

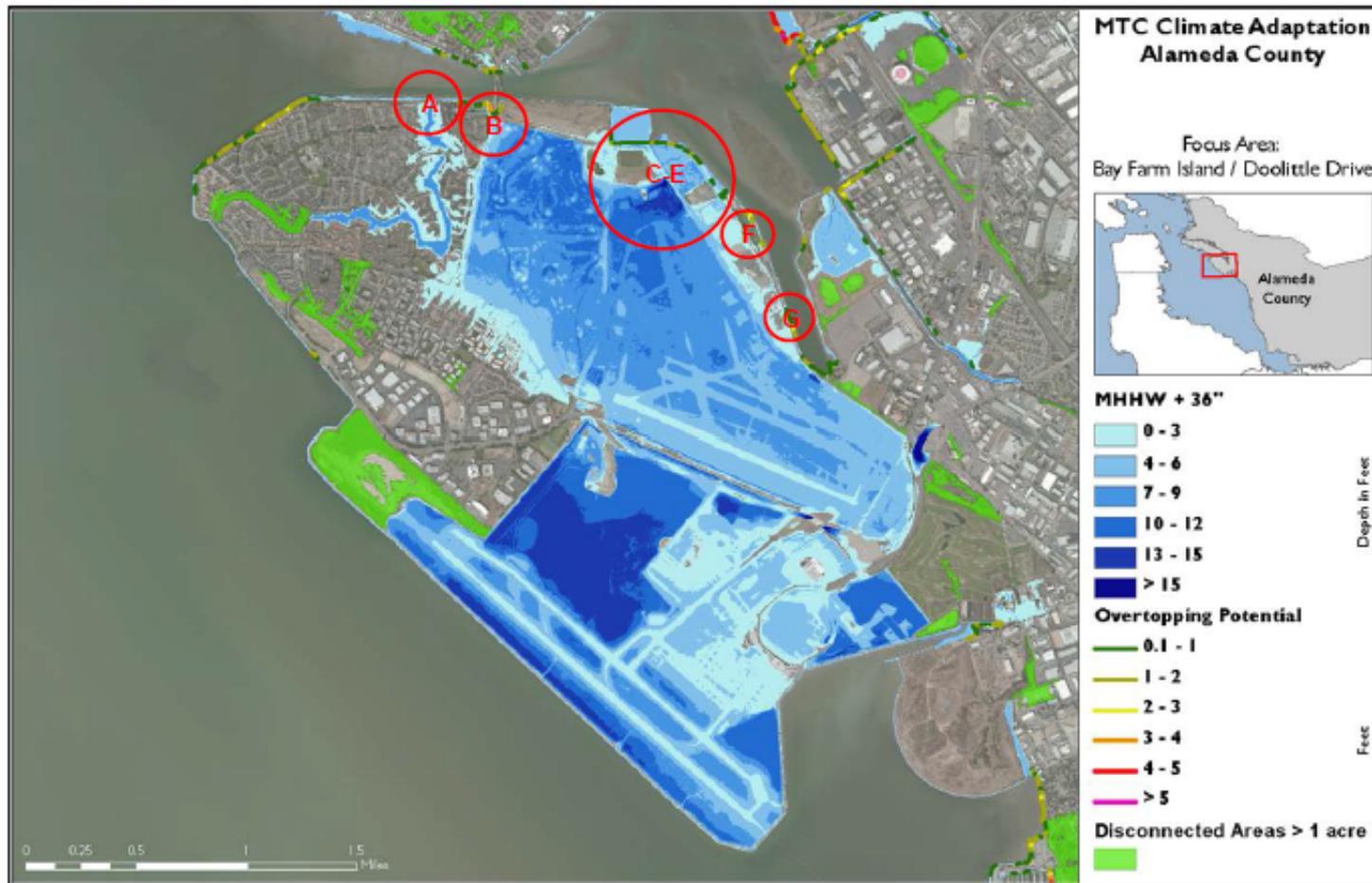


The  
Adapting to Rising Tides  
Program



San Francisco Bay Conservation  
and Development Commission

# Future Flood Risk



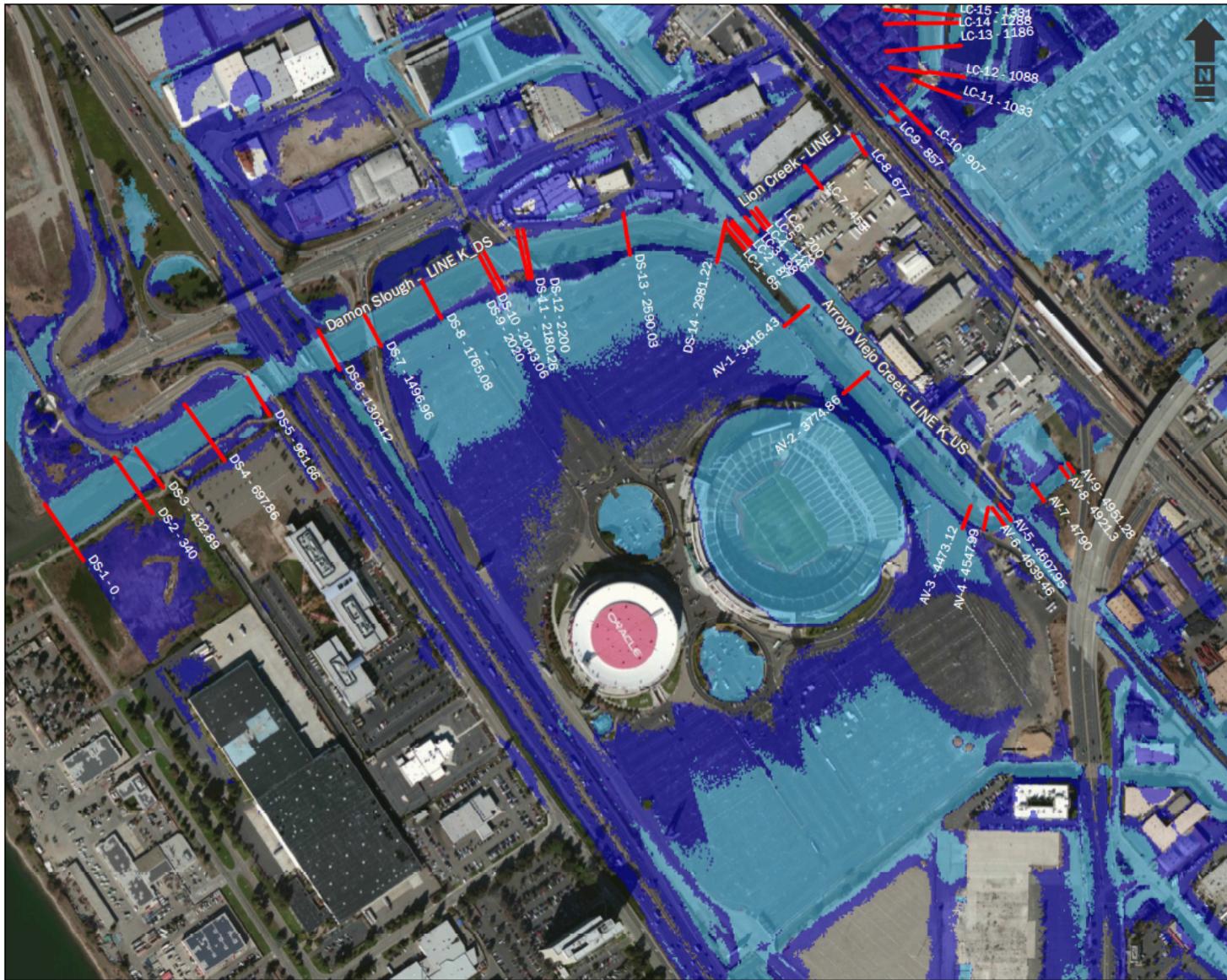
**Figure 12. Updated Inundation and Flooding Analysis Using the Modified DEM**

