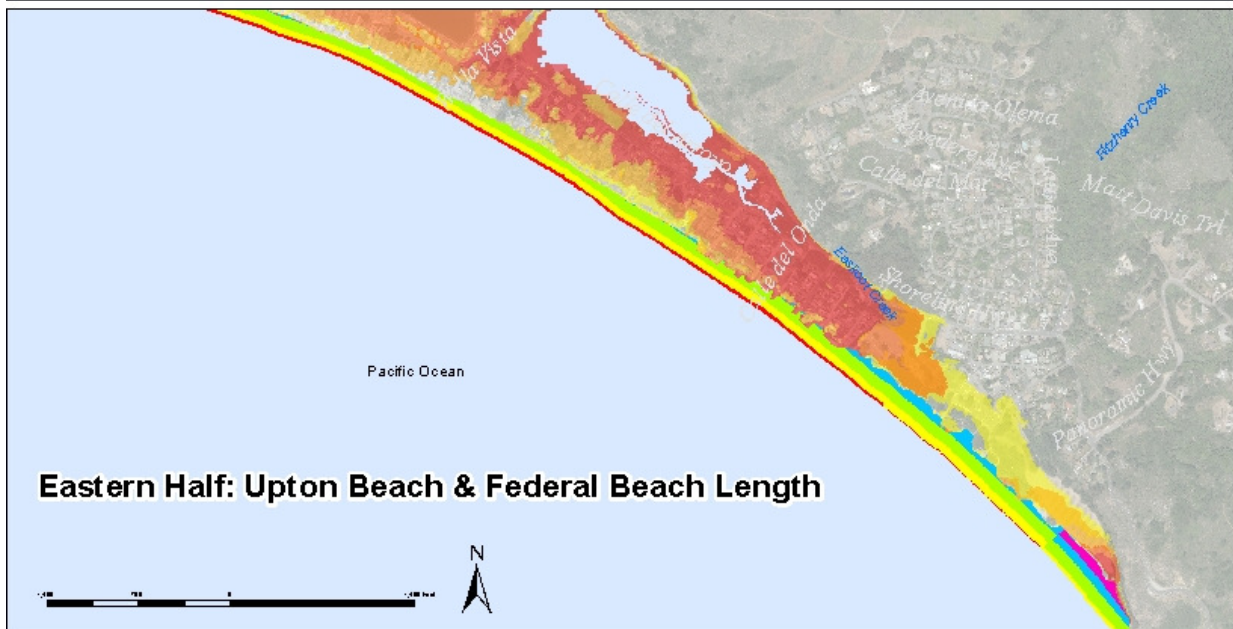
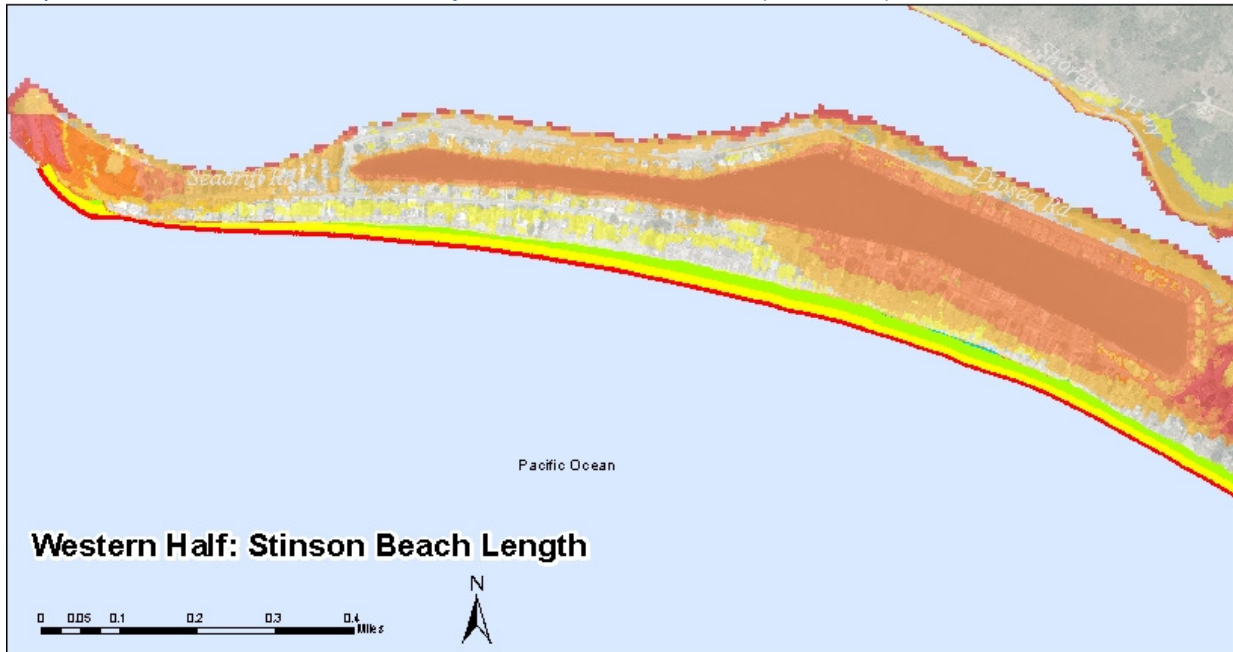
Map 64. Stinson Beach at 20 inches Sea Level Rise & 20-Year Storm



Source: OCOF Flood Depth Layer

MAPS

Map 65. Stinson Beach Beach Loss by Sea Level Rise Amount (no storms)



Scenarios

- | | | |
|---|--------------------------|-------------------------------|
| 1 | 10" SLR + Annual Storm | Beach (around end of century) |
| 2 | 10" SLR + 20-year Storm | Beach Loss @ 80 inches SLR |
| 3 | 20" SLR + 20-year Storm | Beach Loss @ 40 inches SLR |
| 4 | 40" SLR + 20-year Storm | Beach Loss @ 20 inches SLR |
| 5 | 80" SLR + 100-year Storm | Beach Loss @ 10 inches SLR |

Source: Marin Map, Off Coast Oil Field, Department of Fish & Wildlife
 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 herein, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revisions. Local site conditions must be examined. Commercial use is prohibited.

Date: 9/1/2015



MAPS

Map 66. Easkoot Creek Flood Extent Under Storm and Downstream Sea level Rise in Bolinas Lagoon Scenarios (no direct coastal flooding)



Maximum inundation depths, December 2005 (lower)



Maximum inundation depths, December 2005 (upper)



Maximum inundation depths 100-yr event (lower)



Maximum inundation depths, 100-yr event (upper)



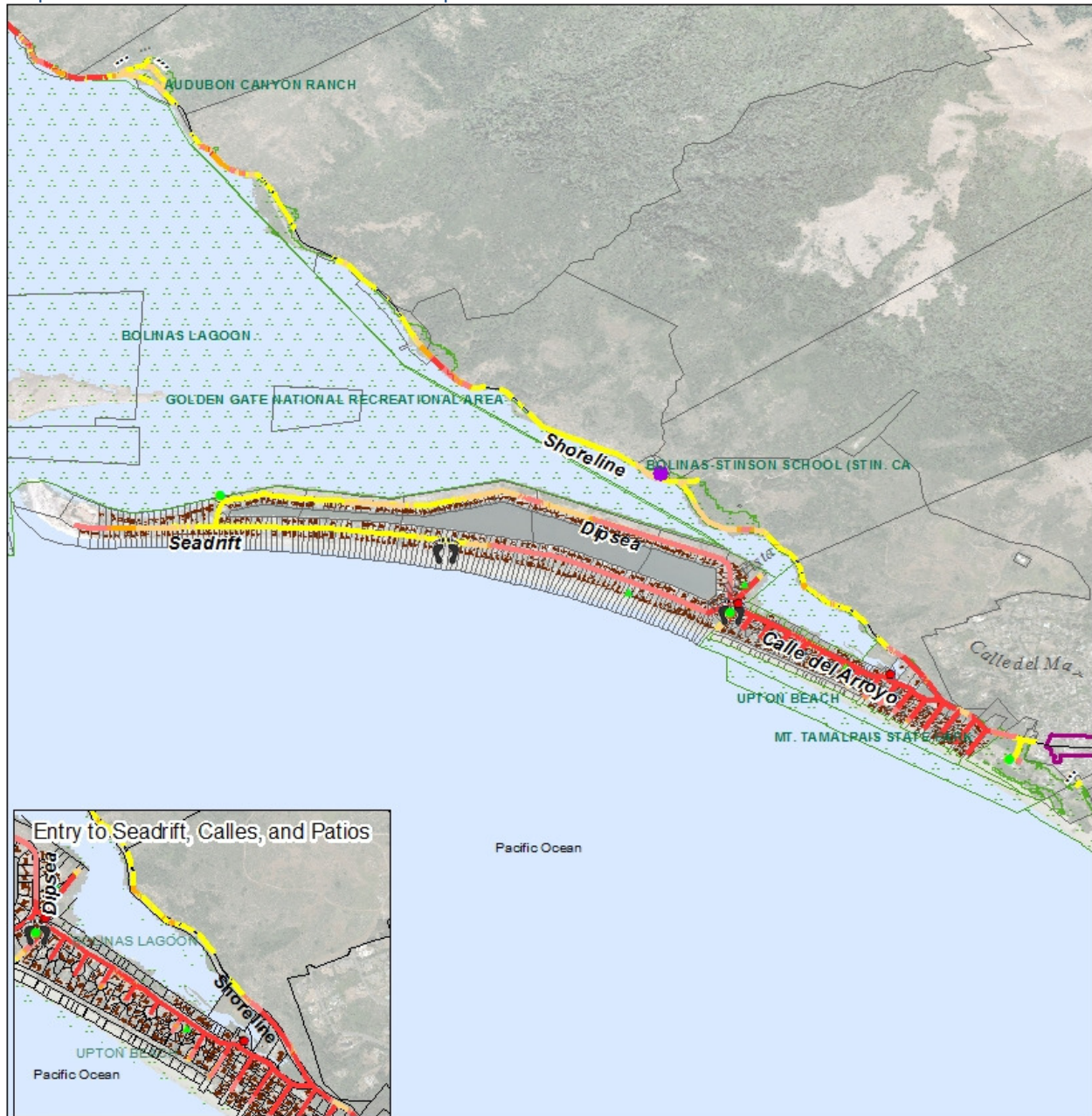
Maximum inundation depths, 200-yr event (lower)



Figure 20A. Maximum inundation depths during the December 2005 event using a MHW+1 plus 20% sea level rise from local boundary conditions (lower reach).

