

# **HCPA** East Contra Costa County Habitat Conservation Plan Association

## **HCPA Coordination Group Meeting**

Thursday, October 17, 2002  
1 p.m. to 3 p.m.

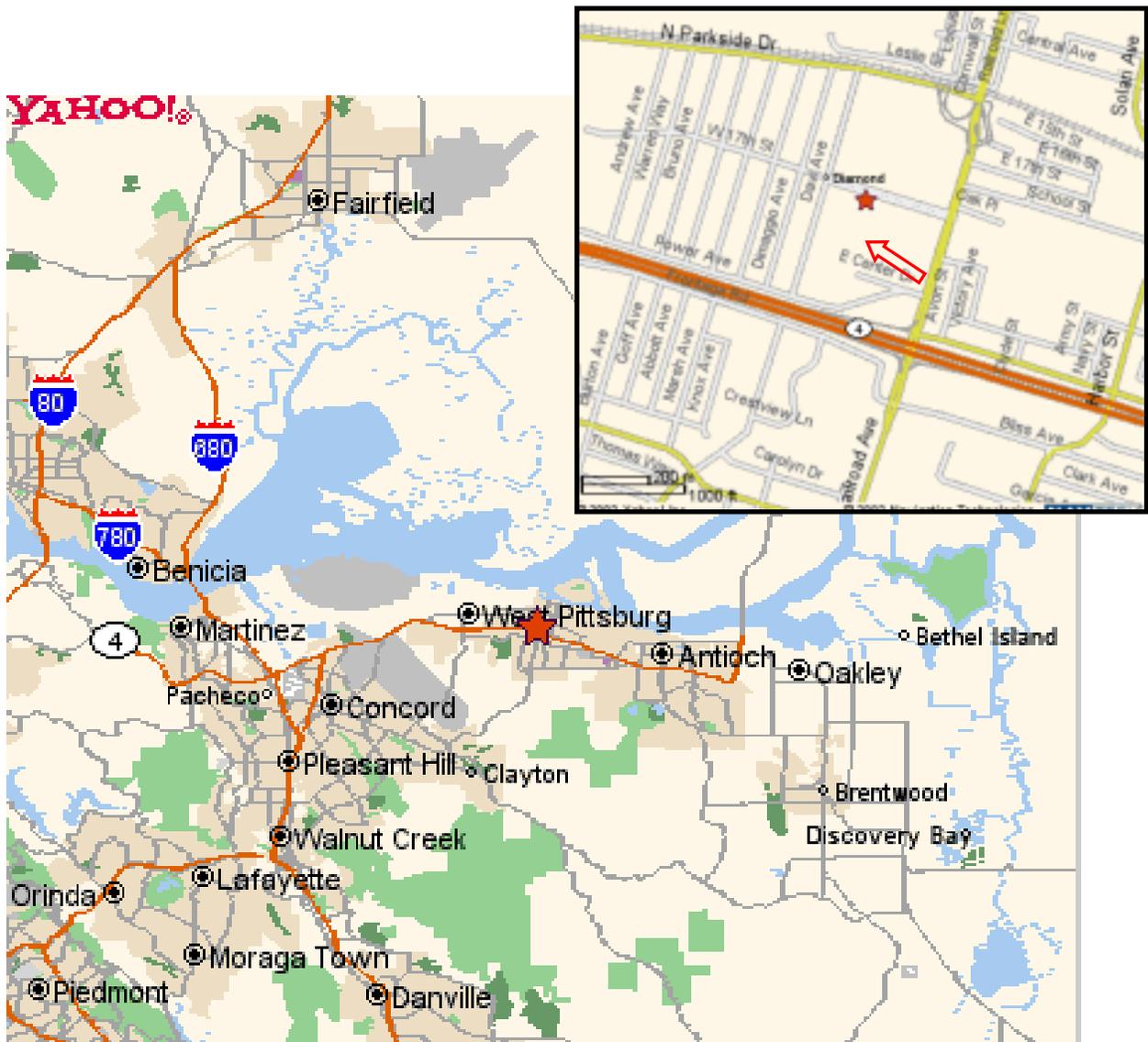
City of Pittsburg Council Chambers  
65 Civic Drive in Pittsburg, 3<sup>rd</sup> Floor  
(see map on reverse)

### **Agenda**

- 1:00 Introductions. Review contents of meeting packet.
- 1:05 Review and approve Draft Meeting Record of the September 19, 2002 Coordination Group meeting.
- 1:10 Update from subcommittee assigned to discuss biological inventory issues in more detail (see draft memo summarizing meeting outcomes).
- 1:30 Continue map-based vs. process-based discussion (see excerpts from other planning efforts that show the approaches they are using).
- 2:20 Continue discussion on the topic of covered activities & consider recommending additional refinements to the list (see Sept. packet). Begin discussion of permit area.
- 2:55 Confirm upcoming meeting dates and review upcoming topics. Upcoming meetings are scheduled as follows for the City of Pittsburg Council Chambers (3<sup>rd</sup> Thursdays):
  - Thursday, November 21, 1 p.m. to 3 p.m.
  - Thursday, December 19, 1 p.m. to 3 p.m. (tentative)
  - (Science Advisory Panel tentatively scheduled to meet again on 12/18)*Upcoming topics include: initial work on economic analysis, Science Panel meeting #2, review of draft alternative conservation strategies.
- 2:55 Public comment.
- 3:00 Adjourn.

*Times are approximate. If you have questions about this agenda or desire additional meeting materials, you may contact John Kopchik of the Contra Costa County Community Development Department at 925-335-1227.*

## Map and Directions to Pittsburg City Hall 65 Civic Drive



### Directions from I-680, Central County

- 1) Take Hwy 4 East toward Antioch/Stockton
- 2) Follow Hwy East over the hill (Willow Pass)
- 3) Exit Railroad Ave. (the 2<sup>nd</sup> exit after the hill)
- 4) At the end of the exit ramp, turn left on Railroad Ave.
- 5) Turn left at the second intersection, East Center Drive (signs for various city offices will also point you this way)
- 6) Immediately bear right into the large parking lot next to City Hall
- 7) Meeting is on the 3<sup>rd</sup> floor

### Directions from Antioch and points east

- 1) Take Hwy 4 West toward Martinez/Richmond
- 2) Exit Railroad Ave.
- 3) At the end of the exit ramp, turn right on Railroad Ave.
- 4) Turn left at the next intersection, East Center Drive (signs for various city offices will also point you this way)
- 5) Immediately bear right into the large parking lot next to City Hall
- 6) Meeting is on the 3<sup>rd</sup> floor

# DRAFT MEETING RECORD

## East Contra Costa County Habitat Conservation Plan Association (HCPA) Coordination Group Meeting

Thursday, September 19, 2002  
1 p.m. to 3 p.m.

City of Pittsburg Council Chambers

**1:00 Welcome and introductions.** Meeting attendees introduced themselves. Coordination Group members in attendance were:

Carol Arnold, CCRC	Sheila Larsen, USFWS
Chris Barton, City of Pittsburg	Suzanne Marr, U.S. EPA
S.F. Galloway (for Gloria Cannon, Mt. Diablo Audubon)	Jody Merriam, Byron MAC
Janice Gan, CA Dept of Fish & Game	Peter Rauch, CA Native Plant Society
Fran Garland, CCWD	John Slaymaker, Greenbelt Alliance
Roberta Goulart, CCC Community Dev.	Nancy Thomas, CCRC
Jim Gwerder, CCC Citizens' Land Alliance	Jay Torres-Muga, the Seeno Companies
Barry Hand, City of Oakley	Kerri Watt, Shea Homes
John Kopchik, CCC Community Dev.	Donna Vingo, CLLA
	David Zippin, Jones & Stokes, Inc

Others in attendance included: John Hopkins, Institute for Ecological Health; Roberta Goulart, CCC Community Dev.; Susan Bainbridge, CA Native Plant Society.

**1:00 Introductions. Review contents of meeting packet.** Participants introduced themselves.

**1:05 Review and approve Draft Meeting Record of the September 19, 2002 Coordination Group meeting.** The Coordination Group agreed on the following modifications to the Draft Meeting record:

- 1) strike sentence "Discussion of items b and c was combined." From page 2, first line under agenda item 1:50 (c);
- 2) insert the words "that participants thought would be useful to share at this time," in the sentence that starts in line 5 on page under agenda item 1:50(c), so that the beginning of that sentence now reads, "He asked for other concerns that participants thought would be useful to share at this time, and individuals suggested the following: the definition of oak savannah..."
- 3) clear up the parenthetical at the end of the sentence discussed in item 2 above by striking the words "for a map highlighting ...(flip charts notes unclear! anyone remember?)" and replacing those words with "that habitat model maps show highways and better separate colors" so that the end of that sentence now reads, "..., and the request that habitat model maps show highways and better separate colors."
- 4) In the 3<sup>rd</sup> line of the top paragraph on the last page, strike the words "and agreed on some suggested refinements." So that sentence now reads "The Coordination Group discussed some of the details."
- 5) In the 4<sup>th</sup> line of the top paragraph on the last page strike the words "agreed to" and replace with the word "proposed" so the beginning of that sentence now reads "The proposed refinements are presented in detail in ..."

The Coordination group approved the meeting record with these changes.

