

# METHODS AND MATERIALS FOR RESERVE DESIGN CRITERIA ◆ THE PASS AREA PLAN *(Preliminary Draft - Subject to Change)*

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This section describes the method and materials used for reserve design for The Pass 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 Pass 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:

- Payson's jewelflower (requires sandy-granitic soils in pinyon-juniper woodland, chaparral and coastal sage scrub)
- Munz's onion (clay soil affiliation)
- Munz's mariposa lily (forests, chaparral and lower montane coniferous forests)
- Jaeger's milk vetch (coastal sage scrub, chaparral, valley and foothill grassland and cismontane woodland habitats)
- California bedstraw (granitic or sandy soils at the ecotone of chaparral and lower montane coniferous forest and lower edge of pine belt)
- Parry's spine flower
- Slender-horned spineflower (sandy soils in mature alluvial fan sage scrub or chamise chaparral)
- California bedstraw (chaparral and montane coniferous forest ecotone habitat affiliation)
- Mojave tarplant (alluvial fan sage scrub habitats)
- Engelmann oak (oak woodland and riparian/oak woodland habitat affiliation)

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- Bell's sage sparrow (large patches of undisturbed coastal sage scrub habitat)
- Mountain quail (montane coniferous forests and valleys)
- Least Bell's vireo
- Los Angeles pocket mouse
- Stephens' kangaroo rat (open habitat, sparse coastal sage scrub/grasslands with sandy loam and loamy soils with low clay content)
- granite spiny lizard (requires coastal sage scrub habitat with granite outcrops)

### ➤ 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 wildlife agencies. The following resource issues, in no particular order of priority, were identified for The Pass Area Plan:

1. Banning/Beaumont to Idyllwild Highway Area: Species within this area include mountain quail, badger, black-tailed jackrabbit, brush rabbit, coyote, desert woodrat, long-tailed weasel, Los Angeles pocket mouse, San Diego pocket mouse, southern grasshopper mouse (potential), mountain lion (potential), California pocket mouse (potential), bobcat (potential), spadefoot toad, legless lizard, rosy boa, red-diamond rattlesnake, banded gecko, ringneck snake, San Diego horned lizard, granite spiny lizard, orange-throated whiptail, San Bernardino mountain kingsnake, two-striped garter snake, sage brush lizard, granite night lizard, leopard lizard and glossy snake. A conservation goal of 1,560 to 1,600 acres has been set for this area. Focus of conservation in this area is to maintain a connection between the northern and southern units of the San Bernardino National Forest. It is recognized that connections between these two areas may exist east of the MSHCP Plan Area. Existing intact blocks of scrub habitat should contribute to the linkage design in this area. This area supports a wide variety of reptile species.
2. San Gorgonio River: Species within this area include Cooper's hawk, black-tailed jackrabbit, coyote, long-tailed weasel, badger (potential), bobcat (potential), brush rabbit (potential), California pocket mouse (potential), desert woodrat (potential), Los Angeles pocket mouse (potential), mountain lion (potential), San Diego pocket mouse (potential), southern grasshopper mouse (potential), Stephens' kangaroo rat

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(potential), spadefoot toad, red-diamond rattlesnake, banded gecko, San Diego horned lizard and orange-throated whiptail. A conservation goal of 1,200 to 1,230 acres shall be obtained for this area. The focus of this area is to maintain a connection from the northern section of the San Bernardino National Forest to the Coachella Valley Multi Species planning area. The river provides a sand source for conservation of species in the Coachella Valley. It should be noted that a complete connection from the National Forest to the Coachella Valley can not be made due to the presence of the Morongo Indian Reservation.

