CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
(831) 427-4863 FAX (831) 427-4877
www.coastal.ca.gov

W18

CENTRAL COAST DISTRICT (SANTA CRUZ) DEPUTY DIRECTOR'S REPORT

For the

August Meeting of the California Coastal Commission

MEMORANDUM Date: August 8, 2012

TO: Commissioners and Interested Parties

FROM: Dan Carl, Central Coast District Deputy Director

SUBJECT: ***Deputy Director's Report***

Following is a listing for the waivers, emergency permits, immaterial amendments and extensions issued by the Central Coast District Office for the August 8, 2012 Coastal Commission hearing. Copies of the applicable items are attached for your review. Each item includes a listing of the applicants involved, a description of the proposed development, and a project location.

Pursuant to the Commission's direction and adopted procedures, appropriate notice materials were sent to all applicants for posting at the project site. Additionally, these items have been posted at the District office and are available for public review and comment.

This report may also contain additional correspondence and/or any additional staff memorandum concerning the items to be heard on today's agenda for the Central Coast District.

REGULAR WAIVERS

1. 3-12-028-W Monterey Bay Aquarium (Monterey, Monterey County)

EXTENSION - IMMATERIAL

1. A-3-PSB-06-001-E4 Beachwalk Resort, L.L.C., Attn: Anthony Wells (Pismo Beach, San Luis Obispo County)

TOTAL OF 2 ITEMS

DETAIL OF ATTACHED MATERIALS

REPORT OF REGULAR WAIVERS

The Executive Director has determined that the following developments do not require a coastal development permit pursuant to Section 13250(c) and/or Section 13253(c) of the California Code of Regulations.

Applicant	*Project Description*	*Project Location*
3-12-028-W Monterey Bay Aquarium	The proposed development involves repairs to the primary seawater intake pipeline including placement of concrete cement sacks in an interlocking pattern directly beneath suspended portions of 29 of the existing pipeline footings, the majority of which are located in 30-feet or less of water and within 400-feet of the shoreline. The proposal also includes renovations/repairs to the Monterey Bay Aquarium café and restaurant and sea otter tank exhibit, which will require the use of a portion of the Hovden Way overlook for construction staging and access. The renovations and repairs will otherwise take place entirely within the existing aquarium building.	886 Cannery Row (Monterey Bay Aquarium), Monterey (Monterey County)

REPORT OF EXTENSION - IMMATERIAL

Applicant	*Project Description*	*Project Location*
A-3-PSB-06-001-E4 Beachwalk Resort, L.L.C., Attn: Anthony Wells	Development of a three story, 67-room ocean front hotel with conference rooms, fitness center, underground parking, and public access courtyard	147 Stimson (Downtown Planning Area), Pismo Beach (San Luis Obispo County)

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NOTICE OF PROPOSED PERMIT WAIVER

Date: July 27, 2012

To: All Interested Parties

From: Madeline Cavalieri, Central Coast District Manager
Mike Watson, Coastal Planner

Subject: **Coastal Development Permit (CDP) Waiver 3-12-028-W**
Applicant: Monterey Bay Aquarium

Proposed Development

The proposed development involves repairs to the primary seawater intake pipeline including placement of concrete cement sacks in an interlocking pattern directly beneath suspended portions of 29 of the existing pipeline footings, the majority of which are located in 30-feet or less of water and within 400-feet of the shoreline. The proposal also includes renovations/repairs to the Monterey Bay Aquarium café and restaurant and sea otter tank exhibit, which will require the use of a portion of the Hovden Way overlook for construction staging and access. The renovations and repairs will otherwise take place entirely within the existing aquarium building at 886 Cannery Row, in the City of Monterey, Monterey County.

Executive Director's Waiver Determination

Pursuant to Title 14, Section 13252 of the California Code of Regulations, and based on project plans and information submitted by the applicant(s) regarding the proposed development, the Executive Director of the California Coastal Commission hereby waives the requirement for a CDP for the following reasons:

The proposed seawater intake pipeline foundation and footing repair is needed to ensure the stability of the pipeline, which is critical to the functioning of the aquarium. Sacks of concrete will be placed in an interlocking pattern on the sea floor directly beneath existing suspended footings with a footprint that closely matches existing block dimensions. Sacks will be transported to the work site by boat or barge and placed into position by divers underwater. The paper concrete sacks will be wrapped in biodegradable burlap wrapping to ensure against breakage. Additional construction BMPs will be in place to prevent foreign materials from entering bay waters during construction. Similarly, material containment and erosion control measures will be in place during renovations and repair of aquarium interior spaces to ensure coastal waters are protected. The temporary construction and staging area at Hovden Way will be fenced off to protect the public and shield the development from public view. Public access will otherwise be maintained across the majority of the site. The Aquarium will post appropriate signage informing the public of ongoing activities and confirming that public access is continuing. As proposed with the submitted mitigation measures, the project will not have any significant adverse impacts on coastal resources, including the Monterey Bay and public access to the shoreline.

Coastal Commission Review Procedure
This waiver is not valid until the waiver has been reported to the Coastal Commission. This waiver is proposed to be reported to the Commission on Wednesday, August 8, 2012, in Santa Cruz. If three Commissioners object to this waiver at that time, then the application shall be processed as a regular CDP application.

If you have any questions about the proposal or wish to register an objection, please contact Mike Watson in the Central Coast District office.

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NOTICE OF PROPOSED PERMIT EXTENSION

Date: July 25, 2012

To: All Interested Parties

From: Madeline Cavalieri, Central Coast District Manager
Stephanie Rexing, Coastal Planner

Subject: **Proposed Extension to Coastal Development Permit (CDP) A-3-PSB-06-001**
Applicant: Beachwalk Resort, LLC

Original CDP Approval
CDP A-3-PSB-06-001 was approved by the Coastal Commission on July 11, 2007, and provided for the development of a three story, 67-room ocean front hotel with conference rooms, fitness center, underground parking, and public access courtyard at 147 Stimson Avenue in Pismo Beach, San Luis Obispo County.

Proposed CDP Extension
The expiration date of CDP A-3-PSB-06-001 would be extended by one year to July 11, 2013. The Commission's reference number for this proposed extension is A-3-PSB-06-001-E4.

Executive Director's Changed Circumstances Determination
Pursuant to Title 14, Section 13169 of the California Code of Regulations, the Executive Director of the California Coastal Commission has determined that there are no changed circumstances affecting the approved development's consistency with the certified City of Pismo Beach Local Coastal Program and/or Chapter 3 of the Coastal Act, as applicable.

Coastal Commission Review Procedure
The Executive Director's determination and any written objections to it will be reported to the Commission on Wednesday, August 8, 2012 in Santa Cruz. If three Commissioners object to the Executive Director's changed circumstances determination at that time, then the extension shall be denied and the development shall be set for a full hearing of the Commission.

If you have any questions about the proposal or wish to register an objection, please contact Stephanie Rexing in the Central Coast District office.

August 5, 2012

Subject: Proposed extension to Coastal Development Permit A-3-PSB-06-001
Beachwalk Resort LLC, Pismo Beach

Dear California Coastal Commission,

This letter is in opposition to your automatically granting a year extension of the project at 147 Stimson in Pismo Beach. While the Executive Director stated that there are no changed circumstances affecting the approved development, I do not agree. The world's increased knowledge of global warming and the effects it has on coastal flooding is constantly changing. This project was approved in 2007 and we have gained so much more knowledge on the effects of global warming on the rising sea level and also the effects a earthquake would have on increased sea levels. This Scripps report was written as recent as last month.

I urge you to read these articles and to not automatically grant an extension on this project. Let's not be remiss in doing our research. Too many lives are at stake, not to mention property damage. This property is ocean front with the waves presently coming up to the property at high tide. The research from the National Academy of Sciences says as the seal level rises, California's Coastline will become increasingly threatened by larger and larger waves hitting farther and farther inland. As the Scripps institute of oceanography states "California is stepping up to lead the way in preparing for--and adapting to--this change" Let's not prove them wrong by automatically approving the extension of this project.

