

Water/Wastewater Sites Resiliency Scoping Document

Site Asset ID:	WW-010	Site Name:	Monterey WRF
Site Address:	5802 Harris St.		
CIP: 131-04	Monterey WRF Improvements		
Project Scope:	Upgrade existing facility and processes.		
JEA Project Manager:	Samuel Ramirez 10/13/20		
Electric Supply Health:	Matt Lundeen: We have previously installed trip savers to improve reliability in this area. 4/4/2019		

Current Site Flood Elevation Scenarios (see attached)

Electrical Supply Resiliency Guidelines

1. If a site has overhead vegetation that could interrupt service during extreme storm events, then underground the electric service.
2. JEA will conduct a power quality audit of the electrical supply and provide recommendations. (JEA service territory)

Flood Elevation Resiliency Guidelines

Design for a maximum feasible elevation but no less than 100 year storm. Elevate critical equipment, controls, transformers and generator/diesel pumps.

Site Flood Elevation Scenarios Definitions

Base Scenarios (Current Conditions) calibrated to current FEMA Flood Insurance Study (FIS)

- 25-year storm with current condition rainfall (8.8 inches) and storm surge
- 100-year storm with current condition rainfall (12.3 inches) and storm surge
- 500-year storm with current condition rainfall (16.6 inches) and storm surge

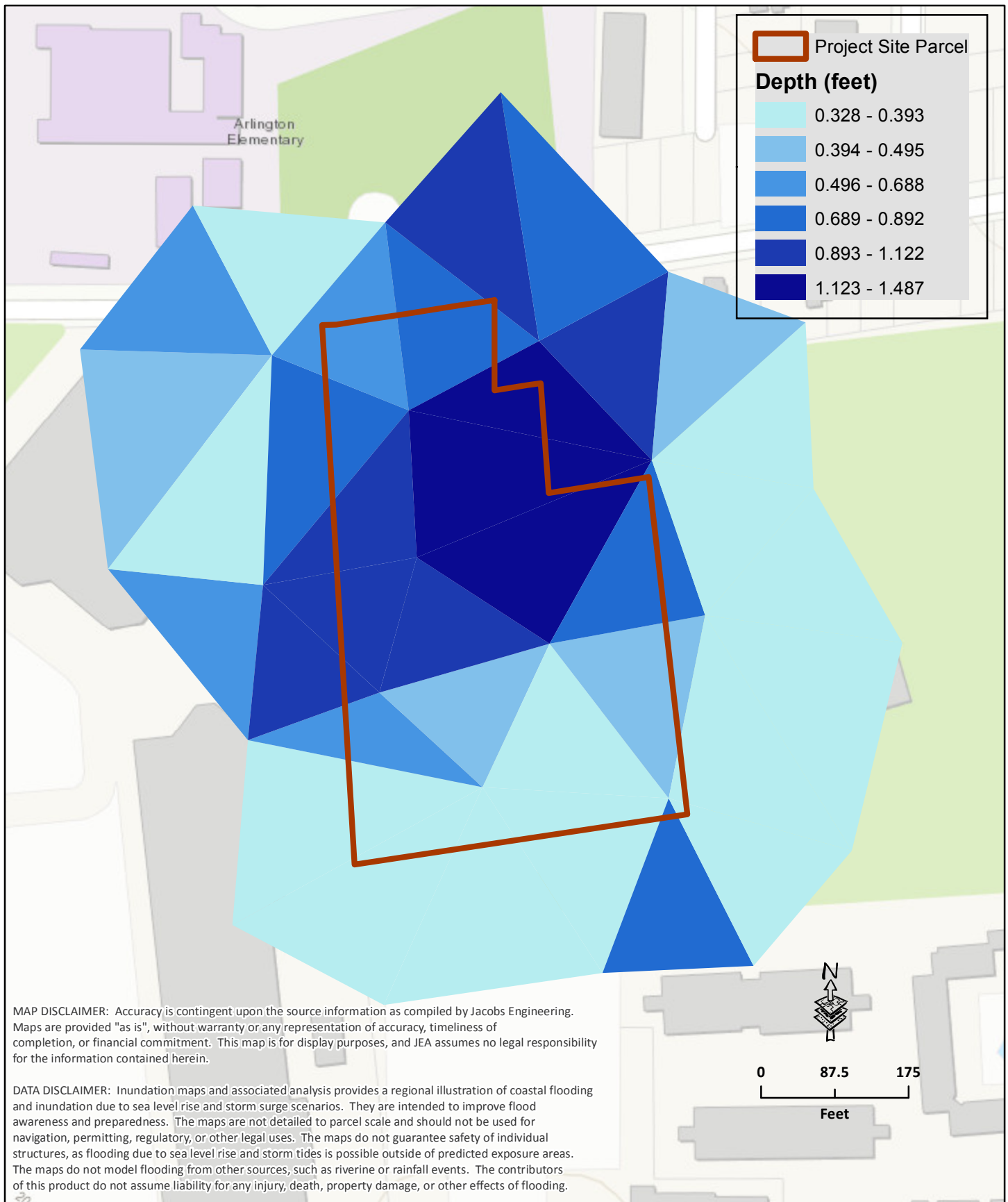
Eight future condition scenarios are described as follows:

- Scenarios 1, 2, 3 and 4 are all projected 100-year storms, with storm surge, projected SLR, and rainfall as follows:
 - Scenario 1 is a projected 100-year storm in the year 2040 with rainfall (24-hour total 13.21 inches), SLR and storm surge using low greenhouse gas projections (RCP6.0)
 - Scenario 2 is a projected 100-year storm in the year 2040 with rainfall (24-hour total 13.69 inches), SLR and storm surge using high greenhouse gas projections (RCP8.5)
 - Scenario 3 is a projected 100-year storm in the year 2070 with rainfall (24-hour total 13.94 inches), SLR and storm surge using low greenhouse gas projections (RCP6.0)
 - Scenario 4 is a projected 100-year storm in the year 2070 with rainfall (24-hour total 14.99 inches), SLR and storm surge using high greenhouse gas projections (RCP8.5)
- Scenarios 5 and 6 are both projected future 25-year storms, with storm surge, projected SLR and rainfall as follows:
 - Scenario 5 is a projected 25-year storm in 2040, with rainfall (24-hour total 9.34 inches), SLR and storm surge with low greenhouse gas emissions (RCP6.0)

