


Summary of Multiple Habitat Conservation Program and Carlsbad Habitat Management Plan

San Diego Management and Monitoring Program

May 22, 2013



“When one tugs at a single thing in nature, he finds it attached to the rest of the world.”

- John Muir



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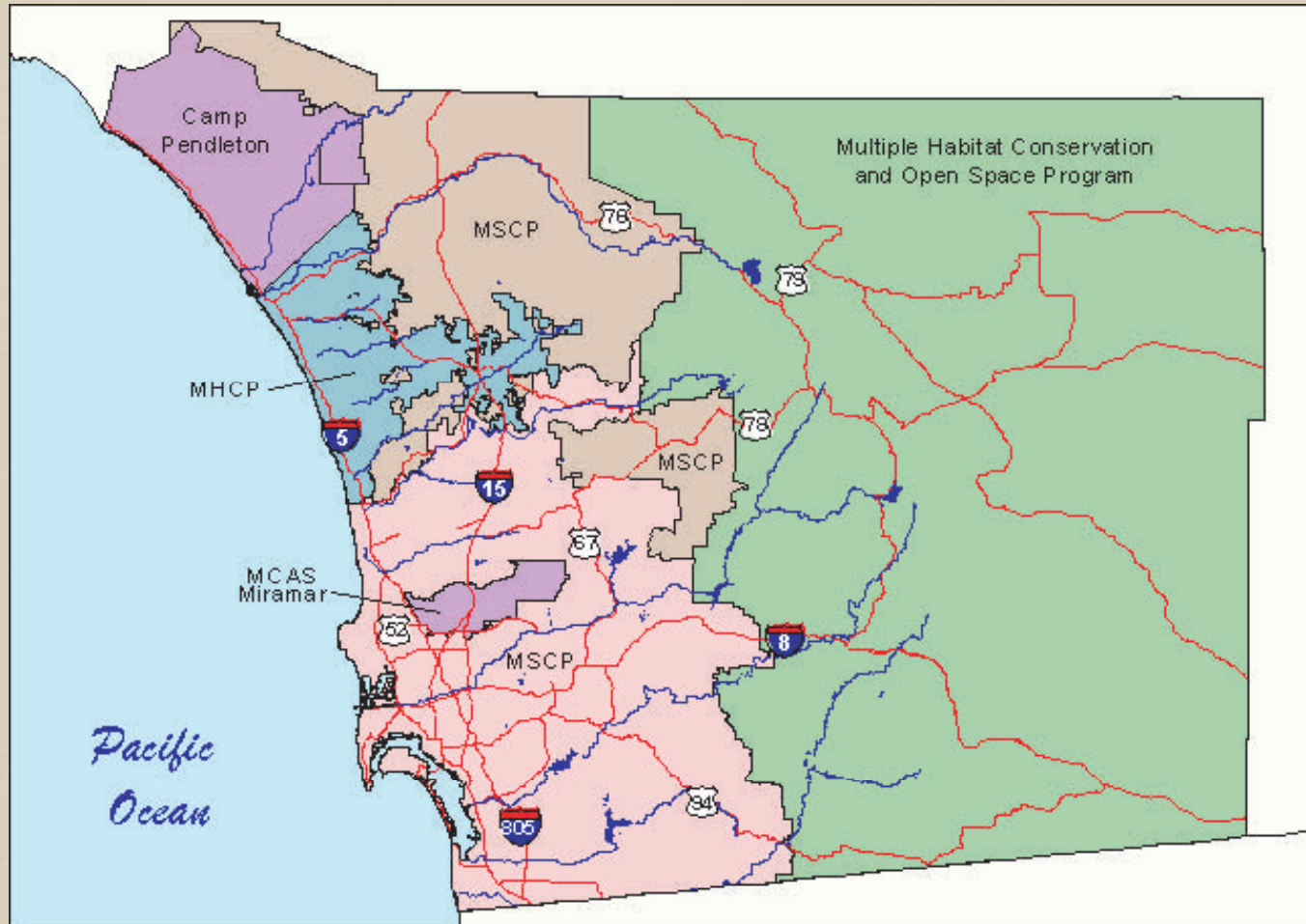


Outline

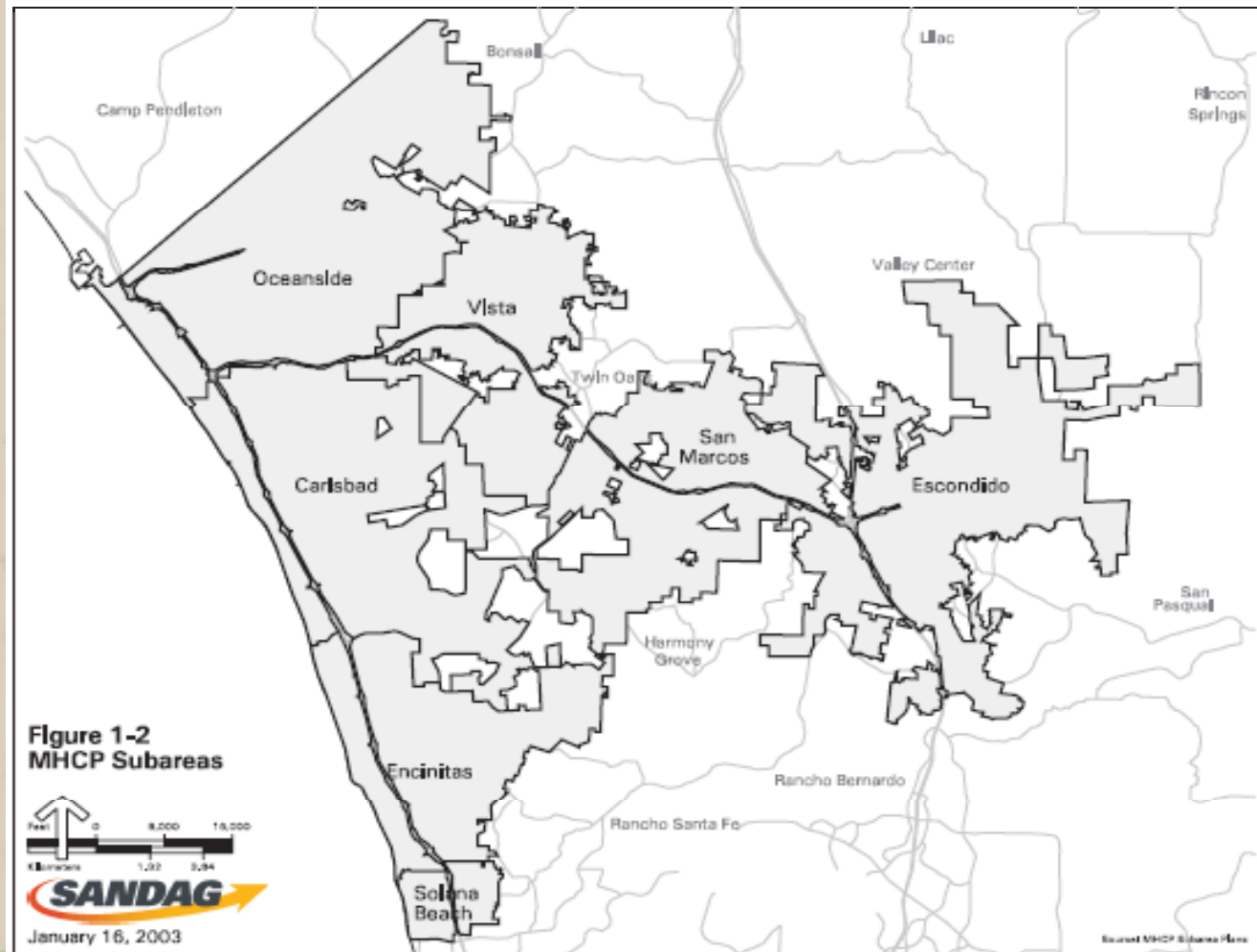
- Summary of MHCP
 - Background and structure
 - Covered species and conceptual models
 - Monitoring requirements and costs
- Summary of HMP
 - Background and covered species
 - Preserve design and assembly
 - Key management and monitoring activities