3. Oak Valley Area: The objective of this area is to provide for a linkage from the Badlands to the San Bernardino National Forest. This linkage would serve largely as an uplands linkage, however it is acknowledged that wetlands do exist within this area. The Oak Valley Specific Plan provides for much of this linkage west of Interstate 10.
4. Noble Creek: This drainage is important for connection between the San Bernardino National Forest and the Badlands. This linkage would be associated with this drainage. Watershed management is also an issue within this area.
5. San Timoteo Creek: Species of concern include least Bell's vireo and badger. The goal of conservation is 760 to 980 acres. Conservation should be focused on preserving existing wetland and creek areas in order to provide for wildlife movement and wetland species conservation. This drainage is also a possible connection into San Bernardino County. Watershed management must also be considered.
6. Badlands/Potrero Core: Species of concern include Parry's spineflower, smooth tarplant, golden eagle, California gnatcatcher, cactus wren, Bell's sage sparrow, loggerhead shrike, rufous-crowned sparrow, badger, black-tailed jackrabbit, bobcat, coyote, desert woodrat, long-tailed weasel, Los Angeles pocket mouse, San Diego pocket mouse, Stephens' kangaroo rat, southern grasshopper mouse (potential), San Bernardino kangaroo rat (potential), mountain lion (potential), California pocket mouse (potential), brush rabbit (potential), western spadefoot toad, legless lizard, rosy boa, red-diamond rattlesnake, banded gecko, ringneck snake, San Diego horned lizard, arroyo toad, granite spiny lizard and orange-throated whiptail. Goal of conservation is 6,890 to 7,100 acres. Conservation should be to maintain a core reserve in this area for key MSHCP species. This core will also provide for a linkage between the northern

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and southern sections of the San Bernardino National Forest.

7. Morongo Indian Reservation: Several areas important for conservation abut Morongo Indian lands (San Gorgonio River, Banning/Beaumont to Idyllwild Highway). Coordination with this group should occur.

### ➤ 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 and San Bernardino Mountains Bioregions
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. Ridgelines and riparian areas for movement of bobcats and other large mammals (Habitat Assessment Workshops)

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9. Patch sizes supporting 5-10 pairs of gnatcatchers is important (Habitat Assessment Workshop)
10. Minimum 1.5 mile dispersal patches for gnatcatchers (Habitat Assessment Workshop).

### ➤ 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
- Critical Habitat Map for the California gnatcatcher
- Biological Resources Maps, November 1999 Report on the Conservation Value of the De Anza/Norton Younglove Reserve by Dudek & Associates
- Existing reserves, conservation banks, BLM lands, other public lands (3,000 scale acetate)
- 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

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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 Pass 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 Pass 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 Pass Area Plan presented in the Methods section. Target acreages and conservation objectives for the subunits within The Pass Area Plan are presented below.

Subunit 1: Potrero/Badlands

Target acreage range for new conservation  
on private lands within subunit: 6,890 - 7,100 acres

Cells and cell groups included within subunit: Cell Group A, Cell Group C, 2369

Conservation objectives within subunit:

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- Key planning species within this subunit include Parry’s spineflower, smooth tarplant, California gnatcatcher, cactus wren, bobcat, Stephens’ kangaroo rat, southern grasshopper mouse (potential), San Bernardino kangaroo rat (potential), western spadefoot toad, red-diamond rattlesnake, arroyo toad and granite spiny lizard.
  
- Important biological issues within this subunit include:
  - ! Provide for a new core reserve focused on the Potrero Creek area.
  - ! Maintain large blocks of undisturbed habitat for core reserve purposes
  - ! Maintain large blocks of habitat for large mammal movement between the northern and southern sections of the San Bernardino National Forest
  - ! Conservation of Potrero Creek and associated alluvial fan for maintenance of key species such as the Stephens’ kangaroo rat, Parry’s spineflower and arroyo toad.
  - ! Conservation of alkali vernal plains in order to conserve smooth tarplant populations
  - ! Conserve Engelmann oaks

### Subunit 2: Banning/Beaumont to Idyllwild Highway

Target acreage range for new conservation  
on private lands within subunit:

1,560 - 1,600 acres

Cells and cell groups included within subunit:

Cell Group B, 1421, 1422, 1516,  
1517, 1518, 1519, 1614, 1615, 1712,  
1716, 1806, 1912, 1914

Conservation objectives within subunit:

- Key planning species within this subunit include granite spiny lizard, San Bernardino mountain kingsnake, San Diego black-tailed jackrabbit, horned lark, mountain quail, bobcat.
- Important biological issues within this subunit include:

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- ! Conserve a representative portion of the San Jacinto Mountains/Riverside Lowlands ecotone
- ! Conserve rock and granite outcrops for reptile populations known within this area
- ! Conserve coastal sage scrub patches which support known populations of granite night lizard, granite spiny lizard.
- ! Habitat conservation should be interconnected in order to provide a linkage from the San Jacinto Mountains to the Coachella Valley east of the MSHCP Plan Area.

