Potential Vegetation Restoration Opportunities

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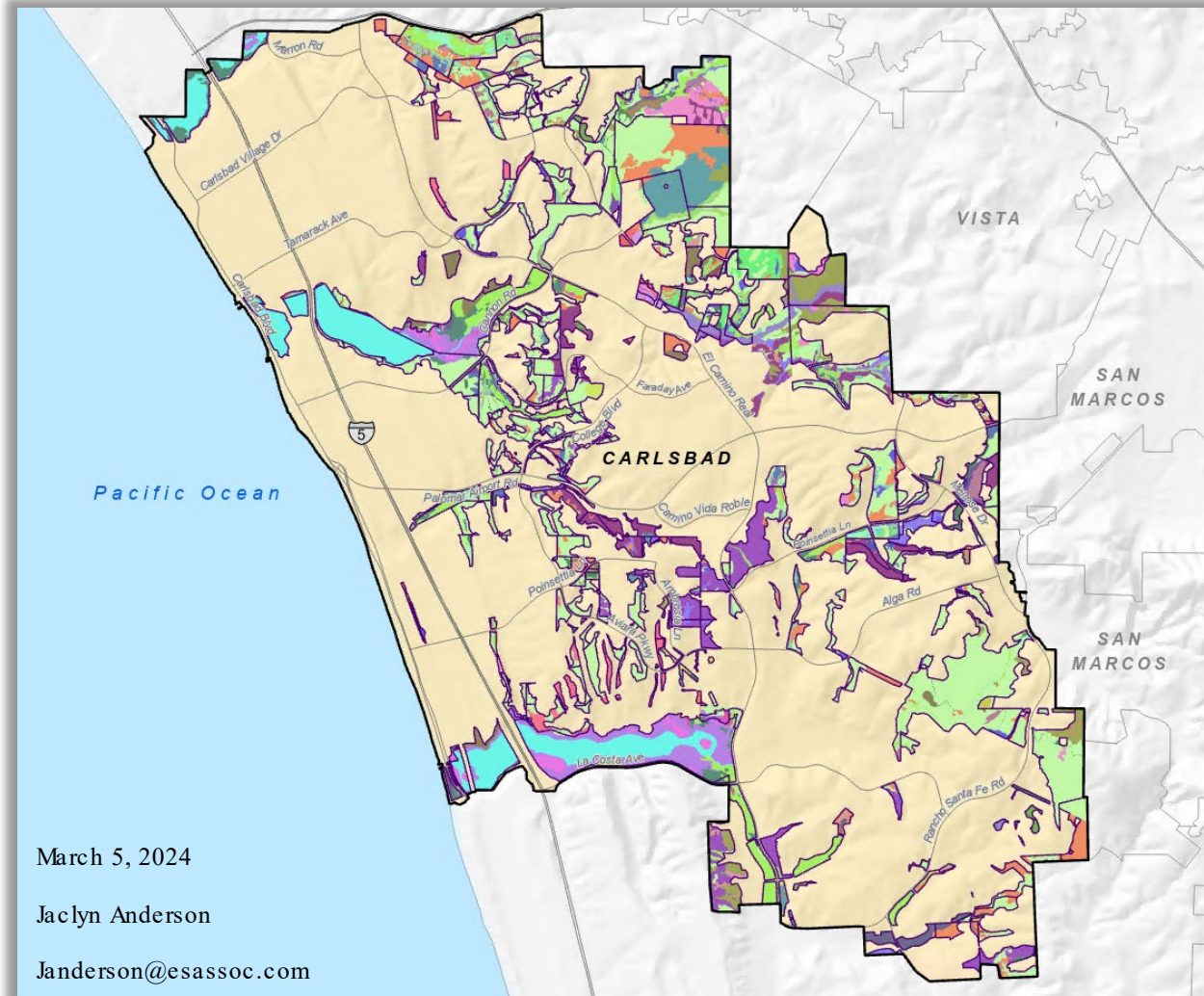
Goals for Analysis