- Scenario 6 is a projected 25-year storm in 2070, with rainfall (24-hour total 10.36 inches), SLR and storm surge with high greenhouse gas emissions (RCP8.5)
- Scenario 7 is a worst case scenario which includes a projected 500-year storm in 2070, with rainfall (24-hour total 21.54 inches), SLR and storm surge with high greenhouse gas emissions (RCP8.5)
- Scenario 8 is a special case, similar to Scenario 4, for the 100-year storm. It includes projected 2070 rainfall (24-hour total 14.99 inches) and sea level rise but does not include storm surge.

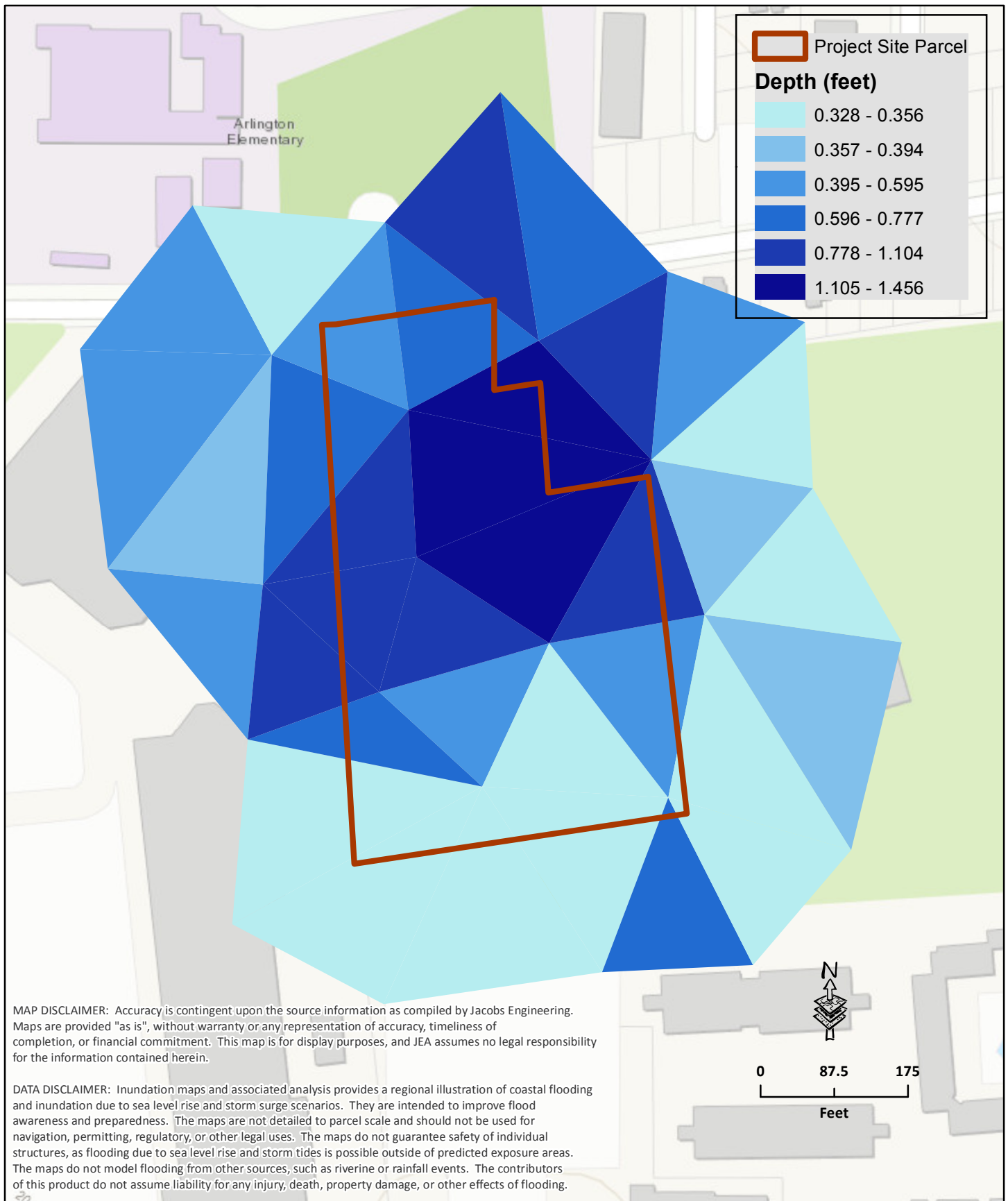
The attached maps show the flood inundation throughout the site based on the specific storm scenario.

The following table describes probable flood inundation levels at each scenario for key plant components.