MAPS

Map 67. Stinson Beach Vulnerable Developed Assets



Exposed Roads

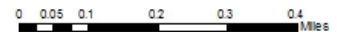
- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

- Agricultural Parcels
- Aquaculture
- Buildings
- Parcels
- Parkland
- Historic District

- Commercial
- Education
- Emergency
- Food
- Government Service
- Historic
- Institutional
- Recreation
- Residential
- Transportation
- Utilities

- Boat Launch
- Fishing Pier
- Access Point
- Port
- Marina

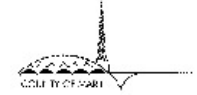
* Roads may also have utility pipes underneath, are used for recreation, and serve as emergency access in some locations.



Source: Marin Map, Our Coast Our Future, CA Coastal Commission

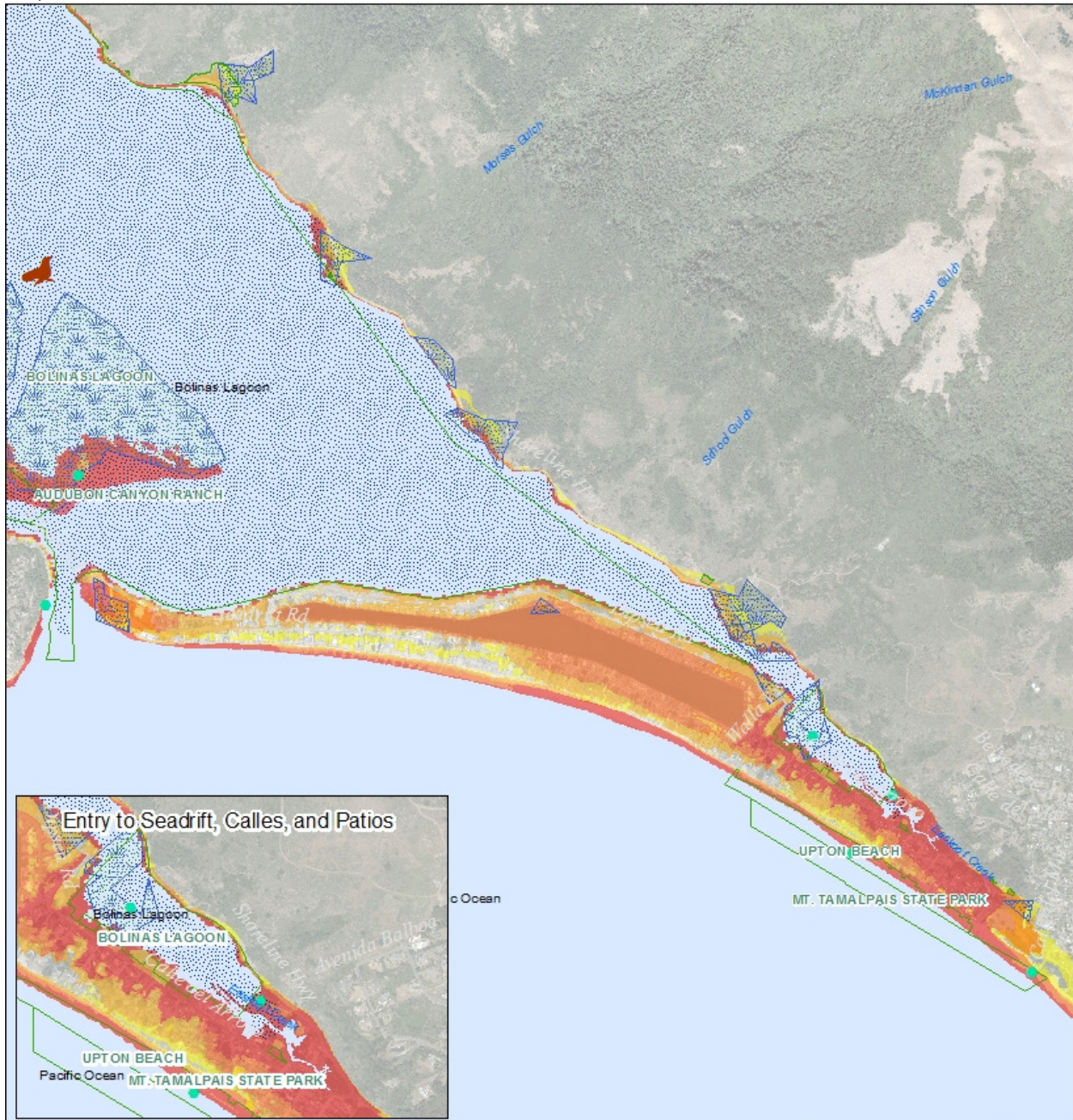
Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future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

Date: 10/19/2015



MAPS

Map 68. Stinson Beach Vulnerable Natural Resource Assets



Scenarios

- | | | | |
|---|--------------------------|---------------------------|---------|
| 1 | 10" SLR + Annual Storm | ● Natural Resource Assets | Wetland |
| 2 | 10" SLR + 20-year Storm | ▭ Parks | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 Seabird Colony | Marsh |
| 4 | 40" SLR + 20-year Storm | 🦘 Mammal Haul Out | |
| 5 | 80" SLR + 100-year Storm | | |

0 0.075 0.15 0.3 0.45 0.6 Miles



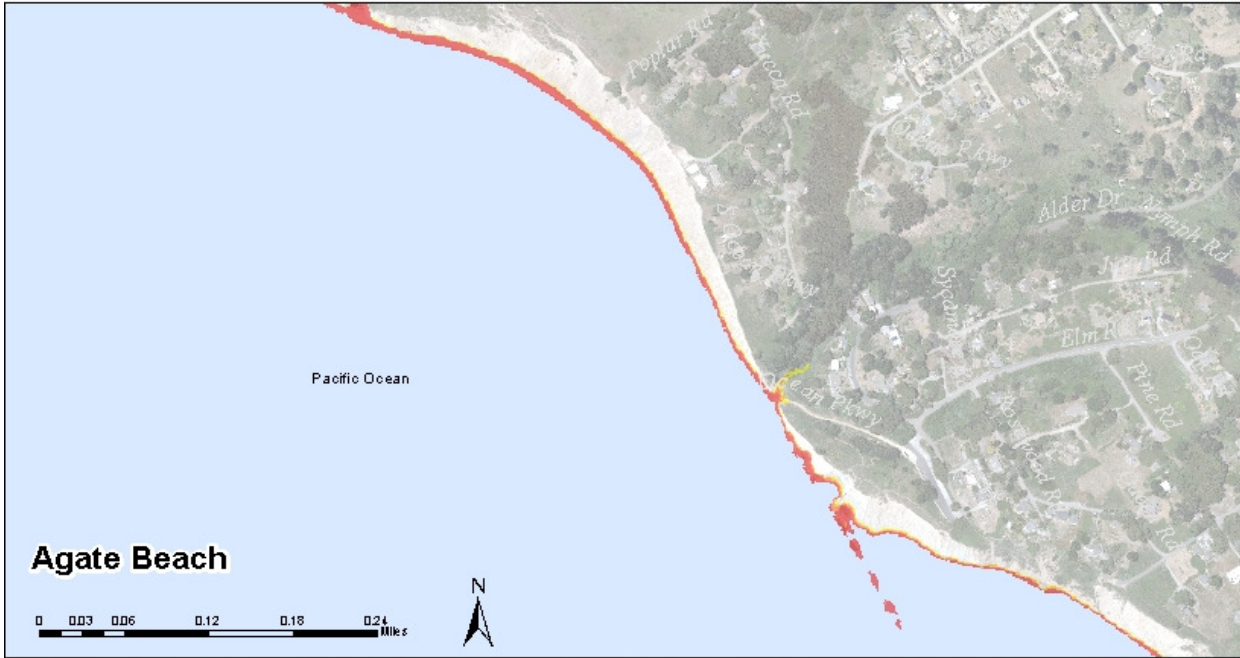
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers here in, make no warranties of the accuracy or completeness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

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MAPS

Map 69. Bolinas Beach Loss By Scenario



Scenarios

- | | | |
|---|--------------------------|-------------------------------|
| 1 | 10" SLR + Annual Storm | Beach (around end of century) |
| 2 | 10" SLR + 20-year Storm | Beach Loss @ 80 inches SLR |
| 3 | 20" SLR + 20-year Storm | Beach Loss @ 40 inches SLR |
| 4 | 40" SLR + 20-year Storm | Beach Loss @ 20 inches SLR |
| 5 | 80" SLR + 100-year Storm | Beach Loss @ 10 inches SLR |

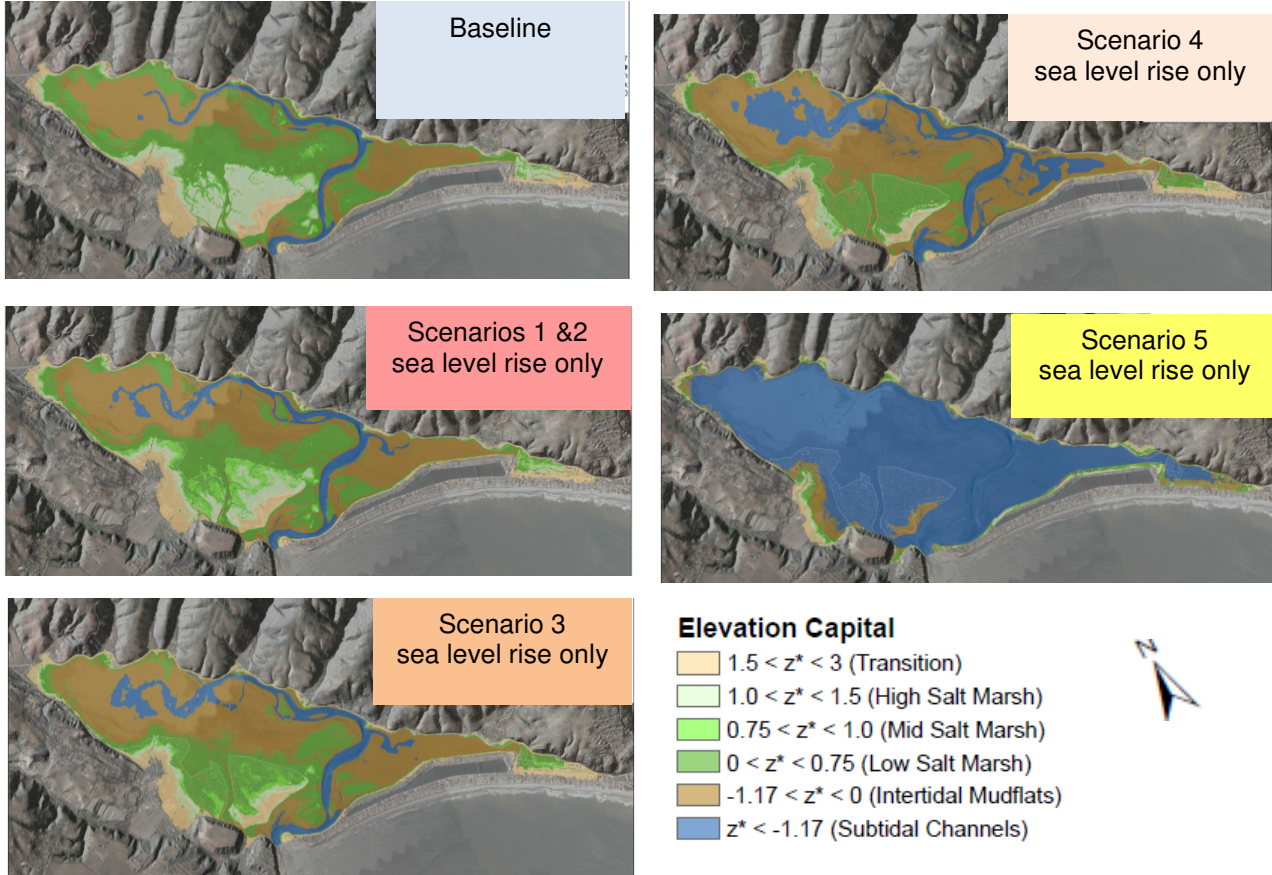
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