Note: System-wide inundation of Bay Farm island is expected at 36 inches of SLR. The tide gate wing-wall (Site A), the Harbor Bay Club shoreline (Site B), and sites along Doolittle Drive (Sites C-G) are the critical inundation pathways in this scenario.

# Future Flood Risk



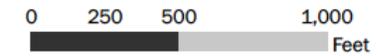
Figure 3. Sites In The DEM Contributing To Inundation In Low SLR Scenario



**MTC CLIMATE ADAPTATION**  
**Damon Slough Focus Area**  
**Alameda County**

**FLOODING EXTENTS**

- 10-YR Extreme Tide + 10-YR Peak Flow
- 10-YR Extreme Tide (24" SLR) + 10-YR Peak Flow
- HEC-RAS XS



North American Vertical Datum 1988  
 NAD 1983 StatePlane California III FIPS 0403 Feet



4/20/2014

**FIGURE 2**

# Damon Slough Flooding

**AECOM**

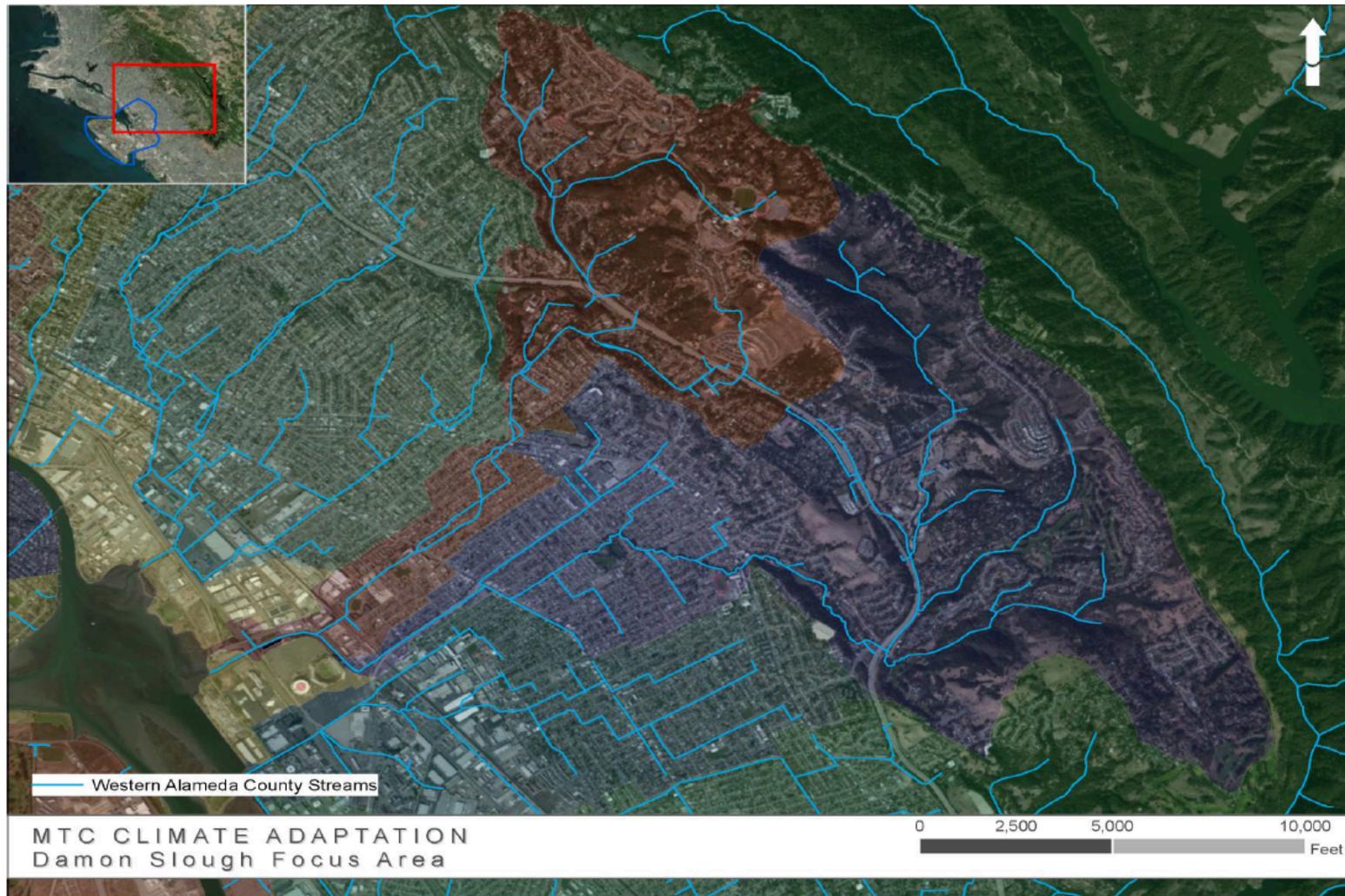


Figure 2 – Watershed Map for Oakland Coliseum Focus Area<sup>3</sup>

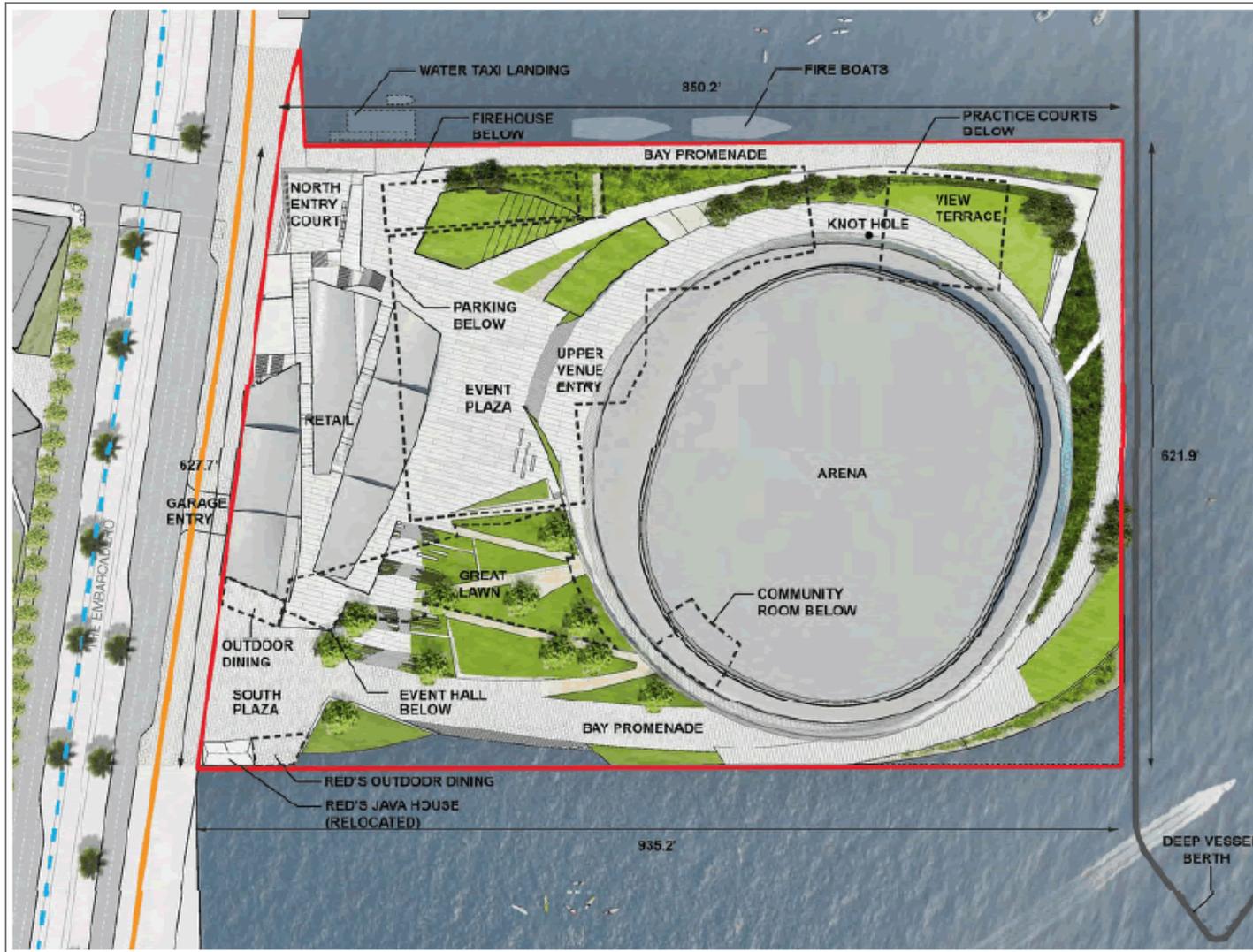
# Port of San Francisco



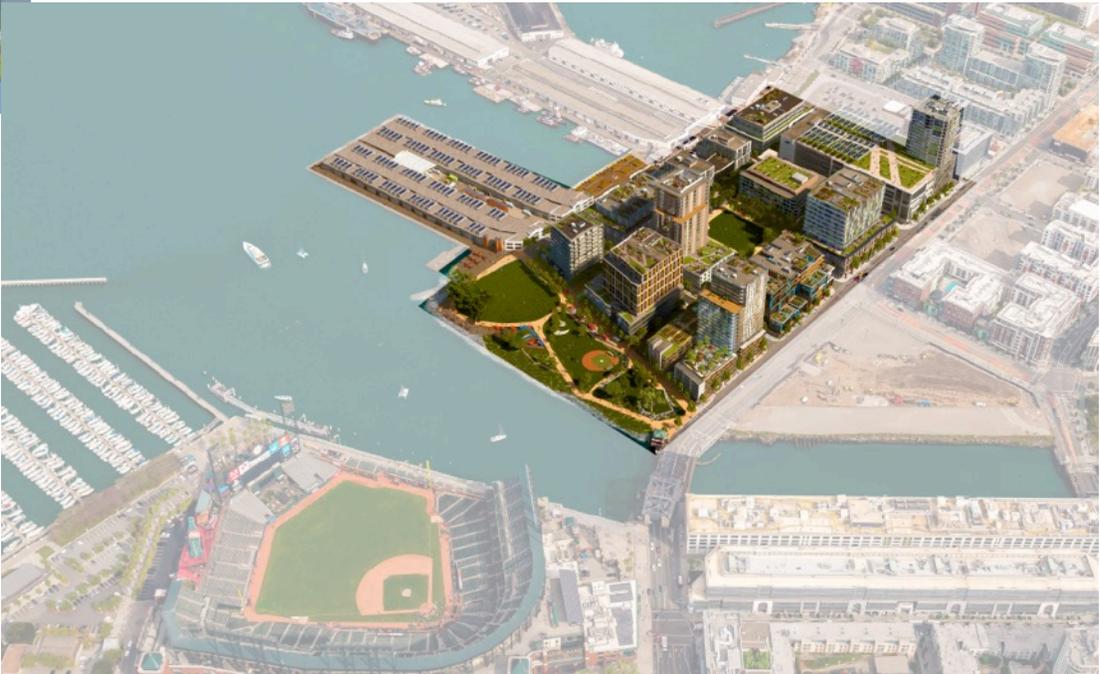
# Port of San Francisco



# Port of San Francisco: Pier 30-32

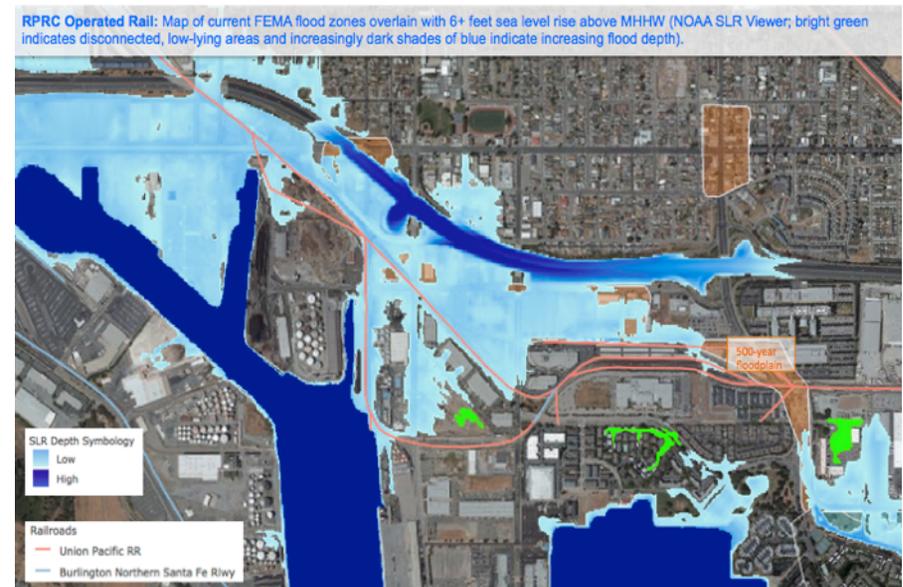