Conservation in San Diego County



Multiple Habitat Conservation Plan



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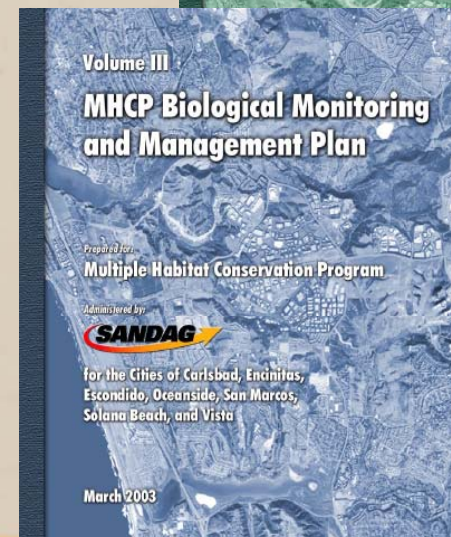
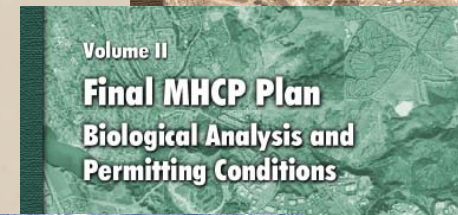


MHCP Plan Structure

Plan Preparation and Structure

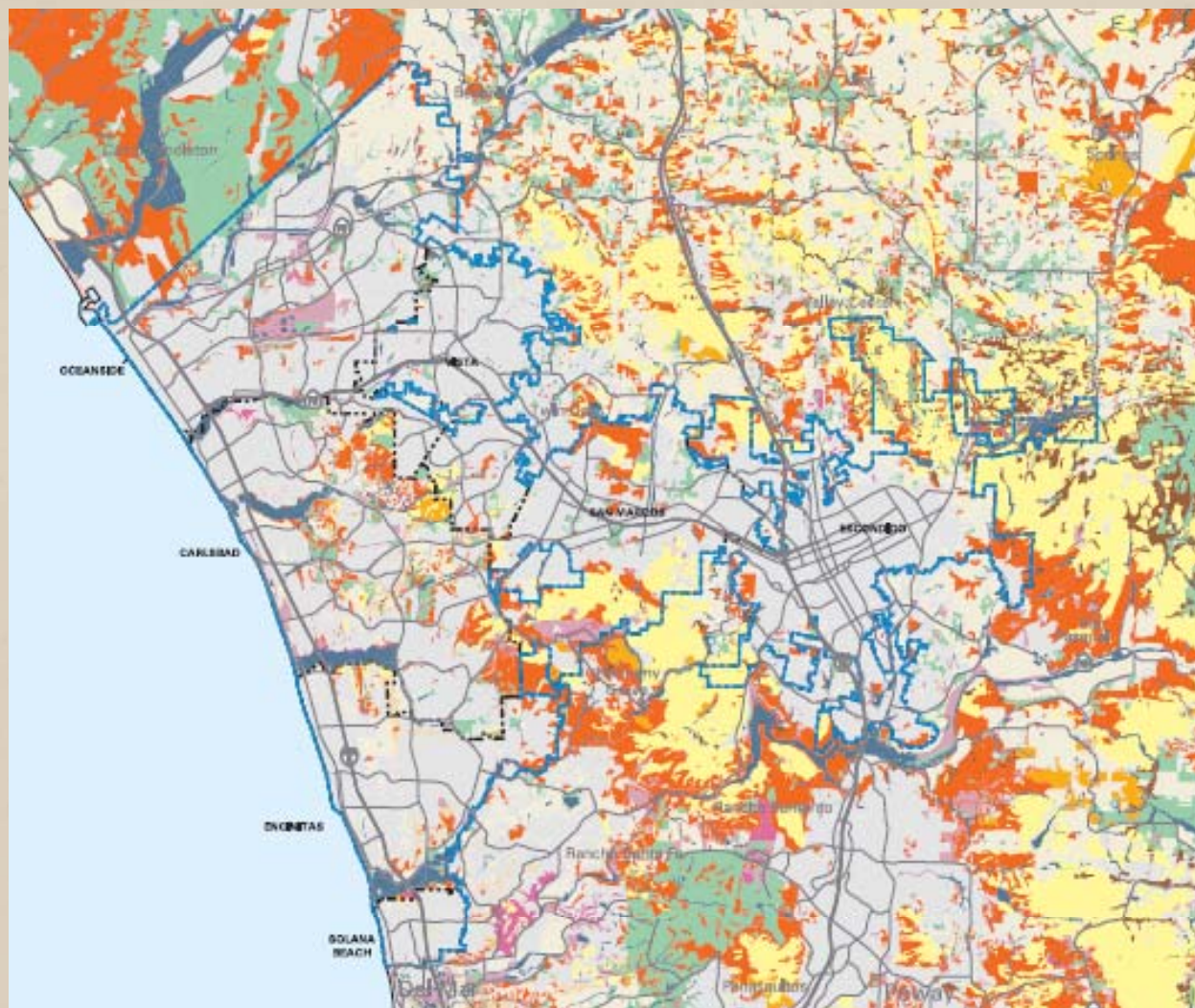
Biological Analysis, Permitting
Conditions

Biological Monitoring and
Management



MHCP Basics

- Study Area = 111,908 acres (~175 mi²)
 - 71% private ownership
 - Only 27% vacant with habitat at time of plan
 - Three areas with over 1,000 contiguous acres
- Focus Planning Area = 19,928 acres
 - Hardline areas (>90%) Softline areas (<90%)
 - Already permitted properties

