



Scenic Pacifica
Incorporated Nov. 22, 1957

CITY OF PACIFICA

540 Crespi Drive • Pacifica, California 94044-3422
www.cityofpacifica.org

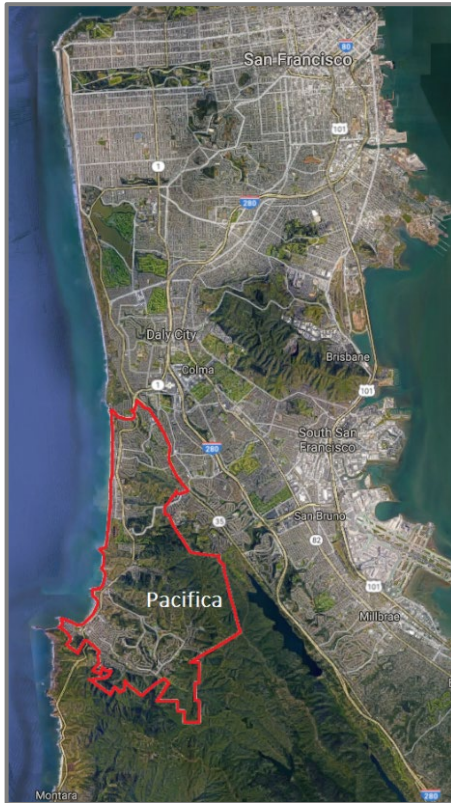
MAYOR
Tygarjas Bigstyk

MAYOR PRO TEM
Sue Vaterlaus

COUNCIL
Sue Beckmeyer
Mary Bier
Christine Boles

Pacifica's Sea-Level Rise Adaptation & Coastal Infrastructure Resiliency Efforts

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Introduction

The City of Pacifica is a California coastal community of approximately 40,000 residents just south of San Francisco on the San Mateo County coast. With six miles of beaches and bluffs, Pacifica has been impacted heavily over the years by coastal erosion. From high bluffs susceptible to erosion along its north coast, to lower bluffs with seawall protection along its mid coast, to the wide Pacifica State Beach (Linda Mar) at its southern end, Pacifica's coastal dynamics are varied and complex. Added to that natural complexity are factors such as pre-California Coastal Act shoreline development, including public infrastructure, a patchwork of public and private land along the shoreline, naturally affordable housing along the shoreline, and a large slice of Pacifica's economy driven by business within the Coastal Zone. Thus, it is readily evident how and why Pacifica's Sea-Level Rise Adaptation and Infrastructure Resiliency Efforts are critical to the future of the city.

This summary report provides an update on the status of the many efforts the City of Pacifica is undertaking to fulfill its vision that the Pacifica coastline, which features stretches of beautiful beaches, open space and recreation amenities, including the Sharp Park Golf Course and a hugely popular fishing pier destination, critical public works infrastructure, and precious naturally affordable multi-family housing

and other pre-Coastal Act private homes, can become a shining example of local, regional, state, and federal collaboration in creating an adaptive and resilient coastline in response to climate change and sea level rise.

Background

The December 2019 California Legislative Analyst's Report "Preparing for Rising Seas: How the State Can Help Support Local Coastal Adaptation Efforts," (<https://lao.ca.gov/Publications/Report/4121>) is comprehensive and informative about the need to start preparing for sea level rise in California. Pacifica is on the leading edge of such preparation, as well as project implementation – from adaptation planning 25 years ago at Pacifica State Beach (see picture to right and <https://www.cakex.org/case-studies/restoration-and-managed-retreat-pacifica-state-beach>), to coastal erosion challenges and infrastructure resiliency projects in recent years, to on-going community engagement and adaptation policy development efforts as part of updating Pacifica's Local Coastal Land Use Program to include sea level rise adaptation policies.