### Subunit 3: San Gorgonio River

Target acreage range for new conservation  
on private lands within subunit:

1,200 - 1,230 acres

Cells and cell groups included within subunit:

109, 159, 221, 307, 308, 399, 401,  
488, 495, 590, 592, 682, 772, 773,  
774, 863, 864, 1049, 1050, 1140

Conservation objectives within subunit:

- Key planning species within this subunit include Cooper's hawk, mountain quail, San Diego black-tailed jackrabbit, California pocket mouse, desert woodrat, Stephens' kangaroo rat (potential), red-diamond rattlesnake.
- Important biological issues within this subunit include:
  - ! Provide a continuous linkage between the northern and southern sections of the San Bernardino National Forest for wildlife movement and dispersal.
  - ! Provide a continuous source of sand into the Coachella Valley for the benefit of Coachella Valley HCP species.
  - ! Provide conservation in both Riverside Lowlands and the San Bernardino Mountain bioregions. Also provide representative conservation in the Riverside Lowlands/San Bernardino Mountains ecotone.

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- ! Conserve riparian and alluvial fan sage scrub habitats for key MSHCP species

### Subunit 4: Badlands to San Bernardino National Forest

Target acreage range for new conservation  
on private lands within subunit:

900 - 920 acres

Cells and cell groups included within subunit:

240, 241, 243, 311, 312, 313, 323,  
324, 326, 329, 332, 390, 392, 396,  
404, 407, 408, 410, 411, 412, 413,  
414, 416, 417, 479, 480, 494, 934,  
935, 940, 1015

Conservation objectives within subunit:

- Key planning species within this subunit include least Bell's vireo, bobcat and Bell's sage sparrow.
- Important biological issues within this subunit include:
  - ! An upland connection through Oak Valley shall occur; this connection shall be a continuous connection utilizing existing public lands along this linkage alignment. It is recognized that this connection traverses an urban area, however conservation of existing natural habitat and incorporation of ditches or other drainage features into reserve design will assist in providing this contiguous connection.
  - ! A wetland connection via Noble Creek shall also be maintained. This connection shall be a continuous connection utilizing Noble Creek. This creek is improved in some areas. Enhancement of improved areas including planting of wetland vegetation for cover shall occur.
  - ! Noble Creek wetland areas shall be maintained for the purpose of wetland species conservation and wildlife dispersal.

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### Subunit 5: San Timoteo Creek

Target acreage range for new conservation  
on private lands within subunit:

760 - 780 acres

Cells included within this subunit:

212, 213, 297, 298, 299, 383, 385,  
386, 387, 388, 474, 475, 476, 477,  
478, 566, 567

Conservation objectives within subunit:

- Key planning species within this subunit include Bell's sage sparrow, loggerhead shrike, least Bell's vireo, Los Angeles pocket mouse and bobcat.
- Important biological issues within this subunit include:
  - ! Maintain wetlands for purposes of connection and wildlife dispersal as well as wetland species conservation.
  - ! Maintain a contiguous connection between proposed reserves in San Bernardino County and the Badlands area.

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Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
Subunit 1 Potrero/Badlands					
A	1076	07	T3S-R1W	NE	Conserve 80% of the cell focusing on the central seven eights of the southern one half of the cell. Conservation shall focus on drainage habitats including riparian habitats, woodlands and forests, alluvial fan sage scrub and landforms associated with Potrero Creek. Conserve upland valleys and hillsides within the Potrero Creek watershed. Conservation of upland habitats shall focus on coastal sage scrub, grassland, and chaparral habitat. Connection to conservation proposed to the west, southwest, south, north, northwest and east shall occur. Connection to the San Bernardino National Forest and other public lands within the Badlands area shall also occur.
A	1200	07	T3S-R1W	SE	
A	1201	08	T3S-R1W	SW	
A	1212	08	T3S-R1W	SE	
A	1217	07	T3S-R1W	SW	
A	1292	16	T3S-R1W	NW	
A	1293	16	T3S-R1W	NE	
A	1311	18	T3S-R1W	NW	
A	1314	18	T3S-R1W	NE	
A	1316	17	T3S-R1W	NW	
A	1318	17	T3S-R1W	NE	
A	1401	18	T3S-R1W	SW	
A	1403	18	T3S-R1W	SE	
A	1404	16	T3S-R1W	SE	
A	1410	17	T3S-R1W	SW	
A	1412	16	T3S-R1W	SW	
A	1413	17	T3S-R1W	SE	
A	1499	22	T3S-R1W	NE	
A	1502	20	T3S-R1W	NW	
A	1505	20	T3S-R1W	NE	
A	1507	21	T3S-R1W	NE	
A	1508	22	T3S-R1W	NW	
A	1512	21	T3S-R1W	NW	
A	1593	22	T3S-R1W	SE	
A	1595	23	T3S-R1W	SE	
A	1596	24	T3S-R1W	S	
A	1597	22	T3S-R1W	SW	
A	1598	20	T3S-R1W	SW	
A	1599	21	T3S-R1W	SE	
A	1600	20	T3S-R1W	SE	
A	1601	21	T3S-R1W	SW	