1. Identify vegetation communities within the city's Habitat Management Plan (HMP) hardline preserve areas that provide restoration opportunities

2. Determine whether there has been any change in vegetation between the baseline HMP vegetation mapping and current vegetation throughout the city's HMP preserve system

Methods - Restoration Opportunities

1. Create composite vegetation layer for entire HMP preserve system, using the following layers:

   1. HMP Current Vegetation
   2. Regional Vegetation for the Western San Diego County (AECOM 2012)
   3. Regional Vegetation (SanGIS)

Holland/Oberbauer vegetation classification system (Holland) was used as the default mapping unit
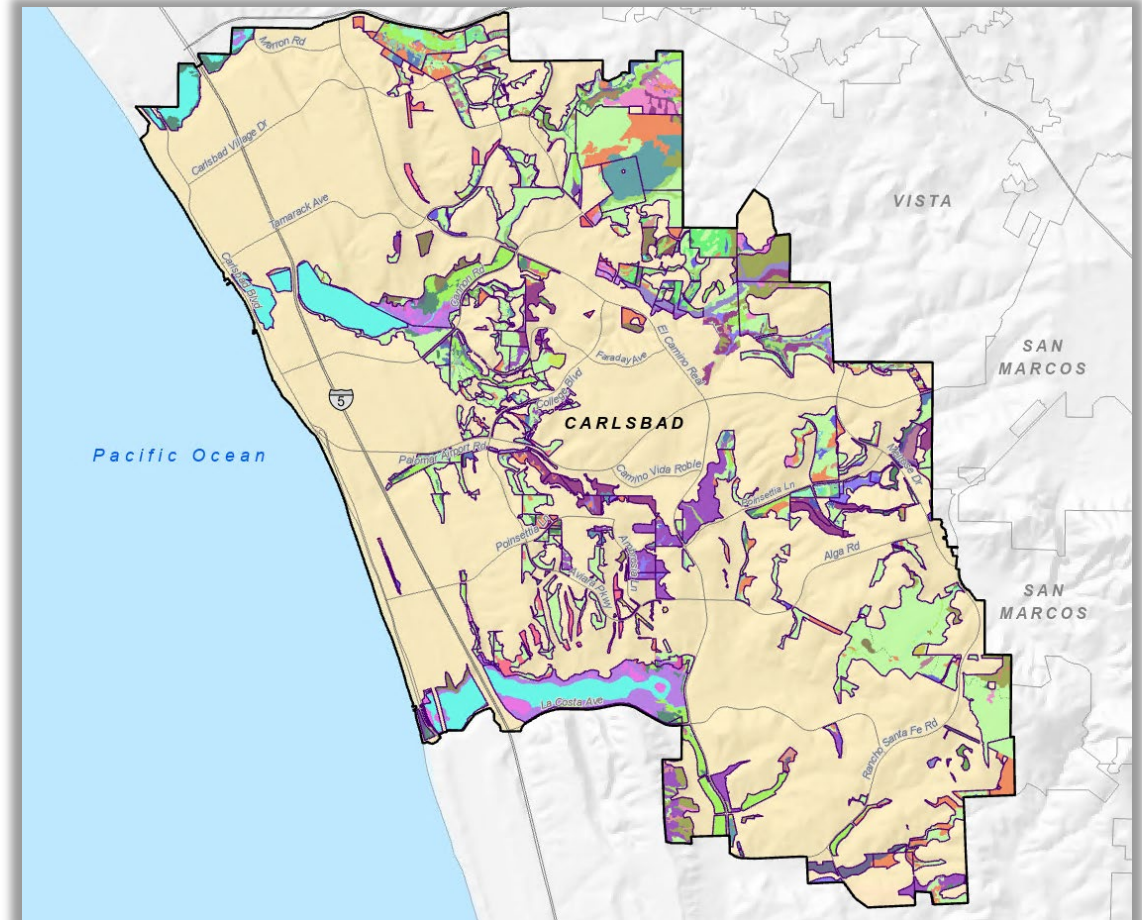
Methods - Restoration Opportunities

