

Responses to Public Comments
Draft Sea Level Rise Vulnerability Assessment

Sea Change SMC Initiative

August, 2017



SEA CHANGE
SAN MATEO COUNTY



The following public comments are organized in alphabetical order with comments from agencies and organizations first, followed by comments from individuals ordered by last name of the individual.

EXECUTIVE SUMMARY

Name & Organization	Comment	Response
California Coastal Commission – Stephanie Rexing	Executive Summary, pg. xii: The public health row in the table is laid out differently than the other rows, particularly in the “what’s vulnerable” column. Suggest either removing it from the table (particularly since there is a paragraph just below that describes the same concepts), or edit the row in the table to include actual detailed information in the “what’s vulnerable” column.	Thank you for your comment. Unfortunately, we do not have the same kind of quantitative information for the public health section of the report and table. We were unable to perform an exhaustive public health analysis for the purposes of this report. Therefore, the row in this table highlights more qualitative information instead. We will remove the paragraph below the table since all of that narrative text is included in the table.
City of Menlo Park – Azalea Mitch	The Executive Summary is an important document. For this reason, it would be helpful if it included important definitions of the concepts introduced in the main body of the report. Specific comments are provided below. 1) What do the risk scenarios mean? What are the thresholds for each? Why are mid, high? 2) Risk class – define what that means 3) Cascading impacts – critical point, should be defined more clearly in more basic terms. Why should people who live in the hills be concerned about sea level rise? 4) Creation of a sea level rise working group and steering committee – sounds great	Thank you for your comment. We will include the following language for clarity on the sea level rise scenarios and risk classes. Beneath the list of scenarios the new draft will read: "The sea level rise scenarios use data from the Our Coast Our Future tool and indicate the projected extent of flooding should the project area experience a 1% chance annual storm plus sea level rise. The baseline scenario shows the possible extent of flooding with a 1% annual chance storm. The mid-level scenario shows the possible extent of flooding during a 1% chance annual storm plus 3.3 feet of sea level rise. The high-end scenario shows the possible extent of flooding during a 1% chance annual storm plus 6.6 feet of sea level rise. However, each parcel shown to be affected within a given scenario may not necessarily be inundated. The scenarios only show what kind of flooding is <i>possible</i> ."

		<p>This is because in the event of a storm, inundation may take place in a variable and unpredictable manner. The erosion scenario illustrates potential future erosion with 4.5 feet of sea level rise, and assumes no shoreline protective devices. The scenarios use the best modeling data for the County."</p> <p>We will include the following language on risk classes in the final draft: "A critical part of developing this Sea Level Rise Vulnerability Assessment is categorizing and classifying the built and natural assets that will be exposed to present and future inundation, using the San Francisco Bay Conservation and Development Commission method of categorization and the American Society of Civil Engineers (ASCE) method of classification. Risk classes and categories assigned to assets provide a framework through which to evaluate potential impacts. Built assets were assigned an ASCE Risk Class 1, 2, 3, or 4 based on asset function or type. Class 1 refers to assets with no or low risk to public safety and society should they be inundated or impaired, whereas Class 4 refers to assets with the highest amount of risk to public safety should they be inundated. Assets were also broken into the same categories employed by BCDC's ART program, which includes 12 categories to group assets by function to aid analysis. Using this framework, this Assessment provides finer detail on the vulnerabilities and risks of sea level rise to the County and its assets through Asset Vulnerability Profiles of 29 assets and one community.</p> <p>We include a brief introduction to the idea of cascading impacts on page xiii.</p>
--	--	--

<p>Glenda Mahoney – Half Moon Bay Individual</p>	<p>Page xi, table, under natural assets, beaches should be listed along with wetlands, lakes and streams, and it should be listed as a recreational resource as well as a natural asset</p>	<p>Thank you for your comment. Unfortunately, this is not how our inventory is structured. In Chapter 3 we highlight the recreational and economic value of beaches but for the sake of consistency with the way the data is presented and analyzed in the entire report, we cannot create a separate recreational resource class.</p>
--	---	--

CHAPTER 1: Introduction

Name & Organization	Comment	Response
California Coastal Commission – Stephanie REXING	Chapter 1, pg. 25: Suggest explaining what “projection” means in Table 1.1, and how it relates to the ranges in the same table.	Thank you for your comment. To address the comment, the following text will be added to page 26 of the VA document: “Table 1.1 provides a summary of sea level rise projections for California south of Cape Mendocino. The table provides a projection and a range in an attempt to incorporate various sources of uncertainty related to future greenhouse gas emissions and concentrations, global temperatures and the response of the ocean to those global temperature distributions. The projections are derived for the A1B scenario which assumes economic and population growth patterns similar to other emission scenarios but with a more balanced energy approach of both fossil-intensive and non-fossil sources. The value of the ‘ranges’ is based on the lowest IPCC 4th Assessment Report future CO2 emissions scenario (B1) and the high end is based on the highest IPCC emissions scenario (A1FI)”.
California Coastal Commission – Stephanie REXING	Chapter 1, pg. 29: Does the information provided in the San Mateo Snapshot relate to the entire county, or just to the northern portion that was the focus of the vulnerability assessment?	Thank you for your comment. The information provided in the snapshot is for the entire county. The text on page 29 will be changed to the following: “Table 1.3 provides a snapshot of key characteristics of the entire County, whereas Figure 1.1 shows a map of the County.”
City of Menlo Park – Azalea MITCH	Page 19 – numbers on questions are off, Overall, the resolution of the figures is poor.	Thanks for catching this mistake. The number system for the questions on page 19 will be fixed. We intend to improve the resolution of the figures for the final document.

<p>Bob Cohen – Menlo Park Individual</p>	<p>On Page 21, it is noted "The physical science basis for proactive responses to the threat of climate change is clear, and a strong economic argument for such responses also exists." The actual economic argument is that any changes that are being considered will not produce any noticeable change in global temperature. Therefore how can this be a strong economic argument?</p>	<p>Thank you for your response. We are not entirely sure what ‘changes’ is being referred to that will not produce any noticeable change in global temperature. We are assuming ‘changes’ refers to climate mitigation strategies to reduce greenhouse gas emissions and global temperatures.</p> <p>Local governments are responsible and required by law to undertake climate mitigation actions. Individual efforts may not account for much, but efforts by nations and all levels of governments within nations to combat climate change taken together will start to produce noticeable change.</p>
<p>Bob Cohen – Menlo Park Individual</p>	<p>On Page 26, "inland flooding is likely to also increase from inland runoff due to persistent storm tracks." I challenge you to show that there is any change in storm track which would produce increased inland runoff. In fact persistent storm tracks imply no change in storms tracks, and therefore no change from present runoff amounts.</p>	<p>Thank you for your comment. The 3rd California Climate Commission projects that an increase in the number and intensity of extreme storms will result in an increase in flooding events over the next century. There is no specific mention of the type of flooding that will increase, hence the sentence will be changed to the following:</p> <p>“Sea level rise is also projected to increase the height of coastal storm surges, while an increase in the number and intensity of extreme storms will lead to more frequent and severe flooding events over the next century.”</p>
<p>Bob Cohen – Menlo Park Individual</p>	<p>On Page 27, "In addition to sea level rise, climate change could affect the frequency and intensity of storms and extreme events." Again I challenge you to provide a reputable source for this. There is no evidence that climate change affects storm intensity and extreme events. To use this to develop policy is wrong, and if you are to justify your reasoning on the words "could affect" then you should not be involved in making policy. That something "could" happen is not science and has no basis in this matter.</p>	<p>Thank you for your comment. A white paper from the California Energy Commission’s California Climate Change Center (2012) which synthesizes San Francisco Bay Area-focused findings from research conducted in 2010–2012 as part of the state’s Vulnerability and Adaptation study (3rd California Climate Change Assessment) states that precipitation “projections show an increase in the number and intensity of extreme storms and consequent flooding events over the next century.”</p>

CHAPTER 2: Methodology and Approach

Name & Organization	Comment	Response
California Coastal Commission – Stephanie Rexing	Chapter 2, pg. 38: Update the reference to the California Coastal Commission’s Sea Level Rise Policy Guidance to the final approved version from August 2015 (not May).	Thank you for your comment. The reference will be updated.
California Coastal Commission – Stephanie Rexing	Chapter 2, pg. 59: The section states that “...if the maps showed that the shoreline overtopped at 12 feet but major components of the asset were not affected until 36 inches of sea level rise, then 36 inches was determined to be the critical water level.” How does this account for access to the assets? For example, for critical facilities, if access would be cut off by a specific flood level, it would have consequences.	Thank you for your comment. The critical water level in the Asset Vulnerability Profile analysis is based on impacts to the asset itself, rather than the point at which access is impaired. However, we recognize that if access is impaired, there would be significant consequences and the asset may not be able to function. The Asset Vulnerability Profiles include a section on Cross-Cutting vulnerabilities that examine access to the asset and most often include asset specific adaptation strategies to ensure continued access. In addition, Chapter 3 of the Vulnerability Assessment talks about consequences, especially access extensively in section 3A.3: Cross cutting vulnerabilities and cascading impacts.
California Coastal Commission – Stephanie Rexing	Chapter 2, section 2.12 (Limitations): Suggest adding a description of how CoSMoS and the Pacific Institute treat existing seawalls in their analyses and what this means for whether the findings are then a possible over- or underestimate of vulnerability. Additionally, should explain that CoSMoS flooding maps assume the current shoreline rather than showing what would flood after long-term erosion, which may mean that flooding is underestimated.	Thank you for your comment. We will add the following text to Chapter 2: 2.12.1 “The OCOF tool is based on the United States Geological Survey (USGS) hydrodynamic model called CoSMoS (Coastal Storm Modeling System). The model incorporates wave projections, tides and regional atmospheric forcing to generate sea and surge levels. CoSMoS uses Digital Elevation Models based on aerial Lidar flights carried out in summer 2010. So any changes to the topography post-2010 is not captured by the DEM. The

		<p>model does not assume any changes in geomorphology or shoreline over time or are assumed to not erode over the time scale being simulated. As shoreline protection devices might degrade or erode over decades, the model holding this as a constant results in an underestimation of vulnerability. In addition, the elevation data has a vertical accuracy of approximately 18 cm, so the model may over- or underestimate the height of sea walls or shoreline protection structures by 18 cm.</p> <p>Pacific Institute erosion scenarios look at the shoreline geology and assume how far it would erode over time, but do not take any existing shoreline protection or seawalls into consideration. This means the erosion modeling may overestimate vulnerability since if shoreline protective devices are maintained in place, erosion rates will be significantly reduced.”</p>
City of Half Moon Bay – Jill Ekas	Page 55 reference to groundwater source - the use is cited to be industrial. In Half Moon Bay, groundwater is most often used for private agriculture or golf course irrigation. Unsure of use of groundwater for municipal supply utilizing wells in Half Moon Bay, suggest contact CCWD, per previous comment on Chapter 3.	<p>Thank you for your comment. Recommend changing text on page 55 to following:</p> <p>“Performed a qualitative evaluation of the potential vulnerability of groundwater extraction wells for cities where groundwater was reported to be a resource for municipal, industrial, and agricultural uses.”</p>
City of Menlo Park – Azalea Mitch	Page 39 – would be helpful to define risk class	<p>Thank you for your comment. We will add the following text to page 39: “For more information and descriptions of the four risk ASCE classes used in this study, see Chapter 2: Methodology and Approach, Table 2.3”</p>
SF Public Golf Alliance – Richard Harris	p. 45. Text: “On the Coastside, erosion data from the Pacific Institute were used to estimate the potential future extent of erosion with sea level rise (Philip Williams and Associates, Ltd., 2009). This future erosion data was the best available data at the time of the Assessment and assumes 4.6 feet of sea level rise.” Comment: The reference to	<p>Thank you for your comment. The reference discrepancy will be addressed and the name of the data set will be called out in the text on page 45.</p>