# Port of San Francisco: Mission Rock

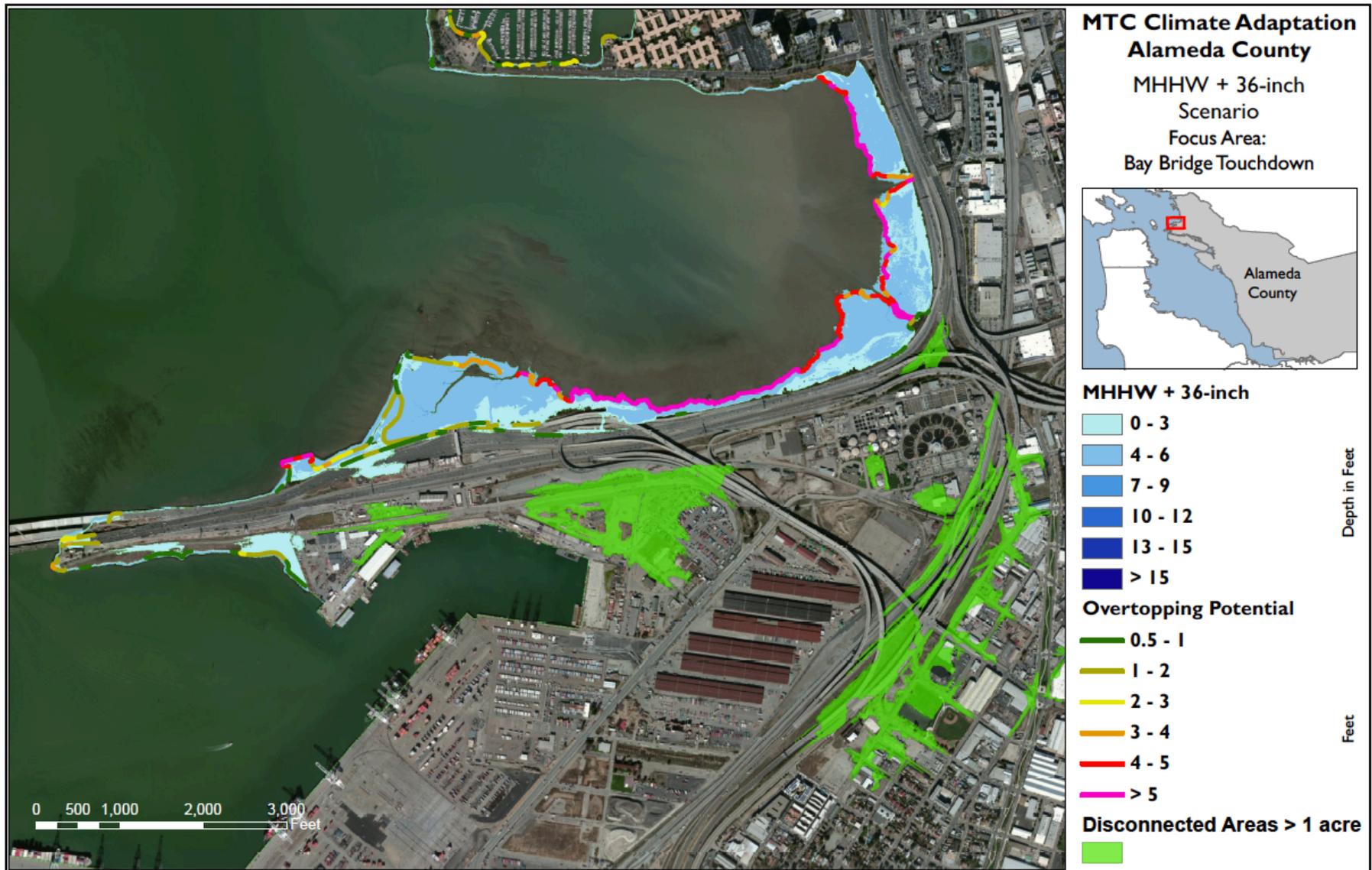


# Caltrans Assets Identified by ART

- I-580 – 23<sup>rd</sup> to Castro Street (Richmond)
- I-80 – San Pablo Avenue approach to the Carquinez Bridge
- I-680 from Service Road to the Benicia-Martinez Bridge toll plaza
- SR-92 – Clawiter Rd to Hayward-San Mateo Bridge toll plaza
- I-880 near the Oakland Coliseum – High to 98<sup>th</sup> Street
- I-80/I580/I-880 – 7<sup>th</sup> to Powell Street to Bay Bridge toll plaza