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Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
A	1609	19	T3S-R1E	SW	
A	1689	27	T3S-R1W	NE	
A	1690	26	T3S-R1W	NW	
A	1691	25	T3S-R1W	N	
A	1693	26	T3S-R1W	NE	
A	1694	27	T3S-R1W	NW	
A	1695	28	T3S-R1W	NE	
A	1708	30	T3S-R1E	NE	
A	1710	30	T3S-R1E	NW	
A	1786	27	T3S-R1W	SE	
A	1787	26	T3S-R1W	SW	
A	1788	27	T3S-R1W	SW	
A	1789	26	T3S-R1W	SE	
A	1791	28	T3S-R1W	SW	
A	1792	28	T3S-R1W	SE	
A	1794	25	T3S-R1W	S	
A	1799	30	T3S-R1E	SW	
A	1883	32	T3S-R1W	NE	
A	1884	33	T3S-R1W	NW	
A	1886	33	T3S-R1W	NE	
A	1887	34	T3S-R1W	NW	
A	1888	34	T3S-R1W	NE	
A	1889	35	T3S-R1W	NW	
A	1890	35	T3S-R1W	NE	
A	1891	36	T3S-R1W	N	
A	1897	31	T3S-R1E	NW	
A	1980	32	T3S-R1W	SE	
A	1981	33	T3S-R1W	SW	
A	1983	33	T3S-R1W	SE	
A	1986	34	T3S-R1W	SW	

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Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
A	1987	34	T3S-R1W	SE	
A	1988	35	T3S-R1W	SW	
A	1989	35	T3S-R1W	SE	
A	1990	36	T3S-R1W	S	
A	2000	31	T3S-R1E	SW	
A	2002	31	T3S-R1E	SE	
A	2079	04	T4S-R1W	NW	
A	2080	04	T4S-R1W	NE	
A	2081	03	T4S-R1W	NE	
A	2082	03	T4S-R1W	NW	
A	2083	02	T4S-R1W	NW	
A	2084	02	T4S-R1W	NE	
A	2085	01	T4S-R1W	N	
A	2094	06	T4S-R1E	NW	
A	2174	04	T4S-R1W	SW	
A	2175	04	T4S-R1W	SE	
A	2176	03	T4S-R1W	SW	
A	2177	03	T4S-R1W	SE	
A	2178	02	T4S-R1W	SW	
A	2179	02	T4S-R1W	SE	
A	2180	01	T4S-R1W	S	
A	2181	06	T4S-R1E	SW	
C	933	02	T3S-R2W	NW	Conserve 66% of the southern half of Quarter Section #937. Conservation shall focus on riparian vegetation associated with the Noble Creek drainage in addition to grasslands adjacent to this drainage. Connection to drainage habitats and associated uplands to the Norton Younglove Reserve to the west and east to the cell boundary shall be maintained.
C	936	02	T3S-R2W	NE	
C	937	06	T3S-R1W	NW	
C	939	01	T3S-R2W	NW	
C	1030	02	T3S-R2W	SE	
C	1031	01	T3S-R2W	SE	