	<p>Pacific Institute and Philip Williams 2009 studies as the source reference for erosion data is uncertain, and appears to be inconsistent with a statement in the Executive Summary, page x, that erosion data in the Vulnerability Assessment is based upon data developed by Philip Williams in 2009 and in 2012. Appendix P – Citations, at unnumbered page 8 contains only two references to studies by the Pacific Institute (2009 and 2012), and one by Philip Williams and Associates (2009). The reference in the text at page 45 should be more specific as to exactly which Philip Williams data set is being referenced, and this citation should include a specific reference to the page and/or Table(s) to which the reference is being made. It is possible that the reference at Executive Summary page x to a Philip Williams 2012 erosion study is a reference to a May 1, 2012 memorandum from Williams’ successor company ESA PWA, to the San Francisco Littoral Cell Coastal Regional Sediment Management Plan team (https://dl.dropboxusercontent.com/u/30028085/ESA.PWA.CRSMP.Tech.Memo%231.5.1.12.pdf). Figure 2 from that study, captioned “Shoreline Change Rates by Study Reach,” reports a “Shoreline Change Rate (ft/year)” for 16 specifically-identified shoreline reaches from San Francisco’s Baker Beach on the North to Pacifica’s Shelter Cove on the South. At Sharp Park, the “Shoreline Change Rate” is identified as approximately 1 and 2/3 feet per year over the 60-year period from 1952 through 2012. Over that 60-year period, annual shoreline erosion at the rate of 1 and 2/3 feet would yield a total 100 feet of shoreline erosion. However, a prior study by Philip M. Williams Associates for the California Coastal Conservancy – entitled “Laguna Salada Resource Enhancement Plan,” and dated June, 1992, determined that between 1931 – 1984, the shoreline at Salada Beach adjacent to the Sharp Park Golf Course in Pacifica “has retreated 200-300 feet. . . The most severe erosion occurred in the large wave storms of 1983. . . Nearly half of the 200-300 feet of shoreline retreat occurring from 1931 to 1984 took place in the period 1978 to 1984. Most of the recent retreat is probably attributable to the 1983 storms.” (PMWilliams Assocs, June, 1992, https://dl.dropboxusercontent.com/u/30028085/SFPGA.PWilliams.Lagu</p>	<p>We did not use the San Francisco Littoral Cell Coastal Regional Sediment Management Plan Study as it was still a draft document then.</p> <p>The vulnerability assessment does not include any analysis or mention of the rate of erosion at Sharp Park or Salada Beach. We are not entirely sure which inaccuracies are being referenced in the last statement with regards to the rate of shoreline erosion at Salada Beach.</p>
--	---	---

	<p>na.Salada.Plan.1992f.pdf,at p. 3) In other words, Philip M. Williams concluded in 1992 that between 1978-1984, the shoreline at Salada Beach eroded 100-150 feet. This amount of beach erosion in the 6-year period 1978-1984 more than accounts for all of the estimated 100 feet of shoreline erosion at Salada Beach during the entire 60-year period from 1952-2012 covered by the ESA-PWA 2012 study. So, when read together, the Philip M. Williams Associates and ESA-PWA studies dated 1992 and 2012 show that there has been no shoreline erosion at Salada Beach since the Sharp Park Sea Wall was reconstructed there in 1989. So it is inaccurate to say that the shoreline is eroding at Salada Beach (Sharp Park) at a rate of 1 and 2/3 feet per year -- or at all.</p>	
<p>SF Public Golf Alliance – Richard Harris</p>	<p>P. 45 Text: “Additionally, this erosion data assumes the shoreline is eroding in its natural state – i.e. without any shoreline protection infrastructure, such as sea walls, rock revetment, or groins. The modeling does not show shoreline protection over the next 50 to 100 years because the continuation of protection infrastructure is a shoreline management decision beyond the scope of the erosion modeling:” Comment: The shoreline erosion modeling of the Vulnerability Assessment should not be based upon the hypothetical “assumption” that there is a “natural state” of erosion independent of “shoreline protection infrastructure”. There is, in fact, shoreline protection infrastructure in place at many locations on both the San Mateo County Coastside and on the Bayside – places such as the Sharp Park section of Pacifica and the San Francisco Airport. If any assumption at all is made about future shoreline management decisions, that assumption should not be that existing shoreline protection infrastructure will disappear, but rather that it will be continued – for the same reasons of protection of residential, commercial and public infrastructure for which the protection infrastructure was built in the first place. If the Vulnerability Assessment wants to illustrate what the picture would be in the hypothetical case that existing shoreline protection infrastructure were not in place, this can be done on separate maps that are clearly marked and explained to be hypotheticals, and for illustration purposes only.</p>	<p>Thank you for providing this perspective. The extent of erosion with sea level rise for the Vulnerability Assessment is based on the future erosion data from the Pacific Institute, which was the best available data at the time of the report. The goal of the assessment was to get a preliminary understanding of the scale and extent of the vulnerability to erosion and sea level rise along the coast in San Mateo County.</p> <p>The Sea Change Team is not in a position to make any assumptions about shoreline management decisions that would be taken at the local level.</p> <p>USGS is currently in the process of updating the Our Coast Our Future tool with updated erosion data. Once available, this information will assist communities in better understanding management options to address erosion impacts.</p>

**CHAPTER 3A: Setting and Context; CHAPTER 3B: Vulnerability Data Analysis and Discussion;
CHAPTER 3C: Community and Health Vulnerability; CHAPTER 3D: City- and County-Specific Findings**

Name & Organization	Comment	Response
California Coastal Commission – Stephanie Rexing	Chapter 3A, pgs. 75-76: Add the Coastal Commission to the list of agencies that address SLR and adaptation planning.	Thank you for the comment. We apologize for the oversight and will add the Coastal Commission to this list.
California Coastal Commission – Stephanie Rexing	Chapter 3B, Section 3B.2.2.2 (Beaches): Suggest including detail on the tourism related economic benefits of beaches and expanding on the concept of “coastal squeeze”, including by adding that if development (seawalls, roadways, residential structures etc.) is removed, beaches are able to more naturally move inland and persist as sea levels rise. Additionally, one sentence states that seawalls etc. are “deployed to fix the shoreline position and prevent beaches from migrating”. It would be more accurate to say that these structures are deployed to protect houses or other development and in doing so that restricts the natural ability of beach to move inland, thereby resulting in the eventual loss of the beach as sea levels rise. As currently stated, this sentence suggests that these structures are an option to protect beaches.	<p>Thank you for your comment. The following language will be included in the final draft in section 3B.2.2.2 Beaches: "In addition to providing essential habitat for local fauna, beaches are an important recreational asset for all County residents. They also provide tourism related economic benefits. Therefore, the loss of beach width would likely result in the loss of economic and tax revenue associated with beach visitation (King et al. 2011). Maintaining public and tourist access is an important part of the area's overall quality of life and reduction in the extent and quality of the County's beaches would not only affect local ecosystems but also have an impact on local recreation and economies as well."</p> <p>Regarding your second wording comment, thank you for pointing this out. The wording in the final draft will read: "Coastal armoring, which may include temporary sandbags, seawalls, or offshore breakers, is often deployed to protect houses or other development. This strategy changes the pattern of sand movement along the shore and produces conditions that restricts the natural ability of the beach to move inland, thereby resulting in the eventual loss of the beach, especially as sea levels rise. When development, such as</p>

		roadways, seawalls, or other structures, is removed beaches are able to more naturally move inland and persist as sea levels rise. "
California Coastal Commission – Stephanie REXING	3A.2 Environmental Context, page 67 – Suggest using the full name for Princeton, e.g. “Princeton-by-the-Sea; and parenthetically including “Surfer’s Beach” after “El Granada County Beach”.	Thank you for your comment. We will change the text to read: "Princeton-by-the-Sea" and "El Granada County Beach (Surfer's Beach)"
California Coastal Commission – Stephanie REXING	3A.3 Cross-cutting Vulnerability and Cascading Impacts, page 73 – Reference is made to “complex governance systems”; for clarity it would be helpful to provide an example.	<p>Thank you for your comment. We provide several examples of complex governance systems in a section below this brief introduction on page 73. For clarity's sake, we will include the following language here: "Built assets such as hospitals and airports (Risk Class 4) are likely to have vulnerabilities that stem from multiple exposed locations or complex governance systems (for example, Pillar Point Harbor), and inundation will trigger a series of cascading impacts."</p> <p>Later, below the list of agencies, we will include the following language to elaborate on the Pillar Point example: "For example, beach loss at El Granada County Beach (Surfer’s Beach) in Half Moon Bay is affected not only by the management of sediment in the littoral cell, but specifically by the jetty managed by the USACE just north of the beach. Pillar Point Harbor is similarly challenging due to the complexity of governance jurisdictions that intersect there which include: the Army Corps (breakwater), the NOAA Greater Farallones National Marine Sanctuary (coastal waters), the CA Coastal Commission (land use authority), the Harbor District (harbor), the State Lands Commission (authority over areas below the mean high tide line), and the City of Half Moon Bay and unincorporated San Mateo County (land use jurisdiction).</p>
California Coastal Commission –	3A.3 Cross-cutting Vulnerability and Cascading Impacts, page 74 – The third sentence, for clarity, should be revised to read: “Mitigating these	Thank you for your comment. The sentence will be revised to read: "Mitigating these effects and adapting this system demands concerted and coordinated efforts...".

Stephanie REXING	effects and adapting this system demands concerted and coordinated efforts...”	
California Coastal Commission – Stephanie REXING	3A.3.2 Governance and Vulnerability, Page 77 – The list presented identifies the challenges with managing (and preparing) for sea-level rise. Suggest /consider adding the challenge of prioritizing both within a single agency and between different agencies/entities.	Thank you for your comment. The final draft text will read as follows: 1. Multiple governing agencies, nonprofit organizations, and research institutions form a complex picture, and may have competing priorities. ... 5. Agencies and institutions balance competing demands on limited staff resources and time, and there may be differing levels of understanding of sea level rise among agency staff.
California Coastal Commission – Stephanie REXING	3A.3.4 Cross-cutting Vulnerability and Cascading Impacts Conclusion, page 80 – Clarify what is meant by “underserved communities”; if referring to communities with limited economic resources and limited access, suggest not using the term “under-served”.	Thank you for the comment. We will remove the word “underserved.” The sentence will read instead: “A failure to adequately respond to this network of vulnerability, as difficult as it may be to fully comprehend, will have profound consequences for everyone in the County and especially those in communities with limited economic resources.”
California Coastal Commission – Stephanie REXING	Chapter 3D, City-and County-Specific Findings, page 165, Table 3d.1 – This table provides key datasets and descriptions; including coastal erosion and flooding should also be added.	Thank you for your comment. We will add the following information to the table: Dataset or Asset Type: Flooding and inundation; Description: Low-lying coastal areas may experience more flooding (temporary) and inundation (permanent) along the Bayshore or the Coast due to sea level rise. The report uses data to determine the geographical extent and depth of inundation along the Coast and Bayshore. The report presents this data in its exposure maps through three different scenarios: Baseline (1% annual chance flood at mean higher high water); Mid-level (1% annual chance flood plus 3.3 feet of sea level rise); High-end (1% annual chance flood plus 6.6 feet of sea level rise); Data Source: Our Coast, Our Future study and tool, 2016.
California Coastal Commission –	Chapter 3D, City-and County-Specific Findings, El Granada, page 219 – Typographical correction and minor edit under El Granada, suggested	Thank you for your comment. That sentence will read as follows in the final draft: “El Granada County Beach (Surfer’s Beach)

Stephanie REXING	revision: "...Surfers Beach and Highway 1 south of (adjacent to) El Granada are assets in the Princeton/Pill Point Harbor profile".	and Highway 1 south of (adjacent to) El Granada are assets in the Princeton/Pillar Point Harbor."
California Coastal Commission – Stephanie REXING	Chapter 3D, City-and County-Specific Findings, Moss Beach, page 220 – The Seal Cove area of Moss Beach is designated as a Geological Hazard area, particularly Zone 1 that is located directly adjacent to the coastline. Development is currently not allowed in that area pursuant to the County’s Local Coastal Program (LCP). This should be mentioned as a factor with the erosion scenario for Moss Beach.	Thank you for your comment. The following language will be included in the final draft in that paragraph: " The Seal Cove area of Moss Beach is designated as a Geological Hazard Area (due to active landslide processes), and development is not currently allowed in the area directly adjacent to the coastline by the County's Local Coastal Program (Parks 2016b)."
California Coastal Commission – Stephanie REXING	Pacifica - Discussion of Pacifica should focus on the erosion scenario, which is very likely given ongoing episodic loss of bluff in recent years. It is unclear why Pacifica’s summary (p.199) underlines the sentence describing a baseline scenario and lack of threat from inundation – seems misplaced given this may be the most vulnerable city in all of San Mateo County. Pacifica State Beach is certainly exposed, but other infrastructure is more at risk and worthy of attention. Generally speaking, large stretches of Esplanade Ave, Palmetto Ave, and Beach Blvd roadways and associated storm/sewer infrastructure are all currently vulnerable to erosion, overtopping, and storm related inundation. The only adaptation mentioned for Beach Blvd is to repair and/or raise the seawall, but planned retreat should remain an option in all areas where it may be feasible to relocate development.	Thank you for your comment. By underlining the sentence we were drawing attention to the finding that under the baseline flood scenario, Pacifica is not imminently vulnerable to flooding. However, this emphasis detracts from the vulnerability entailed in the erosion scenario, so we’ll remove this underlining so as not to be misleading. The sentence itself is referring to the baseline or current <i>inundation</i> scenario (not the erosion scenario. We only have one erosion scenario, but multiple inundation scenarios). Under current conditions, Pacifica is not vulnerable to significant inundation. This statement is true only under the <i>baseline inundation scenario</i> . The picture is different when looking at the future erosion scenario or the mid-level or high-end scenarios. The section already mentions vulnerable storm and wastewater infrastructure. The final text will include the following language: Stretches of Esplanade Avenue, Palmetto Avenue, and Beach Boulevard are also vulnerable to erosion.
City of Brisbane – Ken Johnson	Brisbane General Information Table (pages 171-173) under Total column: EOC = 1, Wastewater Pump Stations = 4, Buildings with Affordable Rental Units = 4, Mobile Home Parks = 1	Thank you for the updated data. You will see these revised numbers in the final inventory.
City of Brisbane – Ken Johnson	Brisbane General Information Table (pages 171 - 173) under High -End Scenario Column: Wastewater Pump Stations = 1	Thank you for the comment. You will see this revised number in the final inventory.

