



Beach Boulevard

INFRASTRUCTURE RESILIENCY PROJECT

Summary

City of Pacifica Beach Blvd. Infrastructure Resiliency Project

Public Workshop

Thursday, December 3rd, 2020

6:00 – 7:30 p.m.

Welcome, Introductions and Agenda Review

Mary Bier, City of Pacifica City Council member, opened the meeting by welcoming attendees and thanking Ryan Marquez and the Beach Boulevard Infrastructure Resiliency Project (BBIRP) team for their continued efforts engaging the community on the project.

Sue Beckmeyer, City of Pacifica Mayor Pro Tem, indicated the importance of the BBIRP project for the protection of the City's interconnected infrastructure and maintaining Beach Boulevard's unique, vibrant, and historical character.

Kelsey Rugani, facilitator, welcomed attendees and reviewed the meeting objectives, agenda, and ground rules. The workshop objectives included:

- Providing a project overview and updates since September Kick-off Community Workshop.
- Sharing the methodology of the Project's Multi-Hazard Risk Assessment.
- Soliciting participant input that will inform the identification of project alternatives and sharing priorities and concerns related to the current seawall and project area.

Overview of Beach Boulevard Infrastructure Resiliency Project

Ryan Marquez, City of Pacifica Public Works Department, provided an overview of the project by introducing the project area and reviewing ongoing City efforts in the Sharp Park neighborhood. The BBIRP is located in northern Pacifica, on the western edge of the historic West Sharp Park neighborhood. The project area is comprised of four different reaches with unique characteristics; the Pier Wall System built in 1973, the North Wall built in 1984, the South Wall built in 1987, and the South Gap. Due to multiple major failures to the North wall between 1984 and 2020 (including foundational and full wall failures), localized flooding and property damage from wave overtopping, and sea level rise projections, Marquez emphasized the need to update these structures in order to protect public infrastructure along and adjacent to Beach Boulevard.

Marquez continued by explaining the project goals of the BBIRP, which include:

- Replacing the current seawall and outdated infrastructure
- Building climate resilience into one of the most vulnerable segments of the City's shoreline.
- Improving public access and use of the Beach Boulevard Promenade.



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- Creating a multi-benefit solution to protect public infrastructure, recreational activities, homes, businesses, and the community at large, from further coastal erosion impacts.



Figure 1 BBIRP project phases

The project is broken into three phases. The current phase, Phase 1, focuses on preliminary planning and feasibility and includes reviewing Existing Conditions and conducting a Multi-Hazard Risk Assessment (MHRA) which will inform the development and analysis of the project alternatives. Once a preferred alternative has been identified, Phase 2 will focus on design and permitting. Phase 3 is the construction phase.

Marquez indicated that there will be a total of four community workshops during Phase 1. The Kick-Off Workshop was held on in September 24 and provided an overview of existing conditions of the project area. The third and fourth workshops will cover the alternative design development and will be held in January and March. Online engagement and information will occur throughout the duration of the project.

Marquez then summarized the key feedback received during the September 24 Kick-Off Workshop, which included:

- Project funding and cost to Pacificans.
- Alignment between City's planning efforts (LCP, SPSP, BBIRP) and regulatory agencies.
- The opportunity for the BBIRP to serve as a catalyst for commercial development and private investments in Pacifica.
- Project's construction timeline (e.g. phasing to address priority areas).

Marquez noted that an [Existing Conditions Survey](#) was made publicly available between September 10 and October 1. Results of the survey encompassed a range of community perspectives on the project areas, including appreciation for the non-commercial, seamless connection to the ocean as well as the



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need for infrastructure updates to ensure public safety reasons. Respondents to the survey also indicated their preferred methods to be engaged during the project, which includes:

- Pursuing additional means for virtual engagement (e.g. comment portals, additional surveys, and social media).
- Utilizing existing meetings or convening additional BBIRP-specific meetings
- Posting draft Project documents online as they become available.

Project funding was noted as a key concern in both the Kick-Off Workshop and the Existing Conditions Survey. Marquez noted the City will be pursuing multiple sources, including those available at the local, state, and federal level. Some of the potential funding sources are listed below.