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Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
C	1032	01	T3S-R2W	SW	
C	1125	12	T3S-R2W	NE	
	2369	11	T4S-R1W	SW	Conserve 30% of the southwestern quarter of the cell. Conservation shall focus on chaparral and coastal sage scrub habitat. Connection to conservation areas to the west, southwest and south shall be maintained.
<b>Subunit 2 Banning/Beaumont to Idyllwild Highway</b>					
B	1328	14	T3S-R1E	NE	Conserve 75% of the cell. Conservation should focus in the southern half of the cell less the northern one third of Quarter Section #1423, less the western two thirds of Quarter Section #1328 and less the northern one third of Quarter Section #1330. Conservation shall focus on a myriad of coastal sage scrub, chaparral and agricultural lands. Connection to habitats being conserved to the south, southwest and west shall occur.
B	1329	13	T3S-R1E	NW	
B	1330	13	T3S-R1E	NE	
B	1423	14	T3S-R1E	SE	
B	1424	13	T3S-R1E	SW	
B	1425	13	T3S-R1E	SE	
	1421	15	T3S-R1E	SE	Conserve 50% of the southern half of the cell. Conservation shall focus on coastal sage scrub habitat. Connection to coastal sage scrub habitat being conserved to the east and southeast shall be maintained.
	1422	14	T3S-R1E	SW	Conserve 80% of the northeastern quarter of the cell. Conservation shall focus on coastal sage scrub. Connection to coastal sage scrub being conserved to the east shall be maintained.
	1516	23	T3S-R1E	NW	Conserve the northwest, northeast and southwestern quarters of the cell. Conservation shall focus on coastal sage scrub and chaparral habitats. Connection to habitat being conserved to the east and south shall be maintained.
	1517	23	T3S-R1E	NE	Conserve the northern half of the cell. Also conserve 50% of the southern half of the cell. Conservation shall focus on coastal sage scrub habitat. Connection to habitats being conserved to the west, east and northeast shall be maintained.
	1518	24	T3S-R1E	NW	Conserve the area between the northern cell boundary and the Morongo Indian Reservation. Conservation shall focus on coastal sage scrub and grassland habitat. Connection to habitats being conserved to the west, north, northeast and east shall be maintained.
	1519	24	T3S-R1E	NE	Conserve the area between the northern cell boundary and the Morongo Indian Reservation less the eastern third. Conservation shall focus on coastal sage scrub and chaparral habitat. Connection to areas being conserved to the north, west, northwest and east shall be maintained.
	1614	23	T3S-R1E	SW	Conserve the western two thirds of the cell. Also conserve the southern half of the eastern two thirds in a diagonal fashion (from west to east). Conservation shall focus on chaparral and grassland habitat. Connection to habitats to the north and south shall be maintained.

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Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
	1615	23	T3S-R1E	SE	Conserve the northwestern quarter of the northeastern quarter of the cell. Conservation shall focus on coastal sage scrub habitat. Connection to habitats being conserved to the north shall be maintained.
	1712	26	T3S-R1E	NW	Conserve the area between the northern boundary of the Morongo Indian Reservation and the northern boundary of the cell. Conservation shall focus on chaparral habitat. Connection to habitats being conserved to the north shall be maintained.
	1716	25	T3S-R1E	NW	Conserve the southwestern half of the southwestern quarter of the cell. Conservation shall focus on chaparral habitat. Connection to habitats being conserved to the south shall be maintained.
	1806	25	T3S-R1E	SW	Conserve the western one half of the cell less the eastern one quarter of the northwestern quarter of the cell. Also conserve the southern one quarter of the southeastern quarter of the cell. Conservation shall focus on grassland, chaparral and woodland and forest habitats. Connection to habitats being conserved to the north and south shall be maintained.
	1912	35	T3S-R1E	NE	Conserve the northern one third of the eastern one eighth of the cell. Conservation shall focus on chaparral and woodlands and forest habitat. Connection to habitats to the east and northeast proposed for conservation shall also occur.
	1914	36	T3S-R1E	NW	Conserve 95% of the western two thirds of the cell. Conservation shall focus on woodlands and forest and chaparral habitat in addition to riparian habitat associated with drainage areas. Connection to areas planned for conservation to the north and west shall occur. Connection to the San Bernardino National Forest to the south shall also occur.
Subunit 3 San Gorgonio River					
	109	08	T2S-R1E	NW	Conserve the southeastern one quarter of the southwestern quarter of the cell. Conservation shall focus on riparian habitat associated with the San Gorgonio River in addition to chaparral and forest habitat. Connection to San Bernardino National Forest lands to the north, northwest, east and northeast shall be maintained.
	159	08	T2S-R1E	SW	Conserve the eastern half of the northwestern quarter of the cell in addition to the western half of the southwestern quarter of the cell. Also conserve the northwestern quarter of the southeastern quarter of the southwestern quarter of the cell. Conservation shall focus on riparian habitat associated with the San Gorgonio River. Also conserve uplands adjacent to the river including forests, chaparral and grasslands. Connection to conservation planned in the north and south in addition to connectivity to the San Bernardino National Forest to the east and west shall be maintained.
	221	17	T2S-R1E	NW	Conserve 80% of the cell focusing on the middle one third and the eastern one half of the western one third and the western half of the eastern one third. Conservation shall focus on alluvial fan sage scrub and riparian habitat associated with the San Gorgonio River. Uplands consisting of woodlands and forests, grasslands, chaparral and forests shall also be conserved. Connection to habitats to the north, south, west and southwest shall also be maintained.
	307	18	T2S-R1E	SE	Conserve the southern two thirds of the eastern half of the southeastern quarter of the cell. Conservation shall focus on grassland habitat. Connection to areas planned for conservation to the east, southeast and south shall be maintained.
	308	17	T2S-R1E	SW	Conserve 66% of the cell focusing in the western two thirds of the cell. Conservation shall focus on riparian and alluvial fan sage scrub habitat associated with the San Gorgonio River. Uplands including woodlands and forests, chaparral and grassland shall also be conserved. Connection to habitats being proposed for conservation to the south, west and southwest shall also be maintained.
	399	19	T2S-R1E	NE	Conserve the eastern one quarter of the cell. Conservation shall focus on alluvial fan sage scrub, chaparral and grassland habitat. Connection to habitats being planned for conservation to the north, northeast, east, southeast and south shall occur.

