METHODS AND MATERIALS FOR RESERVE DESIGN CRITERIA SUN CITY/MENIFEE AREA PLAN (*Preliminary Draft – Subject to Change*)

This section describes the method and materials used for reserve design for the Sun City/Menifee Area Plan. The approach primarily is map-based and incorporates available maps and databases, as described below. Anecdotal information from the habitat assessment workshops and communications with the wildlife agencies regarding biological issues, conservation priorities and specific project information are important components of the methodology. The following description of the reserve design methods is intended to provide the reader with the information necessary to understand and independently reconstruct the reserve design process.

➤ Identify Preliminary Planning Species

Several wildlife and plant species were identified to provide guidelines for reserve design. Listed species known from the Sun City/Menifee Area Plan were the highest priority, with reserve design issues species such as Bell's sage sparrow (requires large patches of undisturbed habitat) and bobcat (wildlife corridors) also as high priority. The following species were chosen to provide reserve design guidance:

- Long-spined spineflower (requires southern needle grass grassland and coastal sage scrub or chaparral)
- Palmer's grappling hook (requires southern needle grass grassland and coastal sage scrub or chaparral)
- Small flowered morning glory (requires southern needle grass grassland and coastal sage scrub or chaparral)
- Payson's jewelflower (sandy granitic soils within chaparral and coastal sage scrub)
- Munz's onion (clay soils in grassy openings in coastal sage scrub, chaparral and valley and foothill grasslands)
- Bell's sage sparrow (requires large patches of undisturbed habitat)
- California gnatcatcher (requires coastal sage scrub patches)
- Grasshopper sparrow (requires coastal sage scrub patches)
- Rufous-crowned sparrow
- Northern harrier
- Burrowing owl (requires open grassland habitats)

- Riverside fairy shrimp
- Quino checkerspot butterfly (requires coastal sage scrub, grassland and agricultural lands)
- Bobcat
- Western spadefoot toad

➤ Identify Key Biological Issues/Areas

Since the MSHCP planning process began in spring of 1999, information regarding biological resources and land planning issues has become available through the species and habitat assessment workshops, the MSHCP sensitive species database and meetings with the wildlife agencies. The following resource issues, in no particular order of priority, were identified for the Sun City/Menifee Area Plan.

1. Warm Springs Creek. Species of concern include bobcat and western spadefoot toad. Provide for and maintain a continuous linkage along Warm Springs Creek between the Southwestern Riverside County Multi-Species Reserve and a proposed new habitat conservation area in French Valley east of I-215 and south of Scott Road. Conservation efforts should focus on the wetlands and connected upland components within and adjacent to the creek recognizing that a continuous wetland connection along Warm Springs Creek does not currently exist. It is recognized that road crossings of this linkage currently are present and new road crossings may be constructed in the future. It is recognized that this linkage is currently strained.

2. French Valley. Species of concern include the California gnatcatcher, Bell's sage sparrow, quino checkerspot butterfly, Long-spined spineflower, Palmer's grappling hook, Small flowered morning glory, Payson's jewelflower and Munz's onion. It is recognized that the proposed core habitat area within French Valley is located within the SWAP, however conservation of uplands along the northern edge of this proposed core are important. Conservation of upland habitats including coastal sage scrub, annual grassland and agricultural lands is important for this proposed core. Conservation of auld clays in this area will assist in conservation for Munz's onion. Other microhabitats associated with plants listed above should be conserved.

3. Lower Sedco Hills. Species of concern include the California gnatcatcher,

northern harrier, Munz's onion, long spined spine flower, Palmer's grappling hook, small flowered-morning glory and Payson's jewelflower. A conservation goal of 850 to 870 acres is anticipated for this area. This area is important for provision of a connection between the Southwestern Riverside County Multi Species Reserve and the Sedco Hills/Estelle Mountains via the French Valley core. Core populations of gnatacatchers existing in both of these areas, connection between core populations is essential for genetic diversity. This area is also important for plant species which require micro habitats.

➤ More General Reserve Configuration and Management Issues

The NCCP biological tenets for reserve design and other general design considerations also were incorporated:

1. Representativeness of the Riverside Lowlands Bioregion.

2. Representativeness of annual grassland, chaparral and coastal sage scrub habitat.

3. Habitat contiguity

4. Large, intact habitat blocks

5. Minimize edge effects

6. Consideration of "directional" influences such as migration/dispersal patterns, rain, wind, fire (Habitat Assessment Workshop).