City of Half Moon Bay – Jill Elkas	We previously submitted updates to the data presented for Half Moon Bay's profile. We see some footnotes indicating that this will be updated, but not all items. We can resubmit this; however, we will wait for your inquiry about the data. It would be difficult to present it in this format. This dates to early February 2017.	Thank you for your comment and working with us to clarify some of these data points. The updated numbers will be reflected in the final inventory.
City of Half Moon Bay – Jill Elkas	There is a reference to flooding in Half Moon Bay near Denniston Creek. We think this may be in the unincorporated area and would suggest double checking that description. (page 66)	Thank you for bringing this to our attention. The Denniston creek watershed is wholly in unincorporated San Mateo County. We will revise this language to the following: "Some areas that experience regular flooding include but are not limited to Pescadero (near Pescadero and Butano Creeks), unincorporated portions of San Mateo County (near Denniston Creek)..."
City of Half Moon Bay – Jill Elkas	The reference to Mirada Road on page 67 (and elsewhere) should be clear that there are City and unincorporated San Mateo County portions. Also, confirm location of municipal wells (page 90) with the Coastside County Water District with respect to location within or outside Half Moon Bay city limits.	Thank you for your comment. Regarding the Mirada Road reference on page 67, the text will now read instead: "City of Half Moon Bay/ Unincorporated County -- Mirada Road". Regarding the municipal wells, we've determined that there are no municipal wells within Half Moon Bay that are directly adjacent to the Pacific. The text will now read instead: "A potential exception that warrants further review pertains to any municipal supply wells adjacent to the Pacific Ocean."
City of Menlo Park – Azalea Mitch	a. Figures are very difficult to see, the scale may not work for the report	Thank you for your comment. We will explore the feasibility of enlarging these throughout the document in our final layout.
City of Menlo Park – Azalea Mitch	b. Page 70 – define storm surge	Thank you for your comment. This term is repeated throughout the report and, along with other key terms, is defined in Appendix O (Glossary). To clarify, we will include the following definition of storm surge when the term first appears in the chapter on page 67 in footnote form: "Much of the Bayshore and the lower-lying areas along the Coastside are also vulnerable to present-day coastal flooding from extreme floods and storm surge. [Footnote:] Increased water level due to

		changes in atmospheric pressure and the action of wind stress on the water surface."
City of Menlo Park – Azalea Mitch	c. Page 73 – cross cutting vulnerability / cascading impacts – it might be helpful to have explicit examples of what a cascading impact means. The impact of SLR on critical facilities, for example, affects a larger sector of the population, not just those in the affected area. This explanation of the impact should therefore be more explicit, since it is important for people to understand that the effects transcend the inundated areas.	Thank you for your comment. You can find examples of what, exactly, cascading impacts and networked infrastructure means and in the sections immediately below page 73. Specifically, 3A.3.3 Cascading Impacts, and 3A.3.3.1 Networked infrastructure and potential cascading impacts in San Mateo County.
City of Menlo Park – Azalea Mitch	d. Page 78 – cascading impacts – it might be helpful to move this section / explanation up in the text. This section makes explains why the Town of Atherton, for example, should be concerned about the inundation of the wastewater treatment plant. Once again, this is an important point and an example that should be made earlier in the text.	Thank you for your comment. This section is situated after necessary introductory text and is placed as early as it can reasonably be.
City of Menlo Park – Azalea Mitch	e. Page 95 – built assets – this is a good section that provides a helpful summary of the impacts to the County as a whole. However, the figures are very hard to use. It might be helpful to zoom in, perhaps have different scales and more than just one figure.	Thank you for your comment. We will work on making these figures larger in the electronic version of the final draft. We will also be developing an online data viewer which will allow users to zoom in and print detailed maps.
City of Menlo Park – Azalea Mitch	f. Page 120 – correct Bay Front Canal, change to Bayfront Canal	Thank you for your comment. The language in the final document will read: “Bayfront Canal”.
City of Menlo Park – Azalea Mitch	g. Page 137 – built asset conclusion – it would be helpful to highlight some of the adaptive capacities that should be considered given the vulnerability of these assets. For example, many of these assets can’t be moved, so they must be protected and the protection, for some, is limited. This would tie into the next section.	Thank you for your comment. We provide adaptive options for each major asset category in the summary tables that precede the asset category analysis. We'll be exploring adaptation options in greater detail in Phase II and III of the Sea Change program.
City of Menlo Park – Azalea Mitch	h. Page 143 – waterborne diseases – there are no “combined” sewer systems in the area. The big impact here is the inability of wastewater treatment plants to receive and treat waste. This would lead to sewer backups, overflows and the release of untreated sewage to affected areas and the Bay. This section should include more information on the impacts to wastewater treatment plants and the consequences.	Thank you for your comment. We will remove the reference to combined sewer systems. Regarding the impacts of wastewater treatment plants being inundated, a much more detailed analysis of this can be found in section 3B.2.3.8 Wastewater Systems, and in Appendix D, Asset Vulnerability Profiles number 2, the Sewer Authority Mid-Coastside Water Treatment Plant,

		number 14, the Silicon Valley Clean Water Treatment Plant, and number 23, the San Bruno Water Quality Control Plant.
City of Pacifica – Tina Wehrmeister	Page 199 – The Map Zone for Pacifica is shown as Zone 9 on page 2 of Appendix B, but is stated here as Zone 8.	Thank you for the comment. This will read "Zone 9" in the final draft.
City of Pacifica – Tina Wehrmeister	Page 200 – Additional characters were included in the Baseline Scenario column for the Assess Value of All Parcels at Risk.	Thank you for the comment. We will remove those extra characters in the final draft.
City of Pacifica – Tina Wehrmeister	Page 201 – Is the value in the High-end scenario correct for the Outfalls, given that the value under the Mid-level scenario is a higher value?	Thank you for the comment. You are correct. That is not consistent. We will fix this inconsistency with our consultant when we update the final inventory.
Committee for Green Foothills – Alice Kaufman	On page 64, there is a reference to “200 miles of inner shoreline flood protection features.” It is not clear what kind of infrastructure this refers to, especially since 53 total miles of shoreline along the Bay. This needs clarification.	Thank you for your comment. The definition of "inner shoreline flood protection features" is included in a footnote at the bottom of the page (inner shoreline flood protection features are “not first line of shoreline defense,’ and are located landward of ‘first line of shoreline defense’ features that are closer to the Bay”). This references the second mention of "200 miles of inner shoreline flood protection features" in the bottom line of that page. We will add another footnote to the bulleted item you're referring to for clarity.
Department of Agricultural Services – Fred Crowder	Page 73 of 291 - “Much of the County’s 53 miles of Bay shoreline was once coastal floodplain and wetland, but over the course of the 20th century this land was drained to support agriculture, salt production, and ultimately urban development. The Bayshore is low lying, and its densely developed lands are already subject to interior flooding caused by rain-driven events and high tides that cause Bay water to back up through outfalls into stormdrains, and then onto streets and other areas. The Coastside has both cliffs and beaches, is more sparsely populated, and is exposed to coastal surge and erosion.” Is there a reference to bay land being drained to support agriculture as am not aware of bay lands being	Thank you for your comment. The revised language will read: "Much of the County’s 53 miles of Bay shoreline was once coastal floodplain and wetland, but over the course of the 20th century this land was diked and filled to support salt production and urban development."

	<p>drained for agricultural purposes? This was done further up the river delta above the tidal salt water intrusion zone but question whether it would be possible to produce crops on saline bay mud. Agriculture was located on the lands adjacent to the bay as was fertile, accessible and level. It was also conveniently located so barges could be relied on to transport crops to markets to other bayside communities.</p>	
<p>Department of Agricultural Services – Fred Crowder</p>	<p>Page 92 of 291 - “San Mateo County on the Bayside mostly consists of commercial and residential land uses, whereas the Coastside is dominated by agriculture, vacant land, and vegetation. The spine of the County, formed by the Santa Cruz Mountains, creates a central region of natural vegetation from the north to the south. Figure 3B.1 below shows these patterns of land uses withing the project area. 'UDIW.”</p> <p>Document might mention that all agriculture operations are located on the coastside and located higher up in the hills, or on bluffs above projected inundation areas anticipated with sea level rise.</p> <p>Note typo in last sentence – “withing” should be “with in”</p>	<p>Thank you for the comment. The text will read instead: "San Mateo County on the Bayside mostly consists of commercial and residential land uses, whereas the Coastside is dominated by agriculture, vacant land, and vegetation. All agricultural operations are located on the Coastside and located on bluffs or hillsides above the projected areas of inundation.Figure 3B.1 below shows these patterns of land uses within the project area."</p>
<p>Department of Agricultural Services – Fred Crowder</p>	<p>Page 115 of 291, first paragraph -" San Mateo County has 29 sites classified as hazardous materials or cleanup sites that are expected to be exposed to flooding in the near term, and up to 665 sites that are expected to be exposed to flooding in the long term. The sites identified in the inventory include closed sites that have undergone remediation in addition to open sites. They also include cleanup sites and areas with historical use of pollutants or pesticides."</p> <p>Are there cleanup sites for pesticides or do you mean hazardous materials drop off sites where residents may drop off pesticides? Am not aware of any such clean-up sites for pesticides in San Mateo County but there are sites to address industrial chemicals. If so, would recommend stating industrial chemicals rather than pesticides as they are very different. There might be a concerns with flooding of fuel, fertilizer and pesticide storage areas on farm operations, however, as mentioned above, San Mateo County agricultural operations are located back up in</p>	<p>Thank you for your comment. The text will read instead: "San Mateo County has 29 sites classified as hazardous materials or cleanup sites that are expected to be exposed to flooding in the near term, and up to 665 sites that are expected to be exposed to flooding in the long term. The sites identified in the inventory include open sites, cleanup sites, and areas with historical use of pollutants or industrial chemicals. Closed sites that have undergone remediation are not included. " As part of the final inventory, we will be removing closed sites that have undergone remediation from the inventory and maps.</p>

	<p>the hills, or on bluffs above projected inundation areas anticipated with sea level rise</p>	
<p>Department of Agricultural Services – Fred Crowder</p>	<p>Last paragraph page 152 of 291 – “Foodborne illness could also be indirectly caused through a chain of events in the agriculture industry. Key crops could become contaminated from contaminated groundwater or irrigation systems, and then be unwittingly sold on the market” Flooding of sewer or septic systems might facilitate such contamination, however, as mentioned above, SMC agricultural operations are located well above projected inundation zones resulting from sea level rise. Irrigation water sources are similarly located. Flooding of septic and sewer systems resulting from heavy rainfall might result in such contamination a circumstance, but this document concerns sea level rise. In some regions of the coast, there are concerns with sea level rise contributing to salt water intrusion into wells or surface water supplies, however, agricultural operations in San Mateo County are high enough above the coast line, and there are few if any irrigation wells on the coast that salt water intrusion into wells, or surface irrigation waters is not of concern. Regarding food safety, the Food Safety Modernization Act (FSMA) through US Food and Drug Administration is intended to address potential contamination and foodborne illness and should address potential contamination of irrigation waters associated with both flooding and sea level rise. Again, contamination of irrigation water sources resulting from sea level rise is very unlikely, but the FSMA shifts the focus of food safety from responding to contamination to preventing it thru proactive practices that mitigate potential contamination. These practices include education and awareness, crop and irrigation water monitoring, addressing anticipated and identified hazards - including contamination sources - recordkeeping, and third party oversight and verification.</p>	<p>Thank you for these observations. We will remove the following language due to inaccuracy: "Foodborne illness could also be indirectly caused through a chain of events in the agriculture industry. Key crops could become contaminated from contaminated groundwater or irrigation systems, and then be unwittingly sold on the market."</p>