- 1:10 Discuss Coordination Group Work Plan for the next several months.** John Kopchik explained the work plan for the Coordination Group for the next several months using a flipchart with the following meeting dates and topics and listed:

<u>Month</u>	<u>Key topics</u>
October	Map-based vs. Process-based
November	Subcommittee Report/Covered Species/various/science panel
December/Jan.(Feb?)	Alternative Conservation Strategies, Preliminary Econ., Work-to-date

John Kopchik explained that staff intent was to have an extended comment/discussion period on all work to date following the completion the Draft Alternative Conservation Strategies in December. John Kopchik and David Zippin also responded to a number of question concerning the HCPA budget, schedule and grant applications (it was unofficially reported that the HCPA was likely to receive an additional “Section 6” grant of \$160K from the U.S. Fish and Wildlife Service/CA Dept. of Fish and Game, which would bring the HCPA’s committed revenues up to about \$800K). Members asked that a log be kept and circulated of comment letters received so that individuals could seek and read letters of interest to them. Staff agreed to do so and verbally listed the letters that had been received so far on the biological inventory.

- 1:20 Consider draft chapter section on Biological Goals for the East Contra Costa HCP.** David Zippin briefly summarized the Draft Biological Goals section and responded to questions. Individual participants made several suggestions for improving/modifying the content and structure of this draft section, including suggestions that the text of the goals will ultimately need to integrate well with the habitat models and the species profiles, that control of some additional invasive plants should be included in the riparian goals, and that the template language for the second species goal for many species also mention conservation of viable populations.
- 1:40 Continue to review analysis methods that will be used to prepare the HCP: 11 new habitat models for covered species.** David Zippin summarized the 11 new habitat models and any changes to the previous eight.
- 2:05 Update on subcommittee assigned to discuss biological inventory issues in more detail (subcommittee to meet before October Coordination Group meeting).** The subcommittee did not meet yet, but will meet before the October meeting. The Coordination Group agreed to expand the subcommittee’s charge to include not just small scale features, but biological issues in general.
- 2:20 Continue discussion on the topic of covered activities and consider recommending additional refinements to the list. Begin discussion of permit area.** Not discussed.
- 2:55 Confirm upcoming meeting dates and review upcoming topics. Upcoming meetings are scheduled as follows for the City of Pittsburg Council Chambers (3<sup>rd</sup> Thursdays):**  
Thursday, October 17, 1 p.m. to 3 p.m. (tentative)  
Thursday, November 21, 1 p.m. to 3 p.m. (tentative)  
**Upcoming topics include: initial work on economic analysis and development of alternative conservation strategies.**
- 2:55 Public comment.** None.
- 3:00 Adjourn.**

**EAST CONTRA COSTA COUNTY  
HABITAT CONSERVATION PLAN ASSOCIATION (HCPA)**

**DATE:** October 11, 2002  
**TO:** HCPA Coordination Group (CG)  
**FROM:** John Kopchik  
**SUBJECT:** Brief Summary of October 7 subcommittee meeting

---

The CG Subcommittee met October 7 at 2 p.m. at the County Admin. Building in Martinez.  
Attendees included:

Sheila Larsen, USFWS  
John Slaymaker, Greenbelt Alliance  
David Dolter, the Seeno Companies  
Jim Gwerder, Contra Costa Citizens' Land Alliance  
Janice Gan, California Department of Fish and Game  
Nancy Thomas, Contra Costa Resource Conservation District and Marsh Creek  
Watershed Planning Group  
Peter Rauch, California Native Plant Society  
John Kopchik & Abigail Fateman, Contra Costa County

The group reviewed their mandate and launched into a free-flowing, productive (I thought) discussion of biological resources, small scale features, outreach to landowners, willing sellers (will there be any and what happens if there aren't), the pre-project survey process, and other underpinnings of the habitat conservation planning process.

John briefly summarized a table that David Zippin had prepared listing many types of small scale features, comparing surveys of these features from the Los Vaqueros biological work to what was in the HCPA inventory, and evaluating the likely abundance and comprehensive "mapability" of these features. John indicated that some features were so rare that collecting anecdotal data could be useful (this will be done through the Science Advisory Panel), some features could only be identified and factored into the process at permit/acquisition time, and that other features could be added to the inventory if additional funding could be obtained. The group did not discuss the details of the table feature by feature, but did agree on two points:

- 1) that finding additional money and including additional data on small features (in cases where this was feasible) was a good thing;
- 2) that the treatment of small scale features in the various components of the plan would need to be well-documented so that, whether these features were one day added to the inventory or rather dealt with at permit/acquisition time, that the importance of these features did not slip through the cracks

(Above is draft summary prepared by staff. Subcommittee members may wish to suggest modified wording at the CG meeting).

Future subcommittee actions may include another meeting, a field trip, and discussion of funding matters.

**EAST CONTRA COSTA COUNTY  
HABITAT CONSERVATION PLAN ASSOCIATION (HCPA)**

**DATE:** October 11, 2002  
**TO:** HCPA Coordination Group (CG)  
**FROM:** John Kopchik  
**SUBJECT:** Background reading materials on the map-based vs. process-based question: excerpts from other HCP processes and plans

---

A key topic for discussion on October 17 will be question of whether to use a map-based or a process-based approach in developing the HCP/NCCP. This question is germane to the formulation of the Draft Alternative Conservation Strategies document scheduled for completion in December. However, the release of that document will not necessarily commit the HCPA toward one approach or another for the remainder of the planning process. Nevertheless, this will be a big step in the planning process--and is likely to be a hot topic—so some additional background information is in order.

In addition to the map-based vs. process-based memo circulated and discussed previously (and attached again for completeness), we have also included background information from other conservation plans or planning efforts relevant to this subject. Attached materials include the following:

- Excerpts from the approved San Joaquin County Multi-Species Habitat Conservation And Open Space Plan (a process-based plan)
- Excerpts from the Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP) and Natural Communities Conservation Plan (NCCP) website (Riverside County) showing their draft approach (which involves maps to some extent)
- An excerpted figure from the Preliminary Draft Yolo County HCP
- Maps printed from the San Diego Geographic Information Source showing the San Diego Multi-Habitat Planning Area preserve over a parcel data base (they have mapped very precisely)

Staff will make an introductory verbal presentation at the meeting next week that will help to put some of these excerpts into a bit more context. Such additional context is probably useful for understanding these excerpts. If you want to learn more on your own, here are links to the above documents:

San Joaquin: <http://www.sjcog.org>  
Coachella: <http://www.cvag.org/mshcp/index.htm>  
Yolo: <http://www.yolocounty.org/HCP/hcp.htm>  
San Diego: <http://www.sannet.gov/mscp/index.shtml>





## Memorandum

---

Date: July 8, 2002

To: East Contra Costa County HCP Association  
C/o John Kopchik

cc:

From: David Zippin

Subject: **Map-Based vs. Process-Based Plan**

---

One of the key decisions to be made in this process is how to structure the HCP/NCCP. One of the most fundamental choices faced by applicants is whether to develop a map-based plan or a process-based plan. This memorandum explains these two types of plans and outlines the benefits and drawbacks of each approach.

### BACKGROUND

**Pure Map-Based Approach:** A map-based plan is the easiest to understand but often the hardest to develop. In such a plan, the preserves to be created are drawn clearly on map. The map designations determine the application of regulations, fees, land acquisition, restoration, or other elements of the plan. Because all landowners must agree to the designation placed on their lands, purely map-based plans (otherwise known as “hard boundary” plans) are difficult to develop on a large scale and are usually used for HCPs with a single property owner.

**“Fuzzy” Map Approach (Hybrid Approach A):** Another option is to designate on a map broad areas in which preserves are to be assembled. Land within this area is purchased in fee title or as conservation easements from willing sellers. Because not all of the land within the mapped preserve areas can be purchased (i.e., not every landowner will want to sell), the preserves zones are drawn to be larger than required to mitigate for project impacts. In order for the preserves to adequately mitigate project impacts, minimum requirements are set regarding elements such as total preserve size, configuration, and habitat composition. Such plans have components of both map-based and process-based HCPs, because lines are drawn on a map but there is flexibility in how the preserves are assembled. Examples of hybrid HCPs are the San Diego County Multi-Species Conservation Plan (both an HCP and NCCP), and the Natomas Basin HCP in Sacramento and Sutter Counties.

**“Relative Value” Map Approach (Hybrid Approach B):** HCPs can alternatively include a map that broadly categorizes areas for mitigation or land acquisition by their conservation value. This approach has less geographic specificity than Hybrid Approach A. A variety of policies

may be established in the plan relating to this map. For instance, mitigation fees or ratios for an area may vary depending on map categories. The number of conservation credits available to sell per acre can also be related to the map. A map could also identify areas with specific mitigation requirements (e.g., pre-construction surveys). The Kern County Valley Floor HCP (still in progress) proposed such a generalized map-based approach. In that plan, areas would be scored high, medium, and low for conservation value and assigned conservation credits accordingly (i.e., high value areas would receive more conservation credits per acre than low value areas). To receive a permit in the HCP, the project proponent would need to provide or fund the purchase of conservation credits in an amount proportional to amount of credits their project would destroy. Sellers of conservation credits would receive more per acre if their property was high value and less per acre if their property was low value.

The Balcones Canyonlands Conservation Plan in central Texas (a regional HCP) took a similar approach by designating zones on a map of either known occupied habitat of a key covered species (based on field surveys), possible habitat (no surveys conducted but habitat was suitable), or areas not considered to be habitat. Mitigation fees were determined based on the proportion of a parcel within each zone.