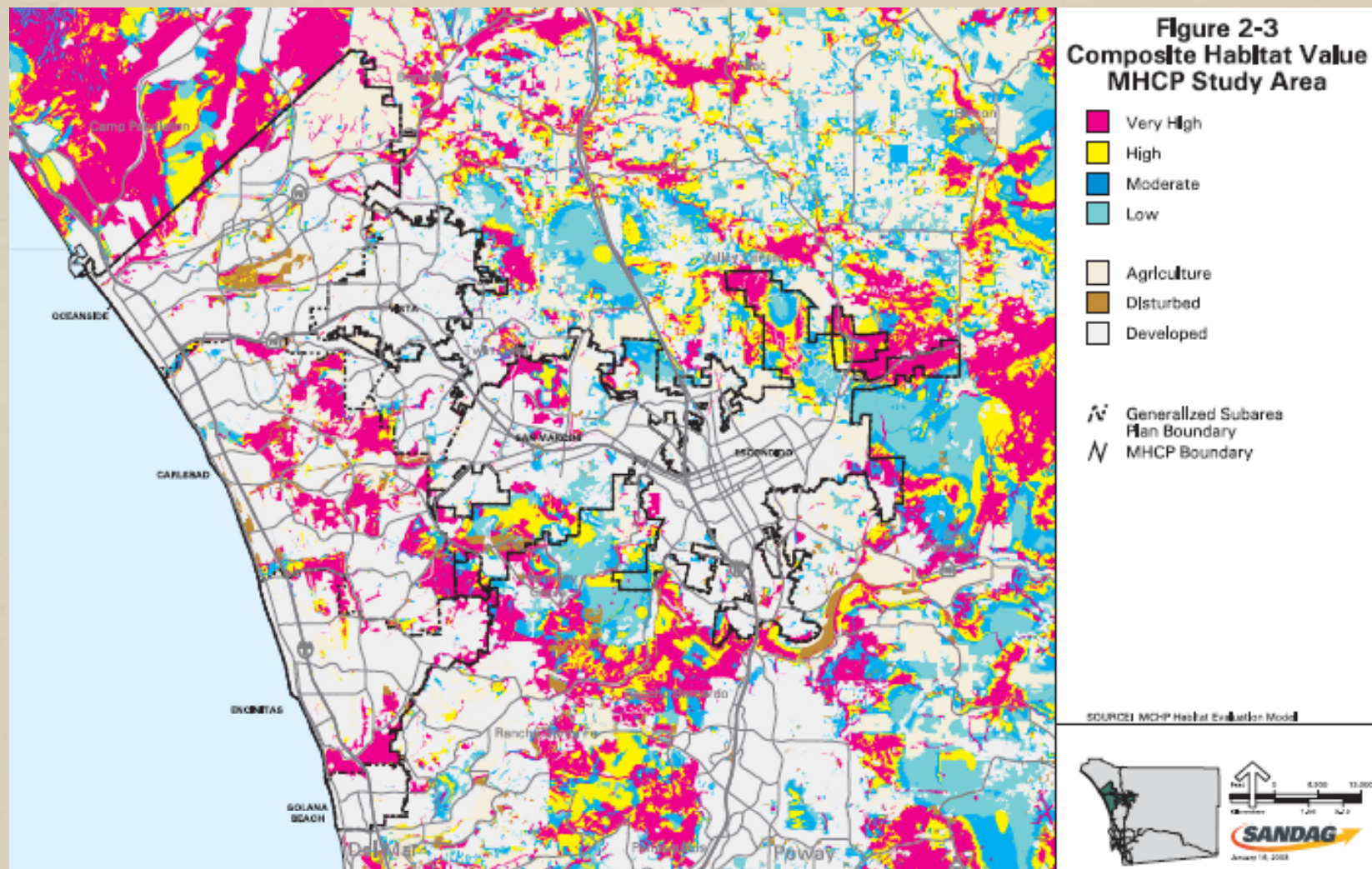


**Figure 2-1
Vegetation Communities
MHCP Study Area**

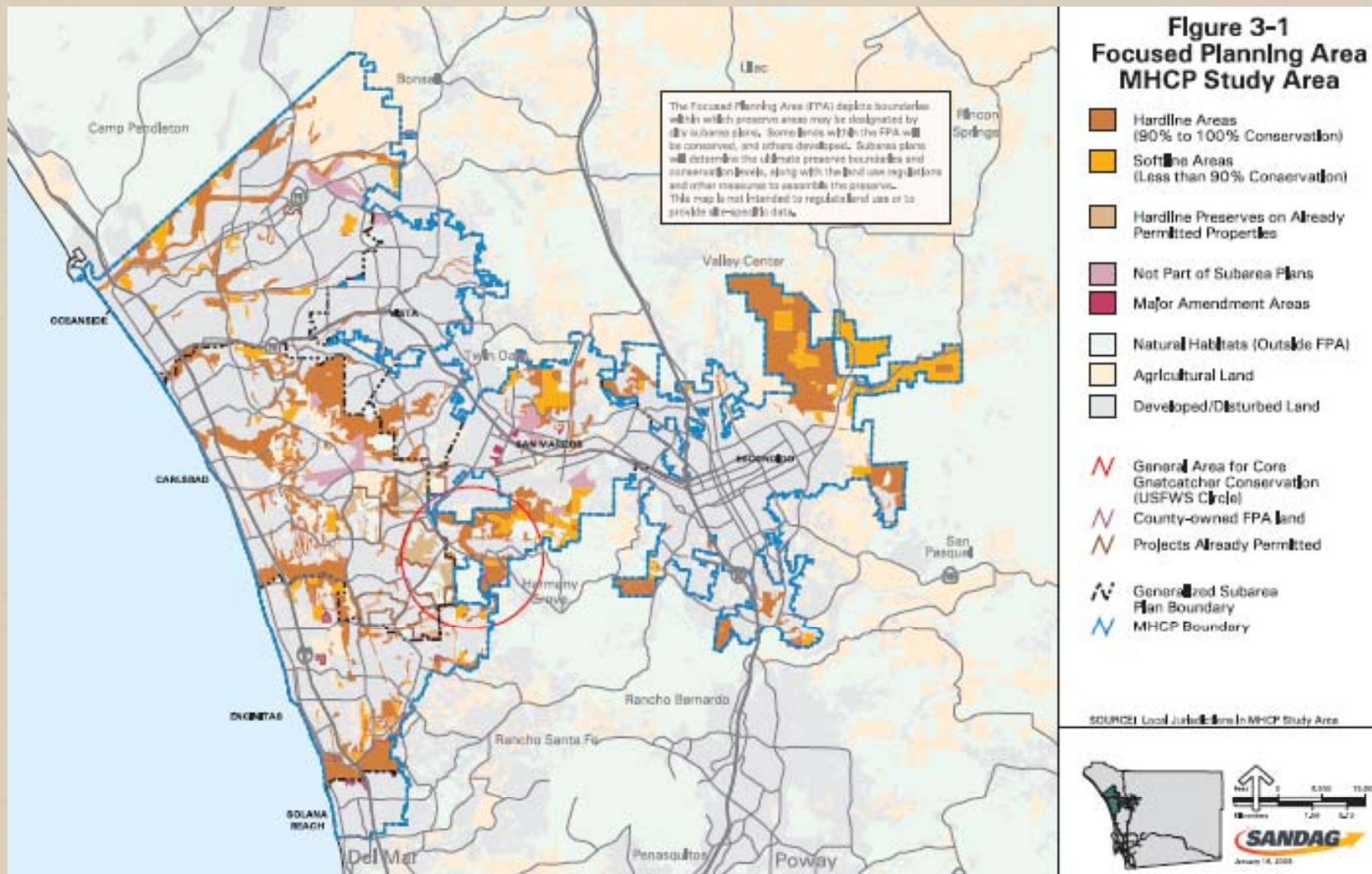
- Dunes and Beaches
- Coastal Sage Scrub
- Chaparral
- Southern Maritime Chaparral
- Coastal Sage Scrub/Chaparral Mix
- Grassland
- Riparian/Wetlands
- Oak Woodlands
- Eucalyptus Woodlands
- Agricultural Land
- Disturbed Land
- Developed
- Generalized Subarea Plan Boundary
- MHCP Boundary