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MAPS

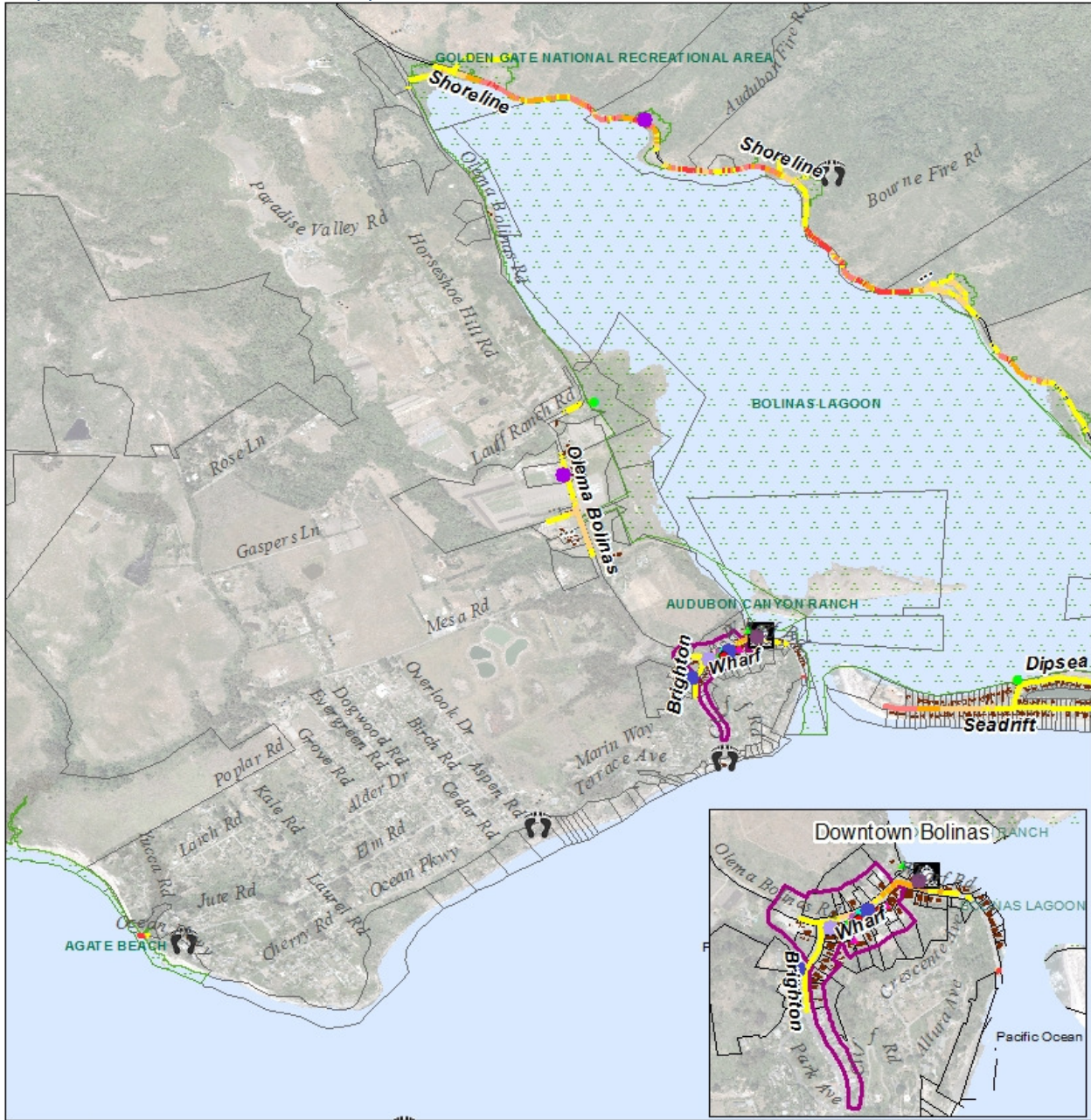
Map 70. Bolinas Lagoon Elevation Capital (z^*) by Scenario at 6 mm/year of Sedimentation



Dark and light brown color in the lagoon is an artifact of the aerial imagery and not a distinction in Intertidal habitat. Source: ESA, 2015

MAPS

Map 71. Bolinas Vulnerable Developed Assets



Exposed Roads

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

- Agricultural Parcels
- Aquaculture
- Buildings
- Parcels
- Parkland
- Historic District

- Commercial
- Education
- Emergency
- Food
- Government Service
- Historic
- Institutional
- Recreation
- Residential
- Transportation
- Utilities

- Boat Launch
- Fishing Pier
- Access Point
- Port
- Marina

* Roads may also have utility pipes underneath, are used for recreation, and serve as emergency access in some locations.



Source: Marin Map, Our Coast Our Future, CA Coastal Commission

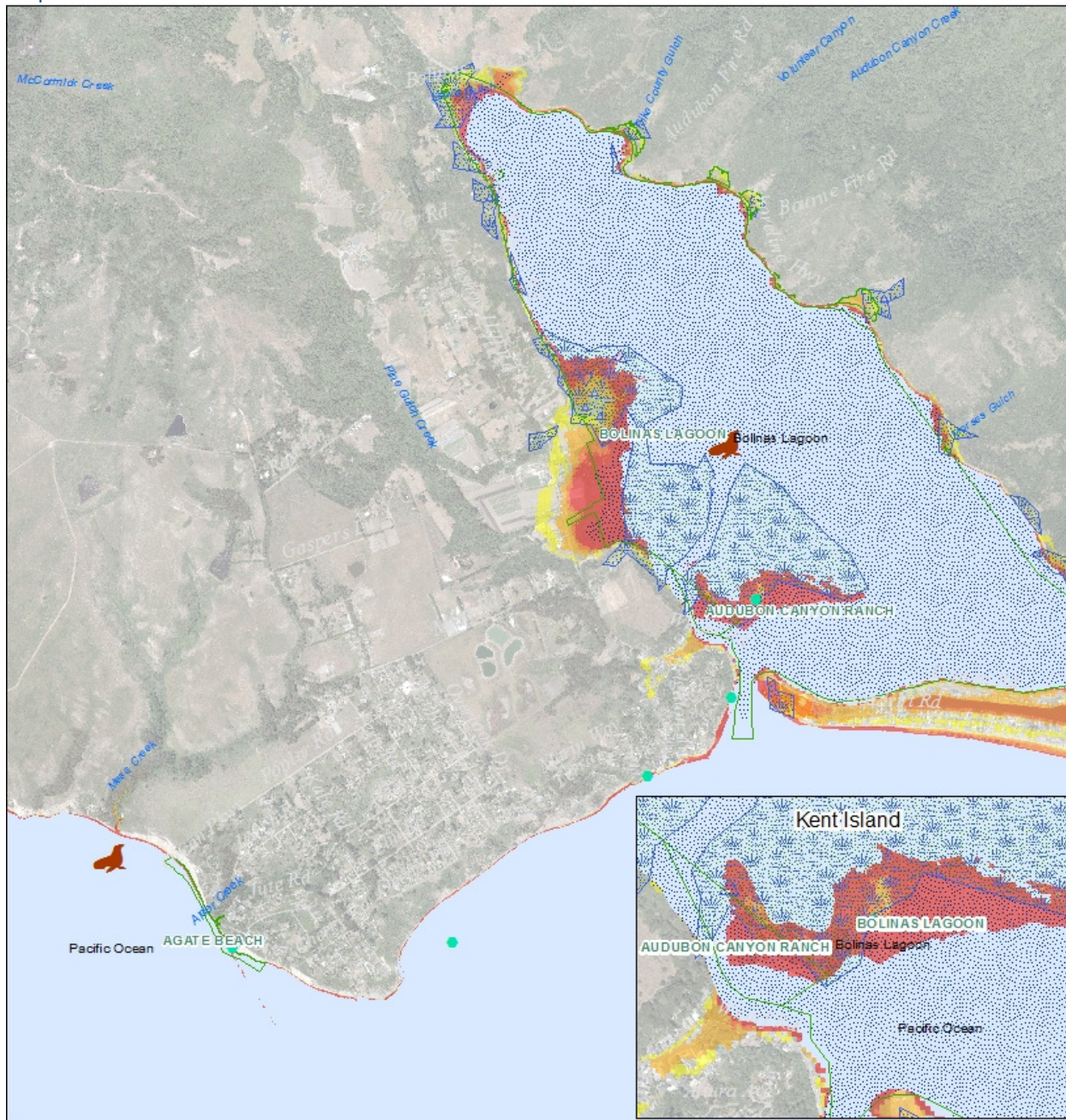
Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future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

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MAPS

Map 72. Bolinas Vulnerable Natural Resource Assets



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|---------|
| 1 | 10" SLR + Annual Storm | ● | Natural Resource Assets | ▨ | Wetland |
| 2 | 10" SLR + 20-year Storm | □ | Parks | ▨ | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 | Seabird Colony | ▨ | Marsh |
| 4 | 40" SLR + 20-year Storm | 🦘 | Mammal Haul Out | | |
| 5 | 80" SLR + 100-year Storm | | | | |