**Process-Based Approach:** A purely process-based plan (otherwise known as a policy-based plan) has no map of where preserves will be established or other mitigation accomplished. Instead, the plan outlines a detailed process by which reserves are assembled according to clear criteria. The amount of flexibility in a process-based plan depends on the flexibility of the preserve assembly criteria. For example, criteria could be developed that essentially mandate the acquisition of certain areas within the plan area because of their critical function or unique biological resources. In this way, a process-based plan can provide a degree of certainty in the outcome close to that of a map-based plan without the controversy associated with lines on a map. Alternatively, criteria could be included that specify the general area in which preserves should be assembled (e.g., “grassland habitat north of Hwy X and east of Y City Limits”). An example of a purely process-based HCP is the San Joaquin County Multi-Species Open Space and Conservation Plan.

There are many ways to apply the principles of map-based and process-based approaches to an HCP. For example, maps could be applied to habitat areas or development areas or both. Alternatively, maps could be applied in preserve areas where acquiring certain habitat is critical to the success of the plan, but not in other areas. In other areas there may be more flexibility in meeting the HCP goals. As mentioned previously, maps may also designate zones within an HCP area in which different mitigation ratios, fees, credits, or criteria apply.

### **Benefits and Drawbacks**

Jones & Stokes will be developing up to four alternative conservation strategies for review by the HCPA. One of these strategies will be the “no take” alternative, as required by the U.S. Fish

and Wildlife Service. The other three alternatives will differ in terms of their level of conservation, or they could differ in terms of the structure of the conservation strategy (e.g., map-based or process-based). A purely map-based HCP is probably not practical for this project because of its large scale. However, it would be appropriate for the plan to be either purely process-based or a combination of process-based and map-based. **We are requesting direction from the HCPA as to their preference of a hybrid approach (i.e., contains some map components) versus a purely process-based approach.** If there is no preference, we will develop alternative conservation strategies with a hybrid approach because choosing one approach is more cost effective. A hybrid approach can be more easily converted to a purely policy-based approach than vice-versa. The benefits and drawbacks of each approach are presented in Table 1.

**Table 1.** Benefits and Drawbacks to Hybrid HCP vs. Process-Only HCPs

Type of HCP	Benefits	Drawbacks
Hybrid HCP (some maps)	<ul style="list-style-type: none"> <li>• Greater certainty for all concerned in terms of how the plan will be implemented</li> <li>• May have to provide less mitigation overall due to higher certainty of locations</li> <li>• Potential for fewer pre-construction survey requirements</li> </ul>	<ul style="list-style-type: none"> <li>• May inflate land prices within designated preserve areas if not enough “extra” land is available</li> <li>• Some landowners may see this as added regulation (even though plan is voluntary) or unfair manipulation of land prices</li> <li>• May require higher level of HCP baseline data within preserve boundaries to demonstrate they meet the biological goals of the HCP</li> <li>• Less flexibility to respond to changed circumstances, be these biological or economic<sup>1</sup></li> <li>• Some stakeholders may not accept this approach for political reasons</li> </ul>
Process-only HCP	<ul style="list-style-type: none"> <li>• Avoids controversy associated with lines on a map</li> <li>• Typically requires lower level of HCP baseline data in preserve areas up front because preserve lands can be assessed in detail as they are purchased from willing sellers</li> <li>• More flexibility in implementing HCP</li> </ul>	<ul style="list-style-type: none"> <li>• May have to provide additional mitigation to offset uncertainty in location of final preserve system</li> <li>• Potential for greater pre-construction survey requirements</li> <li>• Less certainty in the outcome of the plan</li> </ul>

Participants in the HCPA process can no doubt suggest other advantages and disadvantages and are invited to do so.

<sup>1</sup> It would be more difficult to implement such a plan on purely “pay-as-you-go basis” if less development occurred than was predicted; matching available funding to acquisition commitments could be more challenging. The Kern County approach is an exception, allowing market forces to play a role, though guiding that market with incentives.



# Excerpt from San Joaquin County MSCP

## 5.4 PRESERVE SELECTION, ACQUISITION, ENHANCEMENT, AND MANAGEMENT

### 5.4.1 OVERVIEW OF PRESERVE SELECTION AND ACQUISITION PROCESS

#### 5.4.1.1 Overview of Process

The JPA shall rank, select, design, and establish Preserve lands via easements or by acquisitions of fee title, in consultation with its TAC and using the following methods and criteria. Monitoring to ensure compliance with the SJMSCP's Preserve design and development strategy shall occur as described in Section 5.9.2.11.

#### STEP 1

Identify potential Preserve lands consistent with the Preserve selection criteria in Section 5.4.4

**9**

#### STEP 2

Identify willing sellers.

**9**

#### STEP 3

Survey and rank potential Preserve lands with willing sellers based upon the criteria in Sections 5.4.4, and 5.4.5, the criteria for conducting pre-acquisition/baseline surveys established in Section 5.9.2.6 and confirmation from the parcel's title insurance policy that encumbrances will not conflict with the land's biological values. Plant, fish or wildlife/habitat value shall be the primary consideration in establishing all priorities for acquisition.

**9**

#### **STEP 4**

The JPA's TAC prepares a land acquisition proposal, including a Preserve Management Plan (see Section 5.4.7.1) for all acquisitions of conservation easement and a draft Preserve Management Plan for acquisitions in fee title and forwards the proposal and Preserve Management Plans to the JPA for review and verification that the proposed land acquisition is consistent with the SJMSCP.

## **9**

#### **STEP 5**

If multiple parcels meet criteria for Preserve lands, are owned by willing sellers, and are of equal habitat value based upon the evaluation conducted in Step 3, then the JPA shall consider the Preserve Priority Criteria established in Section 5.4.5.

## **9**

#### **STEP 6**

The JPA makes a final decision to acquire land and negotiates with the willing seller to complete an easement purchase or sale of the land in fee title. For easement transactions, Preserve Management Plans shall be completed prior to concluding negotiations with the landowners. For fee title acquisitions, Preserve Management Plans may be finalized after the purchase of Preserve lands. Fee and easement purchases shall include the purchase of a title insurance policy.

#### 5.4.1.2 Timing of Preserve Acquisitions

After the first 1,000 acres of development involving SJMSCP Permitted Activities, and so long as the 350 acre jump-start remains in place (Section 8.6) acquisition of Preserve lands must conform to the compensation ratios set forth in Section 4.1 of the SJMSCP; provided, however, that if the JPA possesses funds sufficient to acquire Preserve lands in accordance with the compensation ratio, acquisition may occur up to 24 months from the land Conversion or development requiring compensation. The JPA shall possess sufficient funds for the purposes of this provision if it has allocated sufficient existing funds to purchase Preserve lands at the per acre cost identified in Table 7-1 of the SJMSCP (and adjusted annually for inflation pursuant to SJMSCP

# continued excerpt from San Joaquin plan: narrative

## preserve design criteria

Once SJMSCP Covered Species are linked to their preferred vegetation types and then to habitat types and then to Preserve types within *SJMSCP Index Zones*, Preserve selection criteria were established. These criteria are refined by reflecting species specific-needs as they apply to each *SJMSCP Index Zone*. Species specific needs reflected in Preserve selection criteria include, but are not limited to:

- A. Establishing minimum patch sizes for Preserves based upon the largest patch size required by all of the species linked to a given *SJMSCP Index Zone* (i.e, if eight species are linked to an *SJMSCP Index Zone* and preferred patch sizes for each individual species range from one acre to 250 acres, then Preserve criteria are based upon a 250-acre patch size);
- B. Reflecting the distribution of populations of species across an *SJMSCP Index Zone* if the species has multiple population centers within the County (e.g., the Swainson's hawk has five distinct population centers distributed across the *Central Zone*<sup>21</sup>: the Dry Creek population, North Stockton population, Southeast Stockton population, South Delta population and the South San Joaquin population);
- C. Reflecting the home ranges of species,
- D. Addressing specialized foraging, breeding or sheltering requirements;
- E. Establishing Preserve buffers which consider the sensitivity of species to human intrusion; and
- F. Other special species needs.

In this manner, the acquisition, enhancement, and management of Preserves containing specified habitat types within specified *SJMSCP Index Zones* provides for the conservation of the SJMSCP Covered Species.

### 5.4.4 PRESERVE DESIGN CRITERIA

The SJMSCP Preserve design criteria derived from the process described in Section 5.4.3 are as follows for each *SJMSCP Index Zone*. Letter symbols indicating vegetation types are mapped on the *SJMSCP Vegetation Maps* and are described in greater detail in Section 2.2.1. Monitoring, to ensure that these Preserve Design Criteria are being met, shall be accomplished through the monitoring procedure established in Section 5.9.2.11. Minimum Preserve sizes specified in Section 5.4.4 may be reduced if determined to be biologically beneficial to SJMSCP Covered Species by the JPA with the concurrence of the Permitting Agencies' representatives on the TAC.

#### 5.4.4.1 Primary Zone of the Delta

Two different habitat types (or Preserve Types), supporting two different suites of species are in the *Primary Zone of the Delta*:

---

<sup>21</sup> The South Delta population crosses the common boundary between the Central Zone and the Primary Zone of the Delta in the vicinity of Roberts Island and Fabian Tract.

- A. Drainage ditches (D); aquatic vegetation types except sewage treatment ponds (W, W1-W5, W7-W9); channel island and tule island and mud flat (I and I2); and riparian forest (R types) and scrub (S) vegetation types. Preserves in this category may also include those with shaded riverine aquatic vegetation. The association of these vegetation types within the *Primary Zone of the Delta* is referred to as "Water's Edge Habitats"; and
- B. Row and field crops (C3 and C4) which may be flooded. This association of vegetation types is referred to as "Flooded Field Habitats."