SOURCE: 1995 Vegetation Inventory, SANDAG

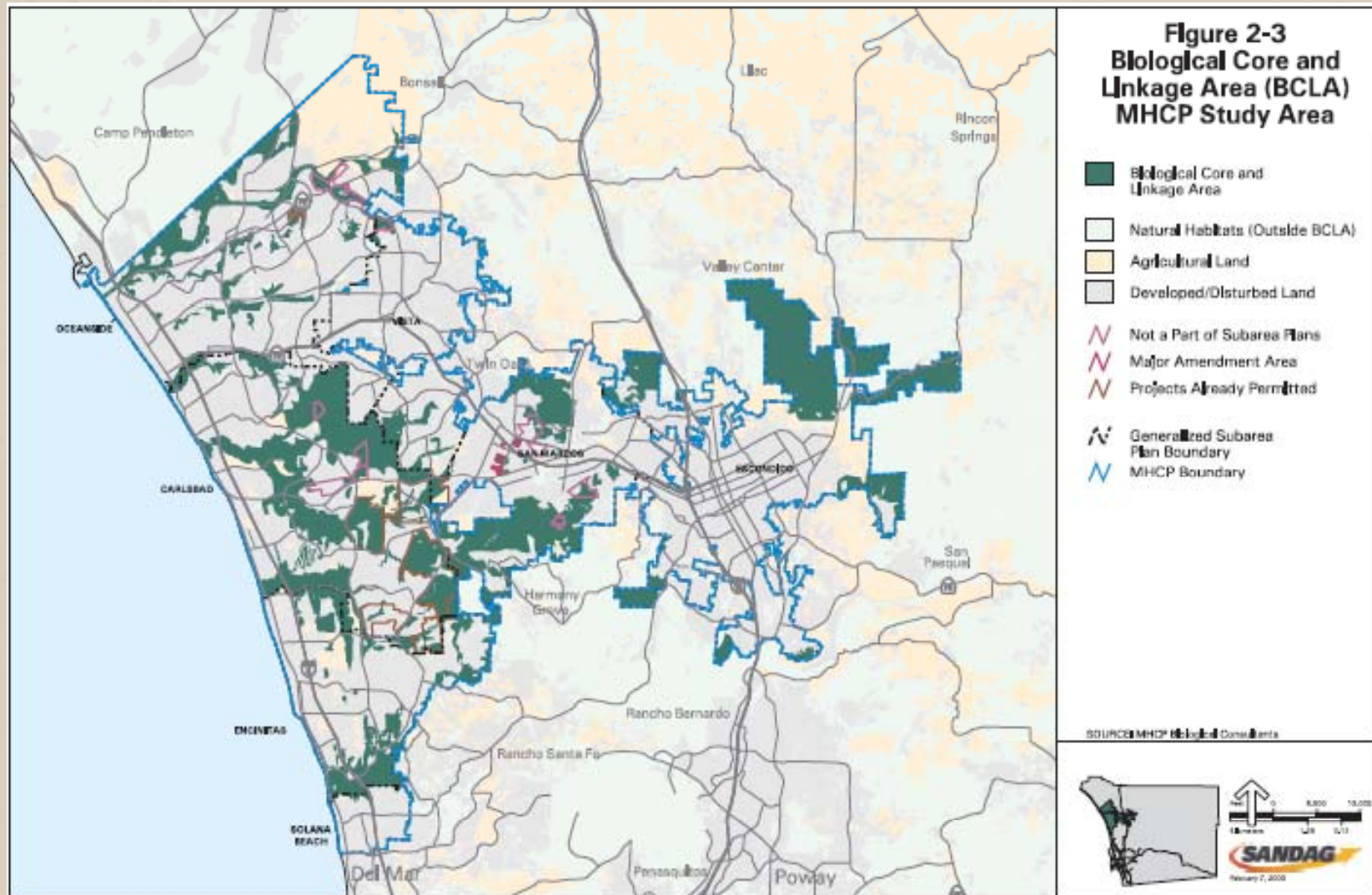




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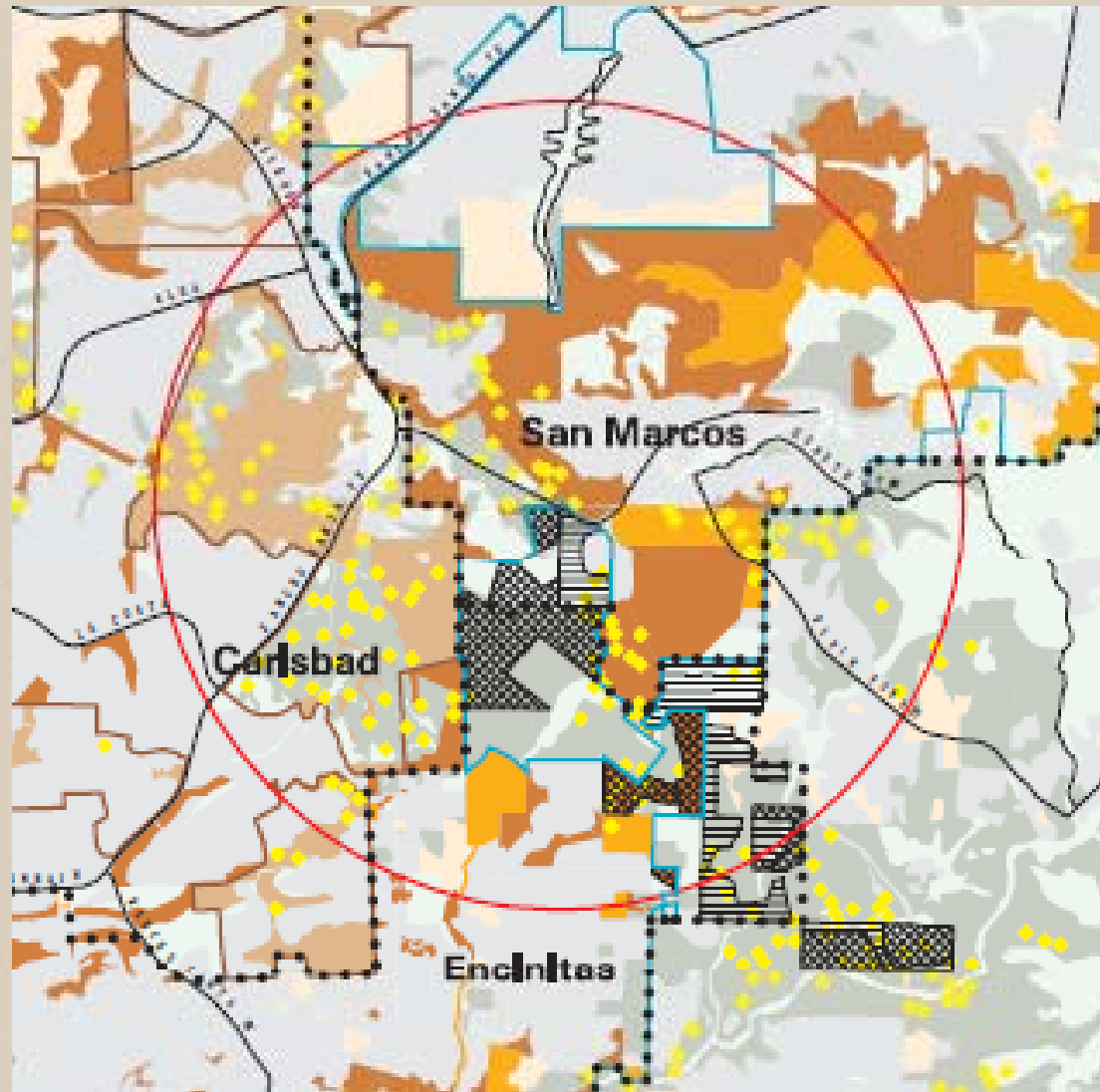
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MHCP Preserve Assembly

- Conservation of existing public lands
 - Includes pre-existing conserved habitat areas
- Public acquisition of private lands
 - Federal and state agencies based upon priority
 - Unincorporated CAGN Core Area
- Private and public development participation
 - Exactions and targeted mitigation



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MHCP Covered Species

- Only 21 species unconditionally covered by MHCP at time of plan approval:
 - Five plants (incl. Del Mar manzanita)
 - Zero invertebrates
 - 13 birds (mostly shorebirds)
 - One reptile (Orange-throated whiptail)
 - Two mammals (incl. NW SD pocket mouse)



Conditionally Covered Species

- 30 species covered subject to species-specific conditions:
 - 15 plants (incl. SD thornmint, Nuttall's lotus)
 - Three invertebrates (incl. Riverside fairy shrimp)
 - Two amphibians (incl. SW pond turtle)
 - Seven birds (including CAGN, LBV, SWFL)
 - Three mammals (incl. SKR)



Coverage Based on Subarea Plans

- 10 additional species covered only if subarea plans adopt additional measures:
 - Five plants (incl. Thread-leaved brodiaea)
 - Two invertebrates (incl. SD fairy shrimp)
 - One amphibian (Arroyo Toad)
 - One reptile (SD horned lizard)
 - One mammal (PPM)



No Coverage from MHCP

- 16 species not covered by MHCP:
 - Four plants (incl. Orcutt's brodiaea)
 - Four invertebrates (incl. Hermes copper)
 - One amphibian (CA red-legged frog)
 - Five birds (incl. BUOW, TCBB)
 - Two mammals (bats)