Level	Opportunity Name	Applicable To
Local	Tax	Whole Project
	Bond	Whole Project
	Parcel Tax	Whole Project
	Assessment District	Whole Project
	Geologic Hazard Abatement District	Whole Project
State	Boating & Waterways - Shoreline Erosion Control & Public Beach Restoration	Erosion control & Nourishment
	Ocean Protection Council - Prop 1	SLR Adaptation
	Department of Water Resources - Coastal Watershed Flood Risk Reduction	Flood Risk reduction w/ fish & wildlife enhancements
	Coastal Conservancy - Various	Coastal Access & Recreation
Federal	FEMA Hazard Mitigation Grant Program (HMGP)	Hazard Mitigation
	FEMA Building Resilient Infrastructure & Communities (BRIC)	Hazard Mitigation
	United States Army Corps of Engineers - General Investigation	Coastal Storm Damage Reduction
	National Fish & Wildlife Coastal Resilience Fund	Restore or expand natural habitats
	NOAA Coastal Resilience Grants	Nature Based Solutions

Question and Answer

Following the overview presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included below.

- Q: Are there any resolutions to the resiliency or permanency to the existing gap in Clarendon, the existing seawall, and the north end seawall?
 - Response (R): While project team has not identified specific solutions to those areas, they will be addressed in our analysis of projective alternatives.

Overview of Multi-Hazard Risk Assessment



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Paul Henderson and Brian Leslie, GHD, provided an overview of the MHRA noting it will identify the potential impacts of a range hazards the City is susceptible to. The results of the MHRA will inform the development and analysis of project alternatives, which include: Beach Nourishment, Sand Retention Structures, Replacement Seawall and Rock Revetment.

An overview of the hazards being analyzed in the MHRA is provided below.

- **Coastal hazards** are designated into two categories: 1) flooding hazards, including those associated with wave run-up/overtopping and stormwater system capacity and 2) shoreline/bluff erosion which entails landward migration of beach (e.g. beach erosion) and how deep might the beach recede at the toes of the current structures.
- **Sea-Level Rise** considerations are being assessed by looking at 2ft, 3.5ft and 7ft sea level rise scenarios. These ranges are being utilized to determine risk aversion scenarios for the project's design life.
- **Flooding** occurs when waves overtop the seawall during large, long period waves and coincident high tides. To analyze this hazard, the project team utilizes the EurOtop v. II model
- **Erosion hazards are a risk to** Pacifica's bluffs, which are made of loosely consolidated materials that are highly erodible. To predict how the beach and bluff could erode without sea level rise, the project team used a background erosion rate of 1.6 feet per year. To account how the bluff erosion is going to accelerate with sea level rise, the project team is using USGS' CoSMoS data.
- **Earthquake risks** exist given the City's proximity to the San Andreas and San Gregorio faults. In addition to strong ground shaking and ground surface rupture, additional risks include liquefaction and slope failure of the coastal bluff. Liquefaction occurs when water saturation and pore pressure increase reduces the strength of subsurface soils. Slope failure risks exist as ground shaking can erode coastal bluffs to the extent that they collapse.
- **Utilities** risks relate to the location of infrastructure for sewer, gas, electric, and others within the project area. The project team is assessing the difference in costs for protecting these utilities in their current location versus relocating them.
- In assessing **economic risks**, the project team will be completing a Benefit-Cost Analysis (BCA) of each project alternative under consideration. The BCA will utilize the economic framework established by the National Oceanic and Atmospheric Administration (NOAA) to assess to potential losses property and tax revenue, threats to utilities, and operations and maintenance. The NOAA framework is being utilized given its suitability for the BBIRP as it has a focus on coastal communities. Additionally, in contrast to other economic frameworks, it provides a holistic structure that accounts for intangible benefits like recreation and other social benefits.
- The three primary **environmental risk** categories include marine biology, terrestrial biology and recreation and visual impacts. The project area supports a diversity of marine biology. While any project alternative would cause an impact to this biology, the effects can be mitigated. In regard to terrestrial biology, the project footprint is likely to be confined generally to the existing Beach Boulevard area with minimal impact on special status species, such as the red-legged frog and garter snakes. Additionally, project structures will serve as a means to prevent salt water intrusion into the Laguna Salad Wetland Complex. Since the project will present opportunities in



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terms of recreation and visual, the team will be looking for community feedback and ideas on these opportunities.