These habitat types will, in turn, be protected under the SJMSCP as Water's Edge Preserves and Flooded Field Preserves pursuant to the criteria listed below.

**5.4.4.1(A) *Primary Zone of the Delta - Water's Edge Preserves***

Two types of Water's Edge Preserves, characterized by their different sizes, a "large area" or "small area", are included so that the ecological requirements of different species may be met. Whenever possible, priority should be given to protection of larger tracts of land because of their ability to support larger and more diverse populations of water-dependent species. In any case, sufficient land will be acquired as Water's Edge Preserves to support an equal or better extent and quality of habitat compared to that which was lost.

The "large area" designation is provided for the California black rail, since it is found only where there are wetlands or marshes that are 20 acres or larger. Such an area will be required for acquisition if impacts of SJMSCP Permitted Activities are known to affect the California black rail (SJMSCP Permitted Activities shall be considered to affect the California black rail if sightings of the rail are made or California black rail calls are heard during preconstruction surveys or if the *SJMSCP GIS Database* contains reliable records indicating the presence of the California black rail on the project site within the past five years).

**A1. Large Area Water's Edge Preserves shall:**

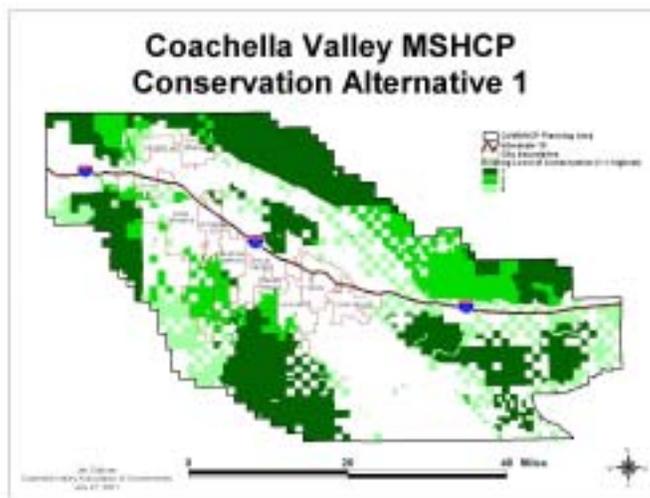
- 1. Be located within the *Primary Zone of the Delta*;
- 2. Include a minimum of 20 acres of existing or restorable instream island, riparian or wetland/marsh vegetation types (buffer lands are not included within the 20 acres);
- 3. Consist of 5 to 10 percent upland habitat that does not flood;
- 4. Provide, in addition to the 20 acres of habitat, to the maximum extent feasible, and as part of the Preserve, a buffer strip of compatible uses or restorable land at least 100 feet in width on the upland perimeter of the 20-acre parcel;
- 5. Give the highest priority during the selection process to land located so that permanent flooding, such as that caused by levee failure, will not result in a loss of habitat values (i.e., located near or above 0' mean sea level to avoid destruction of Preserves due to catastrophic flooding);
- 6. Be located so that it is unnecessary to pump water to maintain habitat values;
- 7. Support only those SJMSCP Covered Species that tolerate flooding if the area floods regularly;
- 8. Be protectable from erosion due to wave action or currents (i.e., land which are compatible with recreational boating and fishing, lands which will not be subject to erosion or where erosion may be controlled at a relatively low cost) if the parcel under consideration is a

**narrative preserve design criteria like the above**   
**continue for another 50+ pages**

## excerpt from Coachella Valley HCP website describing draft alternative conservation strategies

### Alternative 1: Public lands and private conservation lands only alternative

This alternative includes all local, state, and federal agency lands in the Plan area with conservation management levels 1, 2, and 3 that have habitat for the species included in the Plan or have one of the natural communities included in the Plan. Levels 1 and 2 are considered to have adequate conservation management for the species and natural communities included in the Plan. Level 3 areas would require additional management prescriptions to be implemented by the appropriate agency. This alternative also includes private conservation lands that have habitat for the species included in the Plan or have one of the natural communities included in the Plan. No new areas would be acquired for Plan purposes. The local jurisdictions would contribute to the management of the existing conservation areas as mitigation for the habitat loss allowed under the Plan.



Substantial areas would be protected in the mountainous portions of the Plan area: the San Gorgonio Wilderness and Whitewater Canyon ACEC in the San Bernardino Mountains; Mission Creek west of Highway 62, Morongo Canyon ACEC, and Joshua Tree National Park, in the Little San Bernardino Mountains; the Coachella Valley Fringe-toed Lizard Preserve in the Indio Hills; the Mecca Hills Wilderness in the Mecca Hill; the

Orocopia Mountains Wilderness in the Orocopia Mountains; the Santa Rosa Mountains Wilderness, Deep Canyon Desert Research Center, Hidden Palms Ecological Reserve, Carrizo Canyon Ecological Reserve, Magnesia Springs Ecological Reserve and portions of the Santa Rosa Mountains National Scenic Area in the Santa Rosa Mountains; and portions of the Santa Rosa Mountains National Scenic Area, the San Jacinto Wilderness, Mount San Jacinto State Park, and Oasis de los Osos in the San Jacinto Mountains. Some of these areas are well protected, but habitat fragmentation is a problem in other areas where considerable private lands still exist. On the valley floor, the only significant conservation areas would be the three existing Coachella Valley fringe-toed lizard preserves and Dos Palmas ACEC. The sand sources for the fringe-toed lizard preserves are not adequately protected, and, collectively, the valley floor preserves do not provide adequate habitat for most of the species proposed for coverage.

Approximately 50% of the Plan area is either public land with some level of conservation management or private conservation land. While public and private conservation lands in some areas constitute large blocks of habitat, in other areas the habitat on public lands is fragmented by the checkerboard pattern of public and private conservation lands with

non-conservation private lands. The conservation lands are also not distributed in such a way as to provide adequate protection for all types of habitat; nor do these lands include essential ecological processes for some habitats and linkages for wildlife movement between major open space areas.

All lands within the Plan area are assigned a conservation management level between one and four. These levels reflect the extent to which the land is managed for conservation purposes. Conservation management levels are based on a system described by Dr. Reed Noss in a report to the World Wildlife Fund, "Maintaining Ecological Integrity in Representative Reserve Networks" (1994). The conservation management levels and the classification of lands are as follows:

LEVEL 1. The primary management objective is species' habitat protection or preservation of land in its natural state. Management plans or policies governing these areas emphasize maintaining the area in its natural state. Natural disturbance events are either allowed to proceed without interference or are mimicked through management. Most areas managed strictly for wilderness values fall into this category. Light recreation may be permitted.

Big Morongo Canyon Area of Critical Environmental Concern (ACEC)

Carrizo Canyon Ecological Reserve

Coachella Valley Fringe-toed Lizard Preserve (Includes BLM, USFWS, CDFG, State Parks, Center for Natural Lands Management and The Nature Conservancy lands)

Coachella Valley National Wildlife Refuge System (USFWS portion of CVFTL Preserve)

Dos Palmas ACEC

Hidden Palms Ecological Reserve

Joshua Tree National Park Wilderness, Wilderness Study Areas, and Backcountry areas

Magnesia Springs Ecological Reserve

Mecca Hills Wilderness

Mt. San Jacinto State Park Wilderness

Oasis Springs Ecological Reserve

Orocoxia Mountains Wilderness

San Gorgonio Wilderness (BLM)

San Gorgonio Wilderness (USFS)

San Jacinto Wilderness (USFS)

Santa Rosa Mountains Wilderness (BLM)

Santa Rosa Wilderness (USFS)

UC Deep Canyon Desert Research Center

UC Oasis de los Osos

Willow Hole/Edom Hill ACEC and CVFTL Preserve

LEVEL 2. Management objectives include maintenance of natural values, but some permitted uses may degrade natural qualities. Examples include national parks with recreational development, natural areas with livestock grazing, light logging, or other similar uses.

City of Indian Wells/Living Desert (Eisenhower Mountain)  
City of Rancho Mirage/CVMC conservation easement  
Coachella Valley Mountains Conservancy lands  
Friends of the Desert Mountains lands  
Indio Hills Palms unit of the State Parks system  
Joshua Tree National Park (non-wilderness)  
Living Desert (Shumway Ranch)  
Mt. San Jacinto State Park (non-wilderness)  
Salton Sea State Recreation Area  
Santa Rosa Mountains National Scenic Area (public lands)  
Whitewater Canyon ACEC  
Whitewater River/Indian Avenue Preserve (part of Coachella Valley Preserve - owned by C.V. Water District)  
Wildlands Conservancy lands

LEVEL 3. Includes multiple use public lands, managed with some conservation mandate, but permitting potentially damaging activities such as mining and logging.

BLM Multiple Use lands  
City of La Quinta (open space with deed restriction)  
City of Palm Desert (open space with deed restriction)  
City of Palm Springs (open space with deed restriction)  
Desert Water Agency (Snow Creek/Falls Creek)  
Riverside County - Devils Garden  
Riverside County - Fish Traps County Park  
San Bernardino National Forest (non-wilderness)

LEVEL 4. Private or public lands without legal mandates to protect natural qualities and managed primarily for intensive human uses.