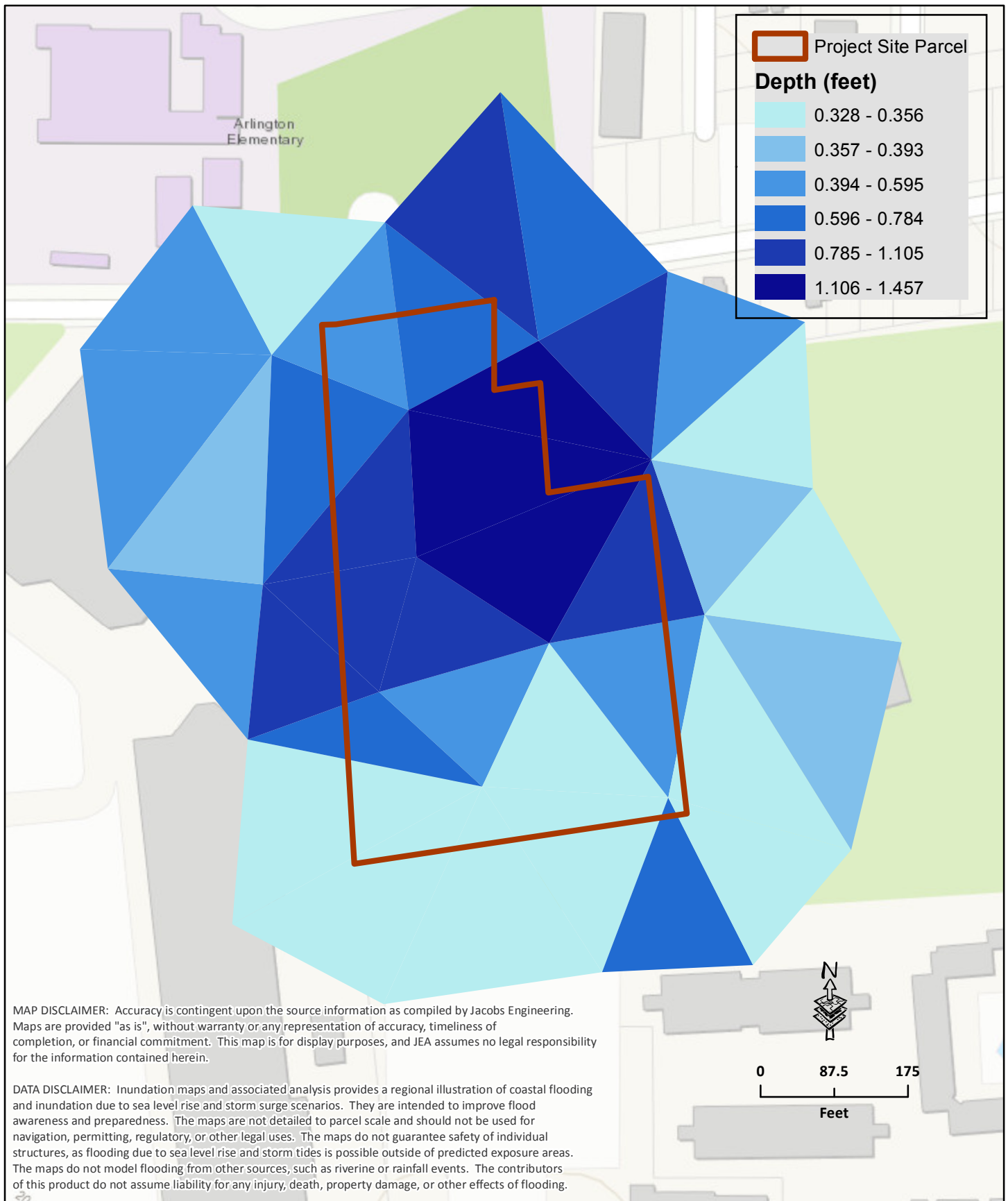
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 1 - 100-year, 2040, Low Emission**



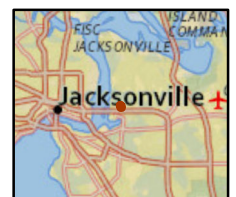


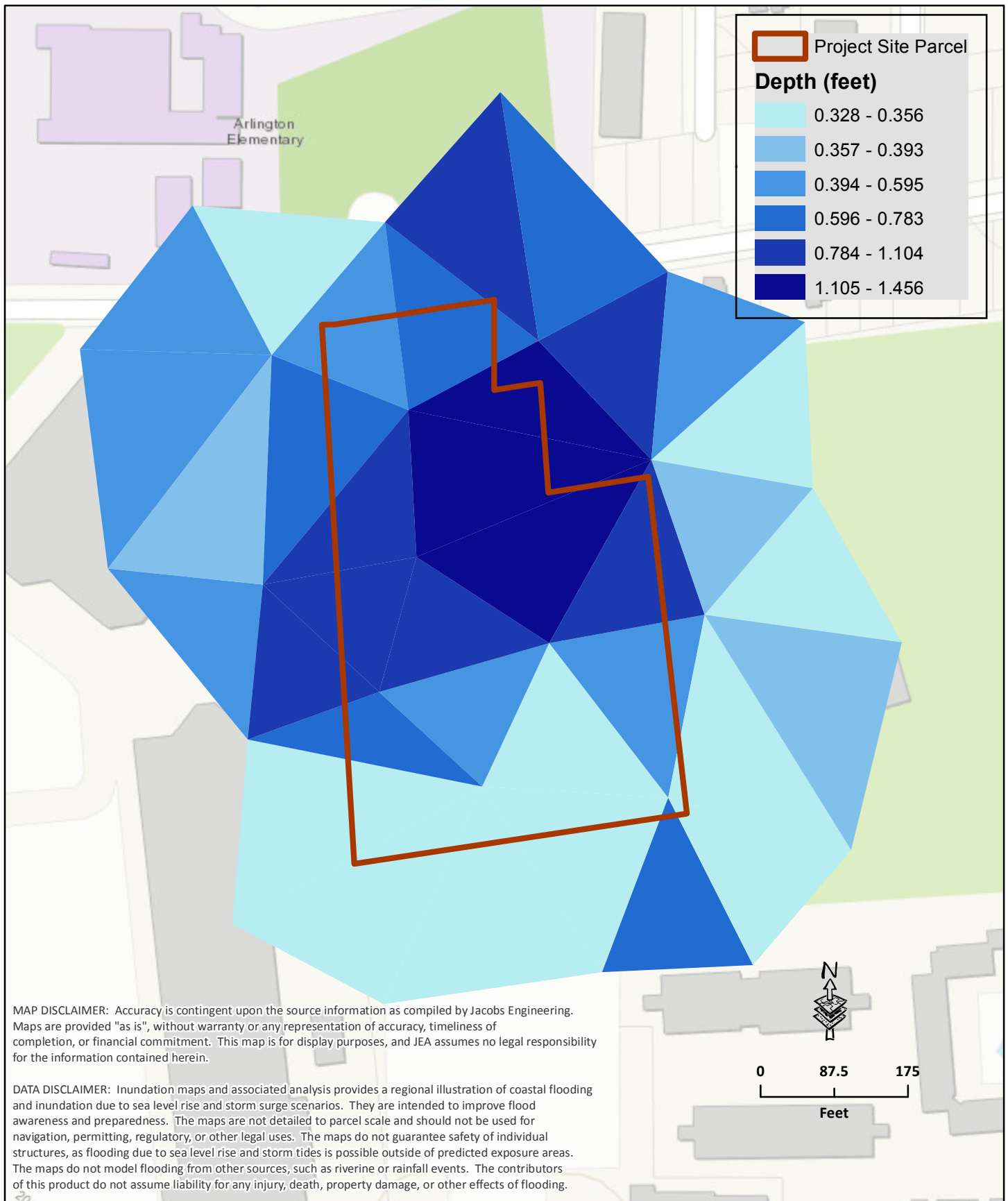
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 2 - 100-year, 2040, High Emission**