Sincerely,

Nancy Hampton
2410 Wild Lilac Ct.
Meadow Vista, CA 95722
HamptonN@aol.com
Phone 530 878 1088

Pismo Beach Quadrangle -

nancy hampton <champtonn@aol.com>
(No Subject)

May 2009

PACIFIC INSTITUTE

Sea Level Rise Scenarios Dark Blue - 1.47 Meters
Coastal Base flood + 1.4 Meters (55 inches)

Reports and Research

Testimonies

Essays and Opinion

Online Update

Case Studies

The Impacts of Sea-Level Rise on the California Coast

In an analysis prepared for three California state agencies, the Pacific Institute estimates that 480,000 people; a wide range of critical infrastructure; vast areas of wetlands and other natural ecosystems; and nearly $100 billion in property along the California coast are at increased risk from flooding from a 1.4-meter sea-level rise – if no adaptation actions are taken.

The Pacific Institute report, ***The Impacts of Sea-Level Rise on the California Coast,*** concludes that sea-level rise will inevitably change the character of the California coast, and that adaptation strategies must be evaluated, tested, and implemented if the risks identified in the report are to be reduced or avoided. Populations and critical infrastructure at risk are shown in detailed maps prepared by the Pacific Institute available online here.

The report also explores how vulnerability to sea-level rise will be heightened among Californians who do not have a vehicle, do not speak English, or who live near hazardous waste facilities. Low-income households and communities of color are over-represented in these more vulnerable groups.

Funded by the California Energy Commission, California Department of Transportation, and the Ocean Protection Council, the report was authored by the Pacific Institute's Matthew Heberger, Heather Cooley, Pablo Herrera, Peter H. Gleick, and Eli Moore.

Learn More

- Full Press Release
- Executive Summary (PDF)
- Full Report (PDF)
- Technical Paper on Erosion

  (Philip Williams & Associates, Ltd.)
- Maps
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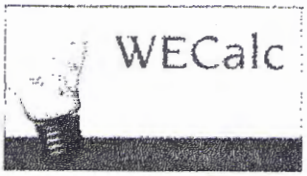
Note: To read pdf files you may need Acrobat Reader

Try the Pacific Institute's WECalc -- Your Home Water-Energy-Climate Calculator:



nancy hampton <hamptonn@aol.com>

August 4, 2012 12:35 PM

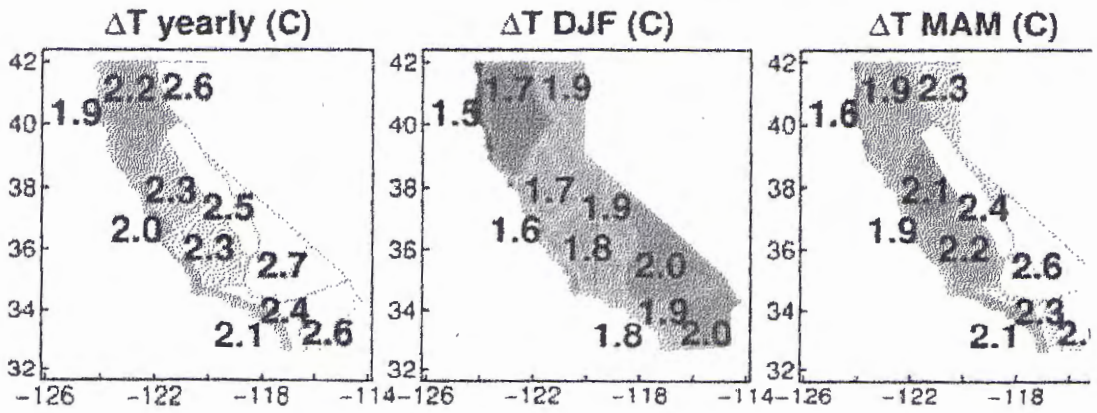
(No Subject)

Abstract

Over the past century, sea level has risen nearly eight inches along the California coast, and general circulation model scenarios suggest very substantial increases in sea level as a significant impact of climate change over the coming century. This study includes a detailed analysis of the current population, infrastructure, and property at risk from projected sea-level rise if no actions are taken to protect the coast. The sea-level rise scenario was developed by the State of California from medium to high greenhouse gas emissions scenarios from the Intergovernmental Panel on Climate Change (IPCC) but does not reflect the worst-case sea-level rise that could occur. We also evaluate the cost of building structural measures to reduce that risk. If development continues in the areas at risk, all of these estimates will rise. No matter what policies are implemented in the future, sea-level rise will inevitably change the character of the California coast.

We estimate that a 1.4 meter sea-level rise will put 480,000 people at risk of a 100-year flood event, given today's population. Among those affected are large numbers of low-income people and communities of color, which are especially vulnerable. Critical infrastructure, such as roads, hospitals, schools, emergency facilities, wastewater treatment plants, power plants, and more will also be at increased risk of inundation, as are vast areas of wetlands and other natural ecosystems. In addition, the cost of replacing property at risk of coastal flooding under this sea- level rise scenario is estimated to be nearly $100 billion (in year 2000 dollars). A number of structural and non-structural policies and actions could be implemented to reduce these risks. For example, we estimate that protecting some vulnerable areas from flooding by building seawalls and levees will cost at least $14 billion (in year 2000 dollars), with added maintenance costs of another $1.4 billion per year. Continued development in vulnerable areas will put additional areas at risk and raise protection costs.

Large sections of the Pacific coast are not vulnerable to flooding, but are highly susceptible to erosion. We estimate that a 1.4 meter sea-level rise will accelerate erosion, resulting in a loss of 41 square miles (over 26,000 acres) of California's coast by 2100. A total of 14,000 people currently live in the area at risk of future erosion. Additionally, significant transportation- related infrastructure and property are vulnerable to erosion. Statewide flood risk exceeds erosion risk, but in some counties and localities, coastal erosion poses a greater risk. This report also provides a comprehensive set of recommendations and strategies for adapting to sea-level rise.



Tuesday, July 31, 2012

More Hot Julys, Rises in Sea Level Three Feet or More Forecast in State Report

Scripps Oceanography researchers contribute to latest report on climate vulnerability and adaptation

Scripps Institution of Oceanography / University of California, San Diego

At the end of a July that broke heat records across the country, a new report released today by two state agencies projects that summer months of extreme heat will be the norm by 2060.

The assessment of rising July temperatures was one of several studies supporting and contributing to the report made by researchers at Scripps Institution of Oceanography at UC San Diego. Another analysis by Scripps researchers contains scenarios that sea level along the California coast would reach three to four feet higher than it was in 2000. A third Scripps study concluded that if the most extreme global sea level estimates are realized, "at the end of the twenty-first century coastal managers can anticipate that coastal flooding events of much greater magnitude than those during the 1982-83 El Niño will occur annually."

The report, titled "Our Changing Climate 2012, Vulnerability and Adaptation to the Increasing Risks from Climate Change in California," is the third in an ongoing series of assessments commissioned by the California Energy Commission and the California Natural Resources Agency to help it plan for the state's climate future. Researchers affiliated with Scripps led four of the studies included in the report.

"Significant increases in wildfires, floods, severe storms, drought and heat waves are clear evidence that climate change is happening now. California is stepping up to lead the way in preparing for - and adapting to - this change," said Secretary for Natural Resources John Laird. "These reports use cutting-edge science to provide an analytical roadmap, pointing the way for taking concrete steps to protect our natural resources and all Californians."