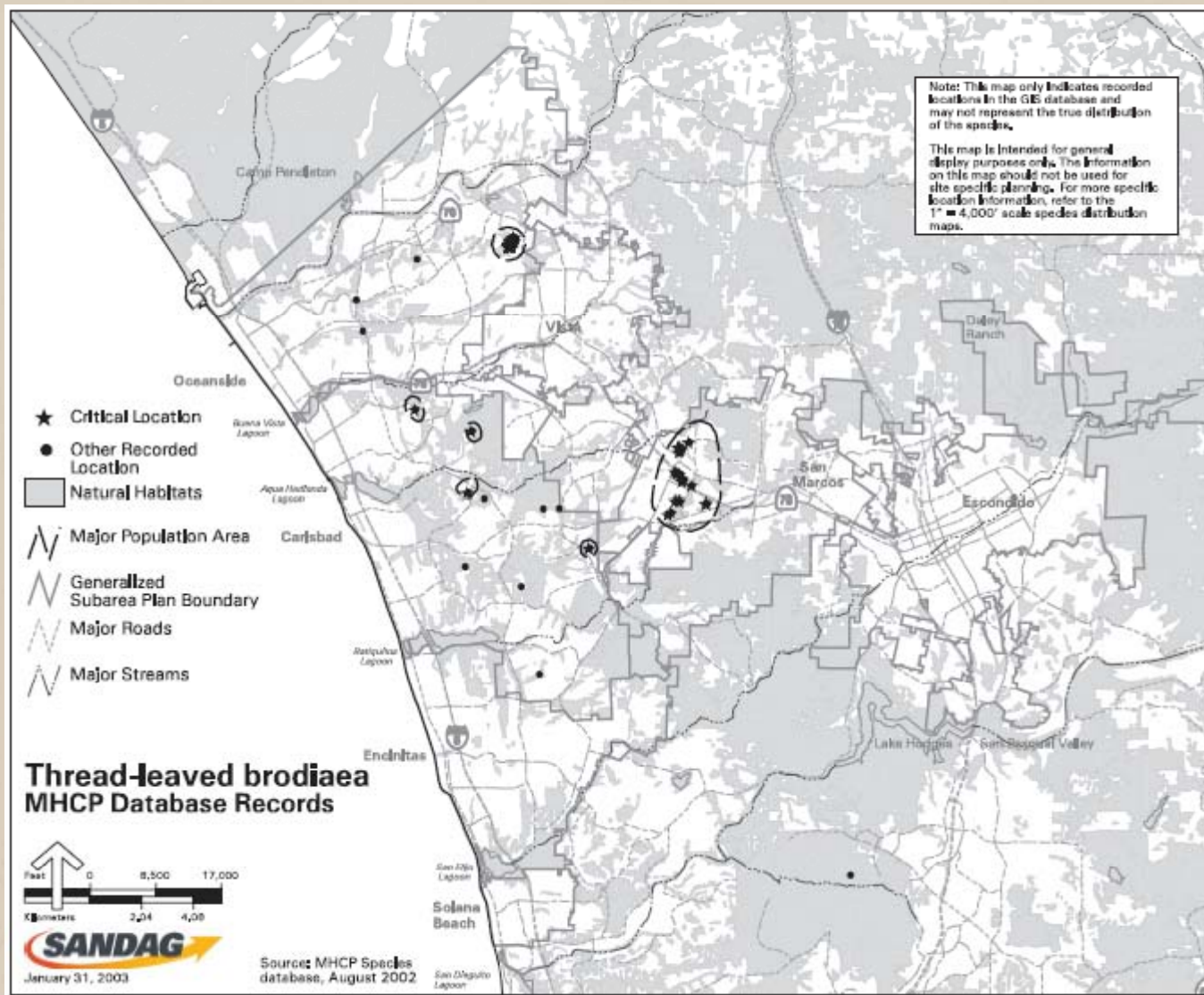


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Species Evaluations

- MHCP contains detailed species evaluations for all 77 species considered for coverage
 - Conservation goals and strategy
 - Coverage determination and permit conditions
 - Background and map
 - Conservation analysis
 - Adaptive management program



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Conceptual Models

- Grouped by vegetation community
 - Physical and biological processes
 - Threats to communities, covered species, and processes
 - Special issues and critical assumptions
 - Available management actions
 - Monitoring questions and protocols



Vegetation Communities

- Coastal sage scrub, chaparral, and grassland
- Riparian
- Lagoons
- Oak woodlands
- Vernal pools



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MHCP Monitoring

- Monitoring at all preserves
 - Divided into species or groups of species
 - Specific monitoring questions and protocols
 - Mostly annual monitoring for species
- Additional monitoring at selected preserves
 - Specialized issues such as avian community, CAGN dispersal, herptofauna.
- Wildlife corridor function at sample locations



Estimated Costs from MHCP

Figure B-1
PLOT OF ANNUAL MANAGEMENT COST PER ACRE BY HABITAT TYPE AND AREA

[Lines indicate values estimated from log-log regression on existing preserves managed by CNLM. Upper line indicates mean cost per acre for riparian or wetland habitats; lower line indicates values for upland habitats. Filled squares indicate existing preserves; blank squares indicate estimated values used in the MHCP financing analysis.]

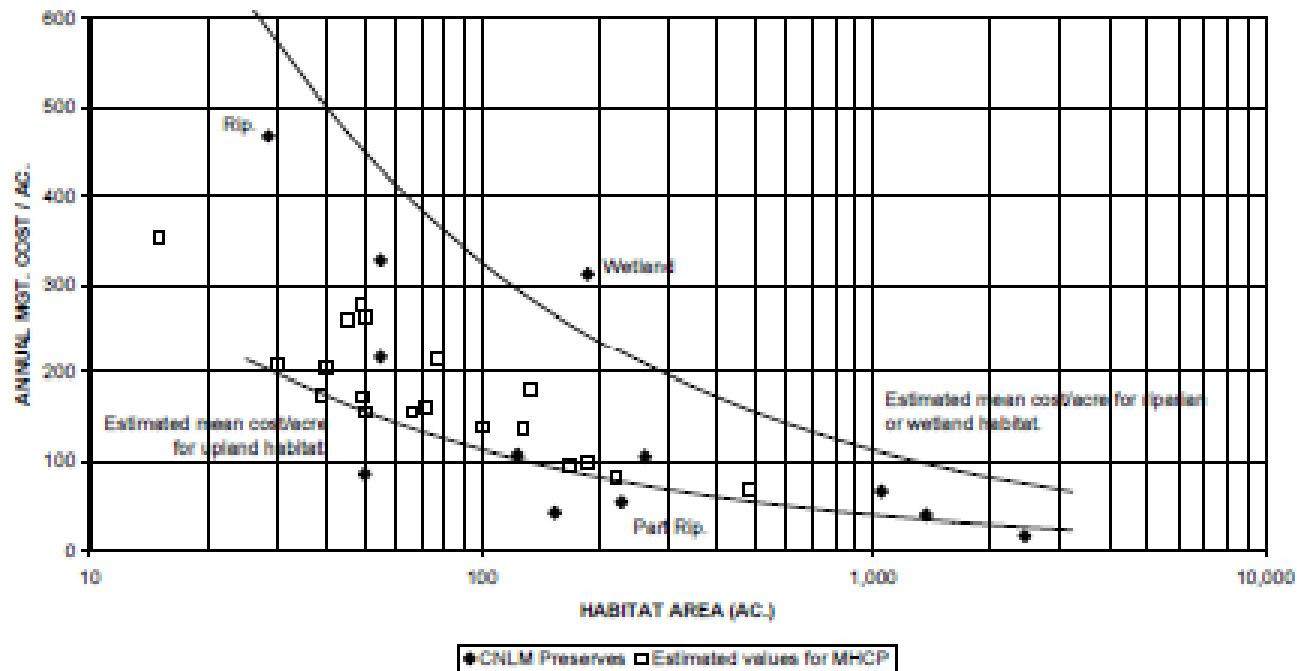


Table 1
PRESERVE MANAGEMENT AND MONITORING AND TASKS

| Purpose of Visit | Task Description | Number and Timing of Visits | Responsible Party |
|---|--|--|--------------------------|
| Biological monitoring | <ul style="list-style-type: none"> • Monitor the health of native vegetation • Identify invasive, non-native plant or animal species • Monitor the status of rare plant populations • Photo monitoring | Annually (Spring) | Preserve Manager |
| Coastal California gnatcatcher monitoring | <ul style="list-style-type: none"> • Conduct a USFWS protocol survey | Annually for first three years, then every 3 years | Preserve Manager |
| General monitoring | <ul style="list-style-type: none"> • Monitor for trash and/or debris • Report any issues with unauthorized access, vandalism, or encampments • Monitor and replace signs as needed • Monitor and repair perimeter fences • Monitor compliance with the RC | Quarterly (Jan, Apr, Aug and Oct) | Preserve Manager |
| Trash removal | <ul style="list-style-type: none"> • Removal of accumulated trash and debris | Biannually (Jan and Aug) | Preserve Manager |
| Habitat maintenance | <ul style="list-style-type: none"> • Remove invasive species as needed • Remedial restoration as needed | Annually as needed (Apr and Aug) | Preserve Manager |
| Annual report | <ul style="list-style-type: none"> • Record results of annual monitoring and management activities | Annually (due by Oct 31) | Preserve Manager |



Example of Actual Costs

- Annual costs for 11.5 acre preserve, including contingency, total \$6,990.
- Assumed endowment annual yield of 4.25%.
- Endowment needed to provide annual income totals \$164,494.
- Endowment cost equals \$14,304/acre
- Annual cost equals \$608/acre/year



Carlsbad Habitat Management Plan



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Summary of Carlsbad HMP

- History and background
- Covered species
- Preserve design and categories
- Preserve creation
- Key management and monitoring activities
- Reporting

Conservation in Carlsbad

- Open space and conservation as a policy
- Joined NCCP at the outset
- City well positioned for plan development
 - Lagoons, steep slopes, utility easements
 - Existing HCP and Wildlife Agency permits
 - Growth Management Program

Carlsbad Habitat Management Plan

- Approved in November 2004
- Total preserve equals 6,478 acres in City
- 306 additional acres of regional conservation
- 25 covered species of plants, invertebrates, birds, and reptiles
- Narrow endemic plants



HMP Covered Species

- Original coverage
 - Five plants
 - Two invertebrates
 - 16 birds
 - One reptile
- Additional coverage received after permit issuance for Thread-leaved brodiaea