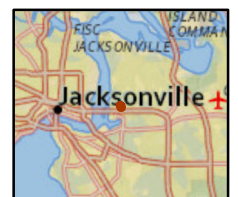


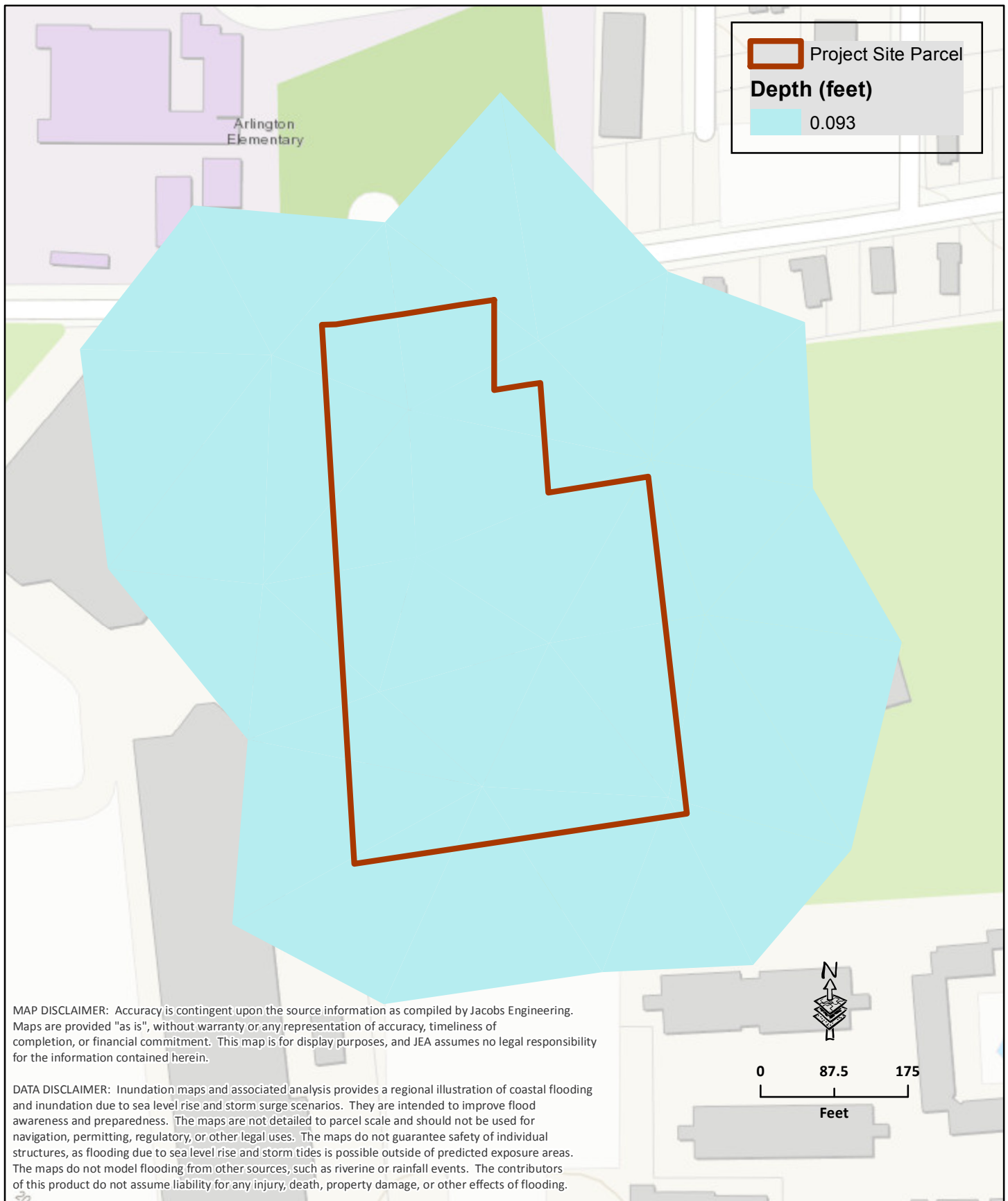
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 3 - 100-year, 2070, Low Emission**