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Email Release »

Robert Monroe or Mario Aguilera

Phone: 858.534.3624
scrippsnews@ucsd.edu

"Our Changing Climate" reports

Scripps Oceanography Extreme Climate Workshop - December 2011

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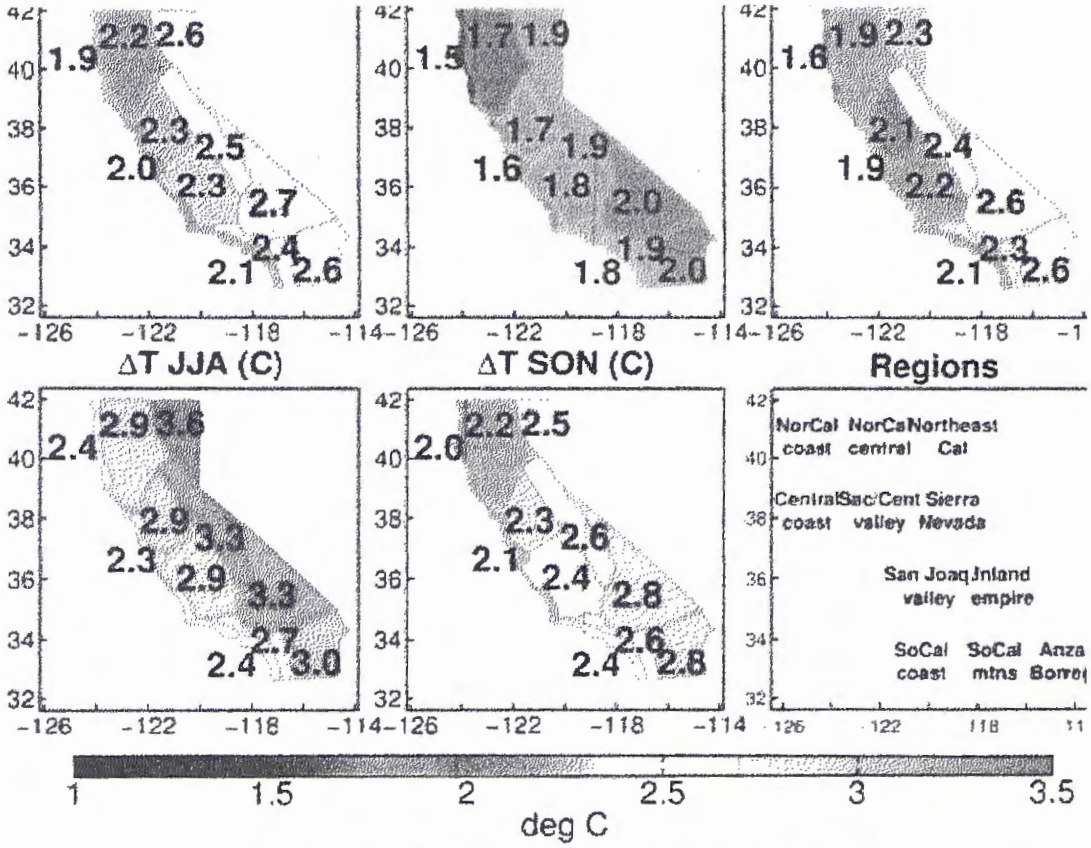


Computer model estimates of temperature change (°C) from years 1985-94 to 2060-2069

Scripps climate researcher David Pierce led a study supporting the new report, estimating climate changes anticipated in the 2060s. Pierce said it is one of the most comprehensive simulations to date using statistical and dynamical downscaling, a method of computer modeling that extrapolates climate phenomena from coarse-resolution global models to California's rugged landscape. He added that while his team's projections show a surprising number of Januaries 50 years from now that are comparably cold to today's Januaries, summers get much hotter.

"What today would be considered an exceptional, record-breaking July will by 2060 be considered to be moderately cool," he said.

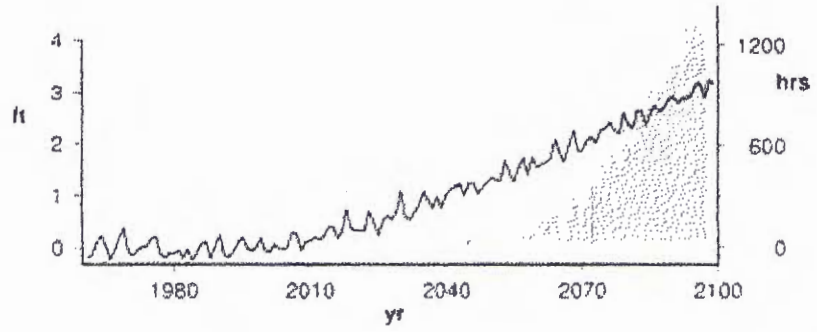
Dan Cayan, a climate researcher with dual appointments at Scripps and the U.S. Geological Survey, led two reports. One dealt with climate change implications for the San Francisco Bay area and the other with sea-level rise projections.

annual sea level

total time of exceedance
hrs above historical 99.99th percentile

1600

In the sea-level rise analysis, Cayan and colleagues report that their computer models suggest an increasing



Sea-level rise projections for San Francisco

tendency for heightened sea level events. The number of hours per year in which sea levels exceed high historical thresholds is expected to increase. By 2100, a mid-range scenario of sea level rise for the central and southern California coast is three feet higher than present-day sea level, and by mid-21st Century the number of exceedances over historical extremes of only one hour per year will likely climb to 75 hours per year. The most extreme sea level episodes during the next several decades will follow historical patterns wherein large storms coincide with high tides, often during El Niño years, but will be amplified as mean sea level rises.

"Sea-level rise is a challenge to California because of vulnerable real estate and infrastructure along its long open coast as well as in the San Francisco Bay/Delta estuary," Cayan said.

Scripps oceanographer Peter Bromirski led a team that analyzed future risks of coastal flooding. The researchers determined that relative sea level off the West Coast, which is distinct from global sea level, is the key factor influencing increased flooding potential. Other variables such as the strength of storms or the frequency of large wave events are not expected to increase significantly in this century, they added.

Bromirski had reported in a previous study that the West Coast has not experienced the sea-level rise that most other areas of the world have over the past 30 years because of prevailing climate conditions.

"Critical infrastructure, such as roads, railroads, and power generation and transmission systems, are located in coastal zones that will be impacted by flooding and coastal erosion. This study demonstrates that increases in the frequency and severity of coastal flooding events are directly linked to the magnitude of sea level rise," said Bromirski.

Konstantine Georgakakos, an adjunct professor at Scripps and director of the Hydrological Research Center in San Diego, and colleagues reviewed water resources management, primarily the operation of Northern California dams, in the context of climate change. The team concluded that current management policy, which relies heavily on long-term historical norms, will likely be insufficient to cope with the increasing variability brought about by climate change, but forecast-informed management would offer better results. The authors - from the Hydrological Resource Center, the Georgia Water Resources Institute at Georgia Tech, Scripps Oceanography and Taiwan's National Central University - found that adaptive management, which relies more on improved forecasting methods and greater inclusion of uncertainty information, stands a better chance of avoiding crises in water delivery in coming decades.

"The effects that climate change and water demand increase are projected to have on reservoir water management in California makes timely the effort to adjust policy and institutional frameworks now to allow water managers to make adaptive water release and allocation decisions based on the use of quantitative science-based forecasts," said Georgakakos.

Other studies included in the California Energy Commission report addressed several key sectors ranging from the potential influence of climate change on freshwater fishes to its effects on agriculture and electricity demand.

This assessment follows up on discussions and topics presented at the Governor's Conference on Extreme Climate Risks and California's Future, held last December in San Francisco and at an accompanying science meeting

hosted by Scripps Oceanography prior to the conference. The new studies will provide a foundation for

the 2012 Climate Adaptation Strategy, with completion expected in December 2012.
"The Governor is committed to rigorous climate science and understanding the impacts of climate change on California so that we can respond, adapt, and continue to prosper," said Ken Alex, Senior Policy Advisor to Governor Edmund G. "Jerry" Brown, and Director of the Office of Planning and Research. "Wise investment in our State's future depends on the science, and is key to strengthening California's economy and protecting the health of our citizens."