<p>SF Public Golf Alliance – Richard Harris</p>	<p>Chapter 3A Page 67. The Draft Vulnerability Assessment acknowledges that shoreline erosion along San Mateo County’s Pacific coast does not occur at a regular, steady pace, but rather occurs in infrequent, irregular bursts. “In the case of erosion, some sections of coastline may be unaffected by waves for a long period of time, and then a single event or storm could dramatically erode a large portion of the coastline or beach. This aspect of erosion contributes to the uncertainty in projecting the frequency, timing, extent, and location of future erosion, necessitating further site-specific study prior to designing adaption measures or permitting developments in these areas.” Comment: See my Comment 1 to Chapter 2, Page 45, above.</p>	<p>Thank you for your comment. Please see Chapter 2 for a response.</p>
<p>SF Public Golf Alliance – Richard Harris</p>	<p>Chapter 3A Page 69. Figure 3A.1, captioned “Sea Level Rise and Erosion Hazards in Project Area,” is based on the Philip Williams erosion modeling, which (as explained in text at page 69) “does not include existing shoreline defenses, such as seawalls.” For the reasons discussed in my comment No. 2 to Chapter 2, page 45, above, the failure to consider existing shoreline defenses is not based on facts on the ground, and accordingly creates an unrealistic and ultimately unreliable picture of future erosion. Accordingly, Figure 3A.1 should be revised and/or recaptioned to qualify and explain the hypothetical basis of its erosion assumption.</p>	<p>Thank you for your comment. We will revise the text to explain the erosion study methodology with greater clarity: "Erosion modeling does not consider shoreline armoring due to a dearth of information on the condition and life expectancy of existing structures. The 2009 Philip Williams and Associates study recognizes that future shoreline protection is likely in general but could not predict where and how these would appear. In this case, developing predictive erosional models is impractical and exceedingly difficult."</p>
<p>SF Public Golf Alliance – Richard Harris</p>	<p>Chapter 3B Pages 85 and 89. Although Section 3B.2.2 contains a list, at page 85, of “Natural Asset Categories Analyzed” which includes “Faunal species,” Figure 3B.2.2.3 (at page 89), captioned “Faunal Species,” and purporting to list “threatened or endangered” species threatened by sea level rise, that list fails to identify either California red-legged frog or San Francisco garter snake. Both of these species are reported to inhabit the Sharp Park wetlands in Pacifica, which wetlands are threatened by sea level rise. (See Philip M Williams Assocs, “Laguna Salada Resource Enhancement Plan, June, 1992, https://dl.dropboxusercontent.com/u/30028085/SFPGA.PWilliams.Laguna.Salada.Plan.1992f.pdf, at pp. 1-3.</p>	<p>Thank you for your comment. Unfortunately, we were not able to perform a comprehensive analysis of all animal species (endangered or not endangered) affected by sea level rise. We will include the following in a footnote: "This list is not exhaustive. Additional endangered species may also be negatively affected by sea level rise."</p>

SF Public Golf Alliance – Richard Harris	Chapter 3B Page 86. Figure 3B.2, captioned “Natural Assets Exposure,” identifies the Sharp Park basin as a Wetlands, but does not show that the endangered and listed species – San Francisco Garter Snake and California red-legged frog – are both reported to inhabit that wetland. See my Comment 3 to Chapter 3B, above.	Thank you for your comment. Please see response to previous comment.
SF Public Golf Alliance – Richard Harris	Chapter 3D Page 199 Pacifica Vulnerability Assessment. Under “Pacifica,” the text refers to “Map, Zone 8”. This is a typographical error. The Built Asset Exposure Map for Pacifica, found in Appendix B is in fact identified as “Zone 9”.	Thank you for your comment. We will fix this typo to read: "Zone 9".
SF Public Golf Alliance – Richard Harris	Chapter 3D Page 200 The list of “Natural Assets” fails to identify “endangered species”; there is in fact at least one area in Zone 9 Pacifica (represented by the Appendix B Natural Asset Exposure map for Pacifica), where endangered and listed species inhabit, which is certain of the wetlands at Sharp Park, which wetlands are reported to provide habitat for the endangered San Francisco garter snake and the California red-legged frog. . (See Philip M Williams Assocs, “Laguna Salada Resource Enhancement Plan, June, 1992, https://dl.dropboxusercontent.com/u/30028085/SFPGA.PWilliams.Laguna.Salada.Plan.1992f.pdf , at pp. 103 and 40-41.) This is not reflected on the Appendix B Natural Asset Exposure map for Zone 9.	Thank you for your comment. Unfortunately, this can't be accommodated. The list of natural assets is part of an inventory and at this point additional "assets" cannot be added to be quantitatively analyzed. We have addressed this comment in a previous response, which includes adding additional language in section 3B.2.2.3 Faunal Species about the limitations of our report.
SF Public Golf Alliance – Richard Harris	Chapter 3D Page 200-201. The Vulnerability Assessment’s list of Class 3 Assets, and Appendix B Built Asset Exposure map for Zone 9, fails to identify the Sharp Park Golf Course pump house, located at the southwest corner of the golf course very near the seawall, which pump house is a Stormwater Pump Station, In addition to providing emergency protection for the golf course and the surrounding West Fairway Park and Clarendon Road residential neighborhoods, the stormwater-pumping capability of the Sharp Park pump house is specifically designed to	Thank you, we will include the location of the Sharp Park Golf Course pump house.

	<p>remove seawater from the Sharp Park wetlands in the event of overtopping or breach of the sea wall. This is critical to the survival of the endangered and threatened San Francisco garter snake and California red-legged frog, which are saltwater-intolerant species. This function of the Sharp Park pump house is described in detail at pages 40-42 of Philip M Williams Assocs, "Laguna Salada Resource Enhancement Plan, June, 1992, https://dl.dropboxusercontent.com/u/30028085/SFPGA.PWilliams.Laguna.Salada.Plan.1992f.pdf.)</p>	
--	---	--

CHAPTER 4: Adaptation Planning

Name & Organization	Comment	Response
California Coastal Commission – Stephanie Rexing	Chapter 4, pg. 249: The row regarding Coastal Armoring should include the blocking beach/wetland/habitat migration (and therefore the eventual loss of these habitats) as one of the negatives of this strategy.	We'll be adding text to the coastal armoring section of table 4.1 (page 249) to add "Blocks habitat migration and can lead to habitat loss and species decline."
City of Menlo Park – Azalea Mitch	Page 249 – habitat restoration – drawbacks are not included. While wetlands may be able to serve as an important function for mitigating sea level rise, it is important to note that their health will depend on the amount of sediment accretion. If the sedimentation rates in the Bay cannot keep up with sea level rise, then wetlands will not be able to survive. It would be important to note this and to make the case for a sediment management plan for the Bay – one that would facilitate the use of sediments to restore these habitats given their critical role.	Thank you for providing helpful feedback to Chapters 4 and 5. In response to your comment, the following bulleted text will be added to page 249 under habitat restoration: "Might not be viable if there is not adequate sediment or space for the habitat to migrate inland." Additionally, we'll be incorporating your comment about the sediment management plan into page 246, paragraph 2 (section 4.3.4 Multifunctional Shoreline Protection), after existing text "When the full system is restored, from the subtidal (using adaptation methods such as living reefs) to the uplands (using adaptation methods such as horizontal levees), a more resilient landscape results. Otherwise, when wetlands cannot keep pace with the rise in sea level or do not have the room to migrate backward because of a lack of open space, and therefore become fully submerged, they become mudflats that are less effective at reducing wave action and storm surge" to include "The health of the wetland will also depend on the rate of sedimentation. To ensure the health, longevity, and success of the wetland, one strategy would be to develop a sediment management plan."
Glenda Mahoney – Half Moon Bay Individual	pg. 241, -Equity This bullet point describes equity in terms of impacts to lower income or ethnically diverse communities, but I think equity also needs to be considered between individual neighbors for specific projects that could protect one building but create more erosion in another area (such as riprap). Does a homeowner who can pay for riprap have the right	Thank you for your feedback on Chapter 4. We'll be adding the content you suggested to the "ownership and governance" bullet point (page 241). The text will now read "A project should take into account land requirements, ownership, and whether a project needs special permitting. Projects should also

	to push erosion southward onto a neighbor who will be negatively affected?	consider any potential impacts that may affect another area. For example, a homeowner who wants to build a riprap to protect their property from erosion must consider how this may redirect the erosion to neighboring lands."
Glenda Mahoney – Half Moon Bay Individual	p. 249 table 4.1 Coastal armoring: Negative impacts in coastal areas should include reduction of beach sand and recreational area in front of armoring and to the south of the armoring. Creates further erosion issues for other stakeholders to the south.	We'll be adding text to the coastal armoring section of table 4.1 (page. 249) to add "Loss of beach sand and recreational area in front of armoring and land adjacent to the armoring." Will rephrase existing bullet "Increases flooding and erosion in areas adjacent to structures" to "Increases flooding and erosion in coastline adjacent to structures which can create issues for neighboring stakeholders."
Glenda Mahoney – Half Moon Bay Individual	p. 249 table 4.1 Beach nourishment and replenishment: In certain locations can restore natural sand flow where it has been interrupted (such as with a breakwater). Provides erosion protection over a large area over time, and preserves recreational areas for tourist-dependent communities and businesses.	We'll be adding text to the beach nourishment section of table 4.1 (page 249) to add "May restore natural sand flow where it has been interrupted" and "Provides erosion protection for a large area over time" and "Preserves recreational areas for tourist-dependent communities and businesses."

CHAPTER 5: Getting Ahead of Sea Level Rise

Name & Organization	Comment	Response
California Coastal Commission – Stephanie Rexing	Chapter 5, pg. 263: Incorporate development/updating LCP policies as a tool for implementation adaptation planning into this list.	Thank you for your feedback. This list (pg. 263) was developed through feedback we received and a number of meetings. After the 'Develop Countywide sea level rise standards' bullet, we'll be adding "and Local Coastal Programs" after the General Plans. The new section will read "Establish Countywide standards for sea level rise science, sources, scenarios, and assessment methodology and produce guidance on how to consistently address sea level rise in General Plans and Local Coastal Programs. " We'll likely be moving this section to the appendices in order to make it clearer to readers that these were ideas generated from our stakeholders.
City of Half Moon Bay – Jill Ekas	With respect to research needs - page 275 - coastal erosion and habitat vulnerability appear to be highly dynamic in Half Moon Bay at this time. The City is investing in erosion study work now. The point of this comment is that much of this additional needed research is crosscutting and technical assistance should be an emphasized next step. Many of the needed studies have not been specifically conducted previously.	We believe that your feedback would be best addressed under the research needs section, 5.3.2 (page 271), for the text to now read: "To meet this need, the County and partners can take several next steps. The Asset Vulnerability Profiles serve as a template for the County, cities, and asset managers to further evaluate the vulnerability of other facilities and areas throughout the County. In future studies that cities conduct throughout the County, it would be helpful to ensure they receive adequate technical support through channels including consultant or agency expertise and County staff..."
City of Half Moon Bay – Jill Ekas	Consider adding economic analysis methods as a research need. Many conditions may require short, mid, and/or long term approaches. With private property involvement, considerations of takings, amortization, etc. will need to be well understood. Although this will need to be done on a case by case basis, development of solid methodology for approaching these assessments could be helpful.	We will be adding economic analysis under the Research Needs section (beginning on page 275). The text will state: "Issue: The Vulnerability Assessment does not provide an economic analysis for specific assets, adaptation strategies, future assessments, or other projects that may arise from the Vulnerability Assessment. In order to determine whether or not a project is economically viable, an economic analysis is an

		essential step. Action: Although economic analyses will be done on a case by case basis, the County and cities could partner with economists, and state and federal funders to develop a standardized methodology for these assessments, and conduct research on the costs and benefits of different adaptation strategies. Working with funders would ensure that analyses are done in a way that is compatible with grant application requirements.
City of Menlo Park – Azalea Mitch	Page 253 – correct governance options, not optionis. Overall, to ensure collaboration given the complexity of sea level rise, it may be helpful to consider different governance models. For example, should one agency have the primary responsibility of implementing SLR projects that require the collaboration of many municipalities? This will become important to consider as we explore and evaluate funding options.	Thank you for your feedback. We've fixed the typo and will add the following text to page 263 "It may be helpful to consider different governance models." Additionally, your comment about agency roles and collaboration is an important one that we will consider and formulate into our plan for our Phase II.
Committee for Green Foothills – Alice Kaufman	The suggested “Adaptation Policy Toolkit” would include “adaptation plan templates, policy language, and planning recommendations for Climate Action Plans, General Plans, and Local Coastal Program updates.” This toolkit should also include specific language for model ordinances and general plan policies that cities can simply adopt. Those policies should be sure to include language supporting the option of managed retreat, especially on the Coastside where bluff erosion makes other options less viable. In addition, model policies that allow for land use and zoning designations to be changed within vulnerable areas in order to minimize impacts to life, safety and damage/loss to infrastructure and built environment. For example, on the Coastside, agricultural uses could be encouraged within and adjacent to the areas vulnerable to erosion.	Thank you for your feedback. We will add text to the Adaptation Policy Toolkit to now state "adaptation plan templates, model policies and ordinances, and planning recommendations for the Climate Action Plans, General Plans, and Local Coastal Program Updates." Some of the model policies may be able to address land use and zoning designations.