Pacifica's six miles of beautiful coastline is very diverse, from impressive reaches of undeveloped coastal bluffs and sandy beaches, to pre-Coastal Act and historic urban-clustered areas of development that provide housing and support businesses, jobs, hotels, and Pacifica's economy. Pacifica's resiliency needs are immediate, not decades away waiting to see at what rate the sea rises. As Pacifica moves into the design and construction phases of numerous coastal infrastructure resiliency projects, the financial demands of these critical projects will require collaborative funding portfolios involving local, regional, state, and federal sources. The City of Pacifica is optimistic it can be a shining success story about collaborative efforts to confront these resiliency challenges.



Beach Blvd Seawall and Infrastructure Resiliency Project

The City received \$1.5 million in state funding in December 2019 for the planning & feasibility of the future of the Beach Blvd Seawall and Promenade. The City completed a feasibility level study to find the best-fit solution for the area, which included numerous public workshops, significant stakeholder and public engagement, and studied a wide array of project hazards and alternatives. In June, 2021, the City Council selected the preferred alternative of a hybrid coastal protection system consisting of a seawall, small rock scour apron, and beach nourishment. Simultaneously, the City is pursuing funding strategies for this expensive project. The hybrid coastal protection system lifecycle costs are estimated in the range of \$125 million (2021) with upfront capital costs preliminarily estimated at \$85 million (2021). However, the

economic analysis shows the cost of doing nothing in this area of Pacifica would exceed \$240 million (2021) during the same time frame. This cost of doing nothing mainly included property and infrastructure costs that could be monetized, but the methodology did not entail monetizing property value and tax revenue losses, economic development and investment losses, legal costs, and recreational, environmental, or other impacts. Therefore, the cost of doing nothing would be much higher in reality.

As an indication of the continuing urgency for this project, there were two breaches of the seawall just north of and adjacent to the Pacifica Municipal Pier in December 2020/January 2021 and major overtopping and flooding in January 2023. Fortunately, the City's proactive maintenance/inspection routines of the northern section of the wall caught these breaches early and these were repaired within a short period of time under an emergency permit from the Coastal Commission, before the roadway and utility infrastructure were threatened. Repair of these breaches cost the City approximately \$270,000 (not including staff time), and every winter presents additional emergency concerns and financial impacts to the City. Since 2016, the City of Pacifica has spent more than \$7 million dollars on emergency repairs due to coastal resiliency problems, a significant figure for a City with a current annual General Fund budget of only \$47 million. This does not include the multi-million dollars in private property damage that occurred during this same timeframe.



Progressing expediently with the design, environmental review, permitting, and construction of the Beach Blvd Infrastructure Resiliency Project is of urgent importance to Pacifica and the hundreds of thousands of visitors from around the region, state, and world that come to enjoy this scenic stretch of coastline and the pier. In 2022 the City Council



and

approved \$1 million in City funding to combine with the remaining State grant funds to commence the preliminary design process, which is just a portion of the overall design process and costs. Preliminary design kicked off in early 2023 and is expected to conclude in early 2024. During this phase of work the City is proactively pursuing grant and funding opportunities to keep this vital project moving into environmental review and final design of the proposed project. More information about this project can be viewed at: www.cityofpacifica.org/BeachResiliency



Esplanade Avenue Bluff Projects Update

The northern coastal bluffs in Pacifica along Esplanade Avenue have experienced erosion for decades, with lateral land loss at an average rate of two feet per year, among the highest along the west coast. While two feet is the long-term average, the bluff erosion is episodic, meaning that it can vary widely from storm to storm, year to year. Furthermore, sea level rise could accelerate this rate of erosion without protective measures. Most development along Esplanade Avenue is pre-Coastal Act, and there exists alternating public and private parcels, many of which have some form of Coastal Commission permitted armoring. For City-owned sections, and where public

infrastructure is imminently threatened, such as streets and the wastewater and water utilities underneath them, the City is undertaking numerous infrastructure preservation projects. These projects are currently estimated to cost on the order of \$20 million. Over the past 6 years the City has been able to assemble FEMA, State, and Local funding to ensure these projects can occur, however the regulatory permitting process may impose changes that would increase the cost of these projects. Both identified projects along Esplanade Avenue are currently moving through design and environmental review, with one having completed CEQA and working through the permitting process, and the other progressing through CEQA and beginning permitting materials.