7. Special microhabitats (Habitat Assessment Workshop)

8. Minimum 1.5 mile dispersal patches for gnatcatchers (Habitat Assessment Workshop)

9. Ridgelines and riparian areas for movement of bobcats and other large mammals (Habitat Assessment Workshops).

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➤ Map Resources

The following map resources were used in the design of the hardline reserve:

- Vegetation map (3,000 scale)
- Selected planning species (3,000 scale acetate)
- Coastal sage scrub habitat Quality Map (3,000 scale)
- Conceptual conservation scenario (3,000 scale acetate)
- DOQQs
- Parcel Map (3,000 scale)
- Critical Habitat Map for the California gnatcatcher and Quino checkerspot butterfly
- Existing reserves, conservation banks, BLM lands, other public lands (3,000 scale acetate)
- Soils Map (Knecht 1971)
  - ! Mapping of Domino, Traver, Willows, Altamont, Auld, Bosanko and Porterville series;
  - ! Edge area map

➤ Methods

Drawing the hardline reserve generally involved the following steps:

1. Compile map/data sources
2. Compile area plan biological issues based on preliminary mapping, criteria analyses, personal communication with agencies.
3. Rough sketch of reserve boundaries based on map data combined with identified key biological issues, without reserves, etc.
4. Refine map based on other constraints and opportunities
   - Existing and planned land uses;
   - Parcel maps;
   - Existing conserved habitat and
   - Minimization of edge effect

Following drawing of the conceptual hardline reserve, the reserve within the plan area was

overlain with USGS quarter sections (i.e., 160-acre cells) and a spreadsheet matrix was created that included an arbitrary quadrat cell identification number, USGS section, USGS quarter section and township and range such that each cell is an area in real space with a legal description, but without being tied to a specific county assessor's legal parcel. Criteria were written for each cell or cell grouping to describe the anticipated conservation within each cell or cell grouping based on the conceptual hardline reserve. The criteria statements first describe the geographic configuration of a fraction of percent of a cell grouping anticipated to be conserved. A brief statement of the biological resources toward which conservation efforts in the particular cell or cell grouping should be directed is also provided. The criteria matrix for the Sun City/Menifee Area Plan is presented in *Table* _____. As noted in the footnote to the criteria matrix presented in *Table* ___, the criteria are based on the existing MSHCP vegetation map. It is understood that biological conditions are dynamic and will change. In cases where the vegetation description does not match existing conditions at the time of reserve assembly, the generalized geographic description for each cell should take precedence to ensure that the overall reserve ultimately assembled conforms with the target acreage and generalized configuration analyzed in the MSHCP.

➤ Results

To further guide long-term assembly and monitoring efforts, the Sun City/Menifee Area Plan was divided up into two subunits. Subunit boundaries are depicted on the cells and cell groupings map display (Figure ___). For each subunit, target conservation acreages have been established along with a description of the general conservation objectives for each subunit. The general conservation objectives are based on the planning species and biological issues for the Sun City/Meniffee Area Plan presented in the Methods section. Target acreages and conservation objectives for the subunits within the Sun City/Menifee Area Plan are presented below.

Subunit 1: Warm Springs Creek/French Valley Area

Target acreage range for new conservation on private lands within subunit:	570 - 590 acres
Cells and cell groups included within subunit:	Subunit A, 4970, 5072, 5168, 5163, 5065

Conservation objectives within subunit:

- Key planning species within this subunit include Munz's onion, long-spined spineflower, Palmer's grappling hook, small flowered morning glory, Payson's jewelflower, California gnatcatcher, Bell's sage sparrow, grasshopper sparrow, rufous-crowned sparrow, burrowing owl, quino checkerspot butterfly, western spadefoot toad.

- Important biological issues within this subunit include:
  - Maintain habitat connectivity of Warm Springs Creek to facilitate wildlife movement and dispersal and conservation of wetland species.
  - Conserve large, intact blocks of grasslands and coastal sage scrub in conjunction with the French Valley Core located to the south.

Subunit 2: Lower Sedco Hills

Target acreage range for new conservation on private lands within subunit: 850 - 870 acres

Cells and cell groups included within subunit: Cell Group B

Conservation objectives within subunit:

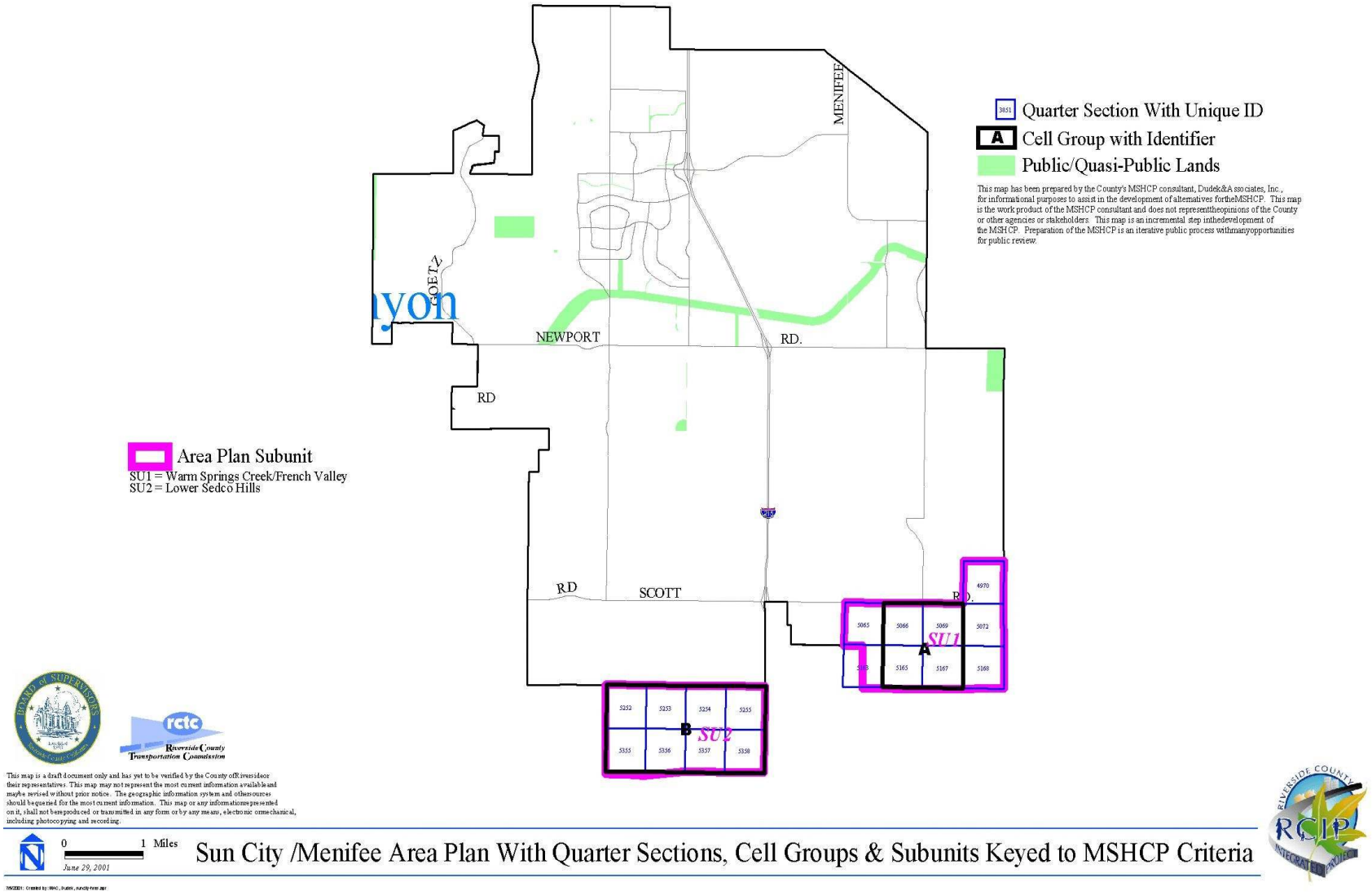
- Key planning species within subunit include long-spined spineflower, Bell's sage sparrow, California gnatcatcher, grasshopper sparrow, northern harrier, golden eagle (nest sites), loggerhead shrike, white-faced ibis, Stephens' kangaroo rat, bobcat, black-tailed jackrabbit, San Diego pocket mouse, desert woodrat, southern grasshopper mouse, California newt, San Diego horned lizard, spadefoot toad, red-diamond rattlesnake, orange-throated whiptail

- Important biological issues within this subunit include:
  - Maintain a robust habitat connection between the French Valley Area and the Estelle Mountain/Lake Mathews Reserve area.
  - Establish core reserves for California gnatcatcher

- Maintain microhabitats (sandy-granitic soils within chaparral and coastal sage scrub) for Payson's jewelflower
- Maintain wetlands for purposes of connection and wildlife dispersal as well as wetland species conservation.