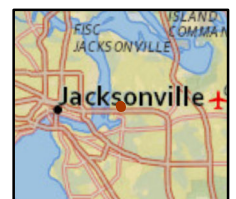


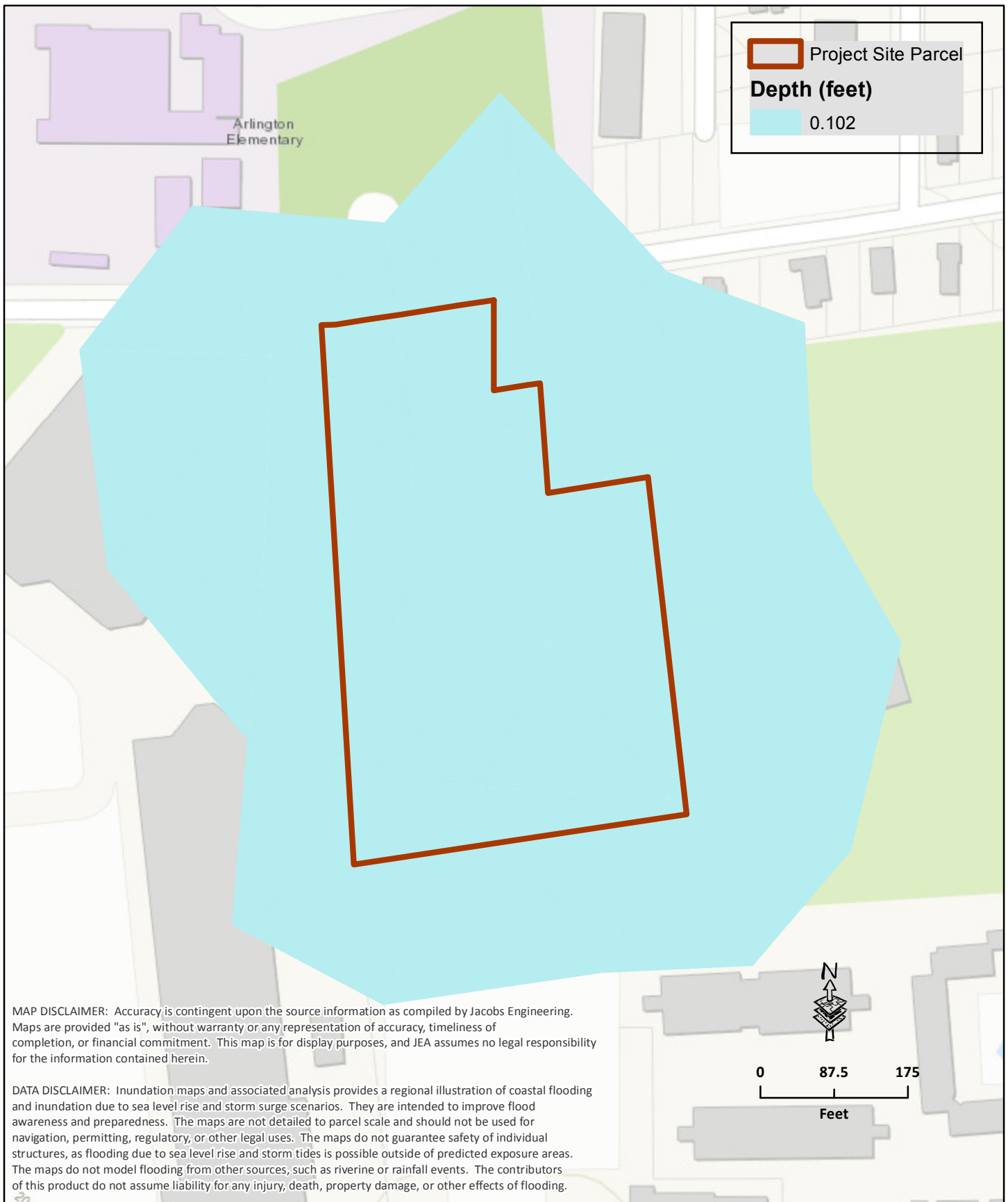
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 4 - 100-year, 2070, High Emission**



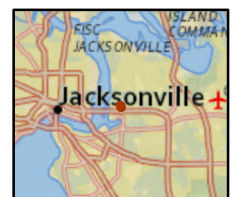


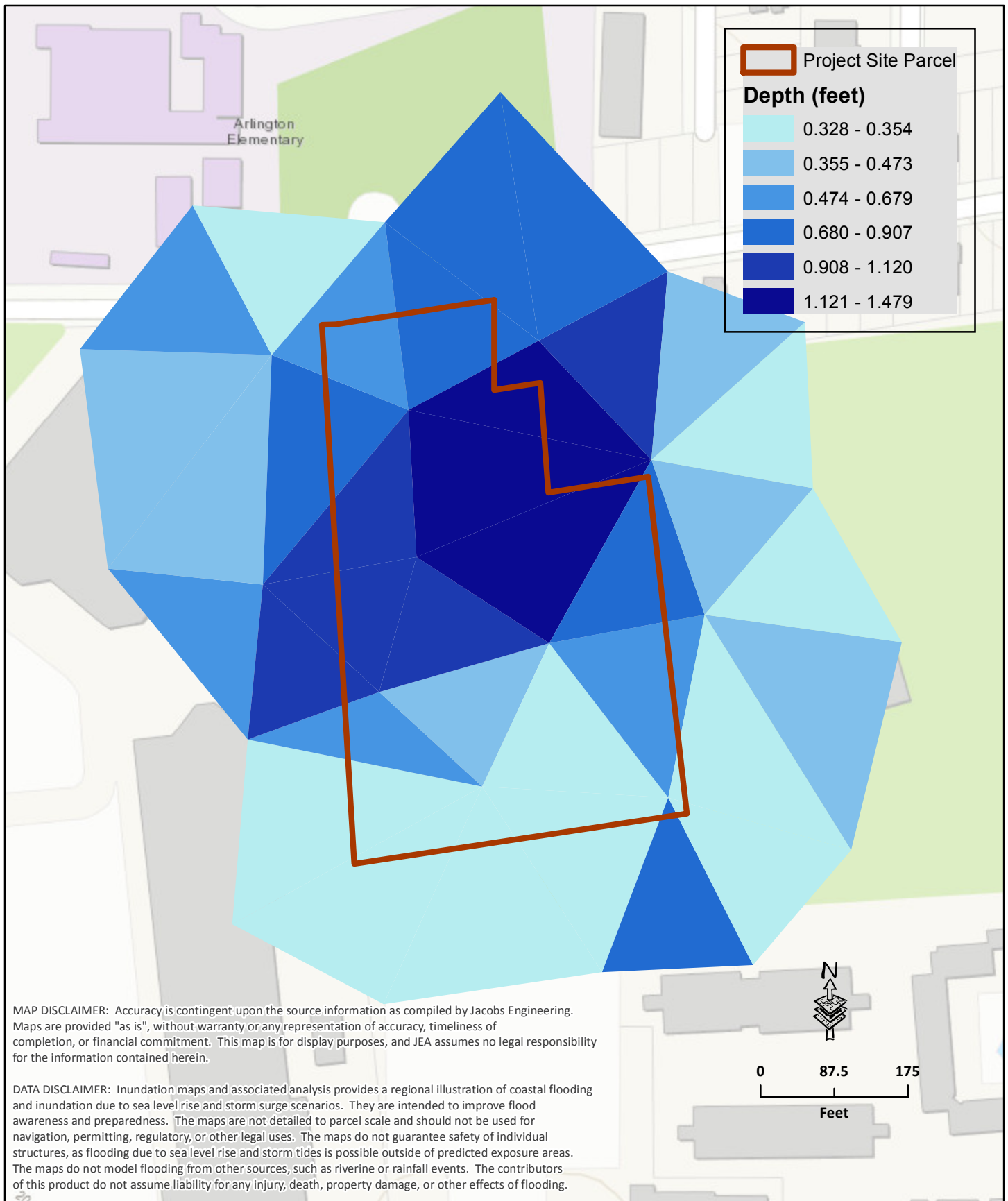
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 5 - 25-year, 2040, Low Emission**