Army Corps of Engineers  
Bureau of Reclamation  
City of La Quinta (unrestricted)  
City of Palm Springs (unrestricted)  
Coachella Valley Water District  
Lake Cahuilla County Park (CVWD)  
Metropolitan Water District  
Private  
Riverside County  
State Lands Commission

## Alternative 2: Core Habitat, Essential Ecological Processes, and Linkages



This alternative was developed by the Scientific Advisory. This alternative would establish conservation areas that protect core habitat for the species and natural communities included in the Plan, ecological processes necessary to sustain those areas, and linkages. The conservation areas include the Alternative 1 lands as well as private lands essential for core habitat, ecological processes, and linkages. New management prescriptions are proposed for the

existing public and private conservation lands where needed, and the private lands would be protected through acquisition, general plan policies, and ordinances, and planning tools. Conservation biology principles were used in preserve design to assure long-term viability and adequate conservation for the species and natural communities.

These principles are:

1. Species well distributed across their native range are less susceptible to extinction than species confined to small portions of their range.
2. Large blocks of habitat, containing large populations, are better than small blocks with small populations.
3. Blocks of habitat close together are better than blocks far apart.
4. Habitat in contiguous blocks is better than fragmented habitat.
5. Interconnected blocks of habitat are better than isolated blocks.
6. Blocks of habitat that are roadless or less accessible to humans are better than roaded and accessible habitat blocks. [Note: while some highly sensitive habitat within the conservation areas may be closed to public access, trails and public access will be provided within many of the conservation areas. These will be sited, monitored, and managed to assure conservation of the species and natural communities included in the Plan.]

- This alternative adds to the public and private conservation lands described in the previous alternative by protecting private lands in the mountains necessary to avoid habitat fragmentation, protect essential ecological processes, and maintain linkages. On the valley floor, this alternative builds on the existing Coachella Valley fringe-toed lizard preserves and Dos Palmas ACEC by adding adjacent habitat for the species and natural communities included in the Plan, protecting the essential ecological processes that maintain the habitat areas, and protecting linkages between the major mountains ranges. In addition, this alternative creates new preserve areas in the Snow Creek area, east of Highway 62 along Mission Creek and Morongo Wash, and at the Whitewater River delta at the northwest end of the Salton Sea. These features of the alternative are briefly described as follows:

### Snow Creek Area

- In the San Gorgonio Pass area, the floodplains of the San Gorgonio River and its tributaries are protected as part of the sand source/transport system for the Snow Creek and Whitewater Preserve areas.
- The Snow Creek area south of Highway 111 to toe of slope, including canyon bottoms, between Fingal and Windy Point is designated for conservation. This area protects a significant blowsand ecosystem at the western edge of the Plan area. Most of the Coachella Valley floor was once a vast blowsand ecosystem covering more than 100 square miles. Three blowsand areas were set aside in the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan (CVFTL HCP). This Plan adds Snow Creek as an additional blowsand area. It provides habitat for the Palm Springs pocket mouse, the Palm Springs ground squirrel, Coachella Valley Jerusalem cricket, Coachella giant sand-treader cricket, and the Coachella Valley milk-vetch. The adjacent canyons provide known or potential habitat for least Bell's vireo, southwestern willow flycatcher, yellow warbler, yellow-breasted chat, and summer tanager. Snow Creek also contains potential habitat for Le Conte's thrasher and burrowing owl; there are unconfirmed reports of desert tortoise as well. The Snow Creek area also has habitat occupied by the Coachella Valley fringe-toed lizard. Natural communities present are active desert dunes, ephemeral desert sand fields, stabilized desert sand fields, Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, southern sycamore-alder riparian woodland, Sonoran cottonwood-willow riparian forest, and desert dry wash woodland. The area is also important for neotropical migrants moving through the San Gorgonio Pass.
- Connections would be maintained between areas south of I-10 (Snow Creek and the adjacent San Jacinto Mountains) and areas north of I-10 (the San Gorgonio Wilderness and Whitewater Canyon ACEC in the San Bernardino Mountains)

through two linkages. The western linkage would utilize two large, adjacent culverts under I-10. Both have excellent line of sight, are open in character, and have soft bottoms. On the south side of the freeway, the linkage would front the Snow Creek area. On the north side of the freeway the linkage would be a minimum of a quarter mile wide adjacent to the freeway, expanding rapidly to two miles wide at the mouths of Stubbe Canyon and Cottonwood Canyon. Excluded is an existing residential subdivision north of the Verbenia Avenue freeway exit. The linkage would provide sand transport along Stubbe wash, help maintain predator-prey relationships in the Snow Creek area, and provide for large mammal movement between the San Jacinto and San Bernardino Mountains. There is the potential for desert tortoise to use the culverts. The linkage area also contains potential habitat for Le Conte's thrasher. The eastern linkage would use the Whitewater River undercrossing, a high, open bridge, of I-10. Excluded is the existing residential area of Bonnie Bell, which occupies about 40 acres in Whitewater Canyon. Whitewater Canyon contains the only habitat in the Plan area for the arroyo southwestern toad, as well as habitat for least Bell's vireo, southwestern willow flycatcher, yellow warbler, yellow-breasted chat, and summer tanager. The canyon also provides potential habitat for Le Conte's thrasher, triple-ribbed milkvetch and Little San Bernardino Mountains gilia. The bluffs west of the river contain the highest density habitat known in the Plan area for desert tortoise. Additional tortoise habitat is found on the bluffs east of the river, including the Whitewater Hill area. The Whitewater River Canyon area is linked, in turn, with the Mission Creek area, also part of the proposed conservation area and linkage system, through the intervening range of hills.

#### Whitewater Preserve

- The existing Whitewater Preserve for the Coachella Valley fringe-toed lizard would be included as a conservation area and expanded to the north and east. The northward expansion would add Garnet Hill to the Preserve to include patches of habitat for the flat-tailed horned lizard. The Coachella Valley fringe-toed lizard has also occurred in patchy habitat on Garnet Hill. The area is valuable from a research and long-term management standpoint as it provides an opportunity to monitor the effects of the railroad on movement of these lizard species. The eastward expansion to Gene Autry Trail would include additional habitat for the sand-dependent species and improve preserve design by making the road the preserve boundary.

#### Mission Creek Area

- The Mission Creek area west of Highway 62 contains low density tortoise habitat, and habitat for the Palm Springs pocket mouse, Palm Springs ground squirrel, triple-ribbed milkvetch, least Bell's vireo, southwestern willow flycatcher, yellow warbler, yellow-breasted chat, and summer tanager. The area also provides potential habitat

for Le Conte's thrasher, burrowing owl, and Little San Bernardino Mountains gilia. Natural communities present are Sonoran mixed woody and succulent scrub, Mojavean mixed woody scrub, southern sycamore-alder riparian woodland, Sonoran cottonwood-willow riparian forest, coastal and valley freshwater marsh, and desert dry wash woodland.

- On the east side of Highway 62 is the only significant habitat in the Plan area for Little San Bernardino Mountains gilia. Culverts convey Mission Creek under Highway 62. Both Mission Creek east of the highway and Dry Morongo Wash, which form a series of braided channels in this area, contain gilia habitat. There is also Palm Springs pocket mouse, Palm Springs ground squirrel, and potential Le Conte's thrasher and burrowing owl habitat in this area. There is a record for desert tortoise as well.

#### Willow Hole and Sand Source Area

- Mission Creek and Morongo Wash drain to the southeast and provide an important sand source for the Willow Hole area, the sand source/transport system for which was not protected in the CVFTL HCP. The two channels, which are soft-bottomed, would be protected to maintain their sand transport function. Near approximately 20<sup>th</sup> Avenue the two channels become less well defined and spread across a wider area of sand deposition.
- From the Mission Creek and Morongo Wash sand source areas, the proposed Willow Hole conservation area stretches east through sand dune and creosote bush scrub habitat to the existing Willow Hole/Edom Hill Fringe-toed Lizard Preserve and ACEC. The expanded conservation area provides habitat for Palm Springs pocket mouse, Palm Springs ground squirrel, Coachella Valley grasshopper, Coachella giant sand-treader cricket, Coachella Valley milk vetch, as well as habitat used in migration by riparian bird species. There is also potential habitat for southern yellow bat, flat-tailed horned lizard, burrowing owl and Le Conte's thrasher. The Willow Hole/Edom Hill Preserve also provides habitat for the Coachella Valley fringe-toed lizard. Natural communities present are mesquite hummocks, stabilized and partially stabilized desert sand dunes, desert fan palm oasis woodland, Sonoran creosote bush scrub, and Sonoran mixed woody and succulent scrub.

#### Edom Hill East to Coachella Valley Preserve

- Proposed conservation area lands continue eastward from Willow Hole through the Edom Hill area of the Indio Hills, bounded by Varner Avenue on the south and on the north of them by a wash that enters Willow Hole from the northeast. This area provides additional habitat for the Palm Springs ground squirrel and the Palm Springs pocket mouse as well as potential habitat for flat-tailed horned lizard, burrowing owl, and the Coachella Valley milk vetch. Coachella Valley fringe-toed lizard is also found in patches in this area. This area functions as a linkage between the Willow Hole conservation area and the Coachella Valley Fringe-toed Lizard Preserve (CVFTL Preserve).

#### CVFTL Preserve and Sand Source Area

- West of the CVFTL Preserve is a critical sand source/transport area for the Preserve. Protection of this area is essential to maintain CVFTL Preserve viability for several species to be covered by the Plan, as well as for the Coachella Valley fringe-toed lizard. The sand source/transport lands also provide habitat for species covered by the Plan.
- The expanded CVFTL Preserve will provide habitat for the flat-tailed horned lizard, the Palm Springs ground squirrel, the Palm Springs pocket mouse, southern yellow bat, burrowing owl, Le Conte's thrasher, Coachella giant sand treader cricket, Coachella Valley grasshopper, Coachella Valley milk vetch, and habitat used in migration by least Bell's vireo, southwestern willow flycatcher, summer tanager, yellow-breasted chat, and yellow warbler. There is also a refugium for desert pupfish on the CVFTL Preserve. Natural communities present on the CVFTL Preserve are active desert dunes, active desert sand fields, stabilized desert sand fields, desert fan palm oasis woodland, desert dry wash woodland, mesquite hummocks, Sonoran cottonwood-willow riparian forest, Sonoran mixed woody and succulent scrub, and Sonoran creosote bush scrub.