0 0.1 0.2 0.4 0.6 0.8 Miles



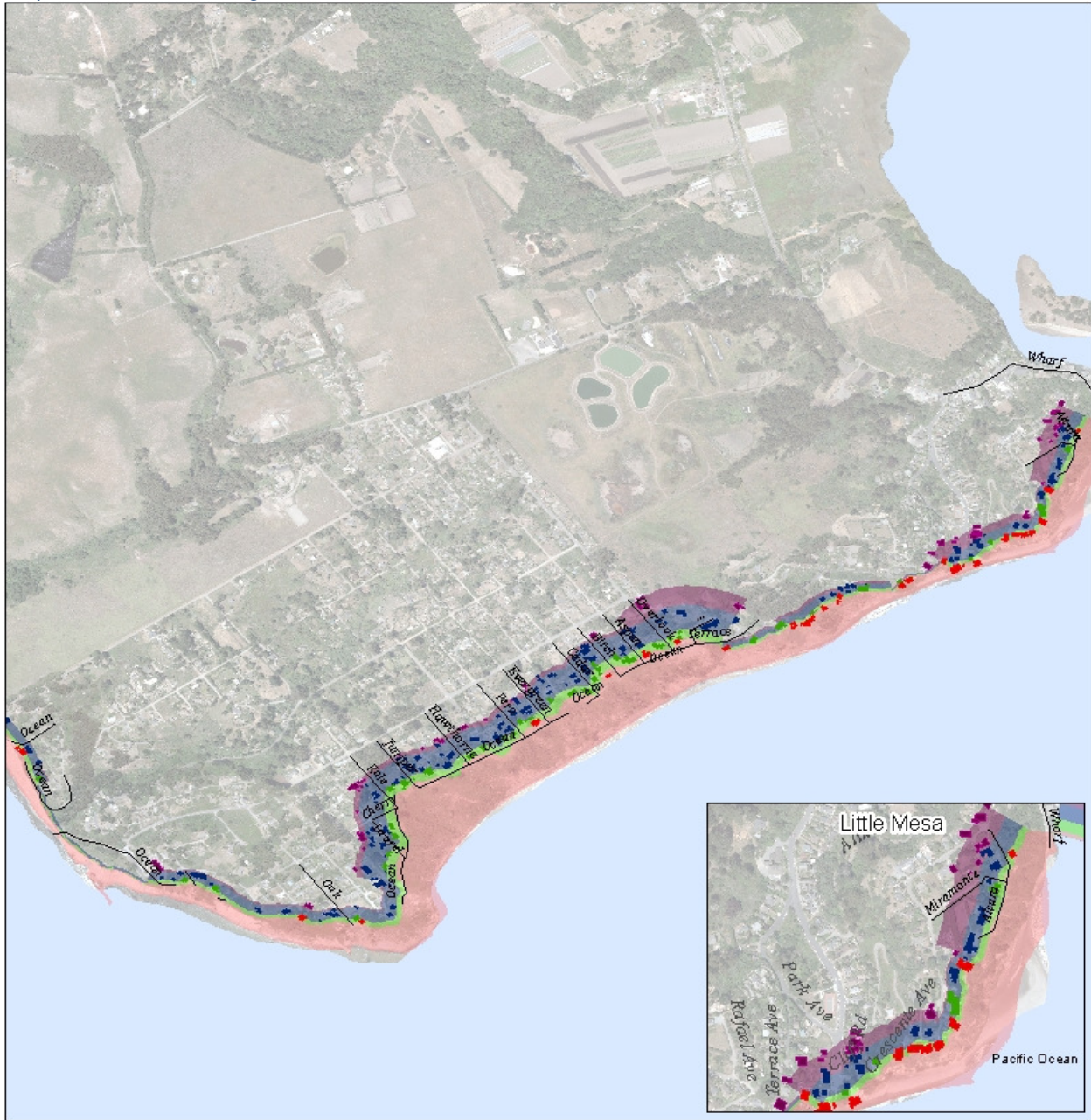
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers herein, make no warranties of the accuracy or completeness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

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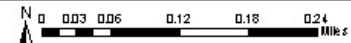


MAPS

Map 73. Bolinas Buildings Vulnerable to Accelerated Erosion



Accelerated Erosion	Buildings Exposed	Exposed Roads
 Scenarios 1 & 2	 Scenarios 1 & 2	— Exposed Roads
 Scenario 3	 Scenario 3	
 Scenario 4	 Scenario 4	
 Scenario 5	 Scenario 5	

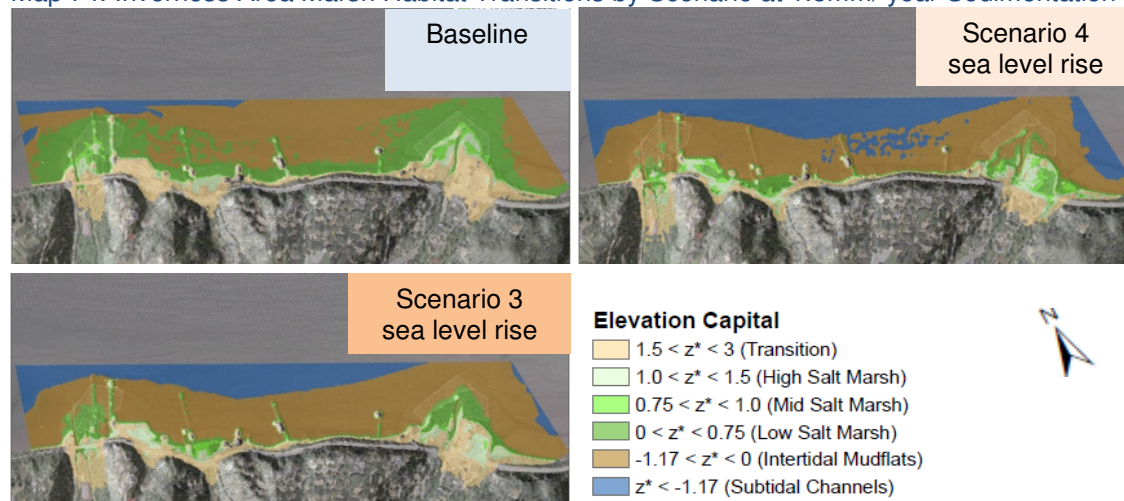


Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representative and subject to future revisions. Local site conditions must be examined. Commercial use prohibited.

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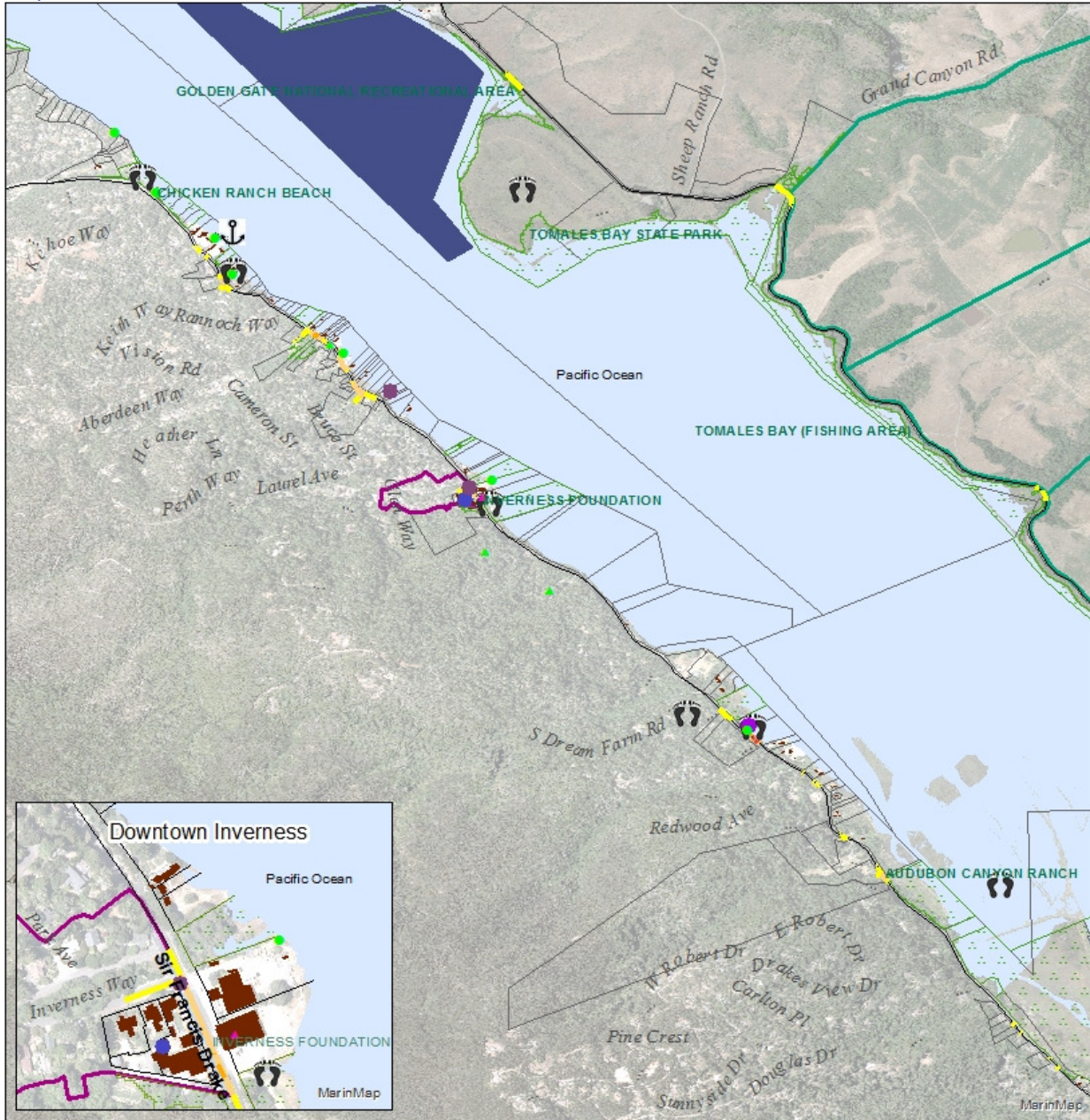
MAPS

Map 74. Inverness Area Marsh Habitat Transitions by Scenario at 1.5mm/ year Sedimentation



MAPS

Map 75. Inverness Vulnerable Developed Assets



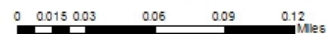
Exposed Roads

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

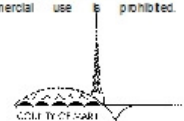
- Agricultural Parcels
- Aquaculture
- Buildings
- Parcels
- Parkland
- Historic District