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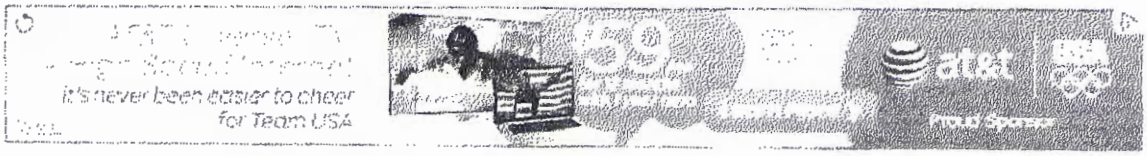
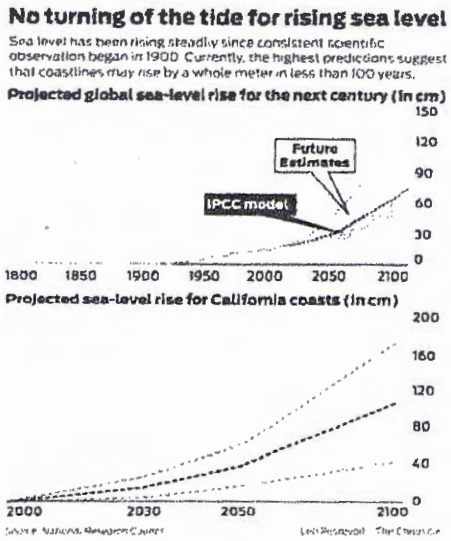
Note to broadcast and cable producers: University of California, San Diego provides an on-campus satellite uplink facility for live or pre-recorded television interviews. Please phone or e-mail the media contact listed above to arrange an interview.

About Scripps Institution of Oceanography
Scripps Institution of Oceanography at University of California, San Diego, is one of the oldest, largest and most important centers for global science research and education in the world. Now in its second century of discovery, the scientific scope of the institution has grown to include biological, physical, chemical, geological, geophysical and atmospheric studies of the earth as a system. Hundreds of research programs covering a wide range of scientific areas are under way today in 65 countries. The institution has a staff of about 1,400, and annual expenditures of approximately $170 million from federal, state and private sources. Scripps operates robotic networks, and one of the largest U.S. academic fleets with four oceanographic research ships and one research platform for worldwide exploration. Birch Aquarium at Scripps serves as the interpretive center of the institution and showcases Scripps research and a diverse array of marine life through exhibits and programming for more than 415,000 visitors each year. Learn more at scripps.ucsd.edu.



Global sea-level rise could hit California hard

David Perlman
Updated 11:17 p.m., Friday, June 22, 2012



Global sea-level rise, induced by the warming climate, will hit California's coastline harder than the other West Coast states over the coming decades and on through the end of the century, according to a new report from the National Research Council.

Oceans around the world are rising, but seas around California will rise even higher - by more than 3 feet before 2100, the report says. Tide gauges and satellites show that the rate of sea-level rise has increased steadily since 1900, and with each passing decade, storm surges and high waves will put low-lying regions like the Bay Area at heightened risk of dangerous flooding.

The forecasts come from the research arm of the National Academy of Sciences, which appointed the 12-member committee to investigate earlier estimates of sea-level rise and factor in all new available evidence. The result was a 260-page report issued Friday.

The report was commissioned primarily by California's Department of Water Resources, along with state agencies from Oregon and Washington in order to aid their planning efforts.

The scientists estimated the rates of global sea-level rise, and compared their findings with other forecasts of the global future. The report did not recommend ways to deal with future issues.

"This is physical science, not political science," said committee member Gary Griggs, an oceanographer and director of marine science at UC Santa Cruz.

Oceans rising

The report estimates that California's sea-level rise south of Cape Mendocino could range between a mere 1.5 inches to a full foot by 2030; the rise could range between 4.5 inches and 2 feet by 2050 and between 16 inches and 4.5 feet by the start of the next century.

"However," the report's scientists warned, "an earthquake of magnitude 8 or larger in this region could cause sea level to rise suddenly by an additional meter (3 feet) or more" beyond those estimates.

The estimates of future sea-level rise are so broad, the scientists said, because of all the uncertainties and knowledge gaps involved in this kind of forecasting.

The sea-level forecast for California below Cape Mendocino is substantially higher than projections for Mendocino north along the coasts of Oregon and Washington because of the great differences in the nature of the Earth's crust between the two regions, the scientists noted.

From Cape Mendocino north, the coastal land mass lies along what is called the Cascadia Subduction Zone. There the entire sea floor beneath the Pacific is slowly diving beneath the coastal crust and pushing the land upward, which means that the sea is slowly receding. That's not happening along the rest of California.

But if a major earthquake hits on the Cascadia Subduction Zone, as it did in 1700, records show, then the diving would stop, and sea level would rise more swiftly, the report said.

The new estimates of sea-level rise are substantially greater than the projections by the U.N. Intergovernmental Panel on Climate Change, known as the IPCC, in 2007. The effect of melting polar ice on sea level has been calculated since then far more precisely, Griggs said.

The Arctic effect

The council's scientists calculated that the melting glaciers in the Arctic and the breakup of vast ice sheets in the Antarctic due to climate change are dumping water into the oceans at an ever-faster rate. The melting ice accounts for 65 percent of total sea-level rise, while the expansion of all the world's oceans as they warm up accounts for the rest, said Robert A. Dalrymple, professor of civil engineering at Johns Hopkins University, who headed the committee.

During a telephone press briefing Thursday, Dalrymple noted that as sea level rises more and more rapidly, California's coastline will become increasingly threatened by erosion, crumbling cliffs, and larger and larger waves hitting farther and farther inland.

"California wetlands are likely to keep pace with sea-level rise," he said, "and sea-level rise will magnify the effects of every storm."

The Bay Area will be particularly hard hit because its airports and many cities are barely above sea level now. With every few inches of sea-level rise, more and more of those urban areas will be flooded - and particularly so by storm surge waters, the report said.

Jeanine Jones, interstate resources manager for California's Department of Water Resources, called the report "extremely helpful in planning for the future."

The new sea-level estimates mean, she said, that "winds, waves and weather will need a lot more prediction and more monitoring than ever."

David Perlman is The San Francisco Chronicle's science editor. E-mail: dperlman@sfchronicle.com

Never out of style
50 years after her death, Marilyn Monroe is still a pop culture icon.

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Most Popular Comments

gugie 7:47 AM on June 23, 2012
8.0 earthquake - rising sea level would be the least concern, I would think.
REPLY (83) (17) POPULARITY 66 | [Report Abuse]
8 replies

ambiguous 7:28 AM on June 23, 2012
Foster city = Venice of San Francisco.
REPLY (69) (10) POPULARITY 59 | [Report Abuse]
7 replies

ninong 7:31 AM on June 23, 2012
We could do like North Carolina did and make it illegal for the sea to rise at an "accelerated rate." By law in North Carolina: "Rates of sea-level rise may be extrapolated lineraly to estimate future rates of rise but shall not include scenarios of accelerated rates of sea-level rise."

Oh, wait, I think you need a Republican-controlled legislature to pass a law prohibiting reality, so I guess the ocean will rise more over here than it does in North Carolina. Florida will pass a similar law any day now.

REPLY (106) (62) POPULARITY 44 | [Report Abuse]
19 replies

View Comments (174)

The Appellants contend that the City-approved project raises issues with respect to the project's conformance with core LCP policies related to hazards, biological, and visual resources. Specifically, the appeals contend that the project approved by the City would not avoid or minimize flooding and other hazards, would not adequately protect biological resources on and adjacent to the site, and would obstruct important coastal views and would not blend visually with the surrounding environment. See Exhibits 8 and 9 for the complete appeal documents.

6. Substantial Issue Determination

As detailed below, the City-approved project raises substantial issues with respect to its conformance with applicable LCP provisions related to hazards, biological resources, and visual resources. Further detail on each of the substantial issue determination findings is found in the Coastal Development Permit Determination section below, which findings are incorporated herein by reference.