Henderson concluded by noting that the findings of the MHRA will be presented at the next workshop. These output findings will also inform the design criteria and benefit-cost analysis of the project alternatives.

Rugani introduced a virtual polling exercise to gauge what risks are of the most importance to meeting attendees. Results are listed below.

Which of the risks discussed is most important to you?

- Overtopping and Flood Risks: 38%
- Earthquake Risk: 4%
- Coastal Risks: 10%
- Utility Risk: 6%
- Economic Risk: 23%
- Environmental Risk: 19%

Question and Answer

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included below.

- Q: Can we design for a 500 year or greater event?
 - R: Yes, however, the costs and environmental impacts for an alternative that addresses a 500 year event are too great given the low likelihood of an event of that scale.
- Q: Why is loss of beaches and recreation amenities not quantified? Is Pacifica economically sustainable if there are no beaches to come to?
 - R: It is difficult to assign a dollar value to recreation, particularly for non-Pacific residents that are using the City's amenities. However, the NOAA assessment includes qualitative methods to include the recreational value of the beach.
- Comment (C): If the seawall started eroding, there would be a loss of market value to homes which would consequently result in loss of property tax revenues. Just because recreation is difficult to quantify does not mean it should not be quantified. The seawall has generally worked for the City and it might be the best approach moving forward.
- C/Q: The project footprint does not include the southern gap leading to the golf course. Will this project close the southern gap?
 - R: While the project generally pertains to the footprint discussed, the project team will be assessing the gap.
- Q: Does Eurotop include the effects of a reflective wave as it interacts with the incident wave in front of a structure?



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B: It does not consider reflective wave; it considers dynamic water levels. Wave set-up (e.g. tides plus dynamic water level) is what is included.

Public Comment

Kelsey Rugani invited members of the public to provide comments to the project team. A summary of public comments made is included below.

- C: Nature-based strategies should be considered in mitigating sea-level rise impacts.
- C: Based on how things were presented, it seems that beach protection and recreation are lower priorities; I think they should be singled-out as its own category and should be quantified economically. It plays a central part in Pacifica's economic sustainability. We are losing what we have in terms of shoreline and we should return it to a more living shoreline. I think a larger seawall would not make things safer and there is reason to believe it would fail in quicker timing. Beach resiliency is misnomer here as resiliency has to do with natural barriers. When we lose the beach, we lose Pacifica.
- C: We really need to replace the seawall with something that will last for at least 50 years. I do not think we should pursue a living shoreline as we are trying to protect infrastructure, business, and homes. Citizens do not want managed retreat.
- Q: Who decides on what the preferred alternative will be?
 - R: All alternatives will be scored against a set of criteria in order to determine the preferred alternative. The preferred alternatives could be a combination of alternatives. The project team will be discussing the range of alternatives and the criteria used to assess them at the next public workshop.
- C: I love what is planned for Sharp Park, but it is never going to happen without a seawall. Nobody is going to invest in real estate development, which is critical to the City's financial future, without a commitment to a modern seawall. A seawall is the most cost-effective alternative in the long run.
- Q: What can Pacifica do to expedite getting a seawall built? How long will it take until we start building the seawall that we obviously need?
 - R: This project needs to follow a thorough process of analyzing the costs and benefits associated with each alternative, not just a seawall. A timeline for construction will be established once we have identified a preferred alternative.
- C: The approaches discussed for protecting habitats and wetlands sounds like managed retreat, which is a non-starter for residents. We have economic viability along the cost that needs to be protected and a seawall seems like our best option.
- C: I am a Resident and property owner and I have done a couple of construction projects in the northern section of the project area. We did a study of the seawall to the north wall to determine what means there are updating the current system which we found can be maintained and augmented. It is important to preserve the historic character of Salada Beach.