Pacifica Pier Update

Pacifica is home to one of the most beloved fishing piers in the state. The wide number and quality of fish caught off Pacifica's shores brings anglers from all over the bay area and beyond. While fishing can be good year-round, many consider the summer months to be the best when salmon and striped bass can be caught. Crab season is also extremely popular on the Pier with anglers lining up before the pier is opened at the crack of dawn. No admission is charged, and no fishing license is required at the Pacifica Municipal Pier, making it a truly unique and free recreational asset to the bay area and state.



User counts during August and September of 2022 revealed approximately 750 daily users with the highest single-day count being over 2,000. Data analytics reveal these users come from all over the bay area and state to use this unique pier and conversations with users have revealed that even out-of-state and country visitors use this pier.

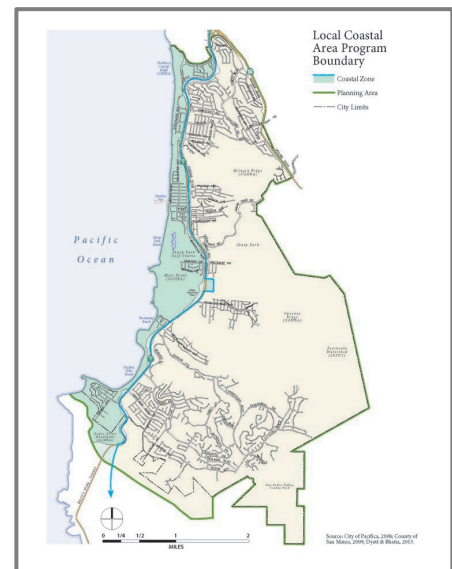
In January 2021 a large storm event toppled the concrete guardrail at the end of the pier. Subsequent structural inspection on all the guardrails found that the majority of them need to be replaced in the next few years and all of them need to be replaced in the next decade. Without a funding source to complete this expensive repair and rehabilitation work, the City applied to various possible grant funds and was able to secure \$500,000 in funding through a state-specified grant being overseen by California State Parks and \$260,000 through the Coastal Conservancy. However, following design and bidding of the project in 2022, the bid results came in over \$1.4 million to replace the guardrails in need of immediate repair, and over \$4 million to replace all of the guardrails. Working on this aging pier is very expensive due to the safety, environmental, and specialized requirements, which results in a small pool of contactors who are qualified to perform this work.

Due to the high (and over-budget) bids, the City pivoted to do further inspections of the pier to have a complete picture of potential repair needs before making a sizable investment in fixing the guardrails. In early 2023, the City began a structural inspection of the full pier, including an assessment of the pile conditions in the ocean, with results anticipated no sooner than May 2023. The City also is continuing its efforts towards possible funding opportunities.

Local Coastal Land Use Program Update

In recent years, Pacifica has worked to update its Local Coastal Land Use Plan (LCLUP) to bring its 1980 LCLUP up to date and address the impacts of sea level rise (SLR). Over an 18-month period in 2017 and 2018, more than a dozen community meetings were held as part of the process to complete an SLR Vulnerability Assessment and SLR Adaptation Plan, culminating in recommended SLR Adaptation Policies considered by the City Council in December 2018.

During 2019, the City completed seven community meetings related to the remainder of the LCLUP Update, revisited and finalized the recommended SLR Adaptation Policies and incorporated them into the LCLUP Update. In early 2020, the Pacifica Planning Commission, and then City Council, adopted the final LCLUP for submittal to the Coastal Commission for certification. The Coastal Resiliency policies contained in Chapter 6 of the LCLUP approved by the City Council would emphasize protecting existing homes, businesses, and infrastructure in Pacifica consistent with the Coastal Act.



The City submitted its LCLUP update to the Coastal Commission in June 2020. The Coastal Commission staff published its final recommendations on February 24, 2023, in advance of a scheduled March 8 public hearing. The Coastal Commission staff has recommended a large number of modifications that, if adopted by the Coastal Commission at the public hearing, the City must accept in order for the LCLUP update to take effect. City staff has requested a continuance of the hearing to a future meeting to allow more time for the City to determine appropriate next steps.

