

# Parks and Recreation

## Vulnerability Assessment Results



### Total Acres of Parks Exposed to Future and Current Flooding

| Asset                                 | Management                     | Total Acres in Project Area | Current 100-year Storm Event* | 12" SLR + 100-year Storm | 24" SLR + 100-year Storm | 36" SLR + 100-year Storm | 83" SLR + 100-year Storm | MHHW Today   | 12" SLR      | 24" SLR      | 36" SLR      | 83" SLR      |
|---------------------------------------|--------------------------------|-----------------------------|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------|--------------|--------------|--------------|--------------|
| Big Break Regional Shoreline          | EBRPD                          | 1,604                       | 208                           | 213                      | 218                      | 222                      | 228                      | 27           | 106          | 179          | 199          | 223          |
| Big Break Regional Trail              | EBRPD                          | 4.1                         | 1                             | 1                        | 1.3                      | 1.5                      | 3.4                      | --           | 0.1          | 0.7          | 0.9          | 1.7          |
| Barbara Price Marina Park             | City (Antioch)                 | 6.5                         | 5.6                           | 6.1                      | 6.3                      | 6.4                      | 6.4                      | 0.6          | 1.3          | 3.5          | 5            | 6.4          |
| Delta Access Regional Recreation Area | EBRPD                          | 987                         | 871                           | 897                      | 925                      | 943                      | 974                      | 0.3          | 0.5          | 0.6          | 0.8          | 947          |
| Slifer Park                           | County                         | 6.5                         | 0.1                           | 0.1                      | 0.4                      | 3.3                      | 6.5                      | --           | --           | --           | <0.1         | 3.8          |
| Dutch Slough                          | State (CDWR)                   | 1,185                       | 655                           | 1,083                    | 1,099                    | 1,110                    | 1,119                    | 0.1          | 1.2          | 3.3          | 638          | 1,113        |
| Browns Island Regional Shoreline      | State (State Lands Commission) | 600                         | 510                           | 541                      | 549                      | 551                      | 551                      | 76           | 135          | 255          | 443          | 551          |
| Summer Lake Community Park            | City (Oakley)                  | 18                          | --                            | 0.03                     | 0.04                     | 0.05                     | 18                       | --           | --           | --           | --           | 18           |
| Cornell Park                          | County                         | 14                          | --                            | --                       | 9.3                      | 12                       | 14                       | --           | --           | --           | --           | 12           |
| Cypress Grove Community Park          | City (Oakley)                  | 5.1                         | --                            | --                       | --                       | 4.8                      | 5.1                      | --           | --           | --           | --           | 4.9          |
| 8 <sup>th</sup> Street Greenbelt      | City (Pittsburg)               | 3.4                         | --                            | --                       | --                       | --                       | 0.3                      | --           | --           | --           | --           | <0.01        |
| Manresa Park                          | City (Oakley)                  | 0.3                         | --                            | --                       | --                       | --                       | 0.3                      | --           | --           | --           | --           | 0.3          |
| Sycamore Drive Park                   | City (Oakley)                  | 0.3                         | --                            | --                       | --                       | --                       | 0.3                      | --           | --           | --           | --           | 0.3          |
| Lakewood Drive Park                   | City (Oakley)                  | 0.5                         | --                            | --                       | --                       | --                       | 0.5                      | --           | --           | --           | --           | 0.3          |
| Prosserville Park                     | City (Antioch)                 | 1.5                         | --                            | --                       | --                       | --                       | 0.6                      | --           | --           | --           | --           | --           |
| Legless Lizard Preserve               | EBRPD                          | 7.9                         | --                            | --                       | --                       | --                       | 1.4                      | --           | --           | --           | --           | 0.1          |
| <b>Total in Project Area</b>          |                                | <b>258,553</b>              | <b>3,647</b>                  | <b>4,136</b>             | <b>5,898</b>             | <b>7,312</b>             | <b>11,714</b>            | <b>1,592</b> | <b>2,294</b> | <b>2,663</b> | <b>2,819</b> | <b>8,344</b> |

\*--: Unexposed assets

MHHW: Mean Higher High Water refers to the average of today's daily highest tide and is used as the baseline for all flooding scenarios.

\*Current 100-year Storm Event: The 100-year storm event reflected in these maps is not equivalent of to the FEMA 100-year flood hazard zone.

\*\*Many parks exposed at MHHW today are characterized by tidal wetland habitats that, by nature, are temporarily flooded daily.

### Exposure Story

Detailed exposure was analyzed for twenty-four shoreline, or near-shoreline, parks in the Project Area. Five parks are shown as exposed at mean higher high water (MHHW) today due to the presence of open water and/or wetland habitat within the parks. This exemplifies the daily temporary flooding that is, by nature, part of the character of wetland habitats. However, when temporary flooding of wetland habitats becomes permanent in nature the potential of loss of habitat and/or park area is introduced.

