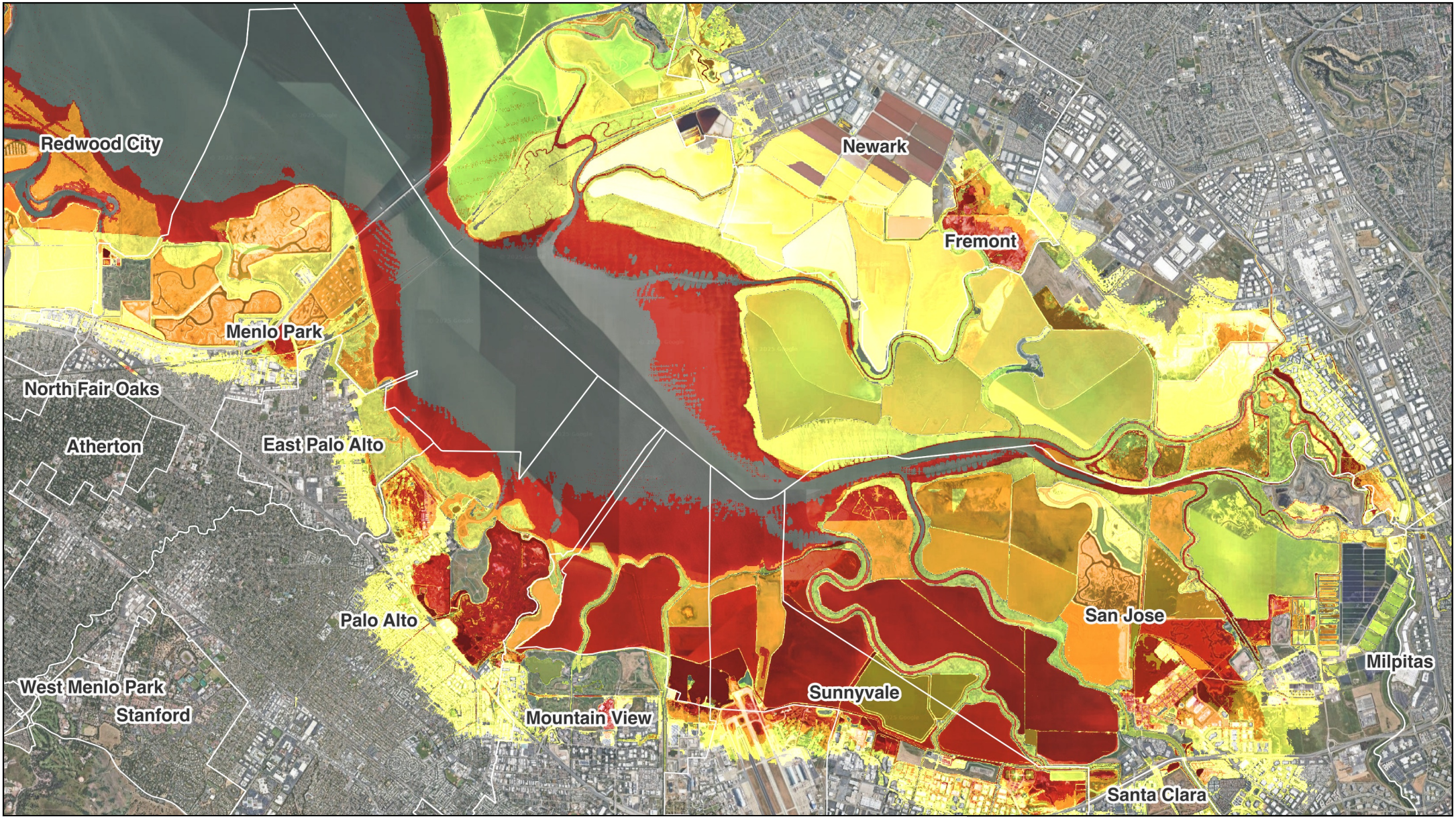
Potential Consequences of Sea level Change in San Jose, California

Cartography by Guo On Chu, Introduction to GIS



+ 10 ft (inundation risk) + 5 ft (significant inundation risk) + 3 ft (greatest inundation risk)

0 1 2 3 4 km

RF Scale: 1 : 109,410

Coordinate System: WGS 84 / Pseudo-Mercator (EPSG:3857)

Data Source: Introduction to GIS Course Website; Google Satellite (QMS), SRTM DEM (NASA), TIGER/Line 2023 (U.S. Census Bureau)

Report: Sea Level Rise in the San Jose Area

In this assignment, I used GIS to look at sea level rise in the San Jose area. I made three layers: 3 ft, 5 ft, and 10 ft. I put them on the map to see which places may get water first. My map shows the colors very clearly, so I can compare the three levels easily.

From the result, I see that many places near the bay are low. When the sea level rises 3 ft, only some small areas and wetlands get water. When it is 5 ft, more areas start to have problems. When it reaches 10 ft, a lot of places around Sunnyvale, Alviso, Mountain View, and Palo Alto are underwater. The difference between the three situations is big. Even just a few feet rise will change many things in this region.

I used Google Satellite as the basemap because it is easy to see the roads and buildings. I also added the city boundary data so I know which city the flooded areas belong to. Making this map helped me understand sea level rise better. Before this project, I only knew sea level rise is a problem. But after seeing the map, I feel it is more real, because I can see which neighborhoods may be in danger. This project makes me think more about how people live near the bay and what will happen in the future.