



Save Our Seashore

A 501(c)(3) Charitable Organization (EIN 94-3221625)
Founded in 1993 to Protect Marin County's Ocean, Coasts, Estuaries, Watersheds and Creeks
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December 13, 2015

Thank you for your efforts to educate the public to the impacts from Sea Level Rise (SLR). Save Our Seashore offers our comments on the C-Smart Sea Level Rise Vulnerability Assessment.

Executive Summary Page 1: Map 2 is confusing. First, it is really Map 1, not Map 2 (Map 2 is on page 2). Second, the Map is titled "Marin County Coastal Zone" but it maps a green area titled "Federal Land (not in the Coastal Zone). We suggest that the source of the confusion is that the Map's first referenced "zone" refers to a geographically-defined area, whereas the second referenced "zone" refers to a legally-defined area. If so, then we suggest re-titling the Map as "Marin County Coastal Areas" with the green area titled "Coastal Areas under Federal Jurisdiction") and the cross hatched area titled "Coastal Areas under County Jurisdiction in the state-designated Coastal Zone."

Executive Summary Page 1: Map 2 (the real Map 2): This map exemplifies a concern that runs throughout the presentation: combining the episodic impacts of storm events and the chronic impacts of Sea Level Rise (SLR). We believe these two impacts are completely different in duration, largely separate in location and each deserves a separate management strategy. Unfortunately, integrating both these impacts in this Presentation diminishes the ability of the public to understand SLR impact.

When Map 2 of the Muir Beach Area combines these two variables: different levels of SLR (10, 20, 40, and 80 inches) with different frequency of storms (1, 20 year 100 year storms), the result is a map whose coloration largely (80%-90%?) reflects areas subject to storm impacts, not SLR. Conversely, when Map 3 of the Stinson Beach Area combines same two variables (SLR and storm frequency), the result is coloration that largely (80%-90%?) reflects areas subject to SLR, not storm impacts. How is the public supposed to understand the impact of Sea Level Rise when some maps of SLR impacts in the County's SLR presentation primarily demonstrate storm impacts, not SLR?

Further, because Map 2 is largely the result of storm events, the difference in most of its area between the four SLR scenarios (10, 20, 40 and 80 inches) is insignificant, whereas the difference between the three storm flooding scenarios is hugely significant. If the SLR Presentation is going to include storm impacts (which we suggest it should not) then its map should be more finely grained than the three 1, 20 and 100 year events shown (e.g. 1, 10, 50, and 100). Lastly, Map 2 is incorrect and should show that Pacific Way Bridge at the Pelican Inn is flooded in Scenario 1 (i.e. virtually every year), not just in Scenario 5.

Executive Summary Map 6. Cal Trans has calculated that SLR impact at the Green Bridge project in Point Reyes Station is the grand total of 2 inches in a 100-year storm, yet the 100-year storm puts the Bridge under several feet of water. Conversely, the impact of a 100-year storm on coastal areas distant from streams but just above current sea level would similarly negligible, yet that area would be under water due to Sea Level Rise. But again, when Map 6 combines the two variables (SLR and storm frequency), the result is coloration that virtually entirely reflects areas subject to storm impacts, not SLR. Further, Map 6 appears to be inconsistent with FEMA 100-year flood maps: [HERE](#). We have not checked other maps in the Presentation against FEMA maps, but such an inconsistency on this one map is troubling.

Executive Summary Map 10: It is not clear why the coloration of the Scenarios needs to change. In Maps 1-9 the five scenarios are reflected in changes from red to yellow, but in Map 10 (and others) the same scenarios are reflected in pink, green blue and purple. Would it not be easier for the public to understand impacts if the color coding were consistent even though some Maps (e.g. Map 2 of Muir Beach) represent flooding impacts, while other maps (e.g. Map 10 of Muir Beach) represent erosion impacts.

Executive Summary Map 10 also reflects another concern that throughout the Presentation: impacts to roads. Map 10 shows “Exposed Roads” as black lines inside the colored area that are at risk. But there are other roads represented on the map with black lines outside the colored areas that are not at risk. And to add to the confusion, some roads represented with black lines outside the colored areas and are indeed at risk. We suggest that this confusion is the result of these maps not reflecting the impact of the different scenarios on road access, rather than just impacts to road segments. For example on Map 10, if the middle segment of Sunset Way (in the colored area) is eroded due to SLR, then the western segment of Sunset Way (not on the colored area) would become isolated and thus (significantly) impacted. But Map 10 does not show this SLR impact. Similarly, if the buildings at the west end of Sunset become cut off due to erosion of the middle segment of Sunset, then would not these buildings be at significant risk from SLR, even though they are not in the Map’s colored erosion impact area?

Lastly and again in reference to roads, another concern that runs throughout the Presentation is that the Presentation and Maps again focus on road segments rather than road access. Given that Pacific Way Bridge is flooded every year and that this Presentation attempts to combine SLR and storm impacts, then it would seem that the Pacific Way Bridge flooding that isolates the entire western segment of Pacific Way should be reflected in this Presentation as an impact not just to this road segment but to the entire isolated segment of the road and the all buildings it serves. But none of the Presentation’s maps show these impacted assets at Muir Beach.

This brings up other road access impacts, such as that on the entire community of Inverness that would be isolated from virtually all services if segments of Sir Frances Drakes (SFD) and Bear Valley Road between Olema and Point Reyes were flooded. Yet the Presentation focuses only on impacts to SFD. Neither the Inverness map nor the Point Reyes Station map includes impacts to Bear Valley Road, which is the Inverness community’s alternative access if SFD is flooded. All of this again points out the difficulty of combining in this Presentation the impacts from SLR with those of storm flooding. It is one thing for the Inverness community to be at risk of being cut off from essential services for a few hours or days due to flooding and quite another thing for the community to be at risk of being cut off from essential services forever due to SLR.