#### Indio Hills east of the CVFTL Preserve

- To the southeast of the CVFTL Preserve, along the southern base of the Indio Hills, are palm oases that provide habitat for the southern yellow bat and which are used in migration by the riparian bird species. The palm oases and a buffer area out to the transmission lines just south of toe of slope are designated a conservation area. Portions of the southern slopes of the Indio Hills themselves are also identified as conservation areas for the Mecca aster.

### Indio Hills to Joshua Tree National Park Sand Source and Linkage Area

- Under the Plan, a linkage would also be maintained between the Indio Hills and Joshua Tree National Park. This linkage is important to maintain biological diversity in the Indio Hills. This area provides desert tortoise habitat and Palm Springs pocket mouse habitat and functions as a sand source/transport area for the CVFTL Preserve. The area is also part of the watershed and water recharge area for the riparian and palm oases on the CVFTL Preserve. The map currently shows an area approximately twelve miles wide between the Indio Hills and Joshua Tree National Park. Not all of this needs to be conserved to maintain the functionality of the area. The conservation area(s) within this twelve-mile wide area will be more precisely defined before the public review draft is released.

### Joshua Tree National Park

- Joshua Tree National Park. Portions of the National Park that provide habitat or potential habitat for desert tortoise, gray vireo, and riparian bird species are included in the conservation areas. These areas are already protected by the National Park Service.

### Mecca Hills/Orocopia Mountains and Environs

- The Mecca Hills Wilderness and adjoining Orocopia Mountains Wilderness will form a major conservation area under the Plan, providing habitat for Mecca aster, Orocopia sage and desert tortoise. The wilderness areas are predominantly public lands managed by BLM. BLM is also pursuing acquisition of private inholdings. The area between the Mecca Hills and Orocopia Mountains and Joshua Tree National Park is also included because it has been designated as critical desert tortoise habitat by USFWS. Inclusion of this area also provides connections between the Wilderness areas south of I-10 and Joshua Tree National Park. Special emphasis for linkages is placed on the largest culverts, underpasses, and bridges on I-10. The westernmost linkage, which follows Thermal Canyon, also ensures connectivity of habitat for desert tortoise and Palm Springs pocket mouse in the eastern area with habitat to the west along the alluvial fans of the Little San Bernardino Mountains. Natural communities protected in this conservation area are desert dry wash woodland, Sonoran creosote bush scrub, and desert fan palm oasis woodland. This area of the Plan, east of Dillon Road and north of the Coachella Valley Canal, is also included in the Northern and Eastern Colorado Desert Plan (NECO Plan). The NECO Plan and the MSHCP/NCCP will be coordinated to ensure compatibility of the conservation and implementation measures between the two plans.

### Dos Palmas

- South of the Orocopia Mountains, and connected to them, is the Dos Palmas Area of Critical Environmental Concern (ACEC). The ACEC includes large tracts of desert sink scrub, arrowweed scrub, desert fan palm oasis woodland, cismontane alkali marsh, mesquite bosque, and mesquite hummocks. Dos Palmas provides habitat for southern yellow bat, desert pupfish, Yuma clapper rail, California black rail, flat-tailed horned lizard, and Orocopia sage, as well as habitat used in migration by least Bell's vireo, southwestern willow flycatcher, yellow warbler, and yellow-breasted chat. What is believed to be Palm Springs pocket mouse was trapped at Dos Palmas in the spring of 1999 by Shana Dodd. Tests to confirm that the subspecies caught was *bangsi* are planned. There are also records for the Palm Springs ground squirrel in this area. There is also potential habitat for burrowing owl, crissal thrasher, and Le Conte's thrasher. The Plan also calls for expanding the ACEC by adding nearly 2,000 acres of habitat that is especially valuable for the flat-tailed horned lizard on the southern boundary of the ACEC.

### Northwest End of the Salton Sea

- A new conservation area would be established at the northwest end of the Salton Sea. This conservation area would provide habitat for desert pupfish, Yuma clapper rail, California black rail, burrowing owl, and breeding habitat for the yellow-breasted chat. The area is also important habitat used in migration by least Bell's vireo, southwestern willow flycatcher, and yellow warbler. Natural communities in this proposed conservation area are desert saltbush scrub, desert sink scrub, Sonoran cottonwood-willow riparian forest, coastal and valley freshwater marsh, and mesquite hummocks. In addition to a conservation area in the Whitewater River delta area and along the western edge of the Sea (excluding Torres Martinez Indian Reservation land), the Whitewater River channel, between Monroe Avenue and the Sea, will have its riparian habitat enhanced through an agreement with the Coachella Valley Water District. The agreement will provide for maintenance of the channel in sections with a five-year interval between vegetation removal in each section. This maximizes the length of time the riparian vegetation is allowed to grow before it is removed to maintain the flood capacity of the channel. Implementation of the Plan will also include a pilot project to create permanent riparian nodes adjacent to the channel using water diverted from the channel.

### Casey's June Beetle Habitat

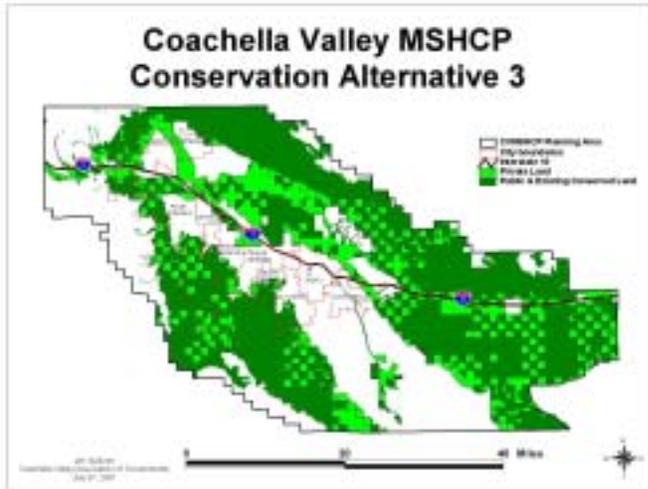
- A small area in the mouth of Palm Canyon may also be protected as a conservation area for the Casey's June beetle. A portion of the known habitat for this species is on the Agua Caliente Indian Reservation and the remainder is on private land. It is not

clear at present whether sufficient habitat can be protected to obtain coverage for this species under the Plan.

### Santa Rosa and San Jacinto Mountains

The final conservation area is the Santa Rosa and San Jacinto Mountains, including undeveloped canyon mouths and alluvial fans. Because of the conservation needs of the peninsular bighorn sheep, virtually all of its current and the potential habitat needed for species recovery would be protected under the Plan. Only fringe areas of habitat that have already been impacted are not proposed for conservation. Riparian areas within the canyons that provide habitat for the least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, yellow warbler, and summer tanager are also included in the proposed conservation area. Other species to be covered under the Plan that occur in the mountains in the same area as the peninsular bighorn sheep are southern yellow bat, desert slender salamander, and desert tortoise. Gray vireo and *euphilotes enoptes cryptorufes* occur at higher elevations above bighorn sheep habitat, and their habitat is also included in the conservation area. Natural communities that would be conserved are Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, semi-desert chaparral, upper Sonoran mixed chaparral, redshank chaparral, Peninsular juniper woodland and scrub, desert dry wash woodland, desert fan palm oasis woodland, Sonoran cottonwood-willow riparian forest, and southern sycamore-alder riparian woodland. It should be noted that the Agua Caliente Indian Reservation and the Santa Rosa Indian Reservation occur within the mountains. Reservation lands will not be included in the Plan for coverage purposes. The Agua Caliente band of Cahuilla Indians is preparing a MSHCP for its reservation lands. Every effort will be made to coordinate the Agua Caliente MSHCP with this Plan

### Alternative 3: Expanded Conservation Alternative



This alternative expands alternative 2 by including the high conservation acreage alternative areas and additional areas that were recommended for further consideration by USFWS and DFG. The areas included in this alternative that are additional to those included in Alternative 2 are:

#### Expanded Snow Creek Area

The area between I-10 and Highway 111 west of the Whitewater River. This provides additional habitat for the Palm Springs pocket mouse, Palm Springs ground squirrel, and Coachella Valley milk vetch, and potential habitat for the burrowing owl.

#### Expanded Mission Creek Area

The alluvial fan area south of Mission Creek and west of Highway 62. This area may provide very low-density habitat for desert tortoise and potential habitat for Le Conte's thrasher and burrowing owl.

#### Expanded Whitewater Preserve Area

- The recharge basins along the Whitewater River south of I-10 and north of Highway 111. The concern is that the basins may be blocking sand transport for the Whitewater Preserve.

#### Expanded Willow Hole and Sand Source Area

- The 100 year floodplain between Mission Creek and Morongo Wash. This area was suggested to enhance sand transport and to provide a potential wildlife movement corridor between the Mission Creek conservation area and the Willow Hole conservation area.