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- C: Pacifica has never been about building infrastructure; the character of this community built on the seamless connection between hills and the ocean. The City should consider moving or upgrading the current infrastructure, so it is safe for decades to come.
- C/Q: There has been a seawall in Sharp Park for decades and residents bought their homes knowing and expecting it will always be there. Are you considering human factors, like those for people who that have built their lives along this shore and trusted the city would take care of it?
 - R: While that is difficult to quantify, we will certainly qualify it and look to discuss it further at future workshops.
- C: I'm a Pacifican who would like to see more alternatives considered and studied. I believe what is being considered is too limited to a seawall, especially when you look at what other cities have pursued for sea-level rise protection. It is only a matter of time until the project area will be subsumed. How much does Pacifica want to pay to preserve the project area for such a short amount of time?
- Q: How long can the current wall last as is?
 - R: Depending on which section of the wall and the severity of storms, it likely would last another 5-20 years.
- Q/C: Are you in communication with the City of San Francisco regarding the Sharp Park berm? The California Coastal Commission has tasked them with repairing the berm. The primary concern was protecting infrastructure in the area and the golf course.
 - R: We are in contact with San Francisco Parks and Recreation, who oversee the berm and the golf course.
- C: An alternative plan to the seawall? Development of a Living Shoreline is practical for unpopulated beaches or areas of beach reclaimed from development. But not for Sharp Park, and it's expensive. An example is on Linda Mar beach in Pacifica. The area just south of the Taco Bell and north of the creek. It had houses on it. In the 90's the houses were condemned and bought out by the city. The city paid to demolished them, brought in sand, created dunes, and planted the area on both sides of the Taco Bell. Two beach parking lots, new restrooms and new pump house were added. It's a beautiful natural looking beach restoration. But it's nothing we could plan or afford to do on the scale of Sharp Park along Beach Boulevard. Right?
- C: If anyone on this zoom call tonight was still considering managed retreat for Sharp Park or Fairway Park. At what cost and how would that be funded? I'm concerned, would it require public funds to acquire and demolish private property? Will the Coastal Commission pay the cost of managed retreat if they require it for Pacifica? I believe protection and continued area development would be more cost effective in the long run to the city.
- C: Seawall height and how long should it last? I'm sure property owners living along Beach Boulevard would gladly give up eight to ten feet of their ocean views if it meant saving their property from sea level flooding. I suggest the only solution must be a replacement wall with a 50-year service life. This is required to protect everything east to the highway. Anything less will mean no Sharp Park plan, no new housing on the historic Palmetto main street. No development in the old sewer plant site. No library, hotel, or new city offices. The economic loss and cost of hundreds of area homes, Hwy 1, and golf course in jeopardy. No one will invest here if City Council does not protect the central core of Pacifica. The new sea wall could be just like the promenade is today, just higher and still providing access to the pier, Sharp Park beach and Mori Point. The new sea wall could be an attraction to visitors unto itself.



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- C: Sharp Park beach south of the pier is a beautiful deep beach with plenty of sand in the summer months. Sand replenishment and dunes would help protect it in the future. California could have sand dredges available to service beaches along the coast as needed. Like it's been done in Holland for hundreds of years. Look at those beautiful beaches and how they are constructed and maintained. It can be done here too. Mori Point and Pedro Point are both natural groins that have helped retain sand on Linda Mar and Sharp Park beaches for years. In Holland look at Egmond ann Zee beach, Zuiderstrand, Zuid Holland, Oostkapelle, Zeeland. Also Petten, and Paal 29, Noord Holland, to name a few. It's often an uphill hike to get to the beach in Holland, but it's worth it.
- C: The Golf Course is an important recreational attraction in Sharp Park as well as a refuge for migrating birds. It's also habitat for snakes, frogs and critters that wander out at night into the neighborhood. The levee protects the golf course and the surrounding neighborhoods from flooding. We're all living below sea level here south of Monticeto Avenue. We're dependent upon water pumps working on both sides of Clarendon Avenue to keep us dry during winter storms. When the water table rises and floods in the golf course, it rises in the streets and under homes. However Sharp Park is protected it must include the golf course too.

Next Steps

Kelsey Rugani reviewed the following next steps before concluding the meeting.

- Participants were encouraged to visit the [project website](#) to:
 - Complete the post-meeting survey;
 - Find the workshop summary and recording; and
 - Sign-up for the project email list.
 - Submit public comments outside of meeting times
- The next Community Workshop will take place in January and focus on the Alternative Design Development and other project updates.