In sum we suggest that this Presentation tries to do too much and in the end does too little. By combining impacts from SLR with those from storm flooding, the SLR Presentation fails to adequately spotlight SLR. Both Sea level Rise and Storm flooding are critically important impacts, but they deserve different treatments, different maps, different presentations and different mitigation/management strategies. But by combining both storm impacts and SLR impacts into one SLR presentation, the County inadvertently does not do justice to SLR.

We thank you in advance for considering what we intend to be our constructive criticisms. Thank you for your efforts to educate the public to SLR.

Sincerely,  President

VanBelleghem, Bridgit

From: George Clyde <gclyde11@gmail.com>
Sent: Monday, November 23, 2015 12:23 PM
To: Liebster, Jack; VanBelleghem, Bridgit
Subject: SLR Vulnerability Assessment Draft - East Shore Corrections

Jack, Bridget --

Congratulations to you for how effective this process has been and particularly regarding the Marin Ocean Coast Sea Level Rise Vulnerability Assessment Public Review Draft.

Here are a few corrections and suggestions for minor clarifications and additions.

Inn on Tomales Bay

The Inn on Tomales Bay, <http://tomalesbay.com/inn.html>, between Hog Island Oyster and Nick's Cove, Parcel 104-170-22, 22555 STATE ROUTE 1, is not at risk. It is at an elevation of about 30' above sea level (according to the owner) and is not on the shore. You can confirm this with the owners, Bob and Lynette Kahn, at (415) 663-9002.



So, these portions of the draft that refer to the Inn on Tomales Bay need to be corrected:

East Shore

The East Shore's most vulnerable assets include Shoreline Highway, development, private wells, OWTs, aquaculture facilities and a number of recreation assets including the Marconi Boat Launch, Tony's Restaurant, and the Inn at Tomales Bay west of Shoreline Highway. (p. 10)

The tables at pp. 42 and 114.

The references at pp.118 and 191.

Perhaps there is confusion with Nick's Cove and Cottages, <http://nickscove.com/>, which is on the water and which definitely is at risk and probably should be mentioned in that listing:



Or, possibly because of the name there is confusion with the Tomales Bay Resort, <http://www.tomalesbayresort.com/>, which is on Sir Francis Drake between the Inverness Yacht Club and Chicken Ranch Beach. It is a motel-like facility with a restaurant, marina and pier that are also at risk.

Emergency Services

The Draft recognizes the loss of emergency services to the east shore from Pt. Reyes Station if Highway One is impassable.

Emergency Services

Temporary or permanent flooding of Shoreline Highway could compromise emergency access between Marshall and Point Reyes Station.

However, the east shore area is served by both the Pt. Reyes and the Tomales Fire Stations, which often both respond to east shore emergencies. I believe if they are dispatched at the same time, they meet approximately at the Marshall Boat Works. Homes and business north of the Marshall Petaluma Road look to the Tomales Fires Station as the primary responders. So, that probably should be included in this paragraph. See also the discussion on flooding below – the vulnerable area of Shoreline Highway at Walker Creek cuts off all Tomales Fire Station access to the east shore.

Shoreline Highway at Walker Creek

The area south of Walker Creek, which is tidal, is presently subject to serious flooding and closure regularly during the winter. In light of the lack of response by Caltrans to complaints by individuals and businesses (especially dairies that rely on the road for milk trucks) and its importance for emergency services from Tomales, the East Shore Planning Group has recently taken it on and expects to be pursuing a response from Caltrans soon. Apparently the sedimentation of the creek has gotten so high that the upper area of the creek bed is nearly the same elevation as the highway in some places. Even when the road is open, large puddles that block a lane

are present for days and even weeks after the flooding event. So, we are is beyond predicting the effects of sea-level rise for that stretch, and perhaps the existing flooding situation should be noted.

I have read the East Shore section of the Community Profiles and noted a few minor typos and errors. If you would like, please send me a Word version of that section, and I'd be happy to provide suggested corrections.

Again, congratulations, and Happy Thanksgiving.

George

From: Jackson, Lorene
Sent: Tuesday, November 24, 2015 11:37 AM
To: Liebster, Jack
Subject: Marin Coast Sea Level Rise Vulnerability Assessment Presentations

Hi Jack,

I just have some comments on the East Shore Utilities section in the draft report. Page 194 implies that the septic upgrades were in response to sea level rise. The systems were upgraded because of their age and proximity to the bay:

Current language:

Wastewater system septic and water systems have already been compromised in some locations, prompting community members to join together and work with Environmental Health Services to establish news (sic) systems east of the highway. However, even these homes' pipe connections could still be vulnerable to corrosion.

Comment:

Most shoreline properties from Nick's Cove south to just beyond Marconi Center have on-site septic tanks that are connected to a community wastewater system where the pretreatment and leachfield area is located uphill and east of State Route 1. This area would not be affected by sea level rise. The underground tanks themselves, laterals, the main lines are designed to withstand marine conditions. The metal lids on the septic tanks and metal straps on plumbing under existing homes would be vulnerable to corrosion. However, when the water level is that high, access to the homes and the homes themselves would be vulnerable. The remaining East Shore properties with on-site leachfields adjacent to the bay would be vulnerable to sea level rise.

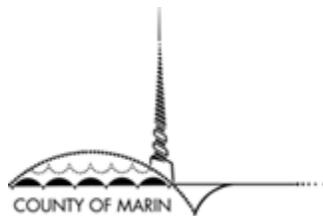
Map 80:

The map shows Synanon. Is that the proper creek name? Synanon is no longer there.

Let me know if you have any questions.

Have a happy Thanksgiving.

Lorene



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Lorene Jackson, M.P.H.
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