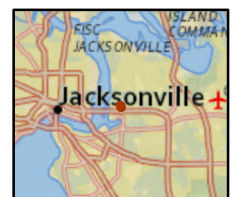


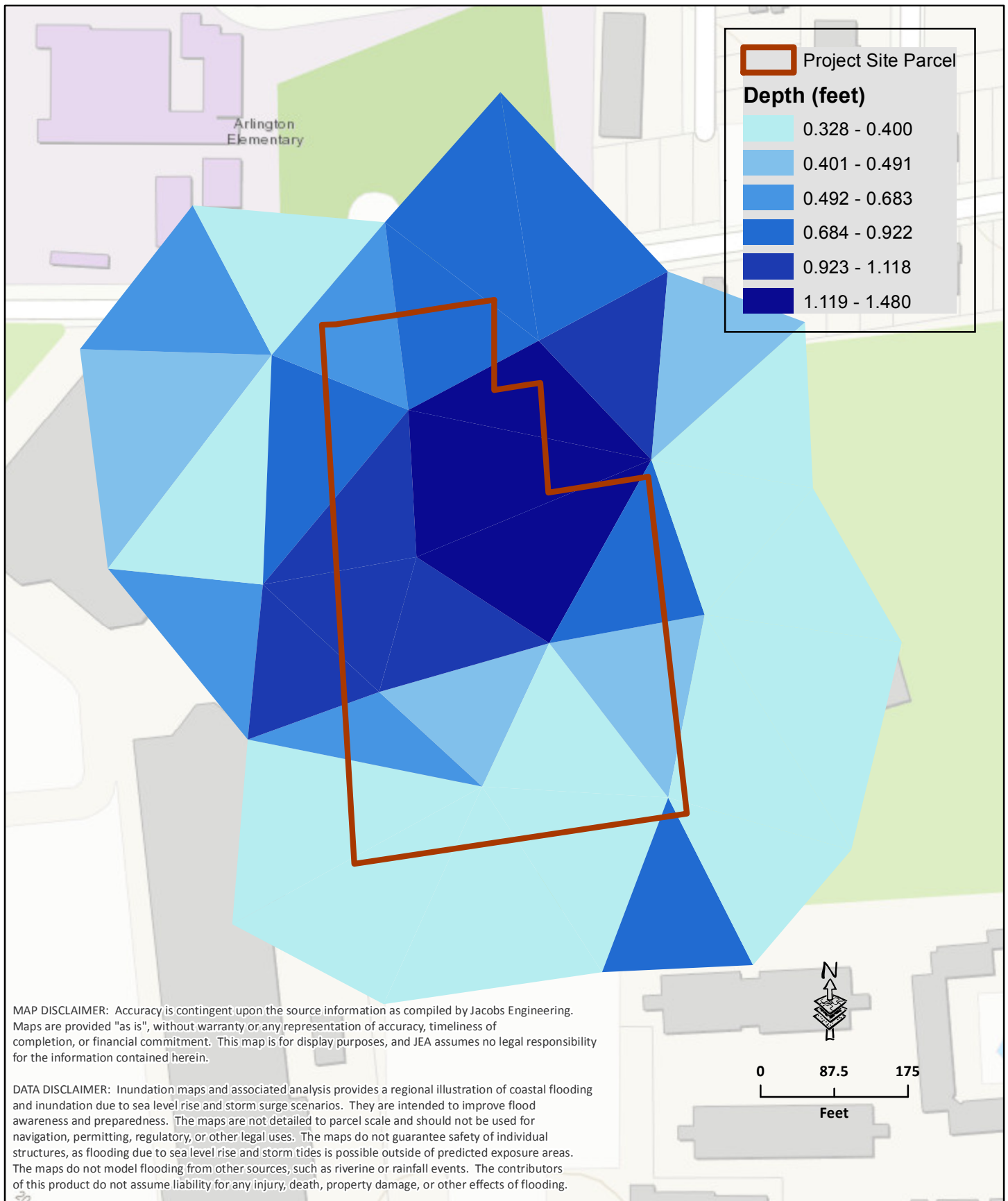
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 6 - 25-year, 2070, High Emission**