#### Flat-top Mountain and Dune Area North of I-10

- The Flat-top Mountain area as additional habitat for Palm Springs ground squirrel, Palm Springs pocket mouse, burrowing owl, Le Conte's thrasher, flat-tailed horned lizard, Coachella giant sand treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley grasshopper, and Coachella Valley milk vetch; and as a potential sand source/transport for the Stebbin's dune area at the northern base of Flat-top. value as habitat for the Coachella Valley milk vetch, and the Coachella giant sand treader cricket, as well as for the Coachella Valley fringe-toed lizard.
- The area between Date Palm and the extension of Duval Road, north of I-10 and south of Varner Road as an active sand field providing habitat for Palm Springs ground squirrel, Palm Springs pocket mouse, burrowing owl, flat-tailed horned lizard, Coachella giant sand treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley grasshopper, and Coachella Valley milk vetch.

#### Big Dune South of I-10

- Approximately 400 acres east from Gene Autry Trail and south of I-10, as habitat for Palm Springs ground squirrel, Palm Springs pocket mouse, burrowing owl, flat-tailed horned lizard, Coachella giant sand-treader cricket, Coachella Valley Jerusalem cricket, and Coachella Valley milk vetch.
- The remainder of the "big dune" area south of I-10 and mostly east of Date Palm Drive, as habitat for the Palm Springs ground squirrel, Palm Springs pocket mouse, burrowing owl, flat-tailed horned lizard, Coachella giant sand-treader cricket, and Coachella Valley milk vetch.

#### East End of the Indio Hills

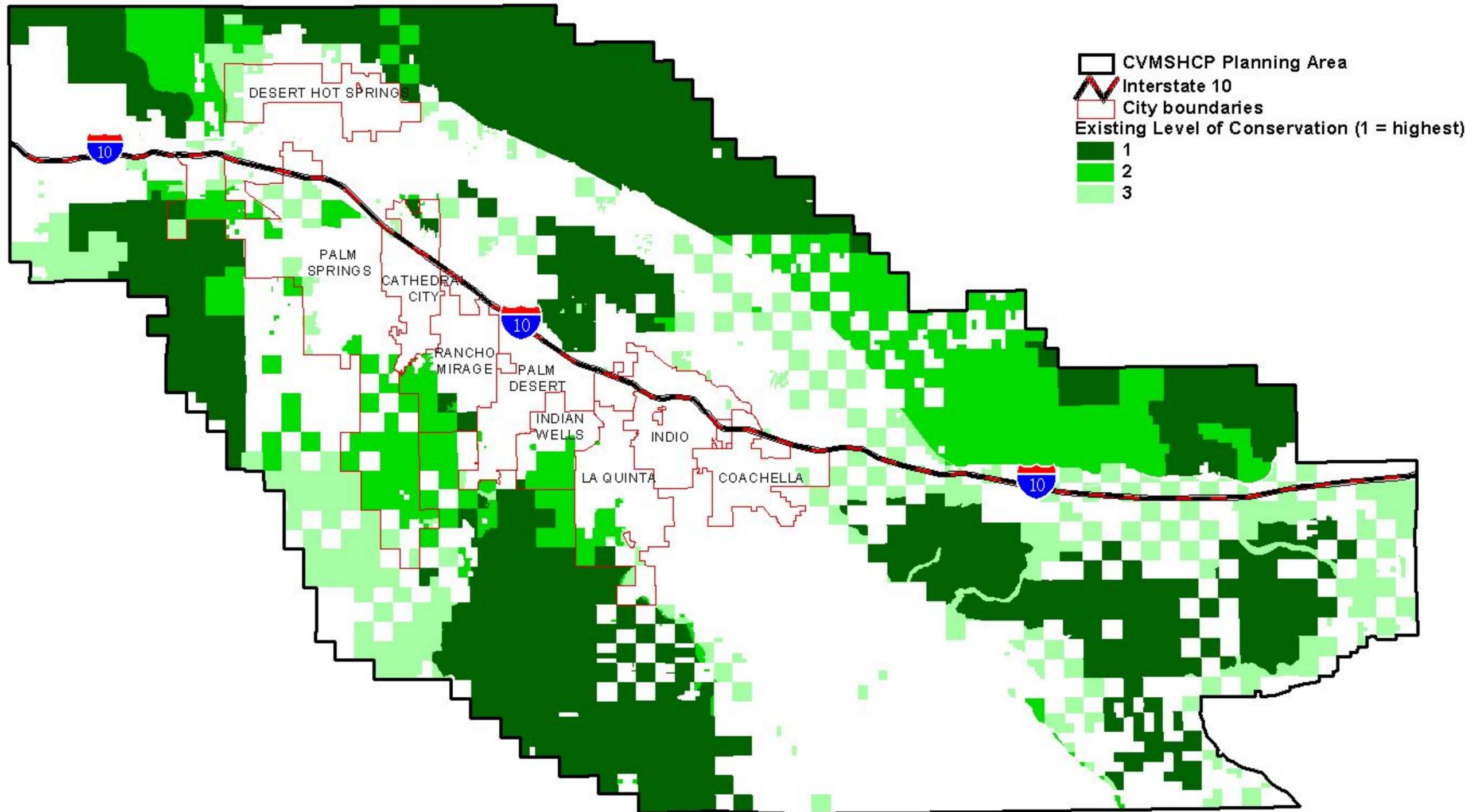
- East of the CVFTL Preserve to the east end of the Indio Hills by Dillon Road for Palm Springs ground squirrel, Palm Springs pocket mouse, burrowing owl, Le Conte's thrasher, crissal thrasher, flat-tailed horned lizard, Coachella giant sand treader cricket, Coachella Valley grasshopper, Coachella Valley milk vetch, the riparian bird species in migration, and the mesquite hummocks natural community. For the dunes at the east end of the Indio Hills the sand sources from the north side of

the Indio Hills and the Little San Bernardino Mountains would also need to be protected under this alternative.

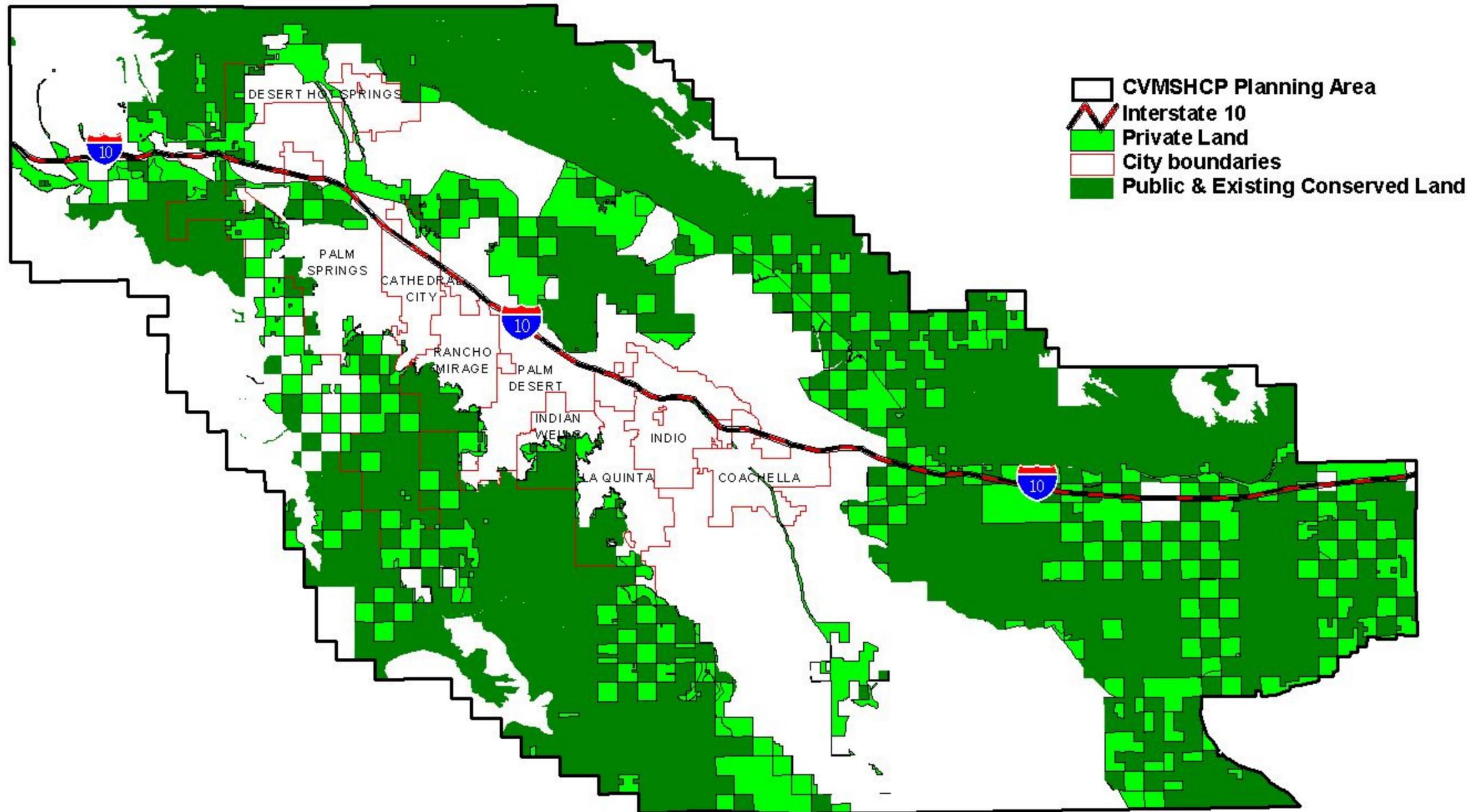
Coachella Canal Linkage

- A one mile wide corridor along the Coachella Valley Canal to provide a wildlife linkage between the east end of the Indio Hills and the Dos Palmas ACEC, primarily for the Palm Springs pocket mouse and the Palm Springs ground squirrel.