- Commercial
- Education
- Emergency
- Food
- Government Service
- Historic
- Institutional
- Recreation
- Residential
- Transportation
- ▲ Utilities

- Boat Launch
- Fishing Pier
- 👣 Access Point
- 🏠 Port
- ⚓ Marina



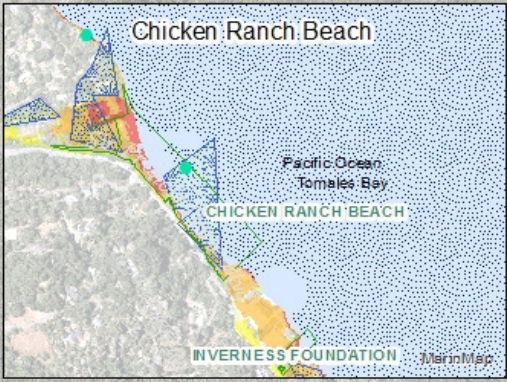
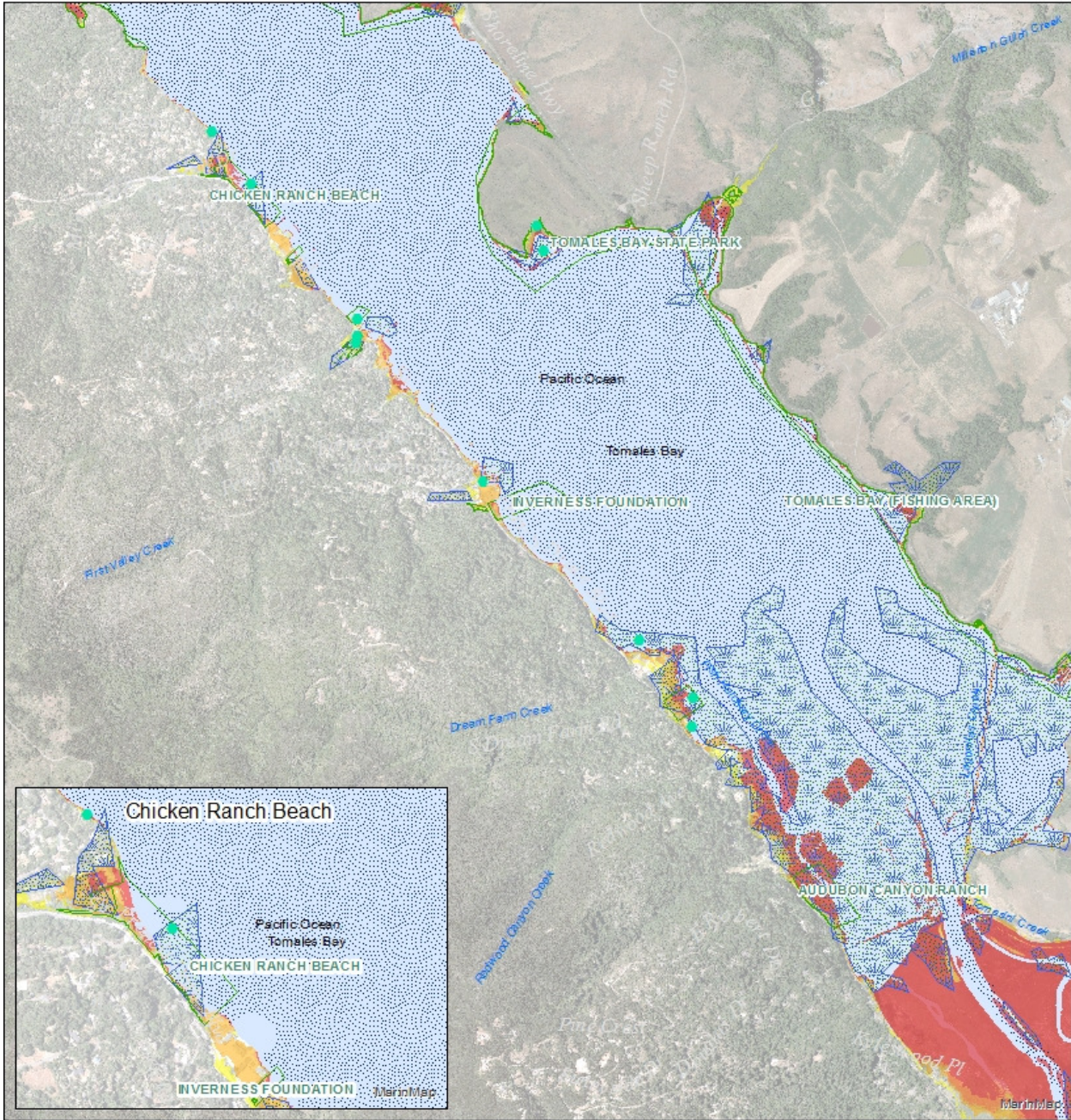
Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.
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* Roads may also have utility pipes underneath, are used for recreation, and serve as emergency access in some locations.

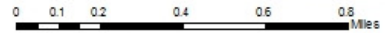
MAPS

Map 76. Inverness Vulnerable Natural Resource Assets



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|---------|
| 1 | 10" SLR + Annual Storm | ● | Natural Resource Assets | ▨ | Wetland |
| 2 | 10" SLR + 20-year Storm | ▭ | Parks | ▨ | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 | Seabird Colony | ▨ | Marsh |
| 4 | 40" SLR + 20-year Storm | 🐾 | Mammal Haul Out | | |
| 5 | 80" SLR + 100-year Storm | | | | |



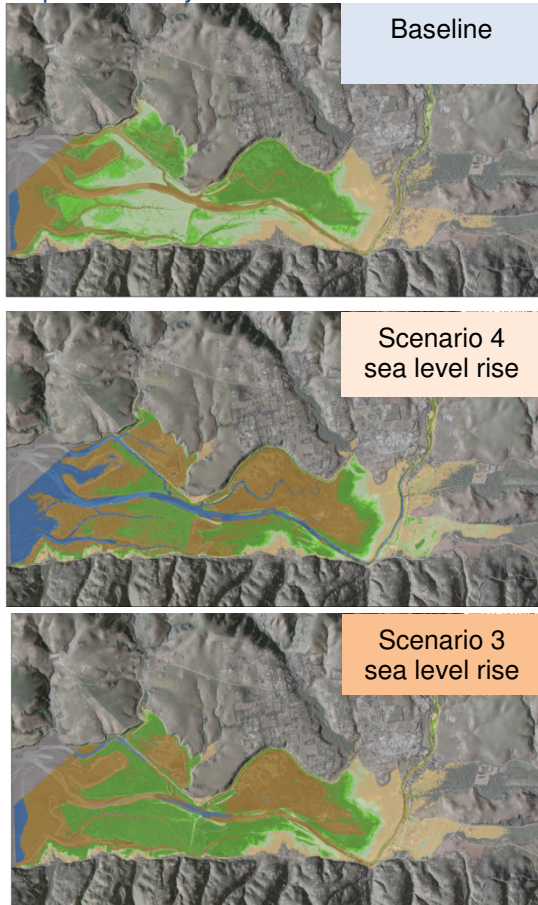
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County and data providers herein make no warranties of the accuracy or completeness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

Date: 11/2/2015



MAPS

Map 77. Pt. Reyes Station Marsh Habitat Transition



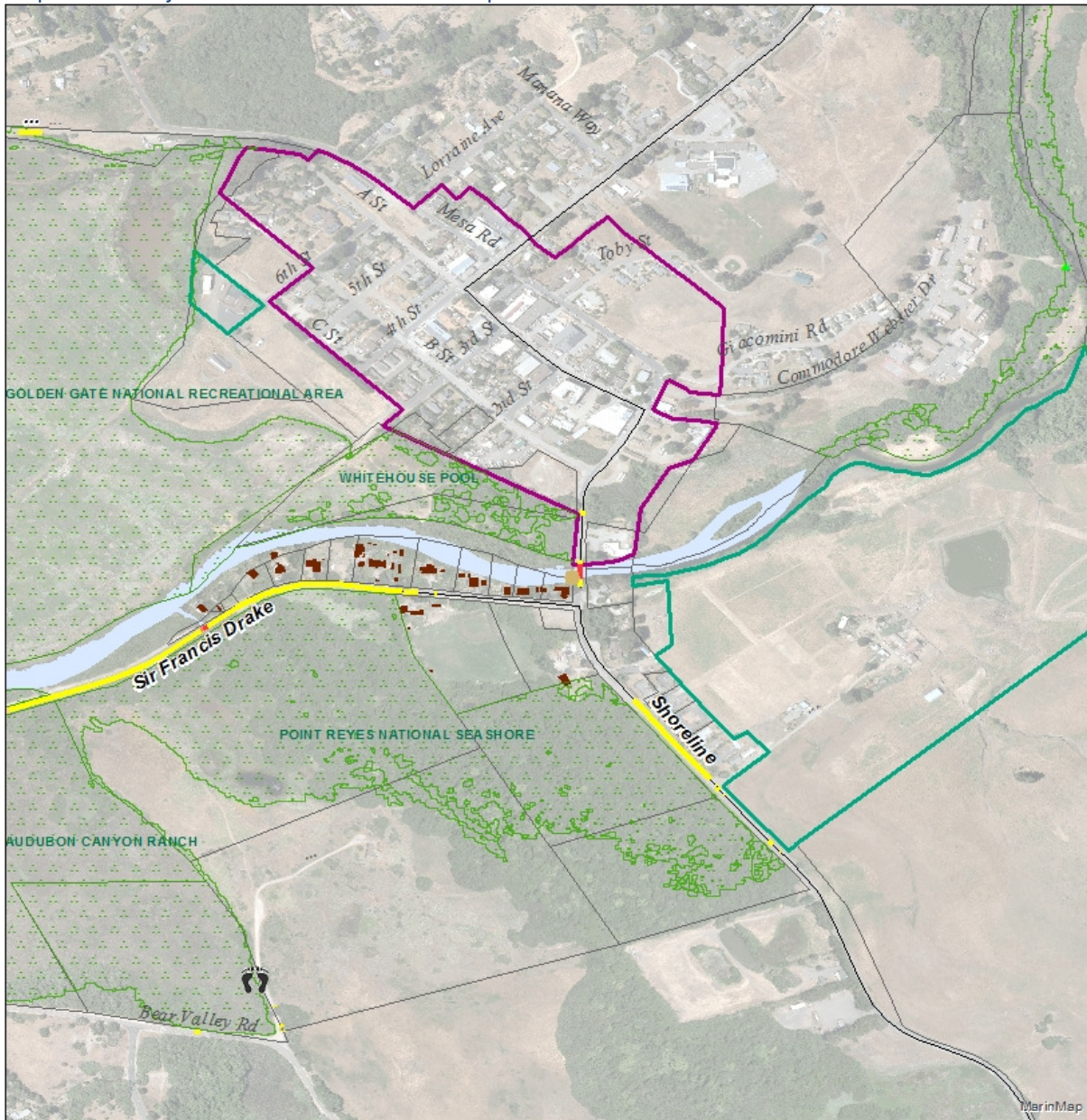
Elevation Capital

- 1.5 < z^* < 3 (Transition)
- 1.0 < z^* < 1.5 (High Salt Marsh)
- 0.75 < z^* < 1.0 (Mid Salt Marsh)
- 0 < z^* < 0.75 (Low Salt Marsh)
- 1.17 < z^* < 0 (Intertidal Mudflats)
- z^* < -1.17 (Subtidal Channels)



