

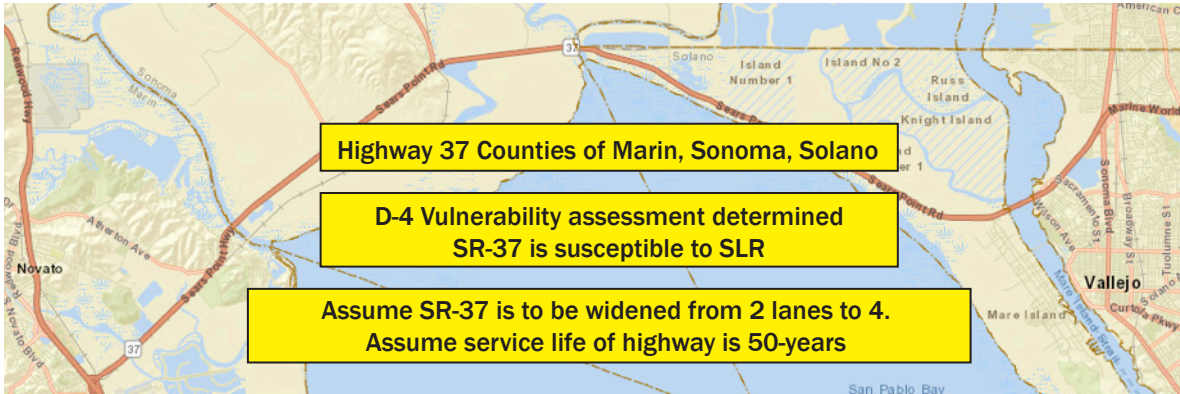
A large, dark blue, stylized number '8' is positioned on the left side of the page. The top of the page features a blue-tinted photograph of a city street with buildings and a suspension bridge in the background.

Sea Level Rise on State Route 37 Hypothetical Case Study

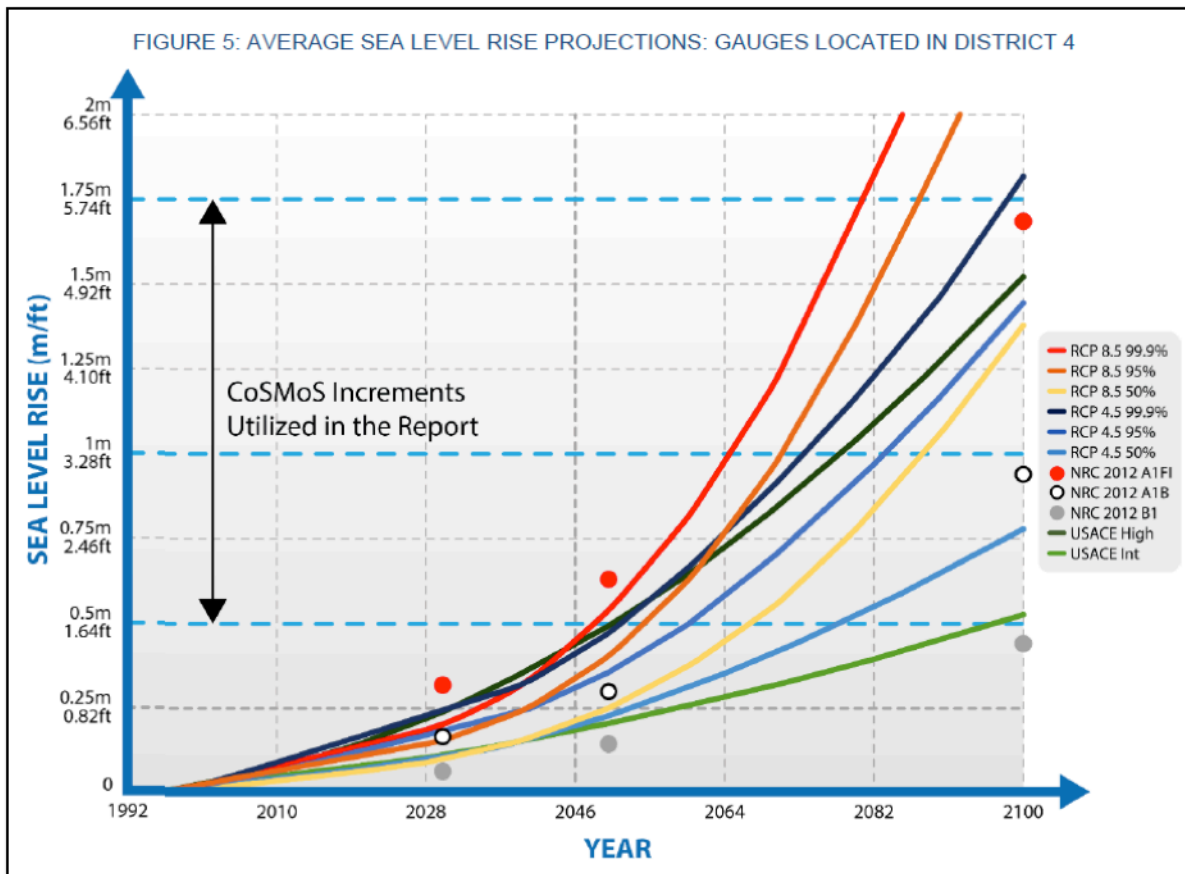
**Accounting for the Threats from Sea-Level Rise (SLR) along State Route (SR-37):
A Hypothetical Example**

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July 2018**

The following example from the transportation sector describes a challenge that infrastructure designers may face if they wish to account for climate change in their ongoing operations, maintenance or plans to build new infrastructure. While the section of Highway 37 that crosses Marin, Sonoma and Solano counties is a real-life example of stretch of road that is vulnerable to sea-level rise (SLR), Caltrans has not completed its analysis and plans. Thus, we consider this example still hypothetical.



SLR projections available vary by emissions scenario and model projections. For 50-year project life, select SLR for year 2070 using RCP 8.5 at 95th percentile and use the USGS Coastal Storm Modeling System (CoSMoS) model projections.



Once SLR vulnerabilities are identified, a number of steps should be taken to assess and select strategies to mitigate SLR-related risks (occasional flooding, permanent inundation, erosion, saltwater intrusion and related corrosion).

Some Alternatives to Mitigate SLR

Partner with U.S. Army Corps of Engineers and other agencies (e.g., California Coastal Commission) and construct seawalls to protect low lying areas and build highway at existing elevations.

1. Build a viaduct to elevate the vulnerable segments of the highway above the projected SLR. If no additional measures are considered there may be potential impacts on ecological systems resulting from ocean waters encroaching onto the existing marsh land.
2. Construct an armored levee at the impacted segments of the highway and construct the highway on the levee. If no additional measures are considered there may be potential impacts on ecological systems resulting from ocean waters encroaching onto the existing marsh land.
3. Construct an armored levee along the coastline and realign the highway on the levee.
4. Evaluate various alternatives and select an alternative which is most feasible, cost effective and may be constructed within a reasonable schedule.