CELL GROUP	QUARTER SECTION	SECTION	TOWNSHIP/ RANGE	QUARTER SECTION	CRITERIA
SUBUNIT 1: WARM SPRINGS CREEK					
A	5066	24	T6S-R3W	NE	Conserve the southern half of the cell less the southeastern, northeastern and southeastern quarters of the southeastern quarter of Quarter Section #5167 and less the southeastern quarter of the southeastern quarter of the southeastern quarter of Quarter Section #5165. Also conserve the southeastern quarter of Quarter Section #5069 and the southwestern quarter of Quarter Section 5066. Conservation shall focus on the Warm Springs Creek drainage and associated riparian habitat. In addition grassland and coastal sage scrub habitats surrounding this drainage shall be conserved. Connection to habitats to the east, west, south and southwest shall be maintained.
A	5069	19	T6S-R2W	NW	
A	5165	24	T6S-R3W	SE	
A	5167	19	T6S-R2W	SW	
	4970	18	T6S-R2W	SE	Conserve 50% of the southern half of the southeastern quarter of the cell. Conservation shall focus on Warm Springs Creek and associated riparian habitat. Uplands located adjacent to the drainage shall also be conserved. This upland buffer shall consist of annual grasslands. Connection to drainage habitat to the south and east shall be maintained.
	5065	24	T6S-R3W	NW	Conserve 80% of the southern half of the cell. Conservation shall focus on th mosaic of coastal sage scrub and grassland habitat in addition to the agricultural lands located to the east and north of these natural habitats. Connection to habitats to the south, southeast and east shall be maintained.
	5072	19	T6S-R2W	NE	Conserve 50% of the cell. Conservation shall focus on riparian habitat associated with Warm Springs Creek. Uplands abutting both sides of the creek shall be conserved. Upland conservation shall consist of grassland and coastal sage scrub habitat. Connection to drainage and adjacent uplands to the south, southwest, west and north shall be maintained.
	5163	24	T6S-R3W	SW	Conserve 75% of the eastern half of the cell. Conservation shall focus on a mosaic of coastal sage scrub and grassland habitat in addition to agricultural lands. Connection to habitats conserved to the north, northeast, west, southeast and south shall be maintained.
	5168	19	T6S-R2W	SE	Conserve the northwestern quarter of the cell less the eastern two thirds of the southern half of the northwestern quarter of the cell. Also conserve the northwestern quarter of the northwestern quarter of the northeastern quarter of the cell. Conservation shall consist of coastal sage scrub and grassland habitats. Connection to Warm Springs Creek and other associated habitats to the north, northwest and west shall be maintained.

CELL GROUP	QUARTER SECTION	SECTION	TOWNSHIP/ RANGE	QUARTER SECTION	CRITERIA
SUBUNIT 2: LOWER SEDCO HILLS					
B	5252	28	T6S-R3W	NW	Conserve the southern half of the cell less the northwestern quarter of Quarter Section #5355. Also conserve the southeastern one third of Quarter Section #5252, the southern half of Quarter Section #5253, the southern half of Quarter Section #5254 in addition to the southern half of the northeastern quarter of this Quarter Section and the southern half of Quarter Section #5255 less the northwestern quarter of the southeastern quarter and the northeastern quarter of the southwestern quarter of the Quarter Section. Conservation shall focus on preserving the myriad of coastal sage scrub, grassland and chaparral habitat in addition to the woodland and forest and riparian habitat associated with drainage areas. Connection to habitats to the east, southeast, south, southwest and west shall remain.
B	5253	28	T6S-R3W	NE	
B	5254	27	T6S-R3W	NW	
B	5255	27	T6S-R3W	NE	
B	5355	28	T6S-R3W	SW	
B	5356	28	T6S-R3W	SE	
B	5357	27	T6S-R3W	SW	
B	5358	27	T6S-R3W	SE	