# Focus on the Bay Bridge touchdown



# Shoreline overtopping areas

These three areas could overtop and cause flooding during today's 50-year storm event, or with a 10-year storm event during an El Nino

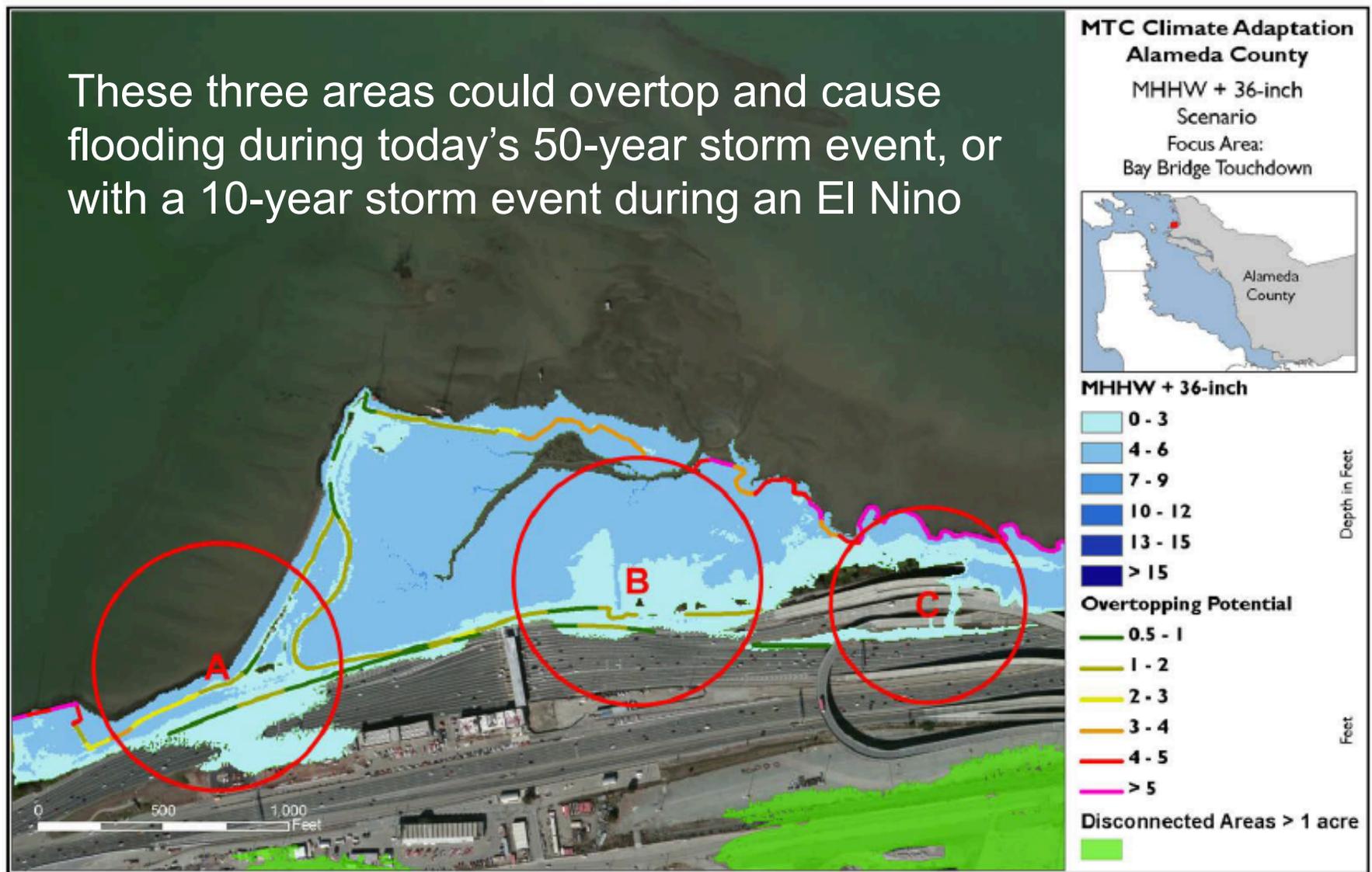
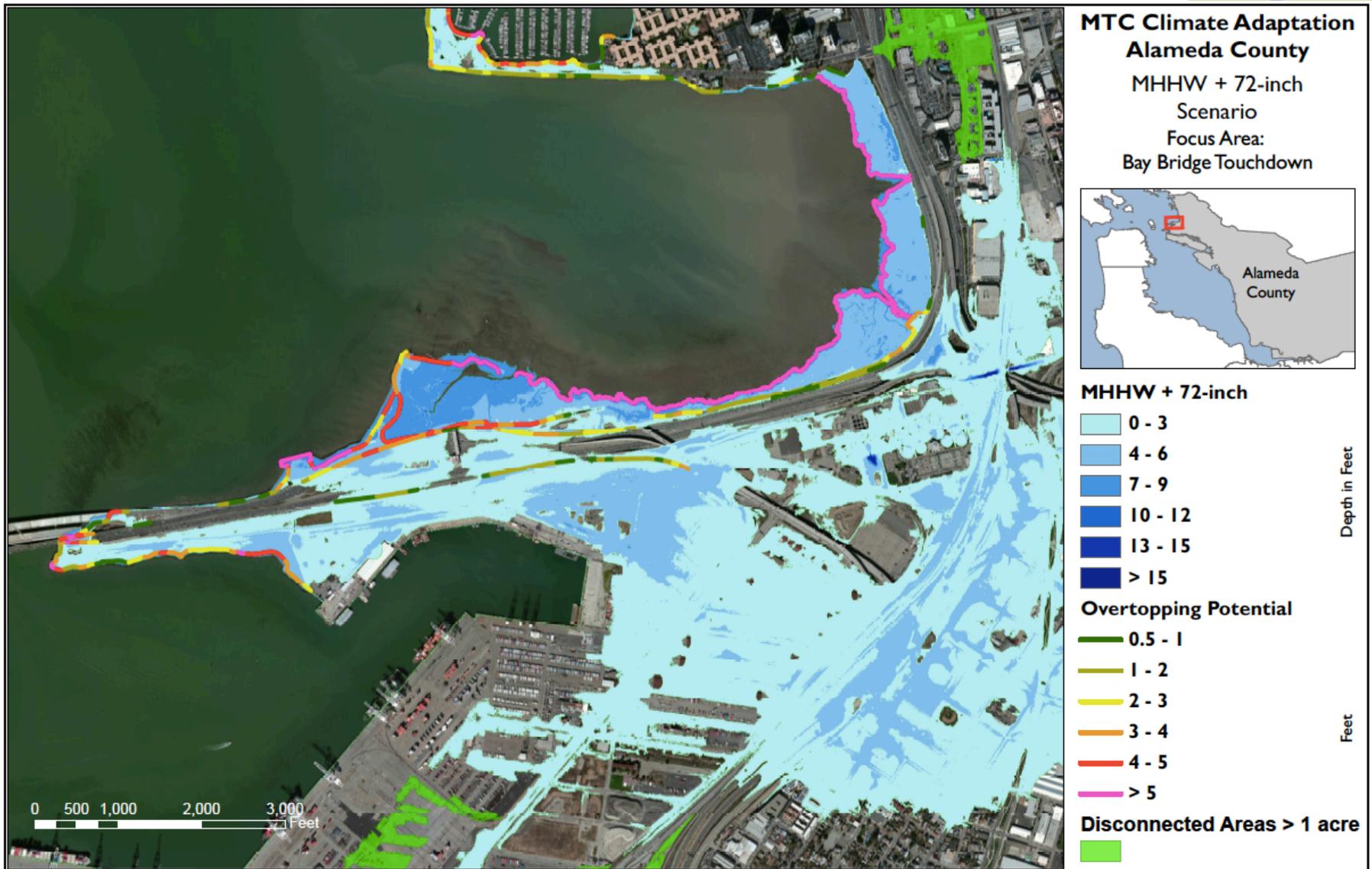
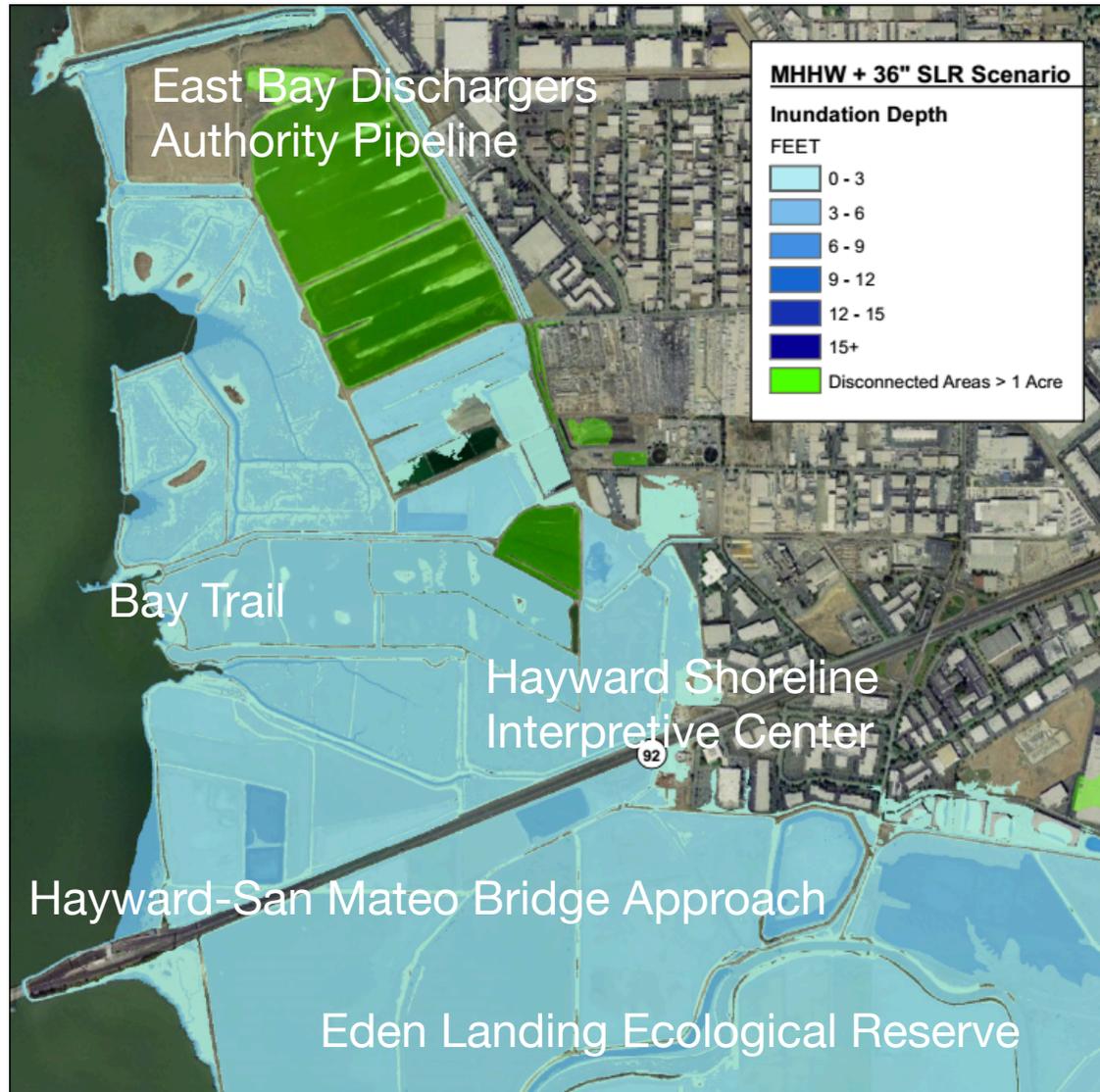


