City of Oxnard Local Coastal Program Update

Sea Level Rise Vulnerability Assessment and Fiscal Impact Report Summary

August 2017

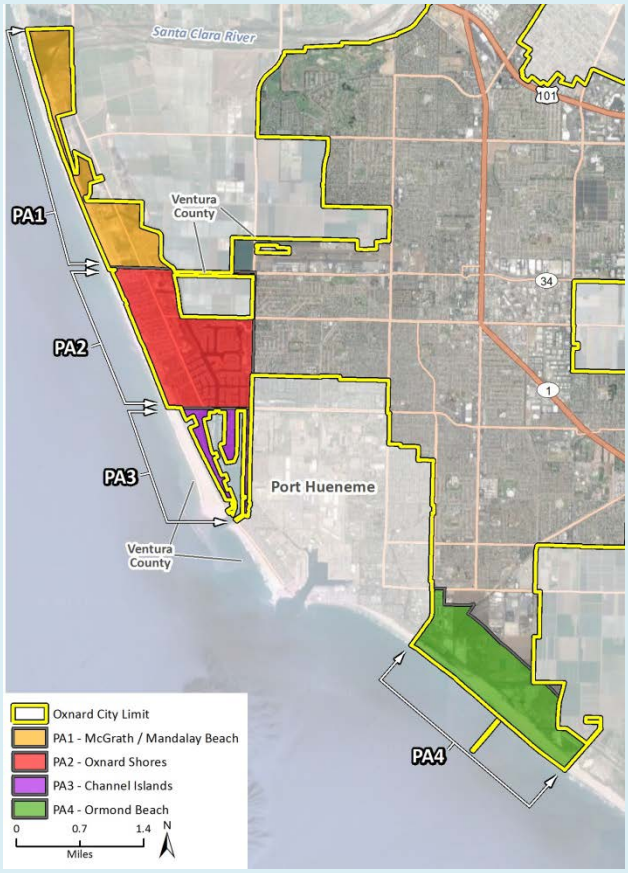
The finalization of the Sea Level Rise Vulnerability Assessment and Fiscal Impact Report is being coordinated with the California Coastal Commission. Therefore, the results presented below are considered preliminary and could be subject to change.

Background

The California Coastal Act requires local governments to prepare and implement Local Coastal Plans (LCPs) to protect natural and man-made coastal resources and maximize public access to the shoreline. Climate change makes that effort more challenging, as climbing temperatures increase sea level rise (SLR) and threaten coastal resources and communities. The City of Oxnard adopted its LCP in 1982, and while it has been amended since then, it has not yet undergone a comprehensive update. The Sea Level Rise Vulnerability Assessment and Fiscal Impact Report was prepared to address sea level rise, associated hazards, and their economic impact in the City of Oxnard to inform the LCP update process as well as future planning and regulatory processes.

About the Assessment

Coastal areas of the City of Oxnard were divided into four planning areas: McGrath-Mandalay (Planning Area 1), Oxnard Shores (Planning Area 2), Channel Islands Harbor (Planning Area 3), and Ormond Beach (Planning Area 4) (see map). Vulnerability assessments and fiscal impact analyses were conducted for each planning area.



Map of Planning Areas

Vulnerability Assessment

The vulnerability assessment relies on Coastal Resilience modeling funded by The Nature Conservancy, the County of Ventura, and the State of California. The vulnerability assessment evaluates hazards to each planning area based on high SLR scenarios at three planning horizons: 2030 (8 inches), 2060 (25 inches) and 2100 (58 inches). Coastal hazards maps were created for:

- **Rising tide inundation.** Projected SLR was added to maximum monthly high water levels recorded at the Rincon Island tide gauge, providing an estimate of areas likely to experience tidal flooding on a monthly basis.
- **Coastal erosion.** Existing erosion rates and projected SLR were used to model threats posed by coastal erosion in the future.
- **Coastal storm flooding.** Storm waves and other storm characteristics (e.g., storm surge) were accounted for to identify areas susceptible to coastal storm flooding.
- **Combined hazard** All three hazard zones were combined to assess the impact of the maximum extent of hazards caused by rising tide inundation, coastal erosion, and coastal storm flooding.

Fiscal Impact Analysis

The economic and fiscal impact analysis was designed to identify the economic value of assets at risk due to coastal erosion and flooding magnified by continuing SLR over time. The hazard maps from the vulnerability assessment were used to develop damage estimates for both public and private property.

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Impacts by 2030

Many of Oxnard's coastal resources are projected to be impacted by coastal hazards by 2030. Impacts are broken down into eight sectors, which include the following:

Residential Land

Losses to single- and multi-family residential properties are estimated to total more than $300 million by 2030. Homes in the Oxnard Shores and Channel Islands Harbor areas are particularly susceptible to tidal flooding.

Commercial Land

Commercial land uses are relatively unaffected by 2030, with about $90,000 in potential damage to retail and small office properties.

Oxnard Municipal Buildings

Most of the City-owned property in the hazard zone is undeveloped. Approximately $5 million in City-owned and undeveloped property is at risk by 2030.

Power Plants

Three power plants—the NRG Ormond Beach Generating Station, NRG Mandalay Beach Generating Station, and Southern California Edison's McGrath Peaker Plant—are vulnerable to coastal hazards by 2030.

Channel Islands Harbor

The Ventura County-owned and operated Channel Islands Harbor, which generates $120.9 million in economic activity annually, would be susceptible to tidal inundation by 2030.

Hazardous Waste

The Halaco Superfund site is expected to be impacted due to coastal storm flooding. No Leaking Underground Storage Tanks (LUSTs) are expected to face impacts.

Coastal Access

Erosion, tidal, and coastal flooding are projected to impact 415 acres of publicly-accessible beach at McGrath State Beach and Oxnard Shores. Due to regular flooding, plans are already in place to relocate the campground at McGrath State Beach at a cost of $11.5 million.

Infrastructure

Water and Sewer infrastructure could suffer projected losses of around $4.1 million due to coastal hazards by 2030. Additionally, the cost of removing and replacing impacted roadways is projected to total $4 million by the same year.

Damages by

2030 $335.7 million

Additional Damages by

2060 $218.6 million

2100 $305.8 million

Total Damages by 2100

$860.1 million

Beyond 2030

The report also analyzed impacts to coastal areas of the city by 2060 and 2100.

- **By 2060** residential losses continue to accumulate, hotel losses total approximately $15.6 million, and infrastructure vulnerability doubles.
- **By 2100** impacts to major manufacturing properties in Planning Area 4 (e.g. New Indy Containerboard, LLC) would result in commercial and industrial losses of approximately $29.6 million, while residential land damages in Planning Area 2 would total over $765 million.

Next Steps

The next step to help the City plan for the future is to analyze what adaptation strategies would address and provide resiliency against sea level rise. Adaptation to climate change involves a range of policies and mitigation measures to respond to impacts already being experienced. Adaptation measures will be designed to reduce future sea level rise impacts to the various coastal resources. With a solid understanding of the City's coastal hazards, specific risks, and the physical processes responsible for causing the risk, the City can effectively develop these adaptation measures.

Source: SunCal, Accessed May 2017