2. Determine Potential Restoration Opportunities within Existing Hardline, Proposed Hardline, and Standards Areas using the following factors:

1. Mitigation Vegetation Type (Restoration Opportunities)
2. Local Facilities Management Zones
3. Preserve management
4. Upland or Wetland

General Vegetation Type	Specific Vegetation Types (Including Holland Code)	Mitigation Opportunity*	
		Restoration/ Enhancement	Creation/Subst. Restoration
Uplands			
Coastal Sage Scrub	32000 Coastal Scrub, 32400 Maritime Succulent Scrub, 32500 Diegan Coastal Sage Scrub, 32510 Diegan Coastal Sage Scrub: Coastal form, 32530 Diegan Coastal Sage Scrub: Baccharis-dominated	x	
Chaparral	37000 Chaparral, 37120 Southern Mixed Chaparral, 37200 Chamise Chaparral, 37900 Scrub Oak Chaparral, 37C30 Southern Maritime Chaparral, 37G00 Coastal Sage-Chaparral Transition	x	
Native Grassland	42000 Valley and Foothill Grassland, 42100 Native Grassland, 42110 Valley Needlegrass Grassland, 42120 Valley Sacaton Grassland, 42130 Saltgrass Grassland, 42300 Wildflower Field	x	
Oak Woodland	71100 Oak Woodland, 71160 Coast Live Oak Woodland, 71180 Engelmann Oak Woodland	x	
Non-Native Grassland	42200 Non-Native Grassland, 42210 Non-Native Grassland: Broadleaf-Dominated		x
Eucalyptus Woodland	79100 Eucalyptus Woodland		x
Disturbed Habitat	11000 Non-Native Vegetation, 11300 Disturbed Habitat, 11300 Ornamental		x
Agriculture	18000 General Agriculture, 18100 Orchards and Vineyards, 18200 Intensive Agriculture - Dairies, Nurseries, Chicken Ranches, 18300 Extensive Agriculture - Field/Pasture, Row Crops, 18310 Field/Pasture, 18320 Row Crops		x
Wetlands			
Vernal Pool	44000 Vernal Pool	x	
Marsh	45320 Alkali Seep, 52120 Southern Coastal Salt Marsh, 52300 Alkali Marsh, 52310 Cismontane Alkali Marsh, 52400 Freshwater Marsh, 52410 Coastal and Valley Freshwater Marsh	x	
Riparian Forest and Woodland	61300 Southern Riparian Forest, 61310 Southern Coast Live Oak Riparian Forest, 61320 Southern Arroyo Willow Riparian Forest, 61330 Southern Cottonwood-Willow Riparian Forest, 62000 Riparian Woodlands, 62500 Southern Riparian Woodland	x	
Riparian Scrub	63000 Riparian Scrub, 63300 Southern Riparian Scrub, 63310 Mule Fat Scrub, 63320 Southern Willow Scrub	x	
Non-Native Wetland	11200 Disturbed Wetland, 13000 Unvegetated Habitat, 63810 Tamarisk Scrub, 65000 Non-Native Riparian		x

* It is not possible to distinguish between disturbed and high quality habitat, therefore, polygons marked with "Yes" for restoration or mitigation opportunity are generally candidates for creation and substantial restoration, rather than enhancement or restoration.