GENERAL COMMENTS

Name & Organization	Comment	Response
California Coastal Commission – Stephanie Rexing	1. Overall, this is a good vulnerability assessment. There is a lot of detail contained within the document, including both specific vulnerability information as well as a significant amount of background information regarding sea level rise impacts and adaptation planning. Moreover, the asset vulnerability profiles provide additional important detail for specific assets that will be helpful for adaptation planning purposes, and which will provide a good starting point as cities, communities, and asset managers in the County carry this work forward.	Thank you for your comment.
California Coastal Commission – Stephanie Rexing	2. This is a very ambitious undertaking and overall this represents a very good start to highlighting the need to connect the many different entities and their respective efforts to appropriately prepare to address sea-level rise. Overall, the document is very long, and it is easy to lose track of some of the most important details. Although we don't have specific suggestions of information that could be trimmed, we suggest that you work to ensure that repeated information is minimized and that critical information is highlighted through things like bullet points, boxes, and concise summaries at the beginnings or endings of chapters. We suggest that when finalizing the document that some of the text be "pared-down" so that readers can better follow discussions.	Thank you for your comment. We recognize that the document is lengthy. Our team is working at preparing a highlights document, creating an interactive story map, and developing more useful and accessible materials for all audiences. Unfortunately, at this stage, we are limited in our ability to cut the document in length. We recognize the need for a much better way to access this information and will provide these in the coming months.
California Coastal Commission – Stephanie Rexing	3. It would be helpful to explain somewhere (either in Chapter 2 where the scenario selection is described or with the vulnerability discussion in Chapter 3 and the AVPs) how the scenarios that were analyzed (all of which include an extreme storm) differ from the more every day/typical water levels. In other words, just because an asset is vulnerable to a specific scenario doesn't mean that it is constantly flooded at that level. Similarly, you may want to describe the concept that an SLR scenario plus	Thank you for your comment. We understand the importance of explaining the difference between temporary flooding and daily inundation. It is very important to communicate that with sea level rise, the extent of both temporary inundation and daily inundation are expected to increase, and the adaptation responses to address these two issues will need to be different. We will clarify this in the report in both Chapter 2 and Chapter 3.

	<p>a storm can be used as a proxy for understanding the impacts associated with a higher SLR scenario but no storm.</p>	<p>We will expand the sea level rise scenarios discussion to explain how the storm scenarios can be used as a proxy for daily inundation from higher amounts of sea level rise. We will add to and modify the language in Chapter 2 after Table 2.1 to read: The baseline scenario shows present-day flood risk without sea level rise. This scenario is designed to show a similar water level as FEMA’s flood insurance rate maps, which are based on the 1% chance annual flood event. The mid-level scenario uses 3.3 feet of sea level rise and is comparable to the National Research Council’s “likely” 2100 sea level rise scenario (36 inches). Since the OCOF model is based on centimeters, the closest scenario to 3 feet is the 100-centimeter scenario, which equates to 3.3 feet. This scenario is also reflected in studies performed by the County of Marin and the City of San Francisco. The selection of the high-end scenario is in line with Coastal Commission’s Guidance Document recommendation to use an extreme scenario that presents a potential worst-case sea level rise scenario. Our team chose to combine these water levels with a hypothetical 1% annual chance flood to show the combined risk of sea level rise and a potential storm. Beyond the short-term episodes of significant inundation represented by the scenarios, daily water levels will also change with sea level rise. An analysis of scenarios without a storm was outside of the scope of this report. However, there are methods to approximate a non-storm scenario. The baseline scenario is roughly equivalent to 3.5 feet of sea level rise. This means that the baseline scenario illustrates generally an everyday water level with 3.5 feet of sea level rise, the mid-level scenario illustrates daily water levels with approximately 7 feet of sea level rise, and the high-end scenario approximates roughly 10 feet of sea level rise. For more detailed mapping showing sea level rise inundation and</p>
--	---	---

		<p>storm equivalents, see the <i>Sea Level Rise and Overtopping Analysis for San Mateo County's Bayshore</i> report (County of San Mateo et al. 2016)."</p> <p>All scenarios and inundation models include some level of uncertainty, meaning actual inundation depths will vary from what is projected on the inundation maps. As such, the maps are intended for planning purposes only; they would be inappropriate for design and construction. Details on sea level rise scenario selection are provided in Appendix G, Selection of Inundation Scenarios for San Mateo County Sea Level Rise Vulnerability Assessment Memo.</p> <p>In Chapter 3 on page 70, the document provides some explanation and a map showing sea level rise scenarios without a storm for 1, 2, and, 3 feet. This will be explained in more detail, with the following language.</p> <p>"The following text includes an overview of sea level rise inundation without a storm. In contrast to the scenarios used to develop the analysis in this report, the following map shows what daily tides could look like with 1, 2, and 3 feet of sea level rise."</p>
<p>California Coastal Commission – Stephanie Rexing</p>	<p>4. It would be helpful to include zoomed in maps of some areas, notably areas along the Pacific Coast which are difficult to see in the full county-size maps.</p>	<p>Thank you for your comment. We are limited in our ability to adjust the sizing and frame of these "printed" maps of the report. However, we're devising a much more useful platform for viewers to interact with our maps. We are in the process of developing an online, interactive mapping tool that will allow viewers to zoom into specific areas of interest and select different assets for analysis.</p>

<p>California Coastal Commission – Stephanie Rexing</p>	<p>5. As a general comment, the AVPs were thorough and well-structured but were seemingly not organized as a group within Appendix D other than “in order of their appearance”. It would be useful to order the sites based on their degree of current risk, although there may be some reluctance to have it appear as a list of priorities. Perhaps the sites could be placed in tiers or simply grouped based on location to make the document more accessible.</p>	<p>Thank you for your comment. I'd like to clarify the intended goal of the "sites" (also known as asset vulnerability profiles, AVP). The AVPs were designed to provide detailed and transferrable information on assets that are commonly seen across the County. The 30 AVPS were selected through stakeholder group meetings, surveys housed on the project website, and public input. The criteria included: 1) geographic coverage of asset; 2) representative across asset types, classes, and categories; 3) representative across agencies and jurisdictions; 4) service area; 5) availability of data; and 6) willingness of asset owner to participate in the study.</p> <p>We were also not comfortable ranking the sites by degree of risk for that exact reason that you state. To avoid inciting premature conversations about what is more “at risk” or “important,” we decided to avoid arranging them in this way. Our main task through this Assessment is to lay the groundwork for constructive and informed conversation.</p>
<p>California Coastal Commission – Stephanie Rexing</p>	<p>Unincorporated San Mateo County (comments 11 - 20) - One can consider San Mateo as two main areas the “San Francisco Bayside” and the “Coastside”. It might facilitate readability if discussions of the two areas had separate focus, rather than inter-mixing them. It may help with visualizing the issues associated with the coast versus the bay. This approach would be even more effective if perhaps there was a section that provides a comparison of the two</p>	<p>Thank you for your comment. We completely agree with your underlying observation. We recognize the different challenges that the Bay and Coastside face and see the need for different adaptation strategies within each. We will incorporate this kind of thinking into Phase II of the Sea Change initiative. Unfortunately, at this stage, we will not be able to reorganize the structure of the report. We’re currently working on developing additional print and online materials as well as an interactive story map that will make the Assessment’s findings more accessible and we can certainly explore the possibility of drawing this comparison out in these products.</p>
<p>California Coastal Commission – Stephanie Rexing</p>	<p>Thank you for stating that the coastline can be unaffected by wave activity over an extended period of time along areas of San Mateo County; but that extreme erosion impacts can result from just one unpredicted single event. Perhaps a cross-reference or example that shows the number of</p>	<p>Thank you for your comment. We will add this detail into the final text of Chapter 3: Vulnerability Analysis. The final draft text will read: “In the case of erosion, some sections of coastline may be unaffected by waves for a long period of</p>

	<p>episodes/events that have occurred within a specific timeframe for an area would be helpful in illustrating this fact.</p>	<p>time, and then a single event or storm could dramatically erode a large portion of the coastline or beach.</p> <p>For example, a study conducted by County of San Mateo Parks Department on the Pillar Point Trail, found that erosion has occurred in short periods of “catastrophic bluff collapse” during 1982-82, 1998, 2010, and 2016, which were followed by long periods with very little erosion (County of San Mateo Parks Department, 2016). In Pacifica, the Esplanade area provides another example of episodic erosion. In the 1970s, the area in front of the Esplanade Apartments was approximately the size of a football field, with a sloping bluff (SF Chronicle 2016). In the 1982-83, the homes first were threatened. In 2003-04, 20 feet of bluff collapsed, and the rest of the bluff dropped off in 2009-2010, and in 2016 and 2017, the City of Pacifica had to remove several apartment buildings due to further bluff retreat.</p>
<p>City of Menlo Park – Azalea Mitch</p>	<p>We would like to thank you for all the effort and focus on the development of this report. The assessment is thorough and will be very helpful as we begin studying and planning for adaptation measures.</p>	<p>Thank you for your comment.</p>
<p>City of Pacifica – Tina Wehrmeister</p>	<p>In multiple locations, the report identifies the use of “best available” data. Please detail how data was determined “best available” (e.g., was the data with most area coverage, most peer reviewed).</p>	<p>Thank you for your comment. We will clarify what the term “best available data” infers in the report. The term is used in two main ways: to describe sea level rise modeling data and to describe asset data.</p> <p>1) The first instance of the term is referring to sea level rise modeling data and tools. Some examples seen in our report are: Our Coast, Our Future and BCDC’s Adapting to Rising Tides. The following will be added to paragraph 2.4 in Chapter 2.</p> <p>“This assessment uses the best available sea level rise and future erosion modeling data. Best available data refers to</p>

		<p>existing modeling systems that were evaluated in terms of their applicability to San Mateo County (available for both the Coast and the Bay), the process (good experimental design, clear documentation of methods and results, peer reviewed), technical information (SLR content, scenarios, terrain, model components, storm definitions), and the reputation of the research and science associated with the modeling.”</p> <p>2) The second instance of the term refers to asset data. Asset data shows the location of key assets and habitat types throughout the County. The Assessment used readily available data to identify vulnerable areas, communities, and assets. This information was augmented by surveys, interviews, and site visits.</p> <p>Chapter 3, page 174, will be updated to include the following information about best available data. “For asset data, County staff considered the following in choosing the best available data:</p> <ul style="list-style-type: none"> - Data that is readily available at the finest scale possible, while being consistent Countywide - Data that is peer reviewed and available from a reputable source - Data that is consistent other vulnerability assessments <p>Where existing datasets did not exist, County staff developed new datasets for key assets by identifying location of assets through Google Map searches, such as for mobile home parks and Ports.”</p>
<p>Committee for Renewable Energy – Anja Miller</p>	<p>Studies so far appear highly informative, but the selection of sites raises questions. Why is the northernmost bayfront ignored? Brisbane has 3 miles of bayshore, a 400-acre unregulated toxic landfill yet to be closed under Title 29, and even City Hall located in a flood zone. Very recent</p>	<p>Thank you for your comment. The selection of the "sites" (referred to in the report as Asset Vulnerability Profiles) were selected to provide more information on assets that are prominent across the County. The assets were not chosen</p>

	massive developments at Oyster Point in South San Francisco are clearly susceptible to even minimum sea level rise.	based on priority or higher risk. The AVPS contain information that can be applied to other similar assets in the County. For instance, the Mussel Rock Landfill contains important information that may also be applicable to the landfill in Brisbane. Although, it was not selected as an AVP, both the County and the City of SSF recognize that Oyster Point is an important asset and adaptation planning related to the area will continue at a city and subregional level.
Committee for Renewable Energy – Anja Miller	Need to know dates of public dissemination of non-discriminatory, comprehensive information on the entire area of susceptibility in northern bayside cities.	Thank you for showing interest in the public dissemination meetings and events pertaining to the Sea Change SMC Initiative. As part of the development of the Draft Assessment, County staff conducted approximately 70 presentations to 3,000 people. To see a list of the County-led public meetings on the Assessment, please visit: http://seachangesmc.com/events/ . We will continue to post events and updated information there. You may also want to consult with local city governments' websites as well.
Committee for Renewable Energy – Anja Miller	Hope you can read all the above. "Dragging the corner" was not possible.	--
League of Women Voters for South and North/Central San Mateo County – Ann Draper	The two Leagues of Women Voters in San Mateo congratulate the County for initiating the Sea Change SMC Initiative and undertaking the Sea Level Rise Vulnerability Assessment. We look forward to the final completion of the Assessment and the continuation of the Initiative. The two Leagues selected sea level rise and climate change as one of its three top priorities. Over the past three years, both Leagues produced several public education forums on sea level rise, participated in the County's Assessment Citizen's Task Force and provided testimony at various city council meetings. Both Leagues maintain sea level rise as a high priority because we learned that San Mateo County is the most vulnerable county to sea level rise in California and through this Assessment, we now understand that it is one of the most vulnerable locations in the United States. Elected officials and community members in some parts of the	Thank you for providing feedback. We've noted your comments and suggestions and will take them into consideration as we prepare for Phase II, adaptation planning.