Figure 2. Shoreline Inundation Areas A, B, and C - MHHW + 36-inch Scenario

# Longer-term, broader solutions



# Flooding in Developed Area



## 4. Unique Recreation and Education At Risk



- Environmental education for 9,000 students/year
- 80,000 Bay Trail users/year
- Interpretation relies on vulnerable natural areas, levees, and trails

# Translating SLR Inundation Maps

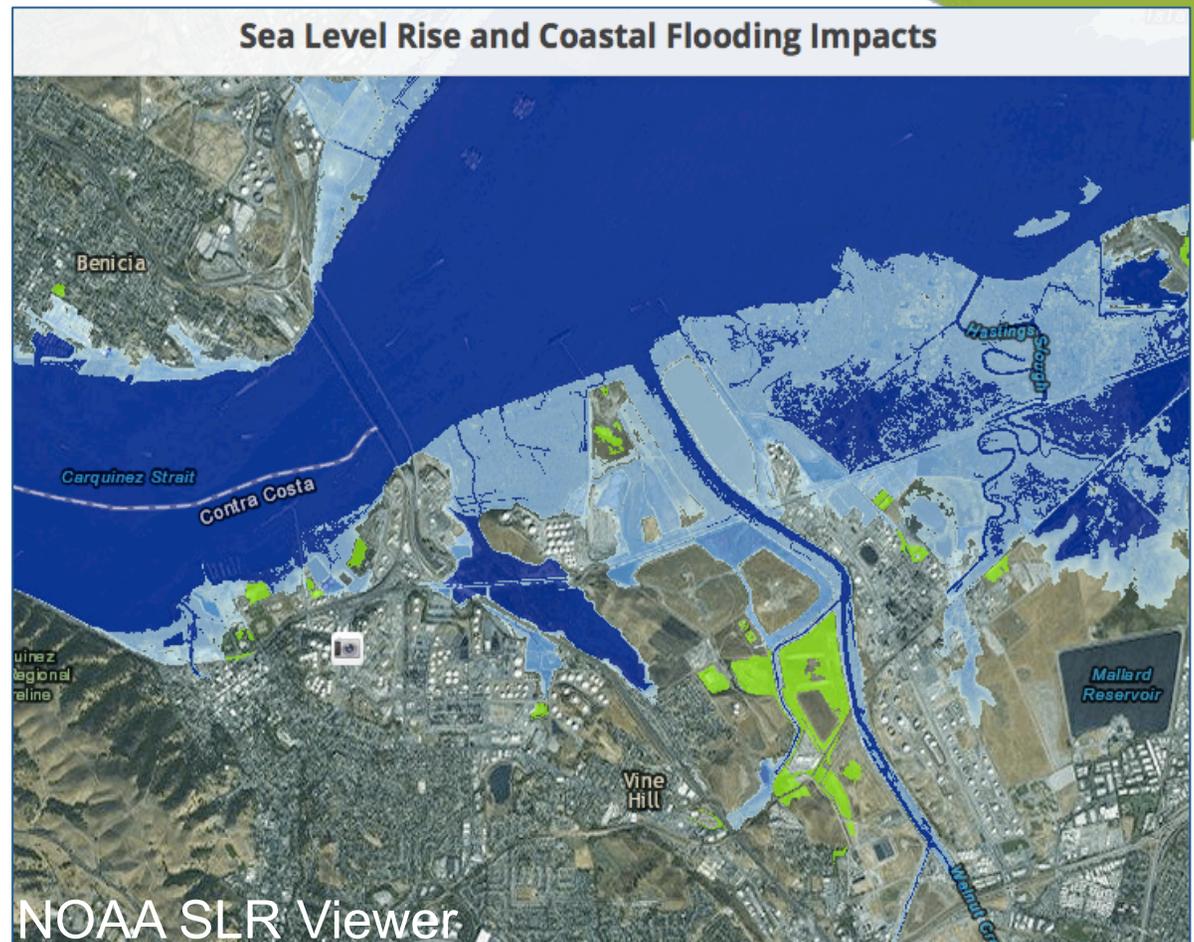
## This single map depicts:

Permanent inundation at high tide from 48" SLR

or

Temporary flooding from:

- 1-year storm with 36" SLR
- 25-year storm with 12" SLR
- 50-year storm with 6" SLR
- Today's 100-year storm