MAPS

Map 78. Pt. Reyes Station Vulnerable Developed Assets



Exposed Roads

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

- Agricultural Parcels
- Aquaculture
- Buildings
- Parcels
- Parkland
- Historic District

- Commercial
- Education
- Emergency
- ▲ Food
- Government Service
- Historic
- Institutional
- Recreation
- Residential
- Transportation
- ▲ Utilities

- Boat Launch
- Fishing Pier
- Access Point
- Port
- Marina



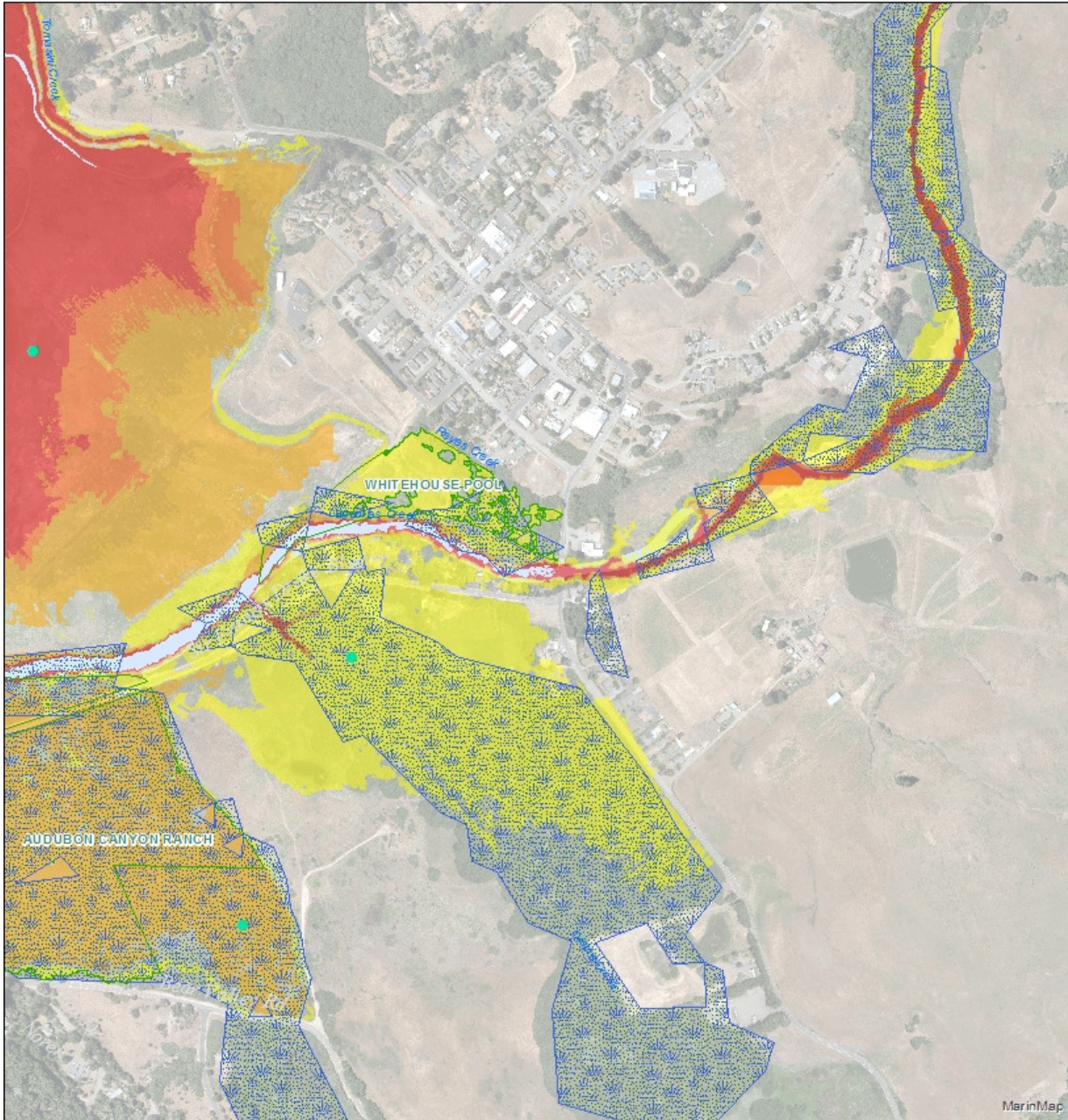
Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use prohibited.
 Date: 10/19/2015



* Roads may also have utility pipes underneath, are used for recreation, and serve as emergency access in some locations.

MAPS

Map 79. Pt. Reyes Station Vulnerable Natural Resource Assets



Scenarios

- | | | | |
|---|--------------------------|---------------------------|---------|
| 1 | 10" SLR + Annual Storm | ● Natural Resource Assets | Wetland |
| 2 | 10" SLR + 20-year Storm | ▭ Parks | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 Seabird Colony | Marsh |
| 4 | 40" SLR + 20-year Storm | 🐾 Mammal Haul Out | |
| 5 | 80" SLR + 100-year Storm | | |

0 0.0375 0.075 0.15 0.225 0.3 Miles



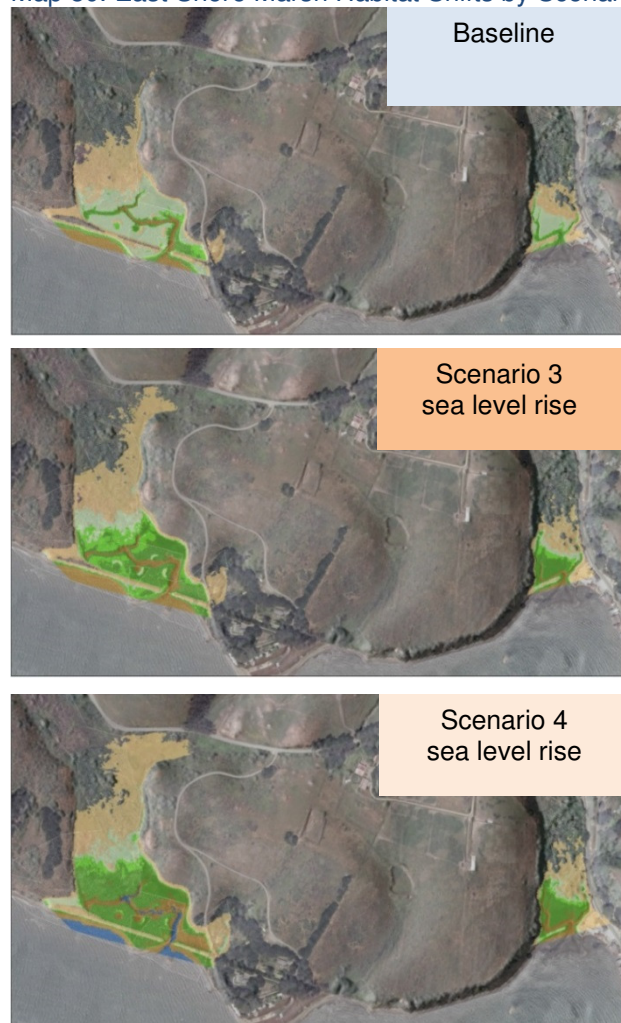
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

Date: 10/19/2015



MAPS

Map 80. East Shore Marsh Habitat Shifts by Scenario at 1.5 mm/year Sedimentation



Elevation Capital

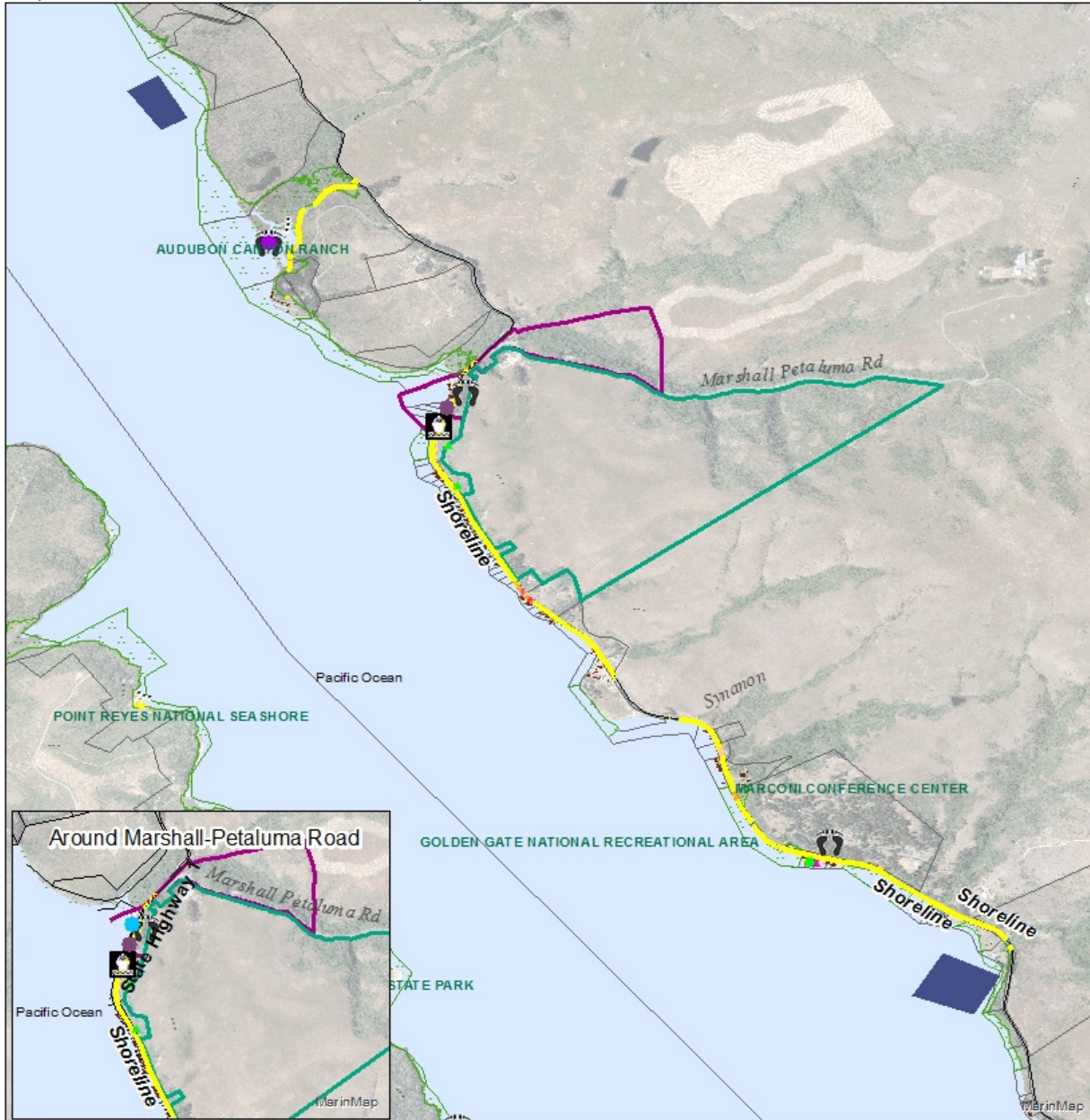
- 1.5 < z^* < 3 (Transition)
- 1.0 < z^* < 1.5 (High Salt Marsh)
- 0.75 < z^* < 1.0 (Mid Salt Marsh)
- 0 < z^* < 0.75 (Low Salt Marsh)
- 1.17 < z^* < 0 (Intertidal Mudflats)
- z^* < -1.17 (Subtidal Channels)