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Results - Restoration Opportunities

- Approximately 910 acres of vegetation with potential for restoration opportunities identified within HMP hardline preserve areas

- Composite vegetation layer with filters provided to the city
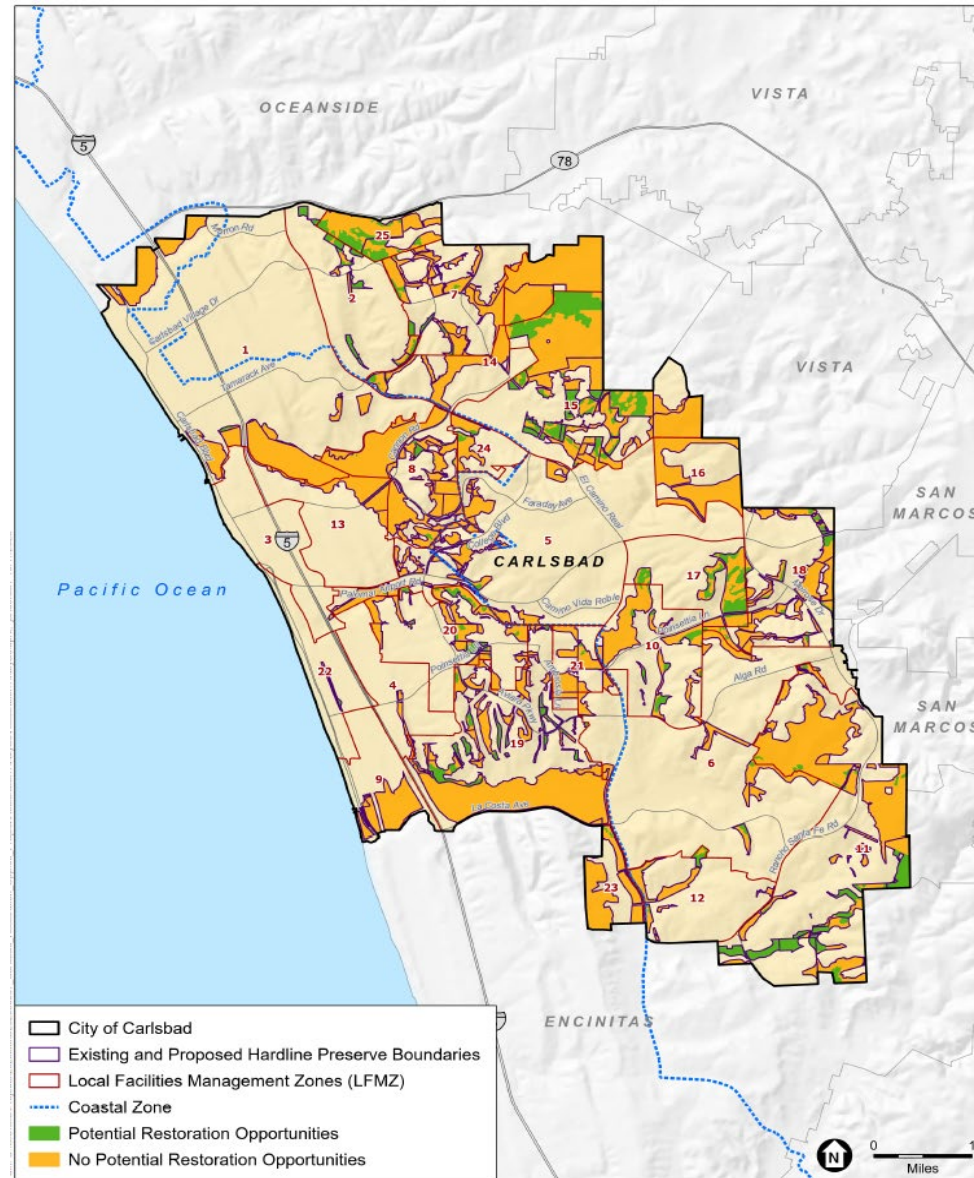
Methods – Vegetation Change

1. The composite vegetation layer was compared to the HMP baseline vegetation layer originally mapped in 1999

2. A new layer was created indicating whether vegetation was different between the two datasets.

   1. Simplified vegetation categories were added for both 1999 and 2023 vegetation for easy comparison

Results – Vegetation Change

- Approximately 3,966 acres of vegetation have changed since the city's original mapping was completed in 1999