A. Hazards

The City-approved project is located in an area of high geologic, flood and shoreline hazards. The LCP requires that all new development be sited and designed to minimize risk from such hazards by, among other means, avoiding the placement of development in high hazard areas, or by identifying and establishing siting and design standards, including setbacks, based upon a geologic review of all existing and potential impacts, that can appropriately minimize such risks. In addition, the LCP requires the preparation of a geotechnical report by a qualified engineer to assess the nature of flood risks, identify the boundary of the 100-year flood plain, and specify mitigation measures that will need to be implemented to minimize and protect against potential loss of life and property. All critical facility construction must be designed and engineered to withstand the force of an 8.5 magnitude earthquake. In addition, new development is not allowed where it is determined that shoreline protection and/or other shoreline altering development will be necessary for protection of the development now or at any time in the future based on at least a 100-year time frame, taking into account all relevant coastal hazards.

The project site is located in a backbeach area that is directly adjacent to the mouth of Pismo Creek where it outlets to the Pacific Ocean. The site is in FEMA's VE zone, which indicates that it is an area subject to the 100-year coastal flood with wave velocity. In addition, coastal flooding at this location is expected to be more severe in the future due to compounding factors associated with sea level rise, and the site is subject to tsunami hazards and liquefaction. In its approval, the City relied on a preliminary geological report and a portion of a proposed geotechnical engineering report, but did not require the completion of a full geotechnical report, as required by the LCP, which is necessary in order to evaluate the project for consistency with the hazards policies of the LCP. In addition, although the project was designed to avoid the risks of sea level rise, the geological report estimated just two feet of sea level rise over the next 100 years, which is below current estimates (see also Hazards section below). Given the proximity of the project site to Pismo Creek and the Pacific Ocean and given the geologic conditions of the site, it is essential for the City to have all of the necessary information to ensure the project is sited and designed to avoid risk from hazards, and to minimize those that are unavoidable. Therefore, because the City did not require all of the necessary geotechnical information, and because the geological report did not adequately address the risks due to sea level rise, the City did not have sufficient evidence at the

time of its approval to fully analyze whether the project was designed to avoid and minimize hazards as required by the LCP.

In addition, even in the absence of completed hazards studies, it was clear that the project was inconsistent with LCP policies related to near-bluff related development, flood protection policies, and prohibitions on construction of shoreline protective devices, as discussed in more detail in the Coastal Development Permit Determination section below. As such, the City's approval of the project raises a substantial issue of conformance with the LCP's hazards policies, including those specifically requiring adequate technical information prior to approval of a project in a hazardous location like this one, and those requiring new development to avoid and minimize risks due to hazards.

B. Biological Resources

The City-approved project would be within backbeach dunes and adjacent to (and potentially on top of) the riparian/wetland area associated with Pismo Creek. The LCP categorically identifies such dune and wetland/riparian resources as environmentally sensitive habitat areas (ESHAs). The LCP requires ESHA to be protected, it explicitly specifies that development must comply with Coastal Act policies protecting biological resources (including Coastal Act Sections 30230, 30231 and 30240), and it requires a minimum setback of at least 25 feet from the inland extent of riparian vegetation at this location. In its approval, the City did not have the necessary information to evaluate the project for consistency with the LCP policies protecting biological resources. To begin, site is located at the backbeach dune area transitioning to Pismo Creek Estuary habitat, and demonstrates ESHA characteristics; residential development is not allowed in ESHA per the LCP. The City did not find the site to be ESHA, but there was incomplete evaluation on this point to determine no ESHA was present. In addition, the wetlands delineation that the City relied on in its approval did not provide the information necessary for a coastal zone wetland delineation because the rule for establishing the dominance of wetland vegetation was incorrectly used, and it did not include the necessary data points. Furthermore, the delineation did not include a map of the adjacent wetland and riparian areas, so setbacks could not be accurately determined, as required by the LCP. And finally, bracketing the question of direct disturbance in ESHA, due otherwise to the proximity of beach dunes, riparian areas, Pismo Creek, and associated Pismo Creek Estuary habitat vales, the setbacks required to protect adjacent biological resources, as required by the LCP, would need to be more than the minimum 25 feet identified. The City did not evaluate whether larger buffers were required at this site. As such, the approved project raises substantial issues of conformance with LCP policies protecting biological resources, including those specifically requiring protection and enhancement of the dune and wetland/riparian resources present in this case, as well as policies protecting ESHA.

C. Visual Resources

The City-approved project would lead to a large structure elevated on piles in a significant public viewshed at the mouth of Pismo Creek. The two stories above the piles would consist of 3,651 square feet of building space, extending to about 33 feet above grade at this location[17] (and almost 30 feet

[17] Id (based on the 7-foot elevation above grade approved by the City).

above Addie Street), and the elevation above exposed piles serves to make the massing appear even more pronounced (again, see Exhibit 5). The height, size and bulk of the duplex present significant visual issues. The certified LCP requires new development to be sited and designed to reflect the small-scale character of the City, and to protect and enhance views of the ocean, river, and estuary. In conflict with these requirements, the approved residence would be a large, boxy, and bulky structure that would obstruct and otherwise degrade public views of Pismo Creek, Pismo Creek Estuary, Pismo State Beach, and the Pacific Ocean, including as seen from the beach, the public street, and various locations along the public recreation trail. As such, the approved project raises a substantial issue of conformance with the LCP's visual resource protection policies.

D. Substantial Issue Determination Conclusion

In conclusion, the City-approved project raises substantial issues with respect to its conformance with applicable LCP provisions related to avoiding and minimizing hazards and protecting biological and visual resources. Therefore, the Commission finds that a substantial issue exists with respect to the approved project's conformance with the certified City of Pismo Beach LCP and takes jurisdiction over the CDP application for the proposed project.

7. Coastal Development Permit Determination

The standard of review for this application is the City of Pismo Beach certified LCP and the public access and recreation policies of the Coastal Act. All Substantial Issue Determination findings above are incorporated herein by reference.

A. Hazards

1. Applicable Policies

The LCP requires new development to avoid and minimize risks due to hazards and it requires new development to ensure that it will not result in increased hazards. LCP Policy S-2 states:

> ***S-2: New development.*** *New development within the City's jurisdiction shall be designed to withstand natural and man-made hazards to acceptable levels of risk by: ... (c) Evaluating new development, particularly industrial, commercial or utility development, to ensure that construction or operation of the project will not cause hazardous conditions at an unacceptable level of risk; (d) Requiring new development to avoid portions of sites with high hazard levels.*

The LCP also specifically addresses the risks due to bluff hazards. It defines bluffs and blufftops, it prohibits most new development on bluff faces, it requires adequate setbacks from bluffs, and it addresses the need to ensure long-term stability and structural integrity and avoid landform-altering devices. The LCP also restricts the development of permanent structures on the beach, prohibits new development that would require shoreline protection now or in the future, and provides criteria and standards for the development of shoreline structures, including groins, piers, breakwaters and other similar structures that serve to protect development. Relevant LCP policies include:

IP Chapter 17.006 Definitions. *... **17.006.0155 Bluff (Ocean):** A bank or cliff rising from the beach or coastline. ... **17.006.0165 Bluff Top (Ocean):** The point at which the slope of the bluff begins to change from near horizontal to more vertical.*

S-3: Bluff Set-Backs. *All structures shall be set back a safe distance from the top of the bluff in order to retain the structures for a minimum of 100 years, and to neither create nor contribute significantly to erosion, geologic instability or destruction of the site or require construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

The City shall determine the required setback based on the following criteria: (a) For development on single family residential lots subdivided prior to January 23, 1981, the minimum bluff setback shall be 25 feet from the top of the bluff (blufftop is defined as the point at which the slope begins to change from near horizontal to more vertical). A geological investigation may be required at the discretion of the City Engineer, and a greater setback may be applied as the geologic study would warrant; (b) For all other development, a geologic study shall be required for any development proposed.