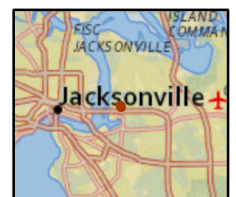


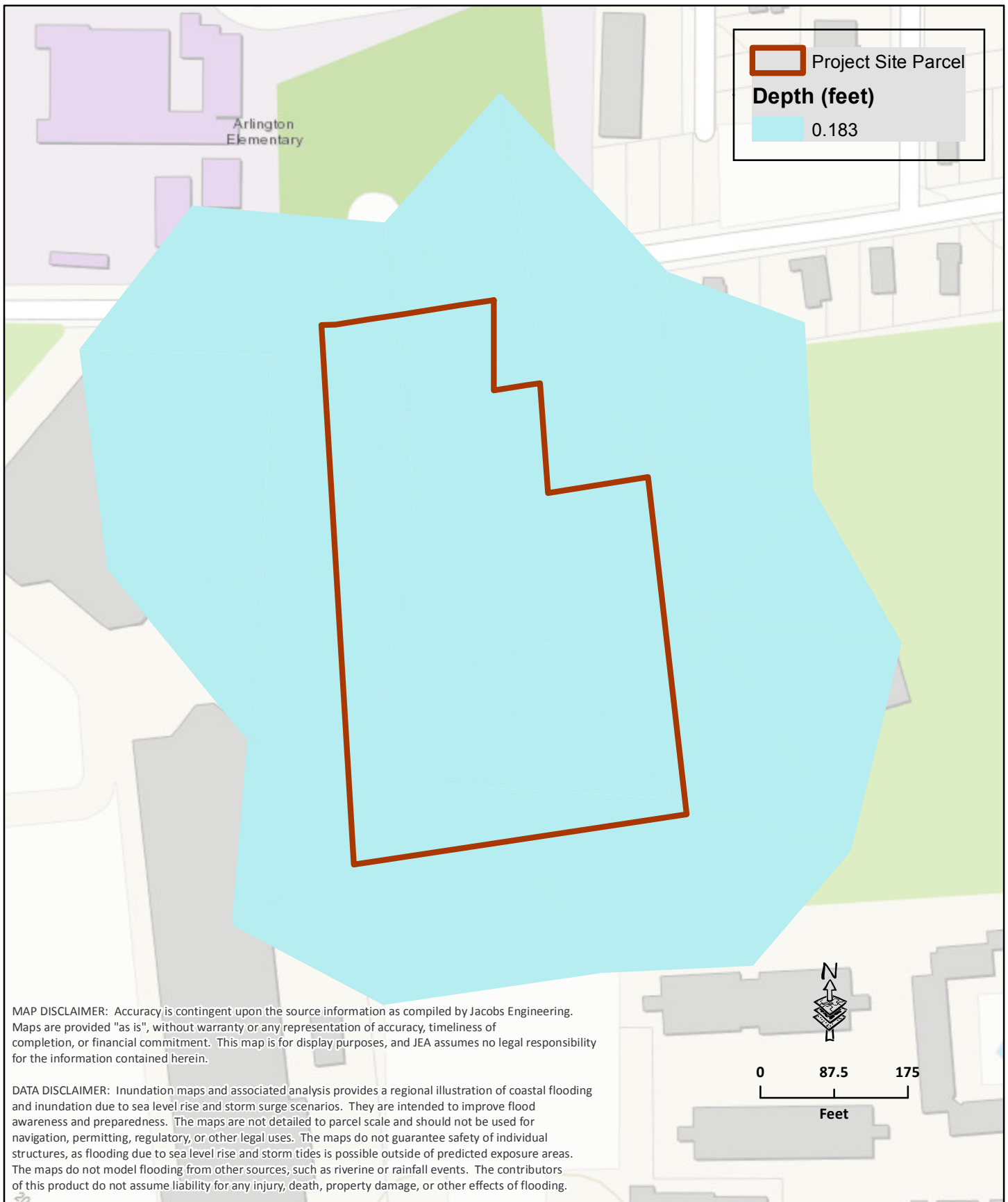
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 7 - 500-year, 2070, High Emission**



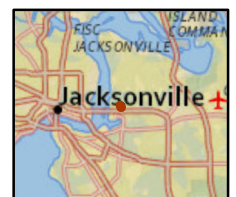


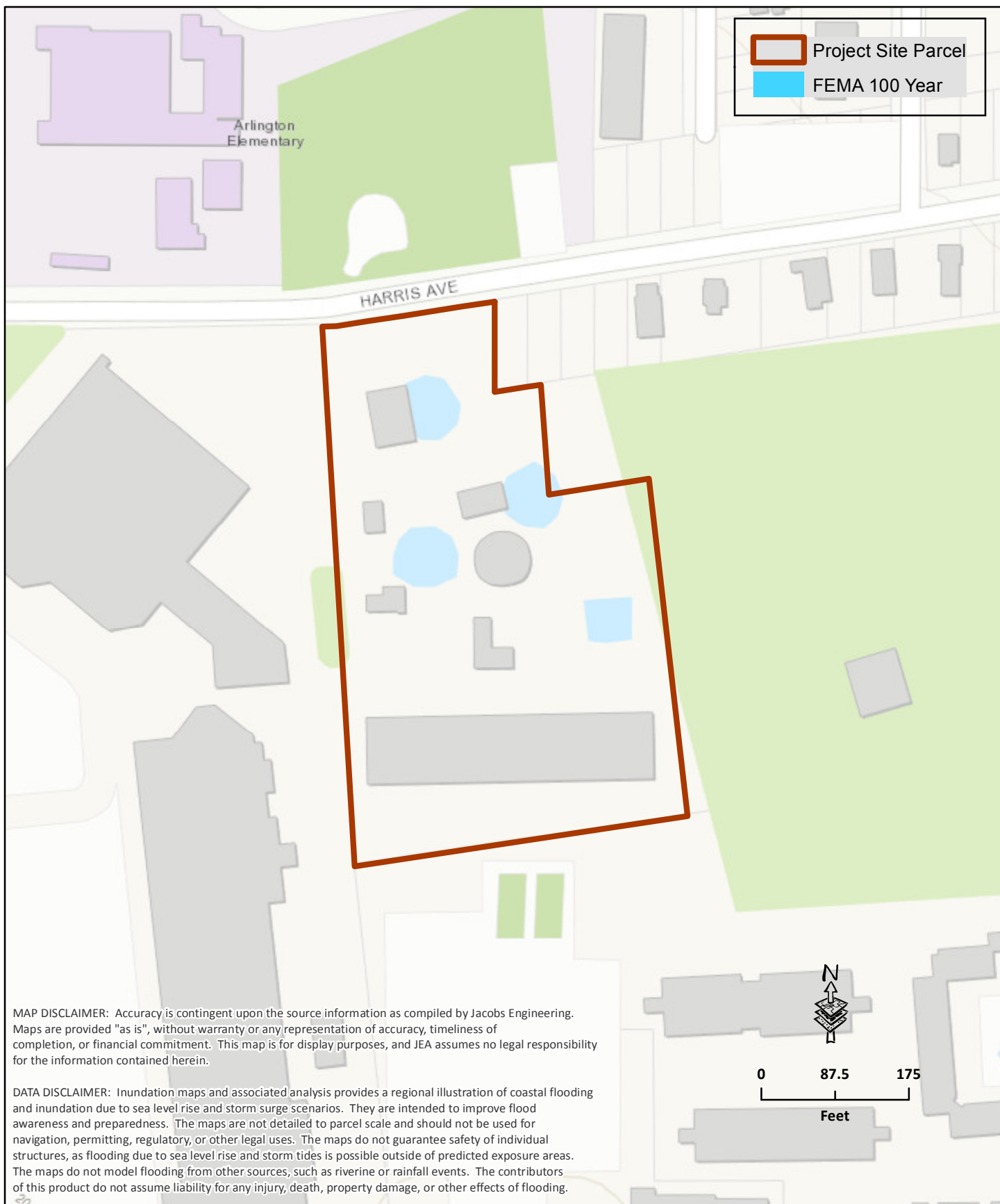
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **Scenario 8 - 100-year, 2070, High Emission**