Quarter Section With Unique ID
A Cell Group with Identifier
Public/Quasi-Public Lands
This map has been prepared by the County's MSHCP consultant, Dudek&Associates, Inc., for informational purposes to assist in the development of alternatives fortheMSHCP. This map is the work product of the MSHCP consultant and does not representtheopinions of the County or other agencies or stakeholders. This map is an incremental step inthedevelopment of the MSHCP. Preparation of the MSHCP is an iterative public process withmanyopportunities for public review.
Area Plan Subunit
SU1 = Warm Springs Creek/French Valley
SU2 = Lower Sedco Hills
MENIFEE
NEWPORT
RD.
RD
SCOTT
SU1
SU2
A
B
This map is a draft document only and has yet to be verified by the County ofRiversideor their representatives. This map may not represent the most current information available and maybe revised without prior notice. The geographic information system and othersources should bequeried for the most current information. This map or any informationpresented on it, shall not bereproduced or transmitted in any form or by any means, electronic ormechanical, including photocopying and recording.
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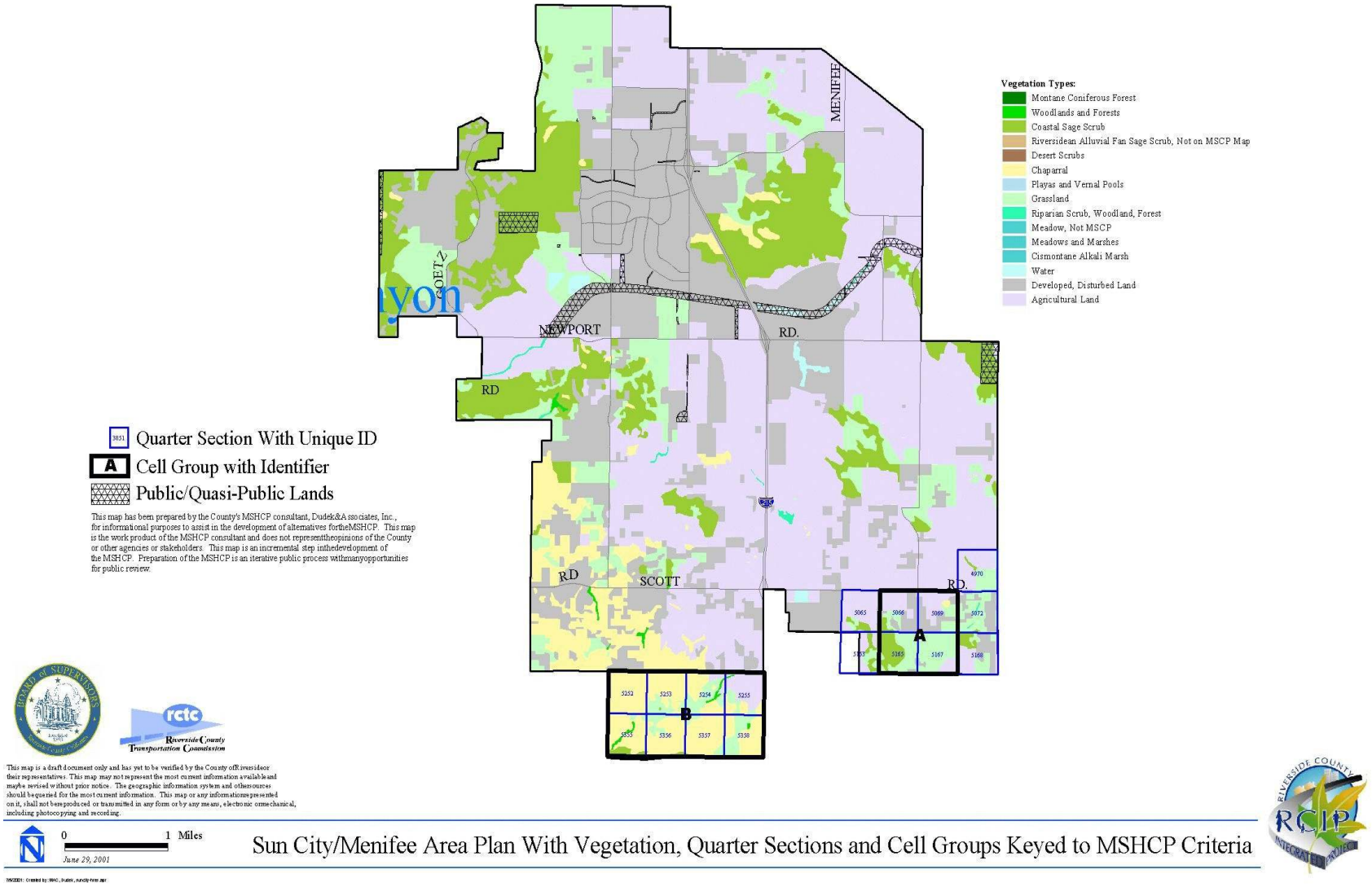
June 29, 2001
Sun City /Menifee Area Plan With Quarter Sections, Cell Groups & Subunits Keyed to MSHCP Criteria


Vegetation Types:
Montane Coniferous Forest
Woodlands and Forests
Coastal Sage Scrub
Riversidean Alluvial Fan Sage Scrub, Not on MSCP Map
Desert Scrubs
Chaparral
Playas and Vernal Pools
Grassland
Riparian Scrub, Woodland, Forest
Meadow, Not MSCP
Meadows and Marshes
Cismontane Alkali Marsh
Water
Developed, Disturbed Land
Agricultural Land
MENIFEE
NEWPORT
RD.
RD
SCOTT
A
B
Quarter Section With Unique ID
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Riverside County Transportation Commission
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RCIP