



City of Carlsbad
Attn: Carl Stiehl, Community and Economic Development Department Planning Division
1635 Faraday Ave.
Carlsbad, CA 92008
carl.stiehl@carlsbadca.gov

September 25, 2017

Dear Mr. Stiehl:

The Surfrider Foundation's San Diego Chapter (Surfrider San Diego) appreciates this opportunity to provide comments to the City of Carlsbad regarding the May 2017 Draft Final Sea Level Rise Vulnerability Assessment. Surfrider San Diego appreciates the multiple opportunities for extensive stakeholder and public engagement in the development and review of this update.

Surfrider Foundation (Surfrider) is a nonprofit environmental organization that engages a vast volunteer network of ocean users to protect the ocean, waves and beaches through conservation, activism, research, and education. Surfrider San Diego represents thousands of ocean recreation users from surfing to seabird watching and beach going, as well as the coastal communities and economies that rely on them throughout the region.

Surfrider San Diego is very happy to see the inclusion and consideration of potentially using a phased approach to implement various adaptation strategies based on pre-determined sea level rise triggers. This method is a great way to account for uncertainty in sea level rise prediction estimates, while still ensuring that the coastal community remains prepared and resilient. We urge that if this method is utilized, that the necessary time between triggers and the approval, construction, and complete implementation of the adaptation method is sufficient. Pre-emptive permitting and detailed action plans could help ensure that triggered adaptation methods are readily employable.

We support the additional consideration of potential sea level rise impacts to visual resources, cultural resources, saltwater intrusion, and lifeguard services. The consideration of maladaptation, tradeoffs, and negative impacts from the use of hard protective devices and sand nourishment are extremely important. Surfrider San Diego applauds their consideration and the inclusion of secondary impacts in the adaptation overview. We would like to encourage the shift towards using more effective, and affordable (over the long term) soft adaptation measures like living shorelines and reconstructed sand dunes, as well as accommodation and retreat. Additionally, pre-emptive planning can help avoid the use of emergency approved hard protective devices such as seawalls.

Surfrider San Diego would like to bring attention to the following considerations identified in the assessment:

- The vulnerability assessment only reviews impacts from 2050 on, nothing beforehand. With projections showing sea level rise of up to 1 foot by 2030, this failure to consider more immediate

sea level rise hazards puts the community at risk, doesn't provide a thorough review of actual vulnerabilities, and weakens the integrity of any future adaptation plan based on this assessment.

- Environmentally sensitive lands in Planning Zone 1 were reduced from moderate vulnerability to low vulnerability in the 2017 assessment, due to a weir's ability to restrict tidal exchange through 2050: however, we'd like to remind the City that this is not a complete climate change impact assessment. For instance, flooding of the lagoon and loss of environmentally sensitive lands could occur from stronger and more frequent rain events and run off, not just rising sea levels. Surfrider would also like to highlight that the weir is privately owned and operated, so to account for the protection of the weir when lifted, the City must have an approved, official, and enforceable agreement with operating landowners to ensure that the weir is employed to prevent tidal exchange through 2050.
- We support the use of hazard overlay zones, and the potential requirement of "site-specific coastal hazard reports" to be included with each coastal development permit.
- We support the development of a coastal armoring database and action plan. Information regarding the age, type, and condition of coastal structures is vital in ensuring that current seawalls are maintained and usable, while seawalls no longer useful are removed in a timely manner.
- When ranking effectiveness of various adaptation strategies for the region's range of shoreline types, managed retreat was consistently and accurately identified as the most effective strategy, followed by a form of soft adaptation methods including dune restoration, wetland restoration, or construction with movable foundations.
- Although we are happy to see a preliminary review of adaptation options, we hope to see more explicit adaptation plans in a separate and comprehensive citywide adaptation plan. We believe this assessment fell short on the stated task to "[d]evelop adaptation strategies to minimize risks from hazards and to protect coastal resources".
- Regarding the methodology –
 - It is unclear how "overall beach function" was measured, as this has big implications on the beach vulnerability ranking.
 - Were extreme storm events (1 in 100 years) modeled to occur more frequently between now and 2100 during the analysis?

We submit these comments on behalf of Surfrider Foundation's San Diego Chapter and our thousands of members, supporters, and volunteers throughout the San Diego region. Thank you for your consideration of our comments regarding the City of Carlsbad's 2017 Draft Final Sea Level Rise Vulnerability Assessment.

Sincerely,



Julia Chunn-Heer
Policy Manager
Surfrider Foundation San Diego