S-4: Blufftop Guidelines/Geologic Studies. *Site specific geological reports shall incorporate the information requirements contained in the State Coastal Commission's guidelines for Geological Stability of Blufftop Development, as adopted May 3, 1977 and updated on December 16, 1981. This guideline is included in the Appendix. The report shall consider, describe and analyze the following: (1) A site specific erosion control plan to assure that the development would not contribute to the erosion or failure of any bluff face shall be prepared by a licensed engineer qualified in hydrology and soil mechanics for all bluff top development; (2) Cliff geometry and site topography, extending the surveying work beyond the site as needed to depict unusual geomorphic conditions that might affect the site; (3) Historic, current and foreseeable cliff erosion, including investigation of recorded land surveys and tax assessment records in addition to the use of historic maps and photographs where available and possible changes in shore configuration and sand transport; (4) Geologic conditions, including soil, sediment and rock types and characteristics in addition to structural features, such as bedding, joints and faults; (5) Evidence of past or potential landslide conditions, the implications of such conditions for the proposed development and the potential effects of the development on landslide activity; (6) Impact of construction activity on the stability of the site and adjacent area; (7) Ground and surface conditions and variations, including hydrologic changes caused by the development (i.e., introduction of irrigation water to the ground water system; alterations in surface drainage); (8) Potential erodability of the site and mitigating measures to be used to ensure minimized erosion problems during and after construction (i.e., landscaping and drainage design); (9) Effects of marine erosion on seacliffs; (10) Potential effects of seismic forces resulting from a maximum credible earthquake, and; (11) Any other factors that might affect slope stability.*

S-5: Development on Bluff Face. *No additional development shall be permitted on any bluff face, except engineered staircase or accessways to provide public beach access, and pipelines for scientific research or coastal dependent industry. Drainpipes shall be allowed only where no*

other less environmentally damaging drain system is feasible and the drainpipes are designed ad placed to minimize impacts to the bluff face, toe and beach. Drainage devices extending over the bluff face shall not be permitted if the property can be drained away from the bluff face, toe and beach.

S-7: Hazards Overlay Zone. *Areas where blufftop hazards exist shall be included within and subject to the requirements of the Hazards Overlay Zone.*

17.078.060 Shoreline protection criteria and standards.

A. No permanent above ground structures shall be permitted on the dry sandy beach except facilities necessary for public health and safety, such as, but not limited to lifeguard towers and the pier.

...

E. New development shall not be permitted where it is determined that shoreline protection will be necessary for protection of the new structures now or in the future based on a one hundred year geologic projection.

F. Shoreline structures, including groins, piers, breakwaters, pipelines, outfalls or similar structures which serve to protect existing structures, or serve coastal dependent uses and that may alter natural shoreline processes shall not be permitted unless the city has determined that when designed and sited, the project will:

1. Eliminate or mitigate impacts on local shoreline sand supply;

2. Provide lateral beach access;

3. Avoid significant rocky points and intertidal or subtidal areas; and

4. Enhance public recreational opportunities.

G. No additional development shall be permitted on any bluff face, except engineered staircases or accessways to provide public beach access, and pipelines for scientific research or coastal dependent industry. Drainpipes shall be allowed only where no other less environmentally damaging drain system is feasible and the drainpipes are designed and placed to minimize impacts to the bluff face, toe and beach.

...

The LCP also addresses hazards due to flooding, restricting development in the flood plain and prohibiting new development that in any way obstructs floodwaters or contributes to flooding. Relevant policies state:

S-8: Flood Plain Zoning. *Areas subject to flooding shall be mapped within and subject to the*

requirements of the Flood Plain Overlay zone.

S-9: Restrictions on Development Within the 100-Year Flood Plain. *(1) No habitable structure shall be approved for construction within the area of the 100-year flood plain unless the applicant demonstrates that the finished floor elevations are at least one foot above the projected elevation of the 100-year flood, except as allowed by FEMA regulations; (2) No new fill, structure, or other obstruction shall be permitted to be placed or constructed within a floodway unless a detailed hydrologic study has been prepared and approved by the City Engineer ensuring that the proposed project will not obstruct, in any way, passing floodwaters; (3) No new development shall be allowed in the 100-year flood plain which will contribute to or increase flood hazards on the same or other properties or which would require construction of flood control devices; (4) Any application for development on a parcel any portion of which is within the boundary of the 100-year flood plain shall be required to submit a hydrological engineer's report which assesses the nature of the flood risks, identifies the boundary of the 100-year flood plain and specifies the protective measures that should be undertaken to attain compliance with the city's flood plain zoning and with FEMA regulations.*

2. Consistency Analysis

Geotechnical Reports

As discussed in the Substantial Issue Findings of this report, the City did not require the applicant to prepare a full site-specific geotechnical analysis prior to its approval of the project. Therefore, after the project was appealed to the Commission, staff worked with the Applicant and the Applicant's engineer to ensure adequate reports were prepared to allow the Commission to have the information necessary to act on the project, as required by the City's LCP. In addition to the information included in the City's CDP record for the project, the Applicant has since provided a geotechnical engineering report prepared by Earth Systems Pacific, dated April 19, 2011. Earth Systems Pacific also prepared a response to Commission staff's comments, dated March 29, 2011. This response provided an updated 100-year flood elevation, and evaluated the site's beach erosion and tsunami hazards.

Site Characteristics

As previously described, the project site is located in an area subject to a combination of coastal hazards due to its backbeach location on dunes in a floodplain at the mouth of a major river. The site is about 2 feet above Pismo Creek at an elevation of +7 feet NGVD[18] and is separated from the paved portion and sidewalk of Addie Street by a coastal bluff in the City right-of way that is approximately five feet high.

The Applicant's 2011 geotechnical reports describe anticipated 100-year flood elevations at the site over the next 100 years using an estimated sea level rise of 42 inches, or 3.5 feet, over that time frame, citing

[18] The Sea Level Datum of 1929 was the vertical control datum established for vertical control surveying in the United States of America by the General Adjustment of 1929. The datum was used to measure elevation (altitude) above, and depression (depth) below, mean sea level (MSL). It was renamed the National Geodetic Vertical Datum of 1929 (NGVD 29) in 1973. The NGVD 29 was subsequently replaced by the North American Vertical Datum of 1988 (NAVD 88) based upon the General Adjustment of the North American Datum of 1988. Thus, +7 feet NGVD is approximately 7 feet above mean sea level.

the State of California Sea-Level Rise Interim Guidance Document.[19] This estimate is at the lower end of guidance provided in that document, which ranges from 40 to 55 inches (or approximately 3.3 feet to 4.6 feet). The Commission has typically focused on the higher range when planning for such hazards so as to err on the more conservative side. In any case, based on this lower-range estimate, the Applicant's 2011 reports indicate that the 100-year flood elevation at this site is +12.24 feet NGVD, which is just above the elevation of Addie Street. The Applicant's reports also indicate, again based on the lower-range sea level rise estimate, that the 100-year stillwater elevation,[20] based on 3.5 feet of sea level rise, is +8.14 feet NGVD, meaning that the site will be under water during stillwater conditions (i.e., the site is currently at +7 feet NGVD). Therefore, even based on the lower-end sea level estimate, the Applicant's reports indicate that the site will be inundated with flooding and storm surges, and will be inundated more frequently in the future.

The Applicant's geotechnical reports also provide the subsurface profile for the site. The site consists of sand to a depth of 13 to 19 feet. Below the sand is a layer of clay that extends to a depth of about 28 feet. Between 28 feet and 50 feet, there is another layer of sand, and below 50 feet, additional clay soils were encountered. No bedrock was found, and subsurface water was encountered at a depth of 5 feet.

Clearly, the site is part of an actively changing shoreline. Although the Applicant's shoreline erosion analysis determined that the shoreline near the site appears to be in near-equilibrium state, it only considered the past 46 years of shoreline changes, and did not consider future expected changes, including due to expected sea level rise. Changes due to sea level rise may be especially significant at this site due to its location in sand dunes that are more prone to shifting and are more easily altered by storms than harder substrates, as well as its extremely low elevation and close proximity to the estuary. As such, it is reasonable to predict that the estuary may migrate or widen in the future and that the beach dunes could be reconfigured by coastal flooding and storms so that the site could be even more regularly inundated with water.