Source: ESA, 2015

MAPS

Map 81. East Shore Vulnerable Developed Assets



Exposed Roads

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

* Roads may also have utility pipes underneath, are used for recreation, and serve as emergency access in some locations.

- Agricultural Parcels
- Aquaculture
- Buildings
- Parcels
- Parkland
- Historic District

- Commercial
- Education
- Emergency
- Food
- Government Service
- Historic
- Institutional
- Recreation
- Residential
- Transportation
- Utilities

- Boat Launch
- Fishing Pier
- Access Point
- Port
- Marina

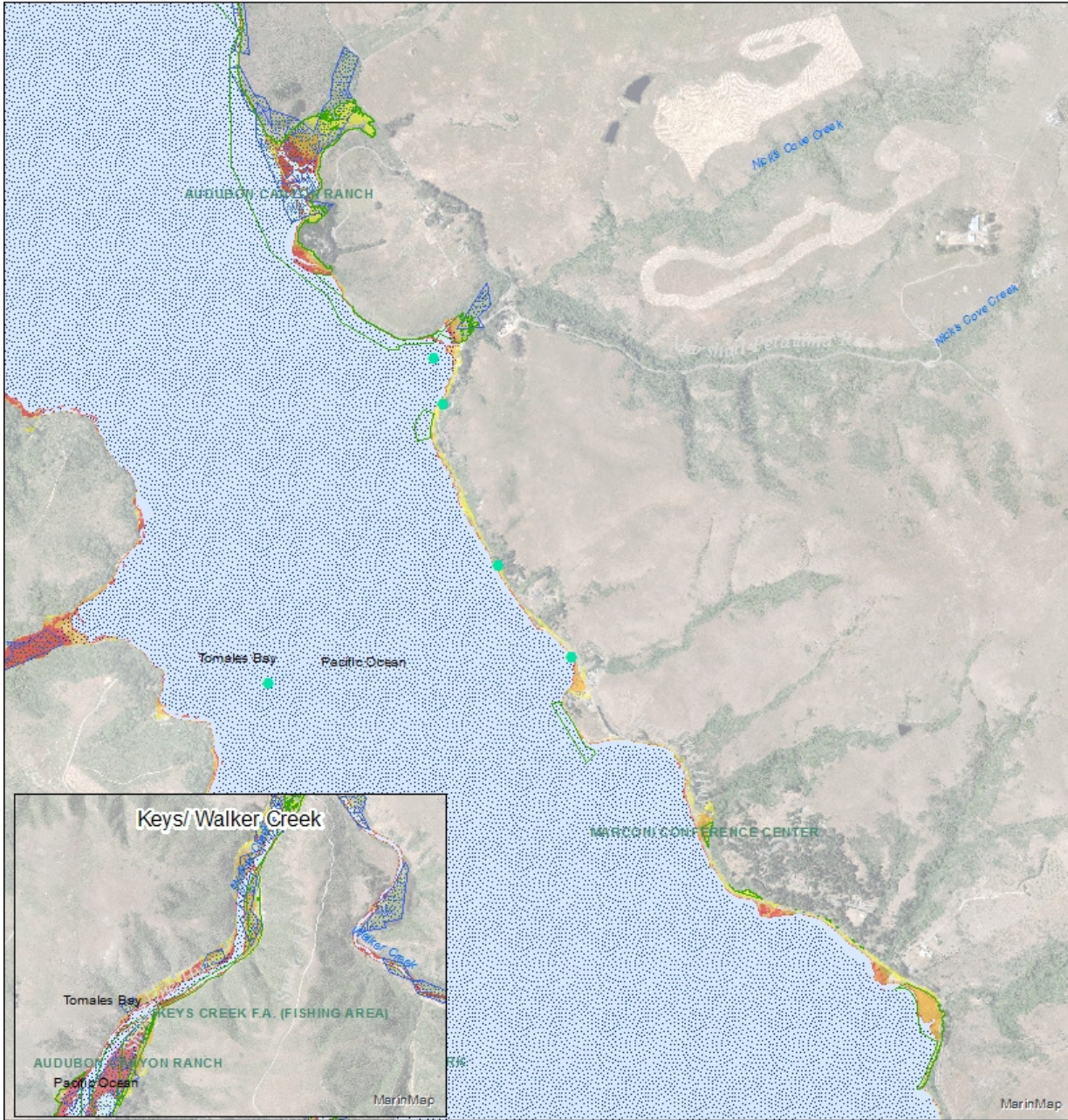
0 0.075 0.15 0.3 0.45 0.6 Miles

Source: Marin Map, Our Coast Our Future, CA Coastal Commission
 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.
 Date: 10/19/2015



MAPS

Map 82. East Shore Vulnerable Natural Resource Assets



Scenarios

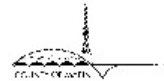
- | | | | |
|---|--------------------------|---------------------------|---------|
| 1 | 10" SLR + Annual Storm | ● Natural Resource Assets | Wetland |
| 2 | 10" SLR + 20-year Storm | ▭ Parks | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 Seabird Colony | Marsh |
| 4 | 40" SLR + 20-year Storm | 🐾 Mammal Haul Out | |
| 5 | 80" SLR + 100-year Storm | | |

0 0.075 0.15 0.3 0.45 0.6 Miles



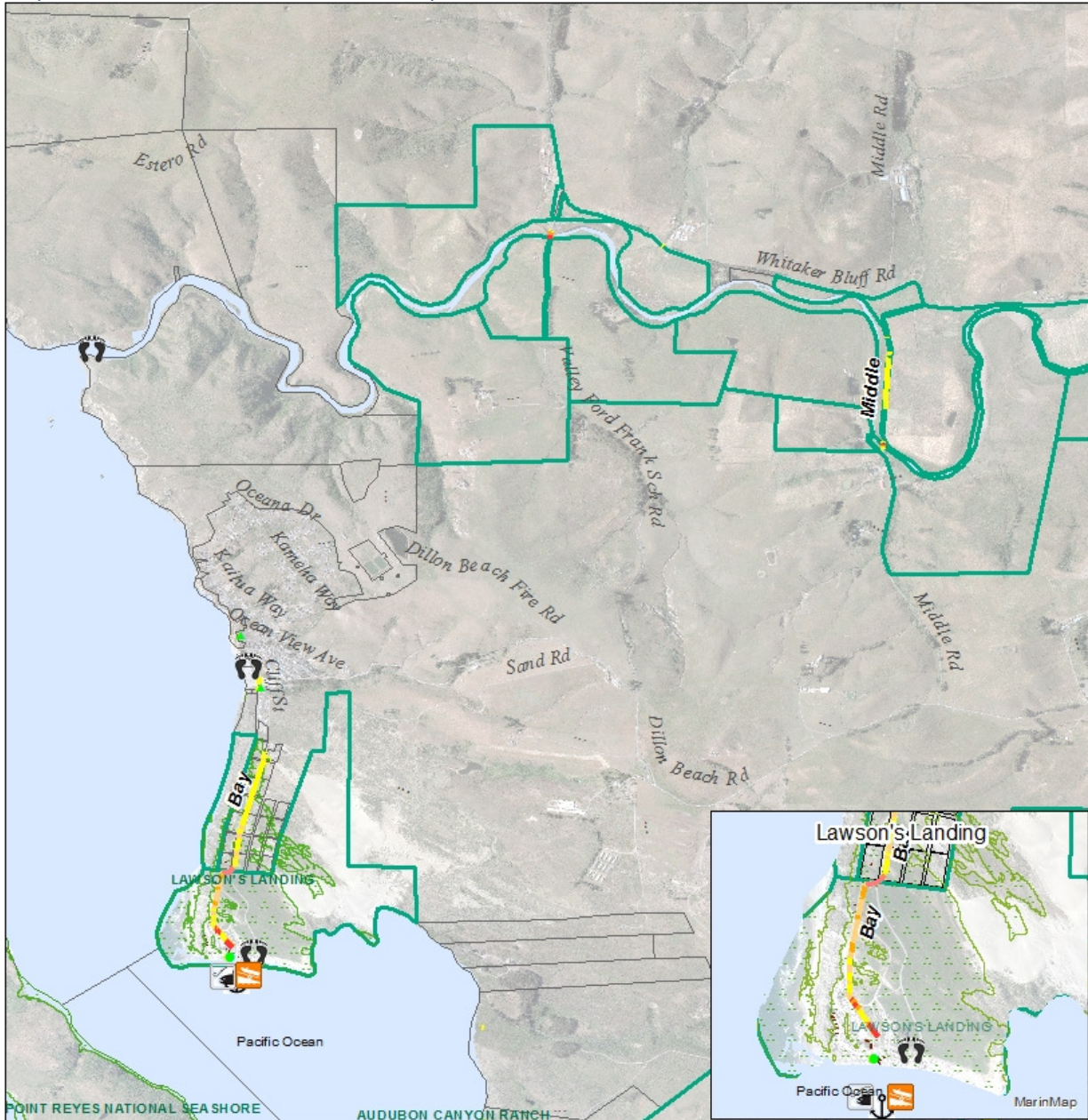
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

Date: 10/19/2015



MAPS

Map 83. Dillon Beach Vulnerable Developed Assets



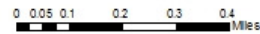
Exposed Roads

- 10" + Annual storm
- 10" + 20-year storm
- 20" + 20-year storm
- 40" + 100-year storm
- 80" + 100-year storm

- Agricultural Parcels
- Aquaculture
- Buildings
- Parcels
- Parkland
- Historic District

- Commercial
- Education
- Emergency
- Food
- Government Service
- Historic
- Institutional
- Recreation
- Residential
- Transportation
- Utilities

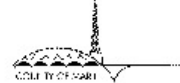
- Boat Launch
- Fishing Pier
- Access Point
- Port
- Marina



Source: Marin Map, Our Coast Our Future, CA Coastal Commission

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.