	<p>County are already making policy, program and fiscal decisions involving aspects of sea level rise. In the coming years, we believe that the magnitude of considerations will significantly grow and involve virtually all aspects of the county. Therefore, we believe that the electorate needs to be informed about sea level rise and needs to understand options available to it to lessen vulnerabilities. Some options will require long lead times to be implemented and now is the time to continue education, develop tools and provide leadership. The two Leagues of Women Voters in San Mateo County look forward to helping inform the public as the Initiative proceeds. We commend the County for creating tools and information that will assist decision making bodies. The draft Assessment provides an extensive description of the best available science and evaluation approaches. This information will relieve local governments and special districts from needing to do the same type of data-gathering and it will help them evaluate their options. The Assessment uses science and evaluation frameworks to create maps showing locations of vulnerability to inundation and erosion. And, the maps show specific assets, hazards or concerns. This information is summarized in tables by both asset/hazard/concern type and by affected jurisdiction. These Assessment summaries provide decision makers with consistent tools and information. Also, the Assessment provides an overview of the particular nature of the county's vulnerability and provide each jurisdiction a snapshot of areas of concern and needs for future action. The Assessment provides a good basis for promoting community understanding and broad support for further action. We do have specific recommendations for future actions: 1. STRENGTHEN AND EXPAND LEADERSHIP We recommend the entire Board of Supervisors endorse the Assessment and the Initiative, perhaps through a resolution. We also recommend that each city and affected special district endorse the Assessment and pledge to be active within the Initiative. Public governing bodies at all levels should use the information and tools in the Assessment. We encourage all governing bodies to create a five-year sea level rise work plan and identify how sea level rise can be incorporated into decisions such as land use, transportation and public works plans. 2. ACCEPT SEA LEVEL RISE AS A</p>	
--	--	--

	<p>PRESENT AND FUTURE RISK AND ACT TO REDUCE RISK Understandably the discussion of sea level rise is often attached to climate change discussions. Changes in the amount of carbon in the atmosphere and heat in our environment are associated with significant efforts to mitigate the increases of carbon. We learned in this Assessment that sea level rise is and will be a risk to our county independent from mitigation efforts. We must view our sea level rise adaptation efforts in similar ways to how our communities incorporate other risks into their everyday considerations such as with earthquake preparedness and hazardous materials storage. At one time these two risks were not part of decision making and then as new information developed, risk reduction measures were employed in policies, rules and public works. While it may not be 100% clear how to proceed and what exactly needs to be done to lessen sea level rise vulnerability, the county needs to continue expanding its adaptation work and reduce our risk exposure. Again, we would like to see all levels of local government establish work plans that identify what the next steps will be. The County may want to work with State officials to identify where changes in state law would be appropriate to require the inclusion of sea level rise in local plans. Such actions will also help to lessen our risk exposure.</p> <p>3. DEEPEN COMMUNITY UNDERSTANDING ABOUT SEA LEVEL RISE RISK EXPOSURE The County has held several workshops and forums on sea level rise. All of these events were well attended. Additionally, some cities and community groups have discussed sea level rise and again the attendance and participation was high. While this is the case, the level of knowledge within the community and electorate needs to be deepened. At some time, decision makers will need to take sea level rise-related actions and the public may be asked to support funding mechanisms to address sea level rise. We believe that the community and the electorate should know and understand the issues to help support such decisions. Communication and information pieces can be drawn from the Assessment and the full range of electronic, paper and oral media can be used to help with this communication. We also believe that additional work could be done to better describe the vulnerabilities for communities affected by "cross cutting" or "cascading" impacts. Profiles for these</p>	
--	--	--

	<p>communities could be prepared similar to the profiles for communities that are directly affected. Thank you for this opportunity to comment on the draft Assessment. The document represents a tremendous amount of work and we thank the County for taking a leadership role on behalf of our communities. Our San Mateo County Leagues hope to continue helping inform the public as this important Initiative moves forward</p>	
<p>SAMCEDA – Rosanne Foust</p>	<p>The messaging of the Sea Level Rise Vulnerability Assessment was also discussed by our Housing, Land Use and Transportation Committee members during a recent meeting. The committee agreed that while it is important to educate the public so that they can be aware that mitigations are needed, the vulnerability assessment should qualify exhibits and statements for sea level rise with added phrases such as, "If no mitigation is taken," so that this point is emphasized. In addition, it may be helpful to tailor messaging such that it does not reflect catastrophic failure rather, an inevitable occurrence which will gradually happen over time. In this way, residents and property owners may combat sea level rise one property at a time and it will not seem overwhelming. 1900</p>	<p>Thank you for your comment. We recognize that there is a “catastrophic” message that the Assessment is conveying. This is largely driven by the scenarios we decided to base our Assessment on. The scenarios are premised on a certain level of sea level rise <u>plus</u> a 1% chance annual storm rather than just sea level rise alone. Our team is currently in the process of developing additional materials that will have a different tone and help stakeholders access this information in a more tailored way.</p> <p>Among the more critical messages within the Vulnerability Assessment is that addressing sea level rise generally cannot happen “one property at a time” or one governmental entity at a time because of the connected nature of our infrastructure and the networked aspects of vulnerability, which the report explores in detail (please see Chapter 3: Vulnerability Analysis). We recognize this Assessment contains an overwhelming amount of information. The next two phases of the Sea Change SMC initiative will make significant steps in helping all stakeholder translate this vulnerability into actionable policies and plans.</p>
<p>SAMCEDA – Rosanne Foust</p>	<p>In addition, members shared concerns that current local and regional policies make it difficult to affect real change when it comes to sea level rise based on the make-up of San Mateo County with 20 cities and the County holding land use control. With that understanding the County's role may be limited to assisting cities in the coordination of more streamlined policies affecting sea level rise. Further, committee members</p>	<p>Thank you for providing feedback. We agree that there is a great opportunity for the County to facilitate and coordinate adaptation planning. We’ve your suggestions and will take them into consideration as we prepare for Phase II.</p>

	expressed the need to identify the developments within BCDC's jurisdiction, which are required to provide designs that accommodate sea level rise, and to create an adaptive management plan to accommodate future sea level rise. In this way, the County, cities and interested stakeholders including SAMCEDA may be able to identify what mitigations are missing and necessary. Another idea that was floated was working with Caltrans in certifying its sound walls as levees in order to protect existing infrastructure.	
SAMCEDA – Rosanne Foust	Thank you for the opportunity to comment on the Sea Level Rise Vulnerability Assessment The San Mateo County Economic Development Association (SAMCEDA) represents a contingent of leading Bay Area businesses, institutions, organizations and entrepreneurs. We are recognized for our experienced, impact-driven approach as a business advocacy organization. Many of our members share the county's concerns of sea level rise and are currently working towards mitigating possible damage by including 100 foot shorelines in their developments.	Thank you for your continued support and engagement. We look forward to working with you in the next phases of the Sea Change SMC Initiative.
SAMCEDA – Rosanne Foust	Lastly, the committee felt it useful to include fluvial (creek) inundation on the assessment's inundation maps as it may increase the inundation area significantly.	Thank you for your comment, at this time the Vulnerability Assessment will not be able to evaluate the impacts of creek flooding in San Mateo County. This action requires another assessment to be conducted to evaluate the impacts in detail, however we believe this is a needed assessment for future projects to come.
SF Public Golf Alliance – Richard Harris	Because the Built Asset and Natural Asset Exposure Maps (Appendix B) are so impactful, and because they are likely to be widely viewed, and because the erosion data upon which they are based is both uncertain (Vulnerability Assessment, Chapter 2, page 67) and hypothetical to the extent that the erosion data assumes that there is no shoreline protection infrastructure in place (which is not the case) (Vulnerability Assessment, Chapter 2, page. 45), it is important that the Asset Exposure Maps carry a much stronger-worded and much more prominently-placed disclaimer	Thank you for your comment. In the final draft we will draw more attention to this disclaimer. We are very limited on space on each map, so we may not be able to place the disclaimer in larger font at the top of the page, but we will draw more attention to this disclaimer, and that particular part of the disclaimer in some other manner.

	<p>than is shown on the maps in Appendix B. The following disclaimer should be placed in boldface at the top of the page of each asset exposure map, immediately below, and in the same font and type size as the caption line that currently reads “Appendix B: Asset Exposure Maps”:</p> <p style="padding-left: 40px;">"This Map is not intended – and shall not be used or referenced or cited --for any navigation, permitting, regulatory, legal, or administrative purposes. See more detailed disclaimer in fine print at the bottom of this page."</p>	
<p>Sustainable San Mateo</p>	<p>Sustainable San Mateo County thanks the County for your leadership and efforts in creating this comprehensive Sea Level Rise Vulnerability Assessment through the Sea Change SMC Initiative. In particular, we applaud the inclusion of equity considerations and often-omitted topics such as groundwater, as well as the prioritization of nature-based solutions. This risk assessment is a critical first step towards a sustainable plan for the long-term future of our County. Given the magnitude of the challenges sea level rise poses to our communities and the need for significant community buy-in to implement and fund adaptation efforts, SSMC encourages an expanded community outreach effort. We must build public understanding for “anticipatory adaptation”: that despite a lack of immediate consequences (in most cases), we must take action now because we will have fewer options and they will be more costly later. We noted the promise of presentations to city councils and the public after release of this assessment’s final draft and agree this is a necessary first step, but recognize that these presentations will likely inform primarily those that are already civically engaged. The existing assessment and materials are long and dense, so we would strongly encourage the development of more easily digestible public outreach and marketing pieces, including clearer descriptions about the scenarios and why they were chosen, and multi-media content including graphics and videos. Potential suggestions include city-specific maps and data formatted as a “one-pager” for each city; this would encourage understanding of specific vulnerabilities within individual communities as well as provide an opportunity to convey that everyone in our county will be impacted,</p>	<p>Thank you for providing feedback. We’ve noted your comments and suggestions and will take them into consideration as we prepare for Phase II. We completely agree with your suggestion and are already developing a “one-pager” for each city.</p>

	<p>including cities/towns, businesses and residents “at the top of the hill” that may otherwise feel this issue doesn’t concern them. Localized images and videos of what sea level rise will look like can be targeted to affected audiences, for instance the users of bayfront ball fields or dog parks. Efforts should be made to ensure that messages can reach diverse audiences across the community through translation into multiple languages and sharing content through a variety of different media, platforms, and local events that reach people “where they are.” Consider audience-appropriate materials tailored to different levels of understanding, and using formats such as art and storytelling to educate those that may not understand or are more skeptical of science, as well as messengers that are trusted within various segments of the community.</p>	
Sustainable San Mateo	<p>Throughout the document the need for further study and engagement of the community is noted, and we absolutely agree that it is important to continually evaluate using the best available science and revise recommendations and plans accordingly. While further study continues, we encourage concurrent and immediate efforts to move forward the Adaptation Policy Toolkit and Guidance Document with Templates outlined in section 5.2.5, as a number of local planning efforts are already in process and decisions being made in the short term may have long-term implications.</p>	<p>Thank you for providing feedback. The team is moving forward with the Adaptation Policy Toolkit and Guidance Document with Templates.</p>
Sustainable San Mateo	<p>The County will necessarily work with and rely on a variety of different partner agencies, organizations and individuals as the Sea Change Initiative moves forward. As a 25-year-old community organization dedicated to the long-term health of San Mateo County and community education on sustainability issues, SSMC hopes to continue to engage in the Initiative and play a growing role in future phases of the work. In particular, participation in the Sea Level Rise Working Group(s) noted in section 5.2.2, Public involvement, Engagement, and Outreach efforts (section 5.2.8) and working to Further Evaluate Community Vulnerability, Adaptation, and Equity (section 5.5.2) may provide opportunities for our group to collaborate and work towards meeting our shared goals. Please consider</p>	<p>Thank you for your continued role as a community partner and your support. We will certainly reach out to discuss specific roles and opportunities.</p>

	reaching out to us at the appropriate time to discuss specific roles and opportunities.	
Roisin Altreuter – Belmont Individual	Thank you for all of your hard work in putting this together, I appreciate it!	Thank you! This is a first step in a long process of adaptation planning. We appreciate your continued engagement and support.
Amy Caplan – Pacifica Individual	Sea level rise is only the tip of the iceberg for climate change. Methane being released can rise the temperature of the planet so food won't grow in many places. San Mateo County must begin to look at vertical farms and shipping container farming and all other indoor farming to be more self sufficient in food sustainability. Water, of course, is the primary survival issue. We need ways to store water that won't evaporate.	Thank you for your comment. For more information about the County of San Mateo's other sustainability programs, visit http://www.smcsustainability.org/ .
Ora Chaiken – San Mateo Individual	Notes sea level change Summary is in terms of \$ value of property versus number of people's homes and businesses. I would find that more impactful, given potentially inflated real estate values. Also, what time frames are considered short or long-term? It seems odd to lump critical infrastructure like BART and 101 with a state beach - their loss has completely different impacts. Goals Whose awareness are you trying to raise? Is the goal to provide a foundation for more analysis? Isn't there a need for more action? Methodology Define what a "risk-based approach" is Add in disease earlier, if this is a substantial risk, as it would impact all readers. Cheers,	Thank you for your comments. 1.) We use assessed property value in the Executive Summary to provide a snapshot of what's at risk economically, which property values give a reasonable, if basic, indication of. In Chapter 3: Vulnerability Analysis, we go into detail on the number of residential and commercial parcels that are vulnerable within the project area. Please see section 3B.2.3.7 for this analysis. We will also place the number of residential and commercial parcels at risk in the Executive Summary. 2) We have two different definitions depending on the context - one being the scenarios and the other being action items. If we are referring to the sea level rise scenarios, near-term is referring to the baseline or present-day scenario, while the long-term is 50-100 years. If we are referring to action items, we use near-term to describe actions we could take now, while, long-term describes action items that could take 5 years or longer.