- Vegetation layer with results of comparison and simplified vegetation categories provided to the city

Legend:
- City of Carlsbad
- HMP Preserve Boundaries

Vegetation Change
- Change
- No Change
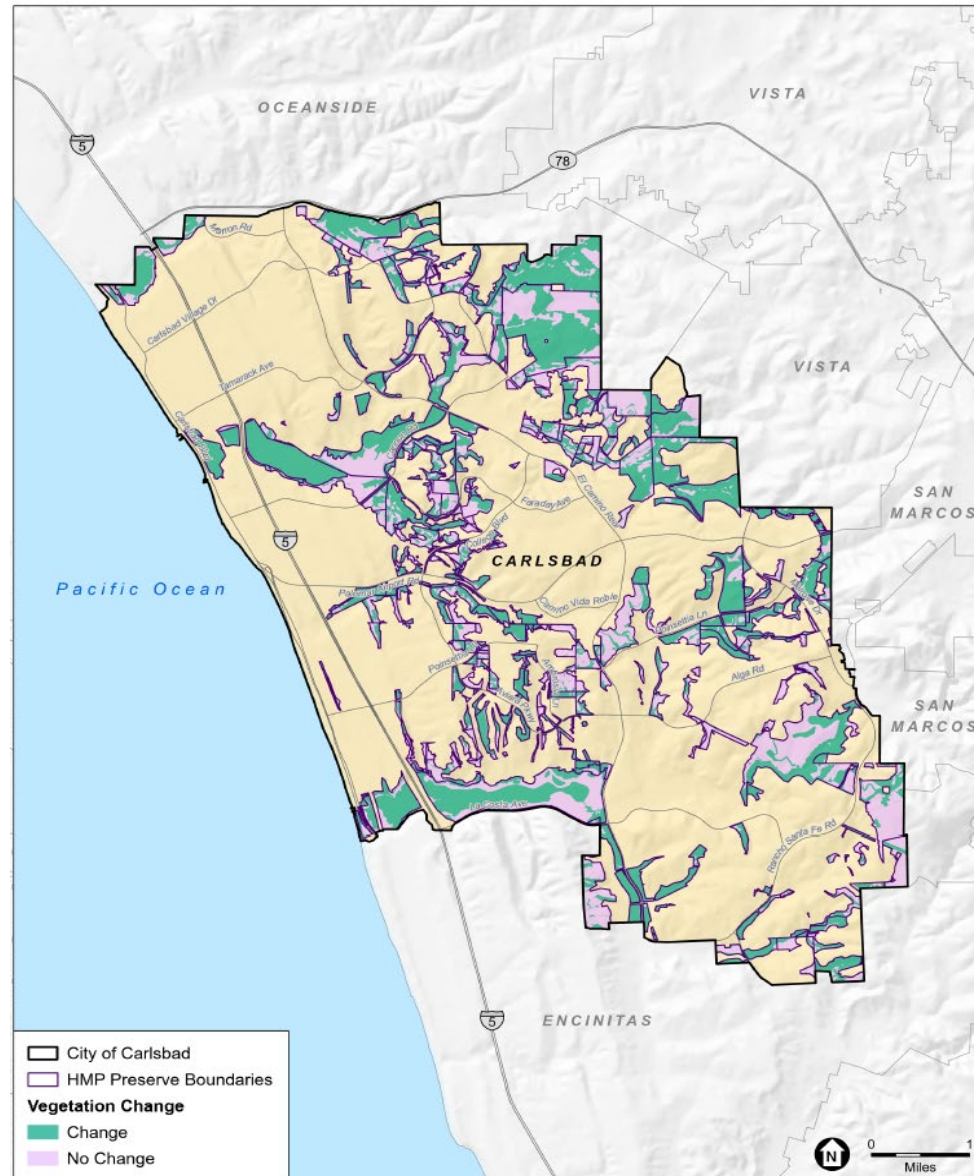
Thank you!
Additional questions can be directed to
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