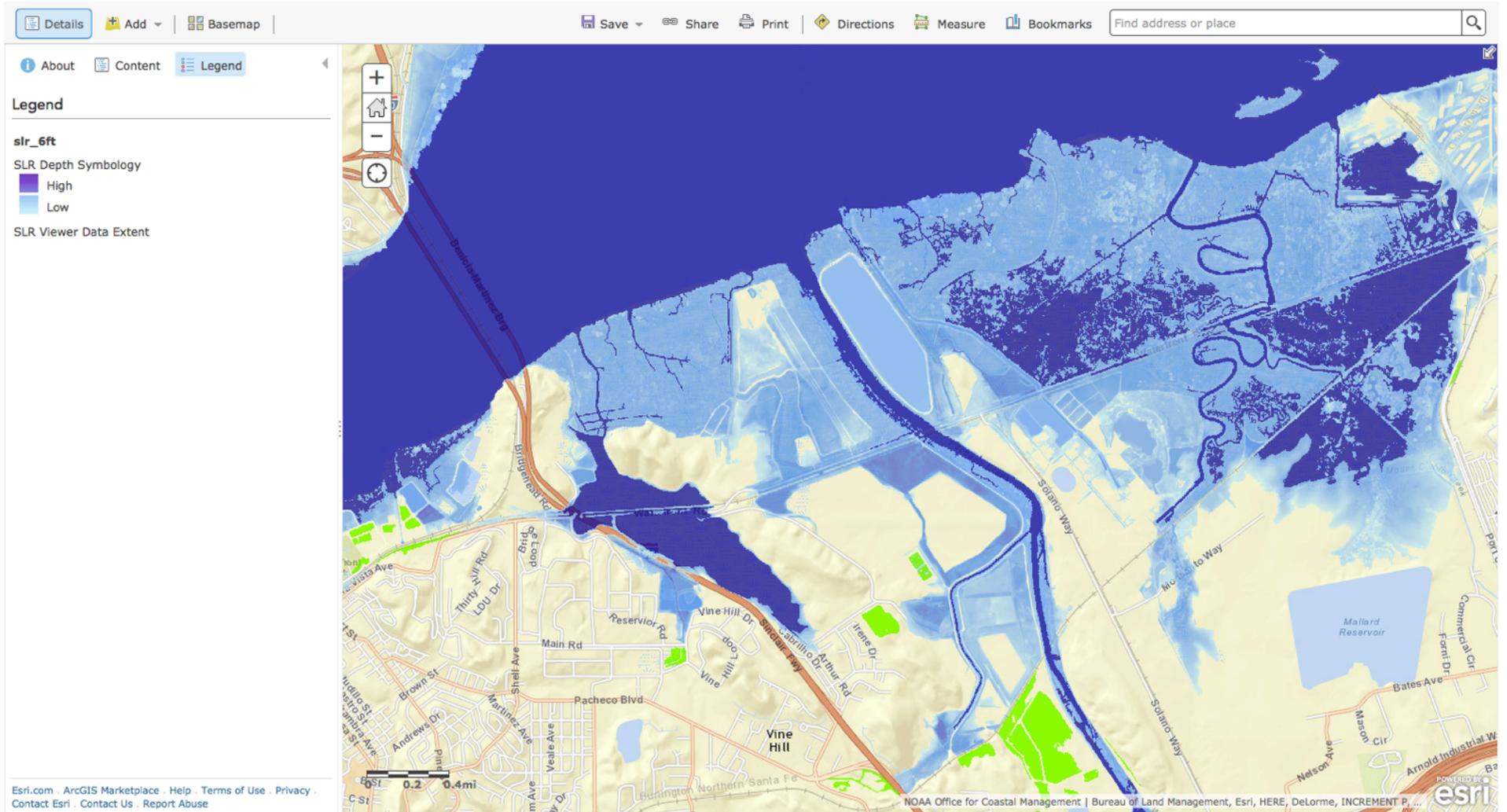


A 10-year storm surge that occurs at King Tide during an El Nino year

# Coastal Flooding

Home ▾ Contra Costa County ART Map

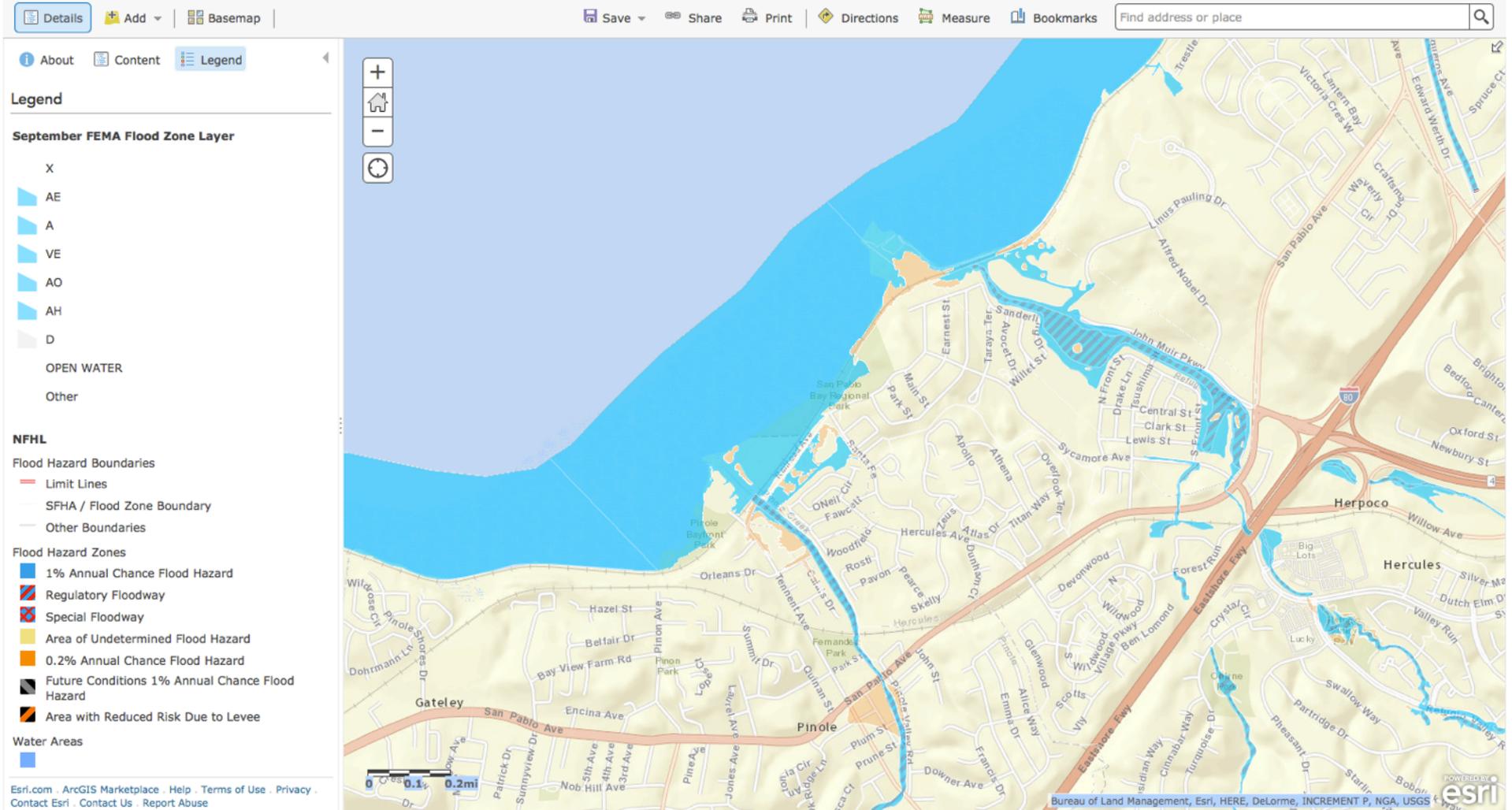
New Map ▾ Edit Presentation BC ▾



# Riverine Flooding

Home ▾ Contra Costa County ART Map

New Map ▾ Edit Presentation BC ▾



## Tools and options



- Washington State has shoreline master programs
- California Coastal Commission has local coastal programs
- BCDC has the ability to develop Special Area Plans
- Habitat Conservation Plans are another model
- England and Wales have Shoreline Management Plans