		<p>The final text will read: "...The assessed value of parcels in the project area exposed to near-term (present-day) flooding exceeds \$1 billion, and the assessed value of parcels exposed to erosion and flooding in the long term (50-100 years) totals roughly \$39.1 billion¹. More than 30,000 residential parcels and 3,000 commercial parcels may also be vulnerable in the longer term."</p> <p>3) The section you're referring to where various assets are "lumped" together is an introductory paragraph, which offers a brief overview and high-level impression of the <i>kinds of things</i> that are vulnerable. The rest of the report is dedicated to unpacking the very question you bring up, but which cannot be addressed within the scope of an Executive Summary introductory paragraph. Later in the report, in Chapter 3: Vulnerability Analysis, assets are categorized by function or sector and risk class- according to the severity and magnitude of the consequences should the asset be impaired.</p> <p>4) Yes, one of the goals of the Vulnerability Assessment is to raise awareness that, in turn, will establish a basis for action in the immediate and distant future. This report is a critical and first step (with many more to follow in raising awareness) in building and offering knowledge for city councils, community groups, businesses, and county residents. The goal of the Assessment is NOT to establish a plan for action. We do not provide explicit policy direction but rather the informational basis for the policies and actions that will follow under County leadership. Planning and implementing are goals embedded in the Sea Change program, but not the explicit goal of the report.</p> <p>5) We will change our definition of a risk-based methodology</p>
--	--	---

		<p>in Chapter 1 on page 20 to the following for greater clarity on the term: “Risk-Based Methodology: Analyze the threat posed by sea level rise according to two components of risk, the ‘magnitude of the consequences should an impact occur and the likelihood of an impact occurring.’ A risk-informed methodology enables the County to formulate an efficient, strategic, transparent, and rational approach to reducing risk that increases the community's ‘preparedness and resilience to sea level rise and storm events while protecting critical ecosystem and community services’ (BCDC 2012a).”</p> <p>6) The study discusses public health and sea level rise, but a dedicated public health assessment was not within the scope of the Assessment. This is why public health does not appear in Chapter 2: Technical Approach and Methodology. It does appear in the Executive Summary and, in depth, in Chapter 3.</p>
<p>Bob Cohen – Menlo Park Individual</p>	<p>References are made in the Sea Level Assessment to using "best available existing data" which predicts a sea level rise over the next century of about 6.6 feet. There is no mention, however, that these predictions are based solely on data output from models. These model predictions do not agree with existing measurements, that is, observed sea level heights over past time as measured by the U.S. government’s National Oceanic and Atmospheric Administration (NOAA). NOAA shows that sea level at San Francisco has risen at a constant rate since about 1855 through 2015. There is no argument about the validity of these measured data, and it is readily available on the NOAA web site. There is no evidence of any increased rate in the rise of sea level as presumed by this report. The rate of sea level rise has been constant for 160 years. The NOAA measured rate of sea level rise, constant at about 0.08 inch per year, corresponds to a sea level rise of less than one inch per decade, and about 8 inches per century. Yet this report invents, based solely on model predictions while ignoring 160 years of observations, a sea level rise by year 2120 of 6.6 feet! Our politicians are asking us to approve funding their costly policies based on a predicted sea level rise of 10 times that which</p>	<p>NOAA data shows that Bay Area sea levels have risen approximately 8 inches from 1905 to 2005. The rates of sea level rise are however, not expected to simply follow this trend line, but are projected to grow through the rest of this century. Projections by the National Research Council for California indicate that the area south of Cape Mendocino could experience sea level rise of 17 to 66 inches by 2100. It could be up to 2 feet by 2050 and 5.5 feet by 2100. As part of this assessment, we did not attach time scenarios to the sea level rise scenarios. Rather we have included three sea level rise scenarios:</p> <ul style="list-style-type: none"> • Present day flood risk (MHHW + 1%-annual chance storm) • Mid-level (i.e. 3 feet scenario + 100 year storm) which is closest to the National Research Council ‘likely’ 2100 Scenario (36 inches) + 1% annual chance storm. This scenario is similar to those used in County of Marin and the City of San Francisco.

	<p>measurements have shown for the past 160 years. There is no factual justification for what amounts to a new climate change tax. At what point do politicians stop promoting model predictions that have already been proven wrong by measurements? When measurements do not agree with model predictions, it is not the measurements that are wrong; it is the unsubstantiated model predictions and thus should not form tax increasing policy.</p>	<ul style="list-style-type: none"> • Extreme Scenario (or 6 feet scenario + 100 year storm). Inclusion of this scenario is in line with Coastal Commission’s Guidance Document recommendation to use an extreme scenario that presents a potential ‘worst case’. <p>In response to your question about the trend line not reflecting the projections and sea level rise in the last 15 years or so being constant or down, here’s what the Coastal Commission’s sea level rise guidance document says about this trend: Tide gauges and satellite observations show that in the past century, mean sea level in California has risen 8 in. (20 cm), keeping pace with global rise. In the past 15 years or so, mean sea level in California has remained relatively constant, and may have been suppressed due to factors such as offshore winds and other oceanographic complexities. Bromirski et al. (2011, 2012) postulate that persistent alongshore winds have caused an extended period of offshore upwelling that has both drawn coastal waters offshore and replaced warm surface waters with cooler deep ocean water. Both of these factors could offset the global sea level rise trend in this region. However, localized sea level suppression will not continue indefinitely. As the Pacific Decadal Oscillation, wind, and other conditions shift, California sea level will continue rising, likely at an accelerated rate (NRC 2012; Bromirski et al. 2011, 2012).</p> <p>Additional details on the methodology and the sea level rise scenario selection are provided in Chapter 2, Appendix A and Appendix G.</p>
<p>Raciel Depalma – San Carlos Individual</p>	<p>I live on a hilltop in San Carlos, Will everyone need to be involved with what is proposed to pay for this? I have already paid in full the cost of the creek improvements that were never necessary many years ago.. The</p>	<p>Thank you for your comment. Currently, the County has not prepared any specific adaptation plans or policies that are ready for implementation. Regarding whether sea level rise</p>

	<p>possible rise in sea level increasment's in my opinion not do not warrant this added cost that may be proposed.</p>	<p>warrants added cost of adaptation planning, it is important to keep a few things in mind. Sea level rise is already happening (we outline this in the report), and it will affect <u>everyone</u> in the County, whether or not an individual lives near the Pacific or the Bay. Critical services that every individual relies on, such as wastewater treatment and roads, are vulnerable to inundation. The effects of sea level rise will also occur irrespective of personal or governmental property lines. All of this is explored in great detail in the Assessment.</p> <p>For future adaptation planning, the County will explore equitable funding mechanisms for resources and assets used by everyone.</p>
<p>Glenda Mahoney – Half Moon Bay Individual</p>	<p>I am glad that this planning is being done, but I think that it needs to move faster in the Coastside/Half Moon Bay area to mitigate erosion that is already happening due to sea level rise. There does not seem to be an agency with a plan or oversight for the erosion issues in the surfer's beach/Miramar area, and individuals are implementing emergency measures (such as new riprap) that do not necessarily benefit the entire area and may cause increased problems later on. It would be nice to have a plan for this region and a contact person to communicate with the homeowners in the area about erosion mitigation measures.</p>	<p>Thank you for your comment. The County is currently taking steps to develop a plan. The County's intention is to complete a shoreline management plan for the developed shoreline within Princeton Harbor in the next few months, then work to better understand shoreline erosion and flooding issues along the rest of the County coastline in order to update the County's General Plan and Local Coastal Program to address these important issues.</p> <p>Projecting erosion rates is a complex matter based on bathymetry, bed conditions, shoreline profile and orientation, wind, storms, geology and other factors. Science-based erosion projections for the area in question are not currently available, but a model is being developed by USGS that will enable the County to make projections in this area based on different assumptions about some of these variables, and should be available for use in 2018. There hasn't been a model available with these variables built into to it to enable anyone to make science-based projections. Once we have science-based erosion rate projections, we can develop policy that responds to that information.</p>

		<p>For more information on general land use and private property questions you may contact Joe LaClair at jlaclair@smcgov.org or, for County road right of way questions contact Joe LoCoco at jlococo@smcgov.org.</p>
--	--	---

APPENDICES

Name & Organization	Comment	Response
California Coastal Commission – Stephanie Rexing	<p>Daly City - Good analysis of Mussel Rock as the primary source of vulnerability. The AVP states under Adaptive Capacity that “if erosion were significant enough to expose garbage, it would likely be necessary to relocate the Landfill inland, or remove and distribute all its contents to other sites”. Consider the use of stronger language since erosion here is inevitable and planned retreat is not merely an option, but will like be an eventual necessity. Previous Coastal Development Permits at Mussel Rock required a planned retreat management plan as a condition of approval, but so far no feasible solutions for retreat have been proposed. The analysis provides no specific discussion of the Vista Grande Drainage project or related infrastructure (canal/tunnel and ocean outlet). While this asset is partly within San Francisco jurisdiction, it may be worthwhile to provide analysis of known storm-related flooding risks in the San Mateo County areas and the anticipated responsibilities of the County and Daly City going forward.</p>	<p>Thank you for your comment. We agree that the Vista Grande Project is an important project to be aware of and it will be important for the County and Daly City to understand any storm-related flooding risks and responsibilities as a result of the project. However, this analysis is outside the scope of the vulnerability assessment study.</p> <p>We understand that with sea level rise and increased erosion, it may become difficult to safely keep the Mussel Rock Landfill in place. However, we feel that the language is sufficiently strong in the Asset Vulnerability Profile. The City of Daly City estimated full removal of the landfill at between \$150- \$200 million, but a managed retreat solution would be more costly in the long term. Although it may become necessary depending on sea level rise rates, relocation of the landfill may not be an eventual necessity. It is conceivable that the closed landfill at Mussel Rock could continue to remain in place, even with the effects of sea level rise, albeit at higher annual cost, but still less than the cost of relocation.</p>
California Coastal Commission – Stephanie Rexing	<p>Half Moon Bay - Mirada Road is a pressing issue for the City. The AVP describes that Mirada road is the only access to certain coastal properties, resulting in low adaptive capacity. However, there is no discussion of extending roads perpendicular to the beach or behind properties to provide access, which is an option for many parcels. Ultimately, this approach may allow for Mirada Road to be transitioned into a single lane road or pedestrian-only access way.</p>	<p>Thank you for submitting comments to our Draft SLR Vulnerability Assessment. Portions of Mirada Road are located within the County of San Mateo’s unincorporated area. It is a pressing issue for both the County of San Mateo and Half Moon Bay. The County is working in partnership with the City of Half Moon Bay on a near-term solution to the erosion challenge at the site. The County agrees that sea level rise and increased erosion may compromise the long-term viability of the road. Long-term solutions are separately being</p>

		<p>considered. These will need to be developed in partnership with the property owners, community members, and other key stakeholders in the area. We updated the profile to mention the possibility of an inland route.</p> <p>The AVP will be changed as follows:</p> <p><i>Adaptive Capacity:</i> This segment of Road is the only access to the coastal properties here, giving it very low adaptive capacity in the near-term. In the long-term, it may be possible to extend roads perpendicular to the beach or behind properties to provide improved access. However, absent the acquisition of separate access easements, additional roads would not provide direct access for several properties that lack frontage on these "back roads", nor would they address the delivery of utilities that Mirada Road properties will require. Further evaluation is needed to understand the feasibility of this option, and solutions will need to be developed in partnership with property owners and community members. While small interventions, like reinforcing the Road with riprap, could slow the erosive impacts of sea level rise, additional solutions such as an inboard sheet pile wall that would support a one way road and multiuse path, as is currently being considered, would have to be a part of a long-term solution. Past events indicate that a failure could lead to a loss of service lasting over 7 days, and with no alternative access, local residents and businesses would suffer. As an extreme example, the north and south segments of the Road have failed in the past (in the 1960s) and are no longer suitable for motor vehicles. Instead of being rehabilitated for vehicle traffic, the former roadway serves pedestrian beach access to the north and south.</p>
--	--	---