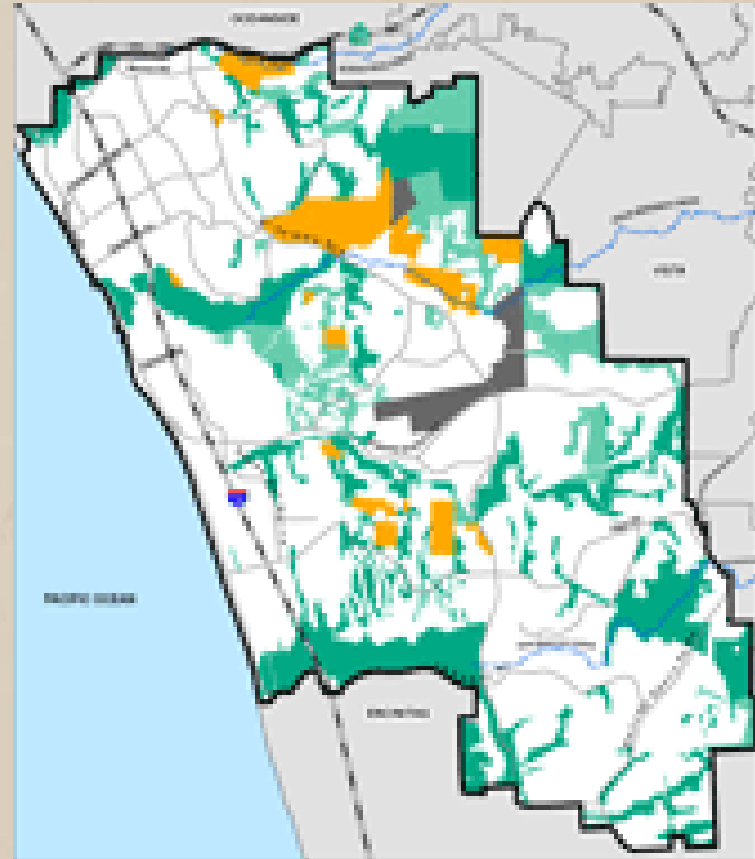
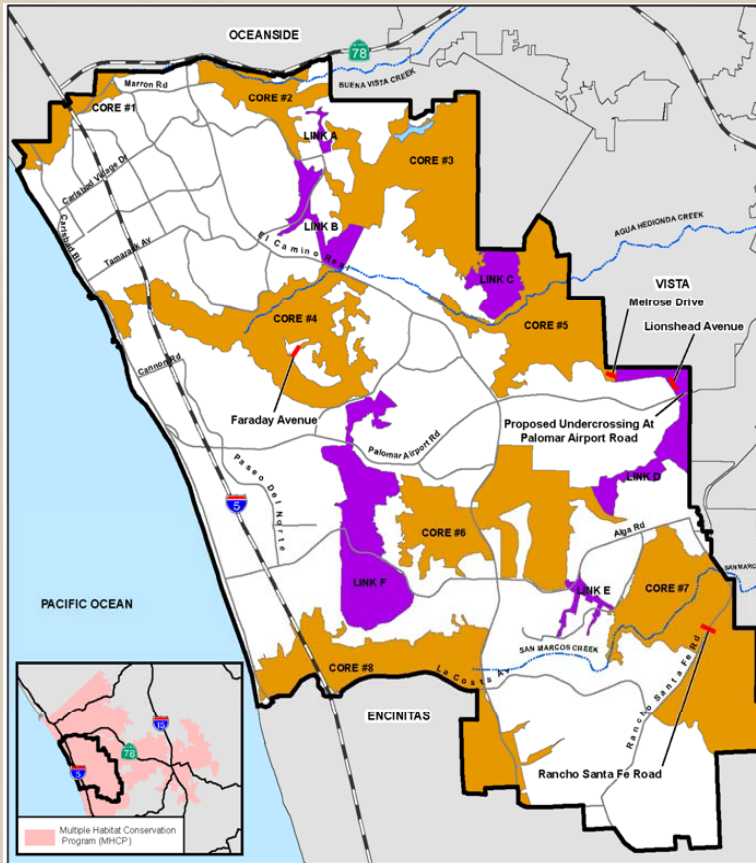


Conditional Coverage

- Six additional plants covered if other MHCP sub-areas plans are approved.
- Ten additional plants and two additional invertebrates (mostly vernal pool species) covered if management and funding provided for already conserved areas.