A variety of flooding trends are seen across the Project Area and parks. Most notably, ~4000 acres of shoreline parks could be flooded to a flood event today with a 100-year storm event. This is twice as many acres as may be flooded in the most extreme sea level rise scenario and highlights the importance of planning for resilience to current and future flooding.

**Other Asset Categories in this Chapter:** Wildlife Refuges and Ecological Reserves, San Francisco Bay Water Trail Sites, Marinas, Fishing Piers.

### Consequences

**Society and Equity:** Residents and business owners could lose shoreline access and wildlife viewing recreation opportunities if shoreline parks are damaged or disrupted. Several communities located near the Bay-Delta shoreline—Antioch, Oakley, Pittsburg, etc.—are vulnerable communities for which shoreline park and recreational facilities provide open space and recreational access, as well as serve as protection from the Bay. This consequence may be more severe for transit-dependent or limited-mobility residents who cannot access substitute recreation further away from their homes.

**Environment:** Marsh habitat in shoreline parks may downshift or drown due to future flood levels if there is not sufficient sediment supply and upland space for transgression. This could lead to habitat loss and impacts on shoreline species.

**Economy:** EBRPD alone provides \$16.7 Million dollars in recreation value each year to Contra Costa and regional residents and visitors. City parks provide recreation value to residents and also help maintain healthy and safe communities.

### Current 100-year Storm Event

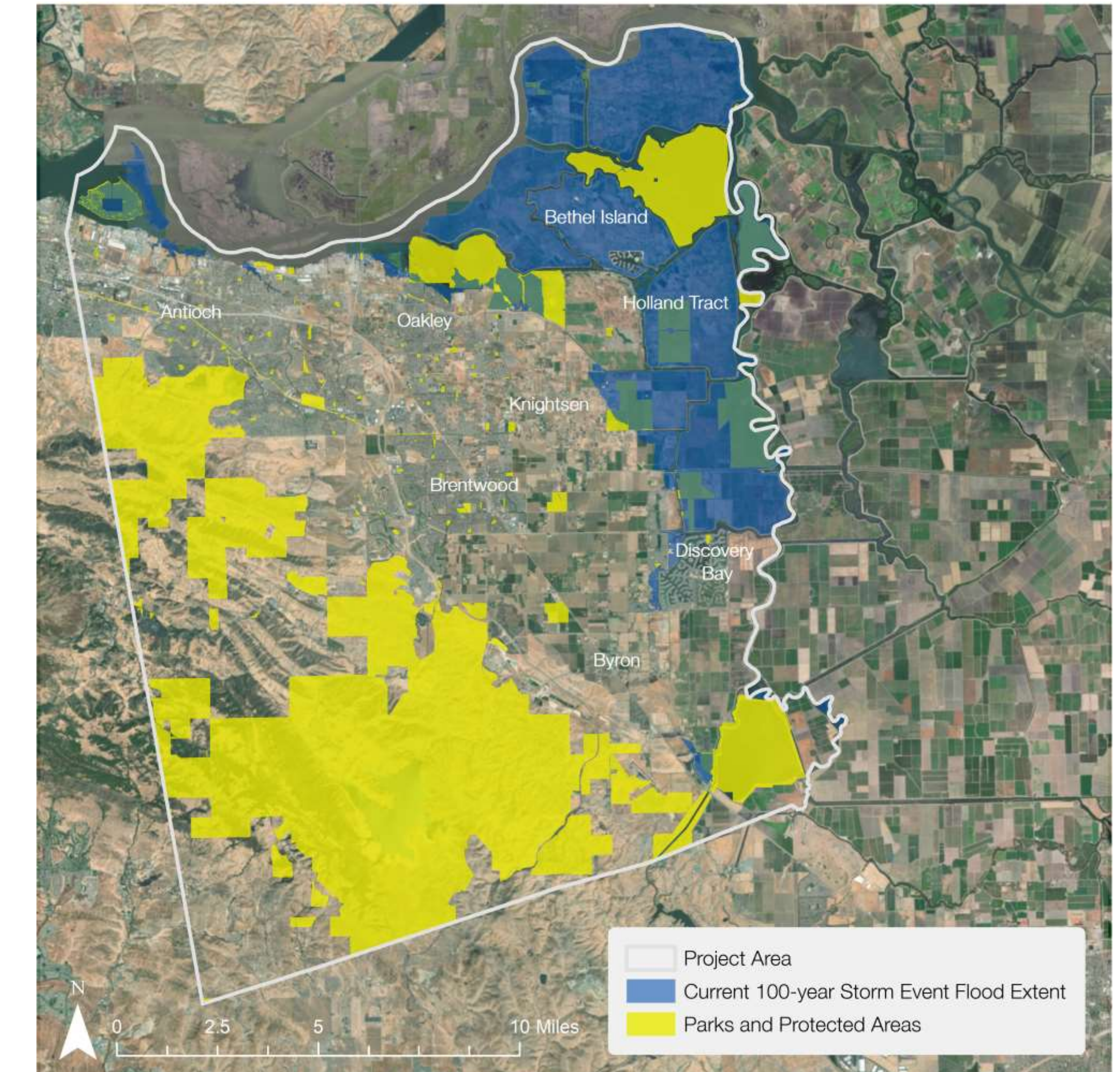


Figure 1: Protected park and recreation area that may be flooded in a current 100-year storm event. Yellow areas indicate parks and recreation throughout the Project Area. Blue area indicates inundation extent of the flood scenario.