Flooding

The project site is located in the floodplain in an area that is highly susceptible to flooding (see, for example, the photos in Exhibit 4). Although the LCP indicates that new development be avoided in high hazard areas like this (LCP Policy S-2), it also allows for such development in floodplain hazard areas if sited and designed appropriately to address such hazards (including through elevation above expected flood levels, no obstruction to floodwaters, etc.). The Applicant has attempted to address the site's flooding hazards by proposing a structure that is raised to an elevation of +15 feet NGVD (and 8 feet above existing grade)[21] on at least 24 piles.[22] To access the pile-borne structure, a bridge would extend

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[19] Coastal and Ocean Working Group of the California Climate Action Team. *State of California Sea-Level Rise Interim Guidance Document*. October 2010.

[20] The design stillwater level in the analysis is the maximum stillwater level under typical 100-year recurrence conditions. Stillwater level is dependent upon several factors, including tide, storm surge, wind set up, inverse barometer, and climatic events (i.e., El Niño and La Niña).

[21] Id (as currently proposed to 8 feet above existing grade).

from Addie Street (at elevation +12 feet NGVD) rising up three feet to the elevation of the base elevation of the garage and duplex structure. This bridge would contain the utility infrastructure for the project, including water and sewer lines.

Thus, although the bottom of the floor of the duplex/garage part of the structure would be at about +14 feet NGVD and just higher (1.25 feet) than the Applicant's estimated 100-year flood elevation of +12.24 feet NGVD (and the finished floor at least 1-foot above this level as required by LCP Policy S-9), the bridge and utilities would be lower than the 100-year flood elevation, and would not meet the flood elevation requirements of LCP Policy S-9. In addition, a 100-year flood at the Applicant's estimated elevation would intersect with the bridge and utilities, obstructing floodwaters and potentially washing the bridge/utility structure out and leading to other impacts (e.g., gas or sewage leak, materials strewn on the public street and/or beach, lack of access to garage/living space, damage to pile-borne structure where connected to bridge, etc.) that would adversely affect coastal resources (including habitat and public recreational access resources). Further, as described above, the Applicant used a lower-end sea level rise estimate. If a more conservative estimate were used, the 100-year flood elevation would be approximately one foot higher, or +13.24 feet NGVD, only several inches below the bottom of the floor of the duplex/garage part of the proposed structure, exacerbating flooding impacts, including those described above.

To address the potential for additional future sea level rise, the proposed project has been designed so that it can be elevated even higher above the flood plain. Although this option would help address the flooding risks to the pile-borne garage/duplex part of the structure itself, it would create additional complications for the bridge and utilities because its slope and distance from the street would increase. It is not even clear if a satisfactory access could be provided in such scenario. In addition, additional elevation creates other problems with the development, including additional public viewshed impacts (see also Visual Resources section below)

Finally, for both lower-end and more conservative estimates for sea level rise and related issues, the proposed project raises other floodway issues by virtue of the fact that it would introduce a series of 24 or more exposed piles in the floodplain. The LCP prohibits projects that include components, like this, that will "obstruct, in any way, passing floodwaters" (LCP Policy S-9). Thus, the LCP identifies a high bar that must be met for proposed projects in the 100 year floodplain. In this case, the proposed piles would be expected to obstruct passing floodwaters, and contribute to exacerbated flood hazards, both by their own surface area and by trapping debris, including objects such as tree trunks, traveling downstream, causing debris jams and impacting the flow of water at and around the site. If even more piles were ultimately required for stability, this impact would be exacerbated. This is inconsistent with the requirements of LCP Policy S-9.

In short, the proposed project is located in the 100-year floodplain and it does not meet the LCP's minimum requirements for addressing this constraint, even based on the lower end sea level rise

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[22] As stated in the project description, it is not clear from the project materials how many piles are required to support the proposed structure, but it appears from the project plans that at least 24 are proposed. More or less piles may be required depending on geotechnical engineering requirements.

estimate. At higher and more conservative sea level rise estimates, such as are generally used by the Commission, such LCP inconsistencies only increase in number and magnitude. The project includes finished floor components, such as the driveway and utilities, sited below the 100-year flood elevation and includes additional components, such as the piles, that would be expected to further obstruct floodwaters. The project is therefore inconsistent with the LCP's flooding hazard policies as cited in this finding.

Shoreline Development

The proposed project is located at the base of the short bluff fronting Addie Street.[23] The LCP includes numerous policies directed at this shoreline interface, including policies limiting allowable development on the beach and bluff, requiring siting and design to provide 100 years of stability, and prohibiting certain types of shoreline structures (LCP Policies S-3 and S-5, and Section 17.078.060). The proposed project cannot meet these LCP requirements.

First, the LCP prohibits all structures on dry sandy beach areas except for those necessary for public health and safety (such as lifeguard towards) (LCP Section 17.078.060(A)). As described above, the site is in the backbeach dune area between Addie Street and Pismo Creek. Although it has been compacted in part by vehicular access and parking for the adjacent existing vacation rental, the site is still a backbeach site, and is characterized by sandy soils overlain by vegetation know to colonize sand; in this case iceplant. In fact, as indicated by the Applicant's boring profile described above, the site consists of sand to a depth of 13 to 19 feet. The proposed residential structure, including its piles, is not allowed on the dry sandy beach. Thus, the proposed project is inconsistent with LCP Section 17.078.060(A).

Second, the LCP allows very limited development on the bluff face itself (i.e., public beach staircases/accessways; research or coastal dependent pipelines; and drainpipes in limited circumstances), none of which is residential development (LCP Policy S-5 and Section 17.078.060(G)). The proposed project includes the aforementioned bridge and utilities, as well as driveway columns, a metal rolling entry gate, and related development, that would be constructed on top of the bluff face, when this is not allowed by the LCP. Thus, the proposed project is inconsistent with LCP Policy S-5 and Section 17.078.060(G).

Third, the LCP requires residential development to be set back from bluff edges a sufficient distance as to be safe for at least 100 years, and generally requires a minimum setback of at least 25 feet to meet this requirement for residential development (LCP Policy S-3). Clearly, the intent of this policy is to avoid shoreline hazards (erosion, bluff retreat, flooding, etc.) by siting new development away from the shoreline hazards and far enough back from bluff edges as to be safe for 100 years. As such, the LCP

[23] This sloped area is a bank rising up from the backbeach elevation to Addie Street (or, put the other way around, sloping down from Addie Street to the backbeach elevation) at the coastline interface between the backbeach dunes and inland development (namely Addie Street itself), and thus it meets the LCP's bluff definition (LCP Section 17.006.0155). As such, this also means that the site itself technically meets the LCP's "bluff top" definition (because it is at "the point at which the slope of the bluff begins to change from near horizontal to more vertical" (LCP Section 17.006.0165)). However, it is clear that the LCP does not envision the backbeach area (such as this site) to be considered a bluff top, rather it envisions blufftops to be the area above the backbeach area. Thus, for the purposes of this analysis, Addie Street (i.e., the actual paved street and sidewalk) are atop the bluff, and the site is at the base of the bluff.

does not even contemplate development on the backbeach at the base of the bluffs, as this area is within the shoreline hazard area that is being avoided through application of such setback policies. Or, put another way, the LCP does not allow development seaward of the required setback. The 100-year (or 25-foot) minimum setback, applied to this case, would extend inland of Addie Street and the public parking lot. Because the proposed project is not sited inland of the required bluff setback, it is inconsistent with LCP Policy S-3.