To date, only a few coastal cities in California have updated their LCLUPs to incorporate SLR Adaptation Policies, and even fewer have been successfully certified through the Coastal Commission process. This poor

track record statewide is insightful about the various complex policy and authority disparities that exist between the Coastal Commission and local governments about important legal, social, economic, and environmental factors. The LAO report mentioned in the beginning of this report brings a number of these issues to light. Pacifica has been working closely with the Coastal Commission staff throughout our LCLUP Update process, and the City is hopeful for achieving a certified LCP that reflects unique local conditions in Pacifica and respects the importance of local control as provided in the Coastal Act.

All of the documents and information about Pacifica's SLR Adaptation planning process and Local Coastal Plan Update are available through the City's website at:

<https://www.cityofpacifica.org/departments/planning/sea-level-rise>

and

www.planpacifica.org

United States Army Corps of Engineers Work

In seeking partners for solutions to coastal erosion issues in Pacifica, the City has been collaborating with the United State Army Corps of Engineers (USACE) for years and is excited to kick off two studies along Esplanade Avenue and Beach Boulevard in 2023.

The City has been requesting a USACE General Investigation along its coastline since 2020 in hopes for a similar outcome San Francisco received with their shoreline issues. The City requested and recently was granted a Continuing Authorities Program (CAP 103) study to mitigate coastal storm damage along an unarmored portion of Esplanade Ave (<https://www.nae.usace.army.mil/missions/public-services/continuing-authorities-program/>). The City's goal is this Federal Interest Determination study will find the erosion issue to be larger than a single CAP, and would support a General Investigation Study of the City's entire coastline. The CAP 103 study on Esplanade (unarmored portion of the 400 block) will begin in 2023.

The City has also requested a CAP 204 study on beneficial reuse of dredged material along both Esplanade Avenue and Beach Boulevard. Understanding the costs and feasibility of bringing in a constant sand source to replenish the beaches along these critical corridors is a priority for the City. The City recently learned that USACE is ready to move forward with a study along Beach Boulevard. We are excited to partner with the USACE on this CAP 204 study, which will begin in 2023.

Funding Summary

Below is a summary table of funding sources the City is pursuing () and been awarded () to help fund these critical coastal projects. Please note not all grants are applicable for each project, highlighting the small amount of funding sources available for these projects.

Projects	Funding Sources							
	FEMA HMGP	FEMA BRIC	CA State Budget	Coastal Conservancy	USACE	CA Shoreline Erosion	NFW Coastal Resilience	WCB Public Access
Beach Boulevard	<input type="checkbox"/>	<input type="checkbox"/>	✓		✓	<input type="checkbox"/>	<input type="checkbox"/>	
Esplanade Bluffs	✓		✓		✓	<input type="checkbox"/>		
Pacifica Pier			✓	✓		<input type="checkbox"/>		<input type="checkbox"/>

Conclusion

Pacifica's coastal projects are varied and complex. This summary report is intended to convey specifics about Pacifica's coastal resiliency challenges, and to highlight the progress the City has made. The coming years are critical in California for how cities, counties, regions, states, and the federal government will need to collaborate to confront climate change and sea level rise effects. Pacifica has a great deal of experience to share in this collaboration and stands ready should such collaborations increase resources available to bring Pacifica's infrastructure resiliency projects to fruition.



Kevin S. Woodhouse
City Manager

Attachment: Aerial Map of Pacifica Coastal Projects

2023 Pacifica Coastal Project

Legend

310-330 Esplanade Infrastructure Preservation

400 Esplanade Infrastructure Preservation

Beach Boulevard Infrastructure Resiliency

Pacifica Pier

EDGE MAR - PACIFIC MANOR

SHARP PARK

Google Earth

Image © 2023 TerraMetrics
Data CSUMB SFML, CA OPC

3000 ft