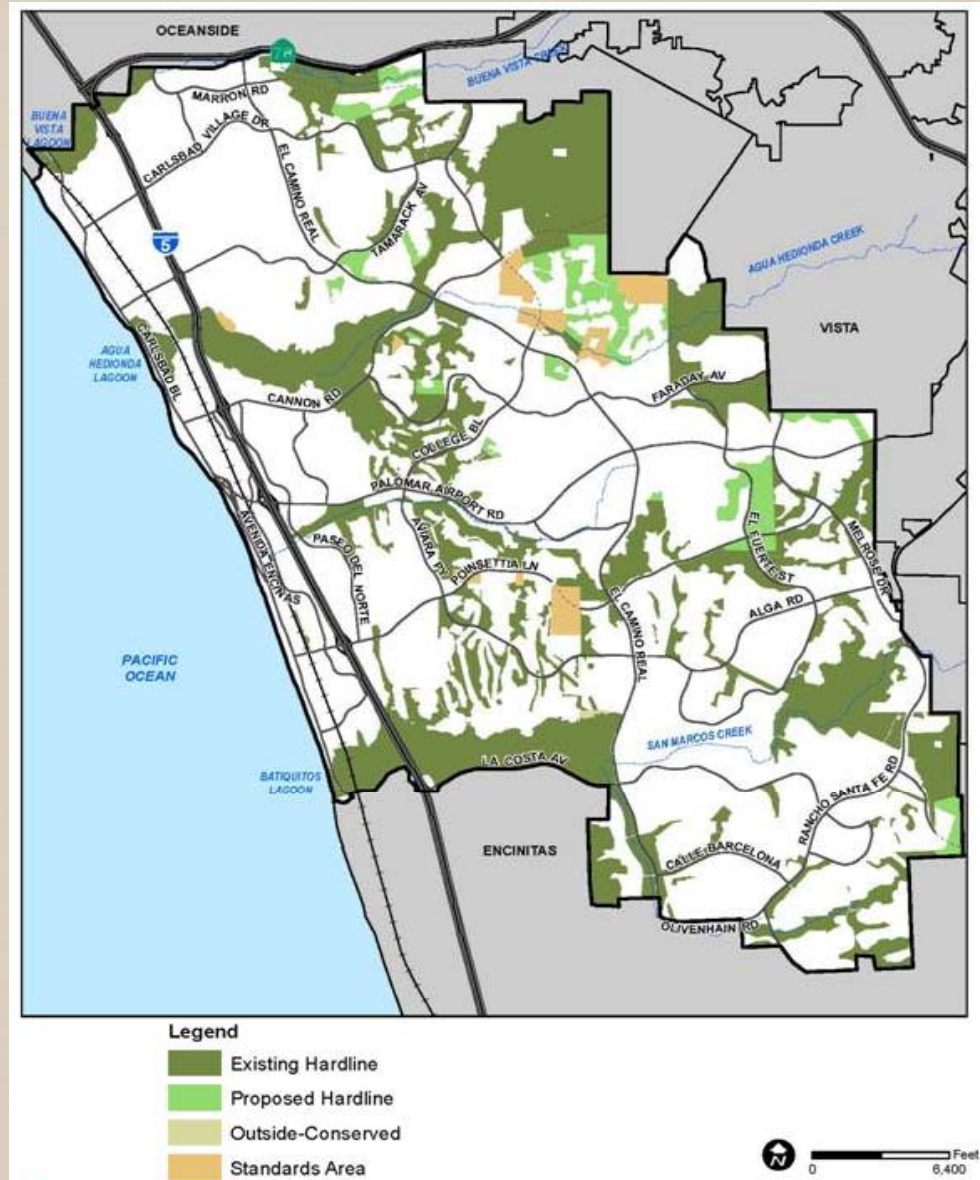
Concept to Preserve Design



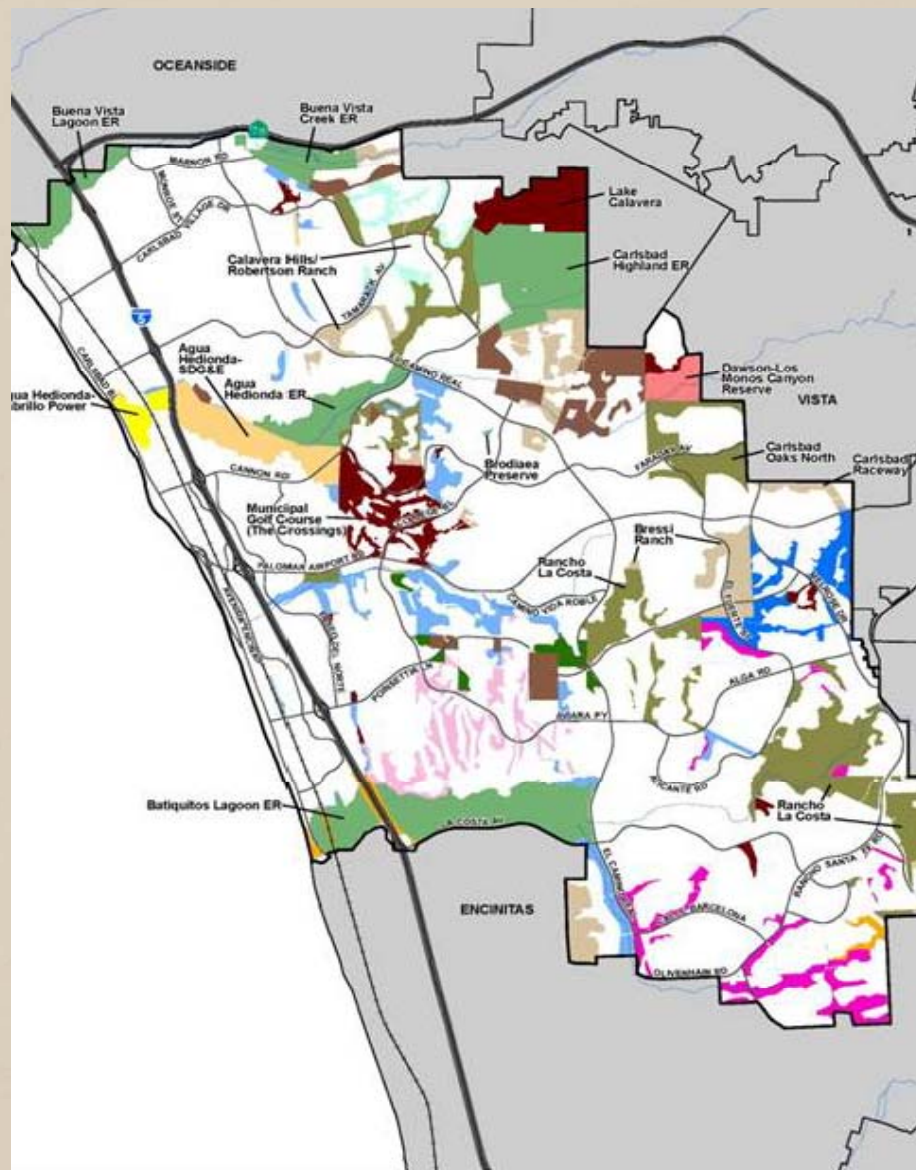
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City of Carlsbad Habitat Management Plan

Preserve assembly as
of May 2013




*HMP preserve
ownership and
management, as of
May 2013*




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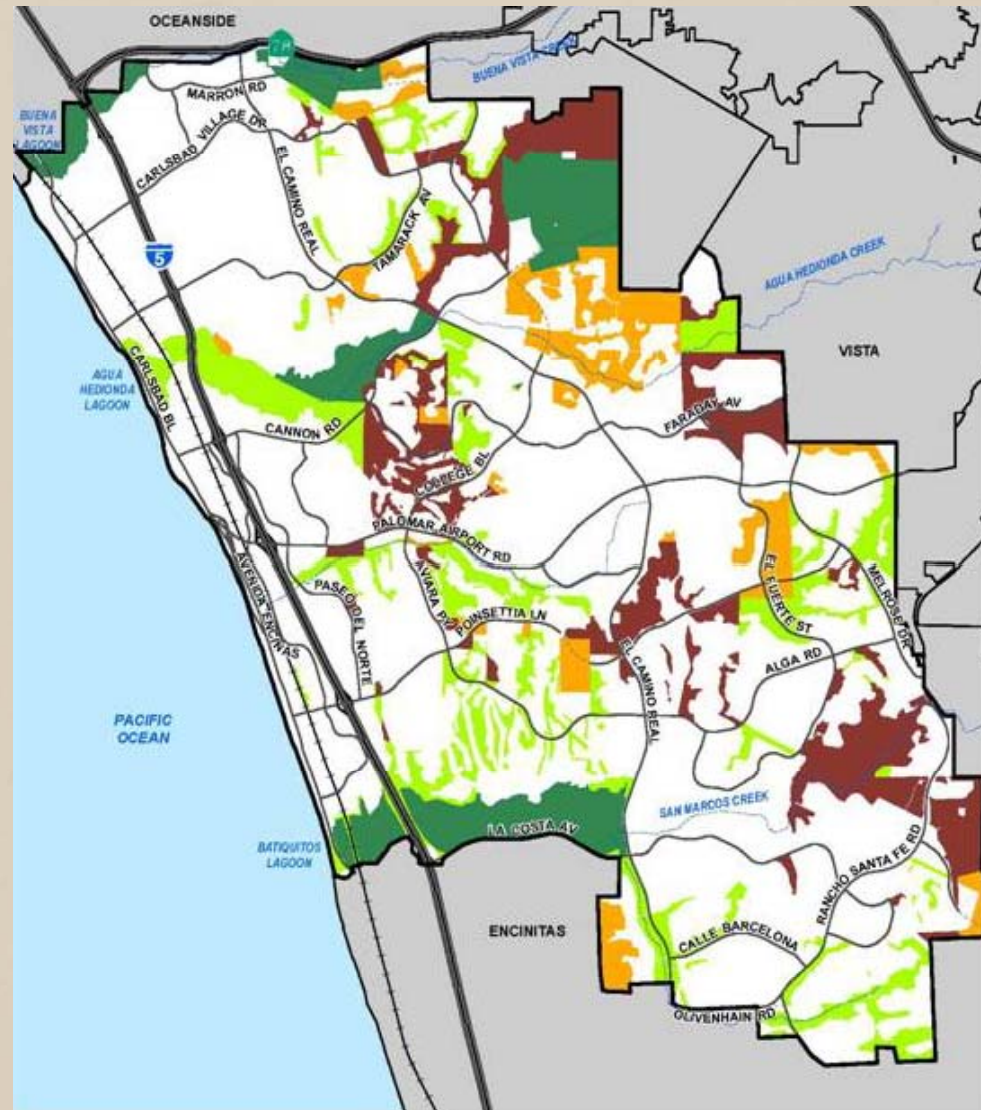
Four Categories of Preserves

 Established private and City-owned preserves

 CDFW Ecological Reserves

 Pre-existing natural open space areas

 Future preserves



How to Make a New Preserve

- Protect the land
 - Conservation Easement/Restrictive Covenant
- Preserve the habitat and species
 - What, Who, and How (PMP/PAR)
- Pay for it in perpetuity
 - Non-wasting endowment



HMP Consistency Process

- Evaluation of development project's consistency conducted during CEQA process.
- Wildlife Agencies receive CEQA documents and project biotechnical report.
- Development project conditions of approval include mitigation and requirement to create preserve, if appropriate.

HMP Compliance Components

- Mitigation for habitat impacts (preserve or fee)
- Coastal Zone standards (if site in Coastal Zone)
- Narrow Endemic standards (if species present)
- Special species standards (if species present)
- Adjacency standards (if next to preserve)
- Preserve requirements (if making preserve)
- LFMZ standards (if HMP Standards Area)

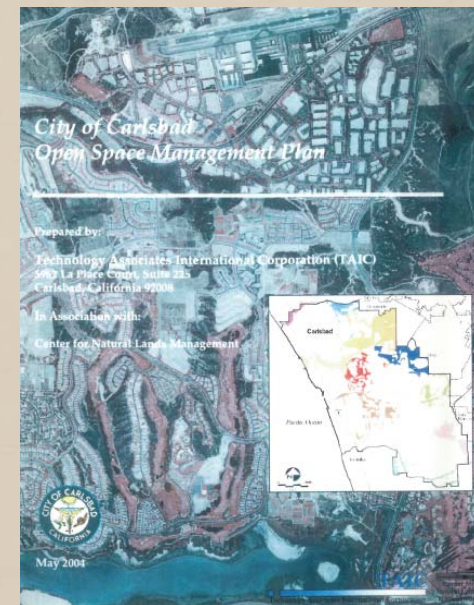
Plan Implementation

- Pre-existing open space areas
- New development dedicates preserve areas
- Annual monitoring of management effectiveness
- Address stressors
- Public outreach