### 83" of Sea Level Rise

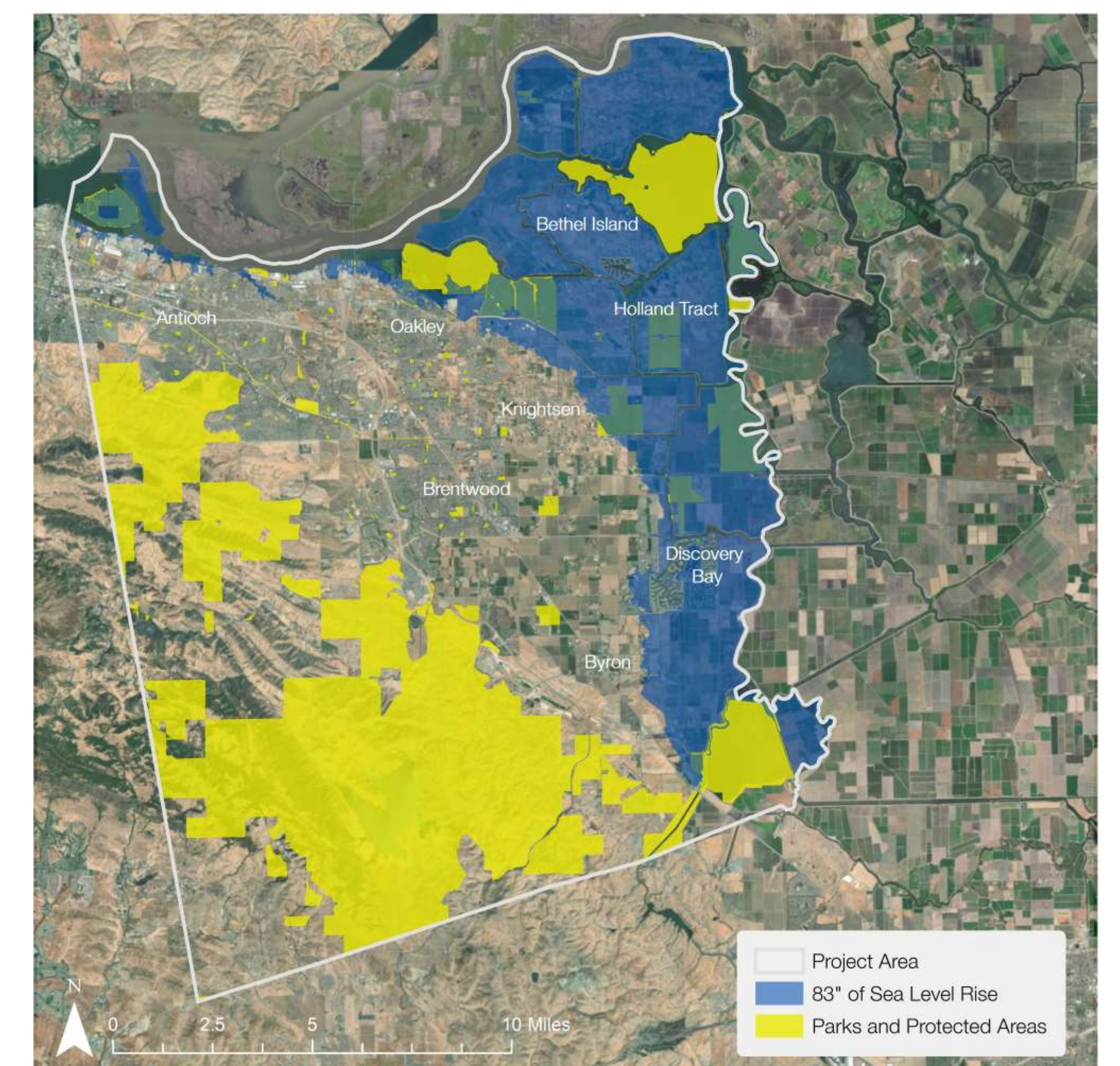


Figure 2: Protected park and recreation area that may be flooded with 83" of sea level rise. Yellow areas indicate parks and recreation throughout the Project Area. Blue area indicates inundation extent of the flood scenario.