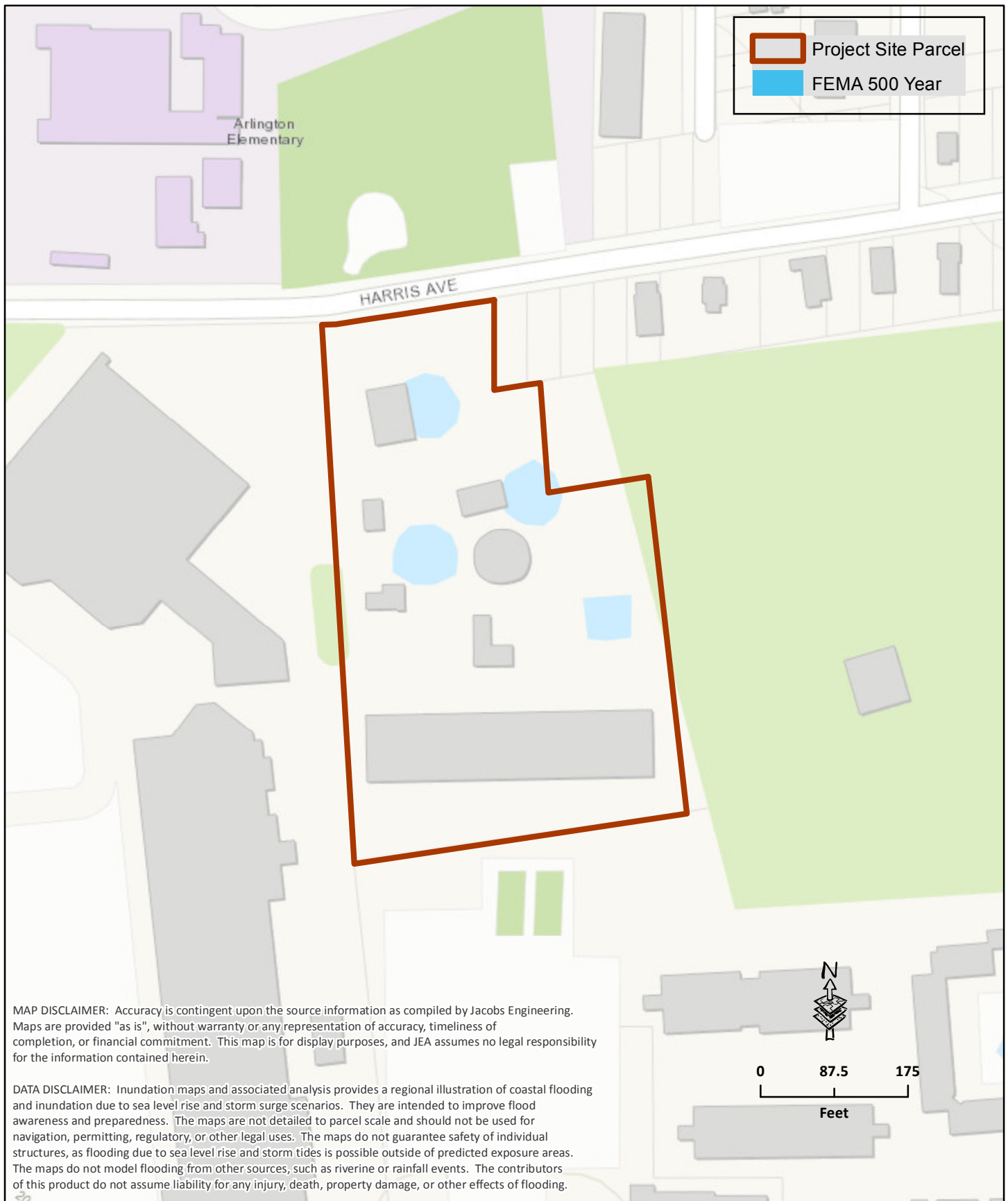
Monterey Water Reclamation Facility **Estimated Inundation Polygons** **25-Year Storm Event Baseline**



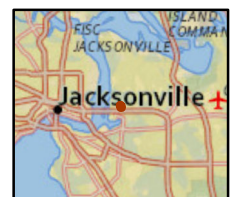


Monterey Water Reclamation Facility **Estimated Inundation Extent** **FEMA 100-Year Event Floodplain**





Monterey Water Reclamation Facility **Estimated Inundation Extent** **FEMA 500-Year Event Floodplain**





**5802 Harris Avenue
Monterey WRF
Site Topographic Contours**