Implementation Documents

- Open Space Management Plan (OSMP)
 - Citywide framework management plan
- HMP Ordinance
- Guidelines
 - Habitat Creation and Restoration
 - Preserve Management
 - Riparian and Wetland Buffers



Implementation Resources

- Staffing
 - HMP Coordinator (city staff)
 - Preserve Steward (city consultant)
 - Preserve Managers (five organizations)
- Coordination
 - Quarterly Preserve Manager meetings
 - Quarterly coordination Wildlife Agencies and Coastal Commission



2012 Management Activities

- MOA between CDFW and Batiquitos Lagoon Foundation for Batiquitos Lagoon ER
- Invasive species mapped and removed
- Erosion control, trail repair, trash removal, public outreach and patrolling
- Installed two cowbird traps at Buena Vista Creek Ecological Reserve – 25 birds captured



2012 Monitoring Activities

- Focused surveys for light-footed clapper rail, Belding's savannah sparrow, California least tern, western snowy plover, and least Bell's vireo
- Continued wildlife movement detection using cameras
- Coastal live oak/gold spotted oak borer

2012 Monitoring Activities

- Rare plant surveys:
 - Orcutt's hazardia
 - San Diego thornmint
 - Thread-leaved brodiaea
 - Blochman's dudleya
 - Wiggins chryptantha
 - South coast saltscale



2013 Management Activities

- Coordinate with CDFW and CNLM for targeted patrolling and enforcement in the Calavera area.
- Coordinate with CWN/SELC for citywide invasive species mapping and prioritization.
- Initial management of newly created preserves.



2013 Monitoring Activities

- Triennial citywide CAGN survey on city, CNLM, CDFW, and HOA preserves, funded by existing budgets.
- Wildlife corridor movement study, partially funded through Local Assistance Grant.
- Continue rare plant surveys and vegetation mapping.

HMP Reporting

- Preserve managers provide preserve-specific annual reports, noting maintenance, management, monitoring, and outreach activities.
- City prepares citywide annual report summarizing preserve activities and HMP compliance (e.g. CAGN core area)



Center for Natural Lands Management

- Preserve management in Carlsbad preceded HMP adoption.
- Now manages over 2,200 acres, including all city preserves, six private preserves, and CDFW's Buena Vista Creek Ecological Reserve.
- Funded through city budget for city preserves and endowments for private/CDFW preserves.



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City Preserves

- Removed 40+ olive trees, 10 pepper trees, 10+ palm trees, 30+ acacia trees, 30+ eucalyptus trees, three acres of artichoke and fennel, and thousands of mustard and other invasive plants.
- Hydroseeded four acres of CSS
- Blocked numerous trails, countless hours of patrolling, enforcement, and public outreach.



La Costa Villages

- Treated thousands of Veldt grass, pepperweed, Ward's weed, fennel, pampas, tamarisk, onion weed, acacia, eucalyptus, olive and pepper trees.
- Enhanced three acres of SWS.
- Developed over 10 miles of scenic trails, installed 20+ kiosks, conducted 50+ public outreach events



Buena Vista Creek ER

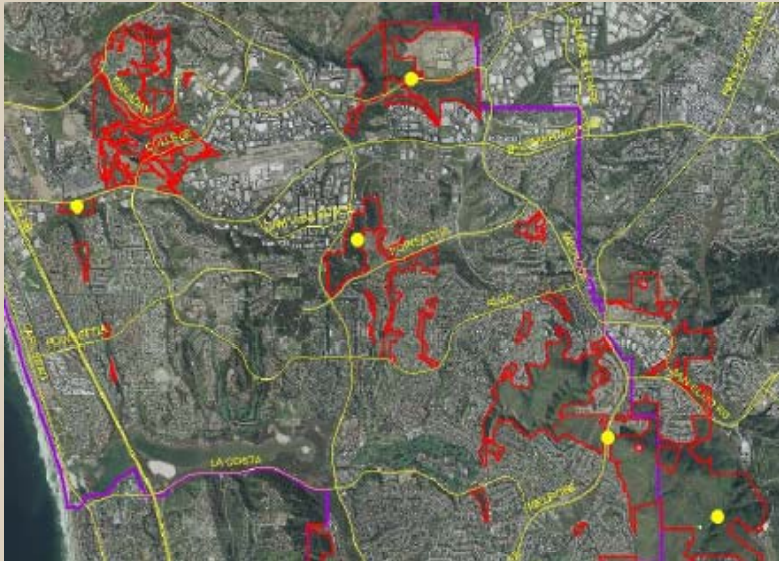
- Treated 10,000's of pampas, fennel, eucalyptus, pepper and fig trees, pepperweed, mustard, artichoke, ivy, walnut, ash, and more.
- Removed numerous long-term encampments.
- Restored 4+ acres of Southern riparian forest and began upland restoration.



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Wildlife Movement Monitoring



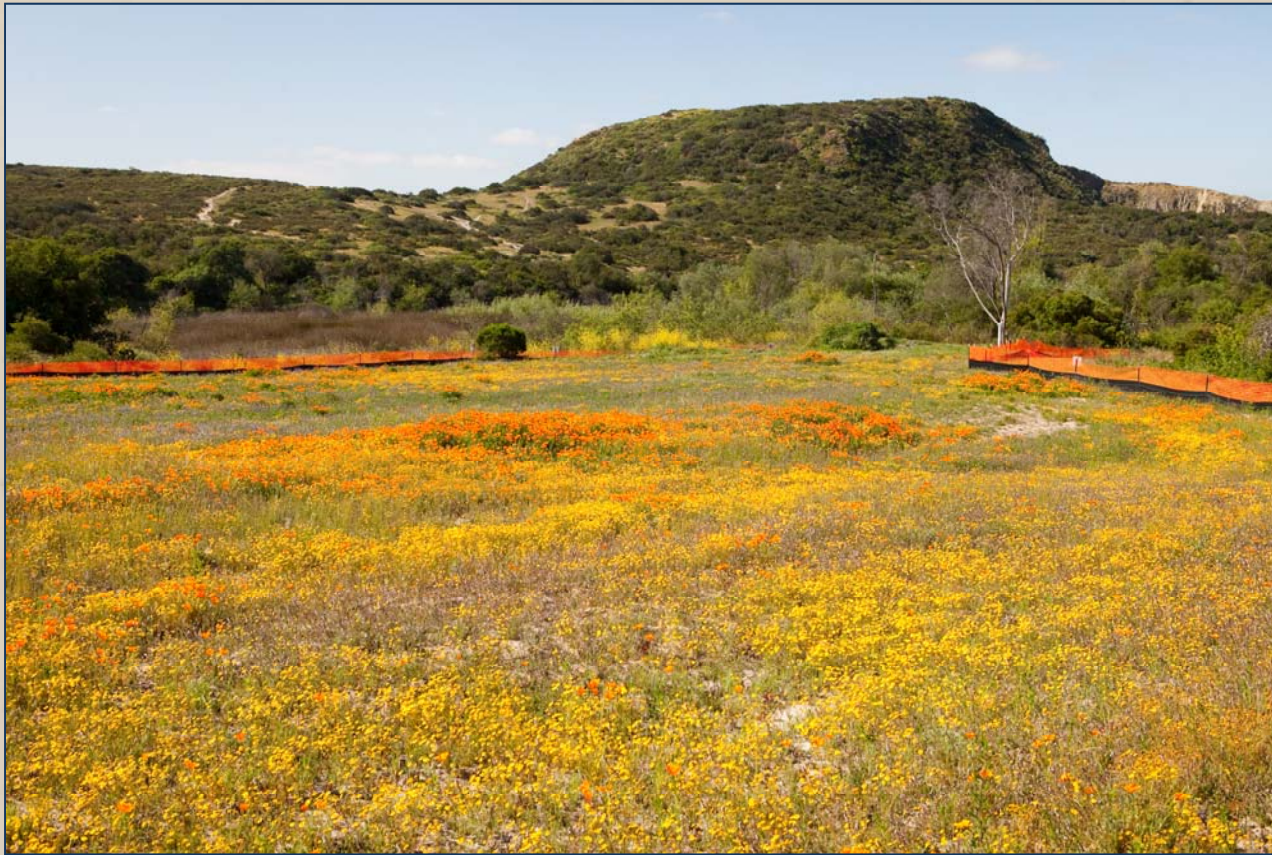
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Summary

- MHCP
 - Highly fragmented area with very detailed monitoring requirements
 - Unknown how conservation goals will be met without other subarea plans
- HMP
 - All about edge effects therefore lots of management needed
 - Monitoring set through individual PMPs



Thank you!



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