# Coachella Valley MSHCP Conservation Alternative 1



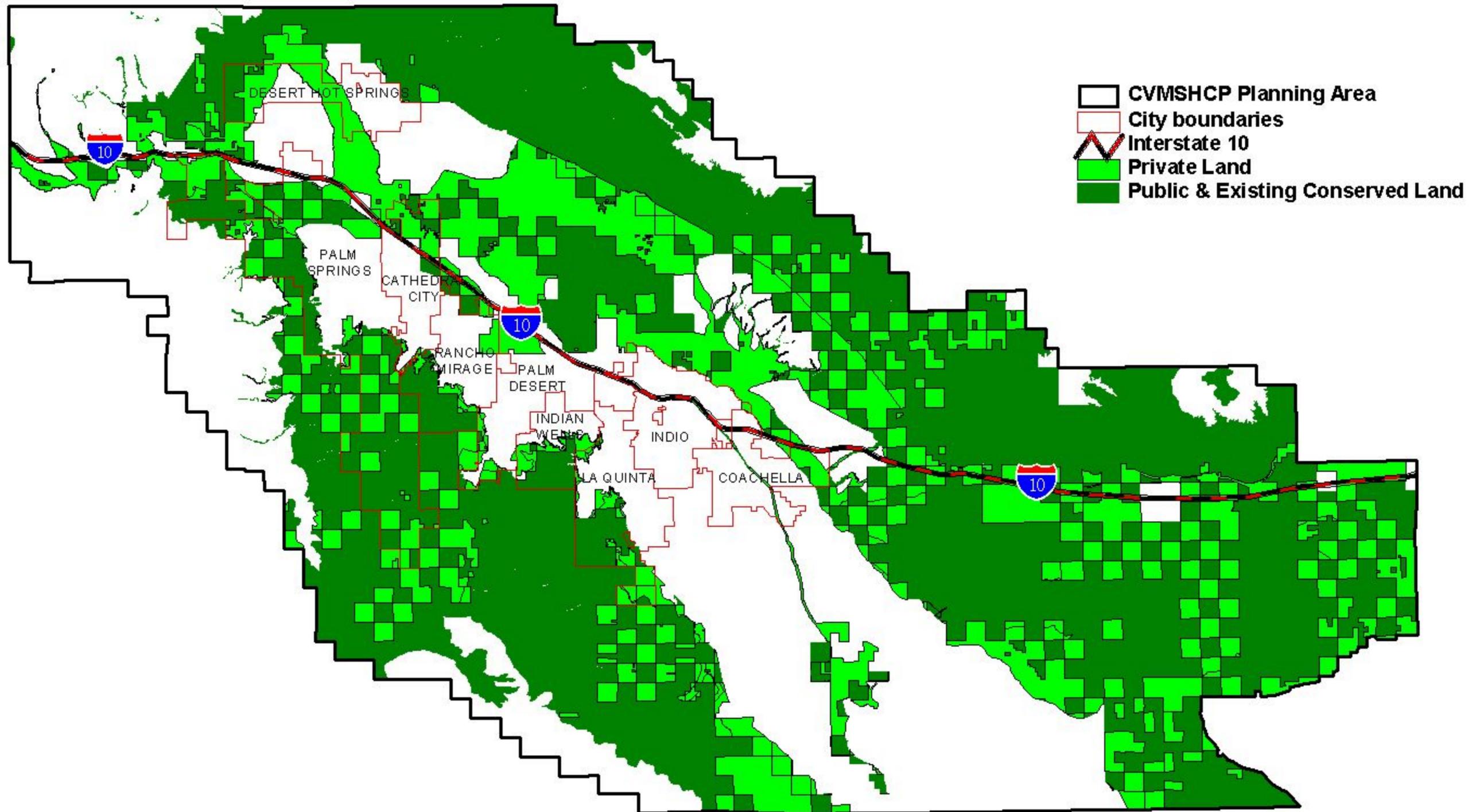
# Coachella Valley MSHCP Conservation Alternative 2



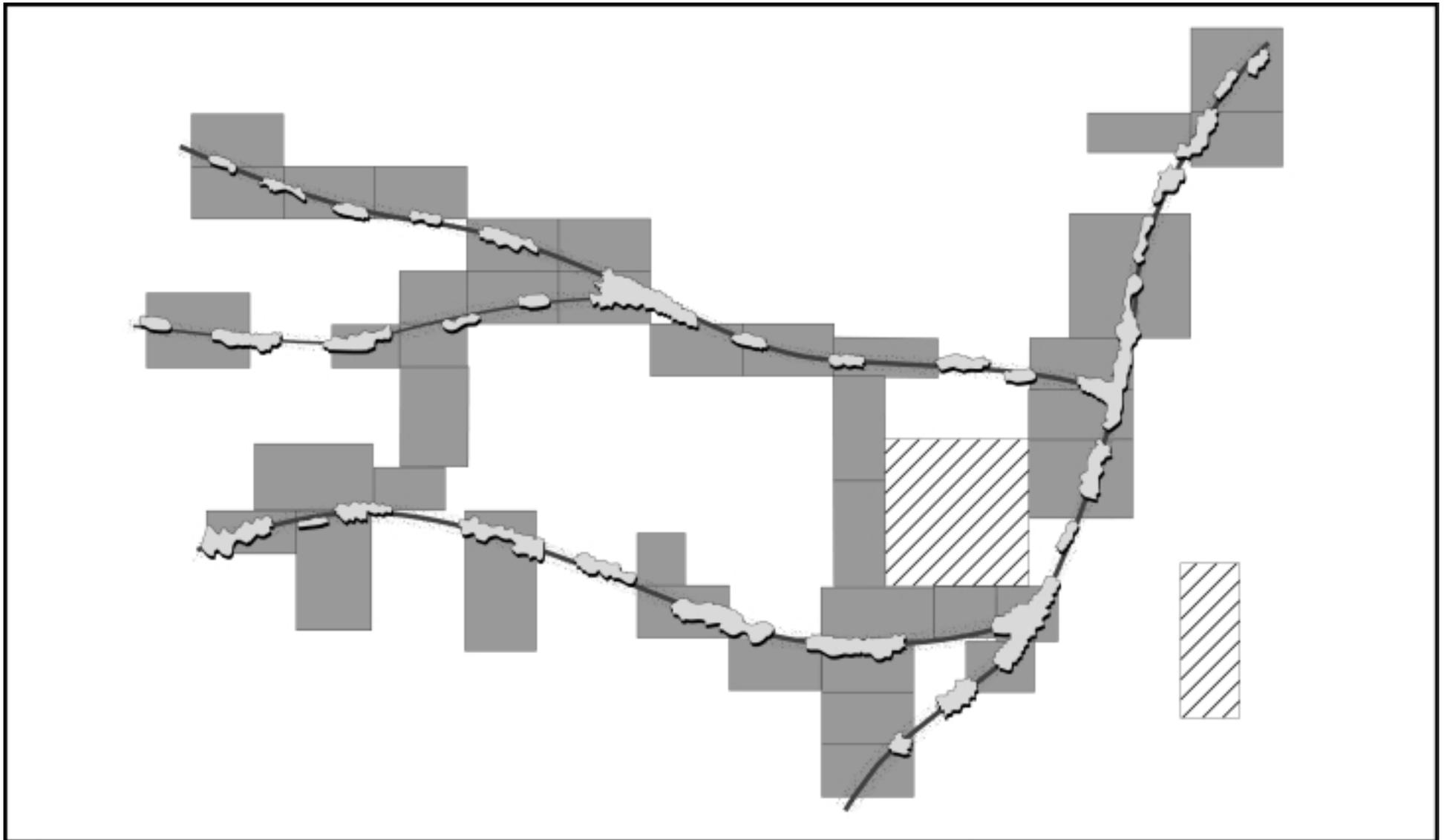
0 20 40 Miles



# Coachella Valley MSHCP Conservation Alternative 3







Streamcourses



Riparian Corridors



Trees/Treelines



Easement  
Enhancement Parcels



Habitat Specialist Parcels



**Figure 6-1**

**Hypothetical Configuration  
Of Mitigation Lands**



# screen print from SanGIS showing parcel level detail in San Diego MHCP

The screenshot displays the SanGIS web application interface within a Microsoft Internet Explorer browser window. The browser's address bar shows the URL <http://www.sangis.org/isa/mnatsangis/>. The main map area shows a parcel-level view with a large area highlighted in green, representing the MSCP (Municipal Service Center Plan). The map includes various features such as parcels, freeways, and roads. A legend on the right side of the map identifies the following features:

- County
- Municipal
- Freeways
- Parcels
- MSCP

Below the legend, there is a list of map layers with checkboxes:

- 200ft Topo
- Earthquake Faults
- Road Names
- Freeways
- Major Roads
- Roads
- Parcels
- Fema Panel
- MSCP
- Water Bodies
- Flood Plains
- VEGETATION

At the bottom of the map area, there are navigation buttons: **ZoomIn**, **ZoomOut**, **Identity**, and **FullView**. Below the map, there is a search interface with buttons for **Search by APN**, **Search by Address**, **Find Intersection**, **Select Map Type**, **Main Menu**, **Help**, and **Address Locator**. A small inset map of San Diego is visible in the bottom left corner of the map area. The browser's status bar at the bottom shows the time as 4:24 PM.