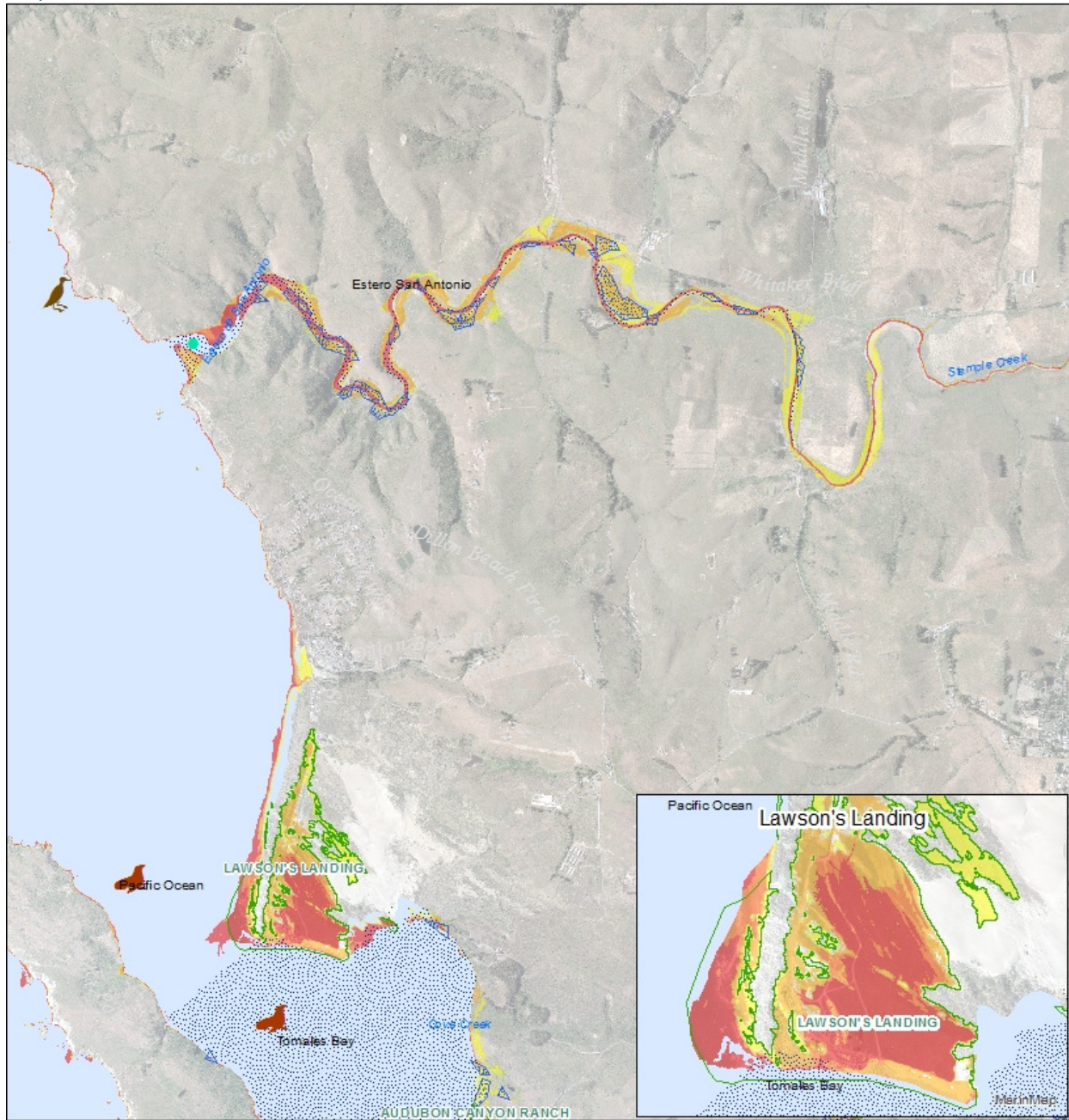
Date: 10/19/2015



* Roads may also have utility pipes underneath, are used for recreation, and serve as emergency access in some locations.

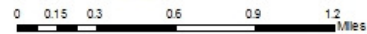
MAPS

Map 84. Dillon Beach Vulnerable Natural Resource Assets



Scenarios

- | | | | | | |
|---|--------------------------|---|-------------------------|---|---------|
| 1 | 10" SLR + Annual Storm | ● | Natural Resource Assets | ▨ | Wetland |
| 2 | 10" SLR + 20-year Storm | □ | Parks | ▨ | Estuary |
| 3 | 20" SLR + 20-year Storm | 🐦 | Seabird Colony | ▨ | Marsh |
| 4 | 40" SLR + 20-year Storm | 🐾 | Mammal Haul Out | | |
| 5 | 80" SLR + 100-year Storm | | | | |



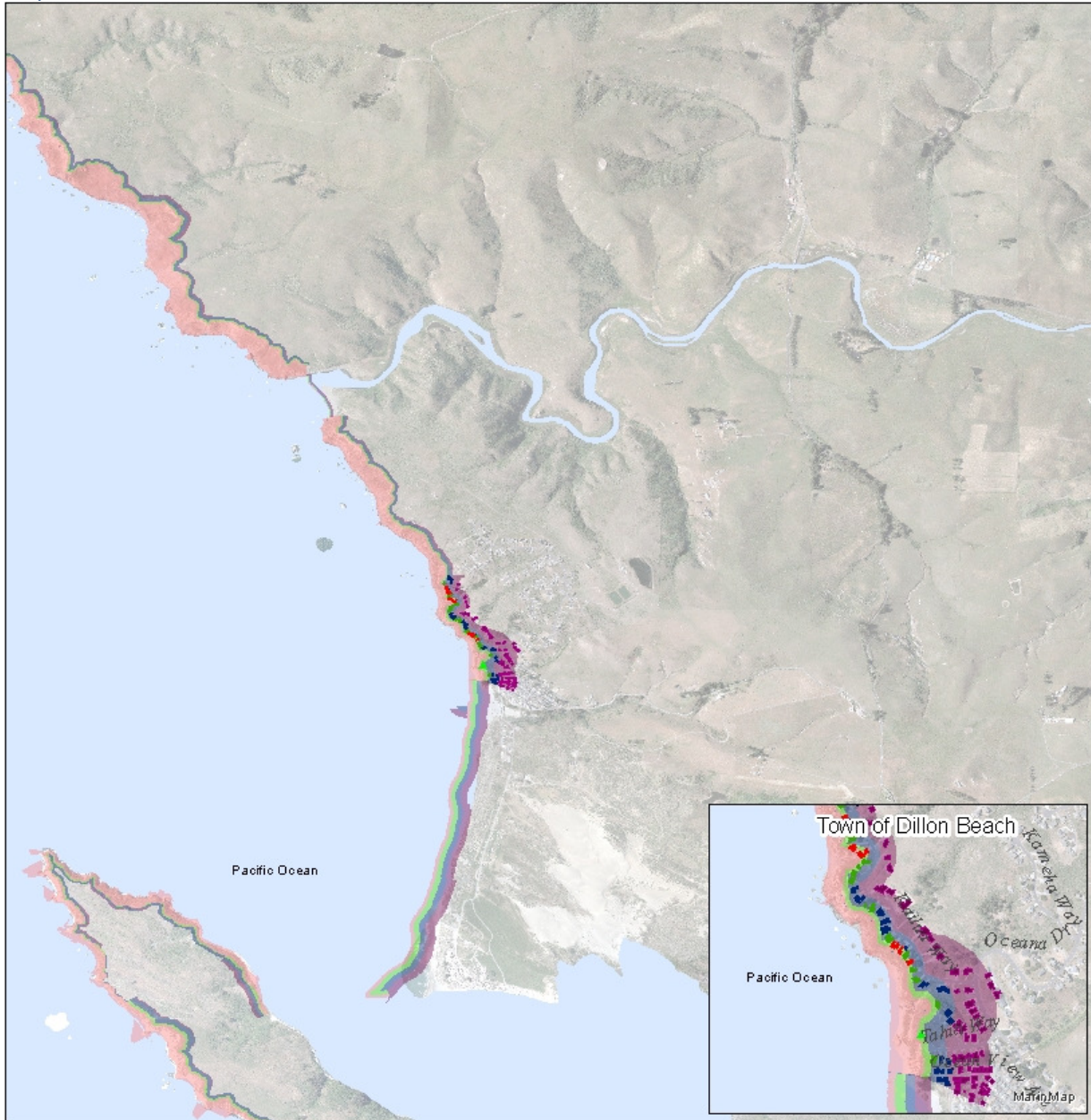
Source: Marin Map, Our Coast Our Future, Department of Fish & Wildlife
 Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness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

Date: 10/19/2015

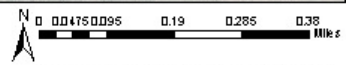


MAPS

Map 85. Dillon Beach Accelerated Erosion Based on C-SMART Sea Level Rise Scenarios



Accelerated Erosion		Buildings Exposed		Exposed Roads
	Scenarios 1 & 2		Scenarios 1 & 2	
	Scenario 3		Scenario 3	
	Scenario 4		Scenario 4	
	Scenario 5		Scenario 5	



Source: Marin Map, Off-Coastal/Future, CA Coastal Commission
 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 herein, make no warranties of the accuracy or completeness of maps and data. Maps are representative and subject to future revisions. Local site conditions must be examined. Commercial use prohibited.

Date: 10/2/2015