Fourth, the LCP prohibits development that would require shoreline protection now or within the next 100 years (LCP Section 17.078.060(E)). Typical forms of residential development and construction would place the proposed duplex and related development at or near existing grade. However, at this location, such siting would place the development in significant danger from shoreline hazards (including coastal flooding, episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, landslides, earthquakes, bluff and geologic instability, and the interaction of these elements). To address this shoreline hazard problem, the Applicant proposes to raise the residential portion of the structure on deep steel piles, creating a pier structure, to protect it from such dangers. Thus, the piles act as protection against shoreline hazards.[24] Because the LCP defines piers and similar structures as shoreline protection, as discussed in more detail below, and because the proposed project requires such shoreline protection, it is inconsistent with LCP Section 17.078.060(E).[25]

Fifth, the LCP limits allowable shoreline protective structures to those that protect existing structures or serve coastal dependent uses, and only subject to exacting shoreline access and landform protection criteria (LCP Policy S-3 and LCP Section 17.078.060(F)). IP Section 17.078.060(F) explicitly identifies piers among other shoreline structures that are subject to this criteria. These limitations emanate from similar Coastal Act requirements related to shoreline protection, and are meant to limit allowable protection projects because this type of development can have a variety of negative impacts on coastal resources, including adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics, both on and off site, ultimately resulting in the loss of beach. The piles proposed to be placed directly in the shoreline environment at this location are intended to protect the proposed project from shoreline hazards, and they will both alter shoreline processes (including as described in terms of their effect on flooding, and the way in which they will block and alter nature sand and shoreline dynamics), and substantially alter the natural landform (as described earlier). Because the piles are not intended to protect an existing structure or to serve a coastal dependent use, they are categorically prohibited by the LCP. Even if they were allowed, the project does not meet the other LCP criteria that would also be required in order to allow them; namely it does not include components to eliminate or mitigate shoreline sand supply impacts, it does not provide lateral access, and it does not

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[24] Not unlike the way a seawall proposed at the same time as a residence could be proposed to be used in place of a setback.

[25] In addition, the setback provisions of LCP Policy S-3 that are not met by the proposed project (as discussed in the preceding paragraph) are required in part to avoid the construction of protective devices that would substantially alter natural landforms along bluffs. The piers in this case, and also the proposed project as a whole (including the duplex/garages above grade, and the bridge on top of the bluff and connecting to Addie Street) would substantially alter the natural landform at this site. The landform would not be able to adjust naturally to the dynamic processes playing out at this transition from backbeach dune to creek estuary, and instead would be unnaturally altered for as long as the development was in place at this location. As a result, the proposed project is inconsistent in this respect with LCP Policy S-3 as well.

enhance public recreational opportunities (LCP Sections 17.078.060(F)(1-4)). Thus, the proposed project is inconsistent with LCP Policy S-3 and LCP Section 17.078.060(F).

In short, the project proposes LCP-prohibited development on the dry sandy beach and on the bluff face, proposes LCP-prohibited shoreline protection and structures, and proposes development that cannot meet LCP shoreline hazard setback requirements. The project is inconsistent with the LCP's shoreline development policies as cited in this finding.

Conclusion

The proposed project is located at the backbeach dune area where it transitions to creek/estuary habitat in an area subject to significant shoreline hazards (including coastal flooding, episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, landslides, earthquakes, bluff and geologic instability, and the interaction of same). The proposed project is inconsistent with the LCP's shoreline development and flooding policies, and cannot be approved consistent with the LCP.

B. Biological Resources

1. Applicable Policies

The LCP includes strong protections for the City's biological resources. Selected principles from the LCP's Conservation and Open Space element state:

> ***Principle 2: Natural Resources--Key Foundation of the City***
> *Pismo Beach is the ocean, beaches, hills, weather and related ecosystems. Conservation and protection of these resources shall be the key focus of the General Plan. The unique geographical character of Pismo Beach is recognized as the foundation for all other aspects of the community. These physiographic characteristics enhance the quality of life of residents and visitors and shall not be wasted, destroyed, or neglected. They are generally nonrenewable and provide many of the scenic, historic, economic, recreation, open space and ecological values for the community.*
>
> ***Principle 3: Resources and Open Space Belong to Everyone***
> *Pismo Beach is an integral part of the larger California coastal community, linked by shared resources that are prized by the state, national and even international community. Congenial and cooperative use of these resources by both residents and visitors is recognized. Solutions for cooperative use shall always be based on retaining the area's fragile charm and resources.*
>
> ***Principle 6: The Big Three***
> *The three primary resources and open space for Pismo Beach are: (1) The Ocean--A Resource For Everyone. The ocean, coastal cliffs, and shoreline resources are vital to Pismo Beach for their wildlife habitat, recreational use, open space, scenic value and the city's overall economy. These natural assets will be protected and made available to all. ...*

In addition, the LCP defines ESHA broadly and requires it to be preserved and protected within the

intent of the Coastal Act's biological resource protection policies. It defines ESHA as follows:

> ***17.006.0435 Environmentally Sensitive Habitat:*** *Those identifiable resources within the Coastal Zone which, due to their sensitivity or public value must be protected or preserved within the intent of Section 30230, 30231, 30233, 30236 and 30240 of the Coastal Act. Also, see Sensitive Coastal Resources Areas.*
>
> ***17.006.0895 Sensitive Coastal Resource Areas:*** *Those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity, including: (1) Special marine and land habitat areas, wetlands, lagoons, and estuaries as mapped and designed in the General Plan/Local Coastal Program Land Use Plan...*

The relevant cross-referenced Coastal Act policies state:

> ***Section 30230:*** *Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*
>
> ***Section 30231:*** *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*
>
> ***Section 30233:*** *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
>
> *(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
>
> *(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*

(4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource-dependent activities.

...

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

...

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Section 30236: *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.*

Section 30240: *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas; (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Finally, the LCP specifically requires the protection of Pismo Creek and the riparian areas around Pismo Creek. The LCP requires a minimum setback of at least 25 feet from the inland extent of these habitat areas.

> ***CO-14: Riparian Habitat.*** *Riparian habitat is the environment associated with lands adjacent to freshwater sources – perennial and intermittent streams, estuaries, marshes, springs, seeps. The habitat is characterized by plant and animal communities that require high soil moisture in excess of that available from precipitation. Among the major plants associated with riparian habitat in the Pismo Beach area are sycamore, cottonwood, willow and occasionally oak. Large riparian areas occur along the banks of Pismo Creek, Meadow Creek and Pismo Marsh, although smaller areas can be found in the planning area. It is the policy of the City to preserve riparian habitat under the following conditions: (1) As part of discretionary planning permits, a biotic resources management plan shall be required; (2) The biotic resources management plan shall include standards for project development which will avoid habitat disturbance; (3) The standards specified in the biotic resource management plan shall be utilized to determine the extent of development. The minimum standards that may be specified in the biotic plan fort he preservation of habitat shall include: ... No significant disruption of riparian vegetation will be permitted. In addition, a minimum riparian buffer area shall be identified for each riparian habitat area at the time of development review. Except as specified in Policy CO-21 for Pismo Creek and policy CO-23 for Pismo Marsh, the minimum width of the buffer area shall be as identified by the biotic resources management plan and generally not less than 25 feet. Development standards for the minor riparian habitat areas and their respective buffer areas shall be the same as provided in Policy CO-21 with respect to kinds and locations of allowable uses.*
>
> ***CO-21: Pismo Creek Protection.*** *Pismo Creek shall be retained in its natural state and protected from significant alterations. The following measures shall be employed to accomplish this intent:*
>
> ***(a) Streamside Protection Zone.*** *There shall be a minimum streamside protection zone to conserve the environmentally sensitive habitats of the creek. This buffer zone shall be measured from the outer edge of the riparian vegetation to where there is no riparian vegetation, from the top of the creek bank. The minimum width for the buffer shall be as follows: West Bank – 100 feet/Cypress northward to City limits; 25 feet/Cypress to the ocean; East Bank – 100 feet/U.S. 101 northward to City limits; 50 feet/U.S. 101 to Dolliver Street; 25 feet/Dolliver to the ocean. A lesser buffer may be permitted if: 1) the minimum widths set forth above would render a parcel inaccessible or unusable for the purpose designated in the land-use plan; or 2) there is a showing by an applicant through the resource assessment study identified in item 'h' that a lesser buffer will not result in loss of, or adverse effects on, streamside vegetation or the biotic quality of the stream. Alternative mitigations shall be required where lesser buffers are authorized. No new construction or vegetation removal, except for normal maintenance, shall be allowed in the buffer zone with the exception of public roadways or bridges identified in the Circulation Element, paths, trails, fences, flood control structures, and other similar structures*