<p>California Coastal Commission – Stephanie Rexing</p>	<p>The Coastal Trail AVP accurately describes threats to the trails within Half Moon Bay as moderate, but Seymour Bridge is imminently threatened and will soon be replaced. Realignment should be stressed as an adaptive measure to avoid similar infrastructure costs in the future. Coastside Land Trust is working on a Coastal Trail improvement project in the Wavecrest area – this deserves a mention along with the habitat and sensitive species issues they have encountered. Coastside estimates moving forward this year with the final permit application, and estimates it will cost \$3-5 million to construct, with beach stairs being paid for separately by Ocean Colony Partners.</p>	<p>Thank you for your comment. To address this comment, we added information about the Seymour Bridge and the Wavecrest area project in the <i>Additional Important Information</i> section of the CCT AVP. The changes we made to these sections are below:</p> <p><i>Additional Important Information:</i> The City of Half Moon Bay has completed an erosion study that examined the existing conditions and trail planning recommendations. The Seymour Bridge has been replaced, however erosion continues to be an issue, and the City is conducting additional studies to address this. The City's next steps is to engage with local partners, residents, and trail users before making trail management decisions. Nearby, in the Wavecrest area, plans are underway for a Coastal Trail Improvement Project, led by the Coastside Land Trust. The \$3 - \$5 million project has encountered habitat and sensitive species issues and includes stairs funded by Ocean Colony Partners. Coastside Land Trust plans to finalize permit application in 2017.</p>
<p>California Coastal Commission – Stephanie Rexing</p>	<p>Pacifica - Discussion of Pacifica should focus on the erosion scenario, which is very likely given ongoing episodic loss of bluff in recent years. It is unclear why Pacifica's summary (p.199) underlines the sentence describing a baseline scenario and lack of threat from inundation – seems misplaced given this may be the most vulnerable city in all of San Mateo County. Pacifica State Beach is certainly exposed, but other infrastructure is more at risk and worthy of attention. Generally speaking, large stretches of Esplanade Ave, Palmetto Ave, and Beach Blvd roadways and associated storm/sewer infrastructure are all currently vulnerable to erosion, overtopping, and storm related inundation. The only adaptation mentioned for Beach Blvd is to repair and/or raise the seawall, but planned retreat should remain an option in all areas where it may be feasible to relocate development.</p>	<p>Thank you for this comment. Please see Chapter 3 responses.</p>

City of Brisbane – Ken Johnson	Appendix B Built Asset Exposure Zone 1 Map: Remove Railroad Station from the south edge of the Brisbane Lagoon. No station exists there.	Thank you for your comment. We will remove this railroad station.
City of Half Moon Bay – Jill Elkas	Appendix D - Asset 1 - CCT: City of Half Moon Bay has completed additional erosion studies since this asset was assessed. Please contact the City for a copy of the study. The Seymour Bridge has now been replaced and the headcutting continues, thus the City is conducting additional studies to address this issue. With respect to the CCT erosion, generally, human activity was found to cause accelerated erosion rates even beyond those attributed to weather and other events.	<p>Thank you for providing comments. We are going to update the information as noted in the <i>Additional Important Information</i> section. We will also add a sentence in the <i>Erosion Extent and Exposure</i> section addressing human activity as one of the main factors causing accelerated erosion rates.</p> <p>The changed language is as follows:</p> <p><i>Additional Important Information:</i> The City of Half Moon Bay has completed an erosion study that examined the existing conditions and trail planning recommendations. The Seymour Bridge has been replaced, however erosion continues to be an issue, and the City is conducting additional studies to address this. The City's next steps is to engage with local partners, residents, and trail users before making trail management decisions.</p> <p><i>Erosion Extent and Exposure:</i> Present-day exposure to erosion is moderate, as this section of the CCT is subject to regular, and in some places severe, erosion due to daily tidal, wind, and wave effects, as well as storm conditions. The erosion study showed that human activity caused accelerated erosion rates even beyond those attributed to weather and other events.</p>
City of Half Moon Bay – Jill Elkas	Appendix I: Groundwater - Please confirm that CCWD ground water source is within Half Moon Bay, which is how it is written. CCWD's ground water source may be outside the city limits.	Thank you for pointing this out. There does not appear to be any CCWD wells within Half Moon Bay's boundaries. The text in the "Estimated Vulnerability of Groundwater to Sea Level Rise" section will read instead: "The Coastside County Water District derives approximately 28% of its water supply from

		<p>local wells and surface water, the remaining 72% is from the San Francisco Regional Water System with water derived from Hetch Hetchy (Coastside County Water District 2016).”</p> <p>We will change the language in the <i>Assessment of Municipal Groundwater Use in San Mateo County</i> section to read: “Districts in San Mateo County where groundwater is a reported resource include San Bruno, South San Francisco, Daly City, East Palo Alto, the Coastside County Water District, and less populated areas on the Pacific Ocean side of San Mateo County (e.g., Pescadero and San Gregorio).”</p> <p>We will also change the language in the <i>Summary of Findings</i> section to read: “A potential exception that warrants further review pertains to any municipal supply wells adjacent to the Pacific Ocean, which are reported to be screened much shallower and contain much younger groundwater indicating a higher potential for adverse impacts from sea level rise.”</p>
<p>City of Half Moon Bay – Jill Elkas</p>	<p>Appendix M - Half Moon Bay's sea level rise vulnerability assessment was completed in April 2016. The scenarios were confirmed in summer 2015. Please update the paragraph on the first page. Since the vulnerability assessment was completed, the City also conducted a site specific erosion study of the California Coastal Trail between Kelly Avenue and Seymour (same as Asset #1). We can provide that so that it may be referenced. The City is now proceeding to further study erosion of the Seymour drainage. The City will continue to include erosion and other SLR related studies and projects in its CIP.</p>	<p>Thank you for your comment. We will make the updates in the Half Moon Bay SLR Planning Efforts section of Appendix M. We have received a copy of the Erosion Study.</p> <p>The changes to Appendix M are as follows:</p> <p>Half Moon Bay SLR Planning Efforts The City of Half Moon Bay is currently updating their General Plan and Local Coastal Program (LCP) in order to account for sea level rise. The City has completed a sea level rise vulnerability assessment, which has informed the development of the General Plan/ LCP update, and will support the development of adaptation projects. In February 2017, the City completed a site-specific erosion study of the California Coastal Trail between Kelly Avenue and Seymour Street (City of Half Moon Bay 2017). The City will continue to</p>

		include erosion and other sea level rise- related studies and projects in the City’s Capital Improvement Plan. To date, areas of concern include El Granada County Beach (Surfer’s Beach) due to its low elevation, as well as multiple bluff areas that are prone to erosion.
City of Menlo Park – Azalea Mitch	For Menlo Park, we want to make sure that the leachate and methane collection systems at Bedwell Bayfront Park are noted as important assets. This is a closed landfill and there is a flare that burns the gas. This is critical infrastructure. Also, there are wastewater equalization basins that are owned by the West Bay Sanitary District at this park, too.	<p>Thank you for your comment. The Ravenswood Pond AVP does mention the landfill and the wastewater equalization basins are critical assets. We will add language noting the leachate and methane collection systems as important assets in the <i>Asset Description and Function</i> section.</p> <p>The following will be added to the end of the <i>Asset Description and Function</i> section of the AVP: “Adjacent to the Ravenswood Ponds is the Bedwell Bayfront Park, which is a closed landfill with a leachate and methane collection system, including a flare that burns the gas. The area also includes wastewater equalization basins owned by the West Bay Sanitary District. These are considered critical assets and impacts to these should be clarified in the future.”</p>
City of Pacifica – Tina Wehrmeister	Appendix D, Page 5-1 – The Western Snowy Plover Federal status is Threatened and its State status is Bird Species of Special Concern. The species is not considered Endangered as stated here.	<p>Thank you for your comment. We will make the change, as noted below.</p> <p>Permanent inundation on site would lead to loss of beach access, loss of the pump stations (and associated spills), and a loss of habitat for the population of the federally threatened snowy plover, which is already limited in the region.</p>
City of Pacifica – Tina Wehrmeister	Appendix D, Page 5-1 – Please revise sentence as shown: Two pump stations (Linda Mar for Wastewater and Stormwater and Anza for Stormwater).	<p>Thank you for your comment, we will revise this sentence as provided.</p> <p>The sentence will now read: Two pump stations (Linda Mar for Wastewater and Anza for Stormwater) are on the southern and northern ends of the beach, respectively.</p>

City of Pacifica – Tina Wehrmeister	Appendix D, Page 27-1 – Clarendon Avenue should be corrected to Clarendon Road.	Thank you for your comment. We will correct this.
City of Pacifica – Tina Wehrmeister	Appendix D, Page 27-1 – Please revise sentence as shown: The seawall protects various utilities located under the boulevard, including sewer, stormwater, water, gas and electrical service.	Thank you for your comment. We will revise this sentence as provided. The sentence now reads: The Seawall protects various utilities located under the boulevard, including sewer, stormwater, water, gas and electrical service.
City of Pacifica – Tina Wehrmeister	Appendix D, Page 27-3 – Please revise sentence as shown: This combination will put the Seawall further at risk of overtopping and erosion damage and endanger city infrastructure, utilities, houses, and other properties it protects.	Thank you for your comment. We will revise this sentence as provided. The sentence will now read: This combination will put the Seawall further at risk of overtopping and erosion damage and endanger city infrastructure, utilities, houses, and other properties it protects.
SF Public Golf Alliance – Richard Harris	Appendix B Because the Built Asset and Natural Asset Exposure Maps contained in Appendix B are so impactful, and because they are likely to be widely viewed, and because the erosion data upon which they are based is both uncertain (Vulnerability Assessment, Chapter 2, page 67) and hypothetical to the extent that the erosion data assumes that there is no shoreline protection infrastructure in place (which is not the case) (Vulnerability Assessment, Chapter 2, page. 45), it is important that the Asset Exposure Maps carry a much stronger-worded and much more prominently-placed disclaimer than is shown on the maps in Appendix B. The following disclaimer should be placed in boldface at the top of the page of each asset exposure map, immediately below, and in the same font and type size as the caption line that currently reads “Appendix B”: Asset Exposure Maps”: "This Map is not intended – and shall not be used or referenced or cited --for any navigation, permitting, regulatory, legal, or administrative purposes. See more detailed disclaimer in fine print at the bottom of this page.	Thank you for providing the disclaimer language, we are discussing this change with the map consultant.

<p>SF Public Golf Alliance – Richard Harris</p>	<p>Appendix B The Built Asset Exposure Map for Zone 9, Pacifica, fails to show the following: (1) fails to mark the Sharp Park Pumphouse and to identify it as a flood control pump station; (2) fails to mark the Sharp Park Golf Clubhouse and Restaurant and to identify it as an important local business and community meeting place; (3) fails to mark the Sharp Park Golf Course and Clubhouse as historical resource property under CEQA, which have been designated by the San Francisco Planning Department . (San Francisco Planning Dept., Historic Resource Evaluation Response (“HRER”), February 15, 2011, at Page 2: https://dl.dropboxusercontent.com/u/30028085/SF_Planning_Dept_Historic_2_8_2011.pdf; and see the Pacifica General Plan, Historic Preservation Element and Historic Sites Map, at pages 95 and 95a, designating both the Golf Course and the Clubhouse as Pacifica Historical Sites: http://www.cityofpacific.org/civica/filebank/blobload.asp?BlobID=3443 .</p>	<p>Thank you for your comment. 1) We have added the Sharp Park pump house to the list of assets inventoried, and labeled it as a flood control pump station. 2) The inventory of assets does not include commercial facilities due to budget and time constraints. To be consistent with the study methodology, we are not able to add the Clubhouse and Restaurant. 3) The study did not inventory Golf Courses and historic sites.</p>
<p>SF Public Golf Alliance – Richard Harris</p>	<p>Appendix B Notwithstanding that the Draft Vulnerability Assessment purports to include the threat of sea level rise to endangered and threatened species (Draft, Chapter 3B, at pages 85, 86, 89), the Natural Asset Exposure Map for Zone 9, Pacifica, fails to show that the endangered San Francisco garter snake and the threatened California red-legged frog, which are saltwater-intolerant species, are threatened by sea level rise at Sharp Park, in the event of overtopping of the Sharp Park Sea Wall and saltwater flooding of the wetlands. (See Philip M Williams Assocs, June, 1992, https://dl.dropboxusercontent.com/u/30028085/SFPGA.PWilliams.Laguna.Salada.Plan.1992f.pdf, at pp. 1-3, and 40-41.)</p>	<p>Thank you for your comment. See Chapter 3 response</p>