# THE PASS AREA PLAN RESERVE DESIGN CRITERIA

## (Preliminary Draft – Subject to Change)

Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
	401	20	T2S-R1E	NW	Conserve the western two thirds of the cell. Conservation shall be focused on alluvial fan sage scrub and riparian habitat associated with the San Gorgonio River. Uplands including chaparral shall also be conserved. Connection to areas planned for conservation to the north, northwest, west, southwest and south shall be maintained.
	488	19	T2S-R1E	SE	Conserve the northeastern quarter of the northeastern quarter of the northeastern quarter of the cell. Conservation shall focus on grassland and chaparral habitat. Connection to areas being proposed for conservation to the north, northeast and east shall be maintained.
	495	20	T2S-R1E	SW	Conserve the western four fifths of the northern half of the cell. Also conserve the western two thirds of the southern half of the cell. Conservation shall focus on alluvial fan sage scrub and chaparral habitats. Connection to conservation anticipated in the north, northwest, west, south and southeast shall be maintained.
	590	29	T2S-R1E	NW	Conserve 50% of the northeastern quarter of the cell. Conservation shall focus on chaparral and alluvial fan sage scrub. Connection to habitats to the north and east shall be maintained.
	592	29	T2S-R1E	NE	Conserve 75% of the southern half of the cell in addition to 30% of the northern half of the cell. Conservation shall focus on the mosaic of alluvial fan sage scrub, grassland, chaparral and agricultural lands.
	682	29	T2S-R1E	SE	Conserve 95% of the eastern half of the cell. Also conserve the eastern half of the northeastern quarter of the northwestern quarter of the cell. Conservation shall include grassland and alluvial fan sage scrub habitat. Connection to habitats to the north, south and southeast shall occur. Connection to San Bernardino National Forest lands to the east shall also be maintained.
	772	32	T2S-R1E	NE	Conserve the northeastern quarter of the northeastern quarter of the cell. Conservation shall focus on grassland habitat. Connection to habitats proposed for conservation to the north and east shall be maintained.
	773	33	T2S-R1E	NW	Conserve the northern half of the cell. Also conserve the eastern half of the southern half of the cell. Conservation shall focus on chaparral, grassland and alluvial fan sage scrub habitats. Connection with habitats proposed for conservation to the east, south, southeast and west shall be maintained. Connection with San Bernardino National Forest lands to the north shall also be maintained.
	774	33	T2S-R1E	NE	Conserve the southwestern quarter of the cell. Also conserve the southwestern quarter of the northwestern quarter of the cell and the southwestern quarter of the southeastern quarter of the cell. Conservation shall focus on alluvial fan sage scrub associated with the San Gorgonio River. Uplands including grassland and chaparral shall also be conserved. Connection to habitats to the west, southwest and south shall be maintained.
	863	33	T2S-R1E	SW	Conserve 30% of the northeastern quarter of the cell. Conservation shall focus on grassland habitats. Connection with habitats to the north, northeast and east shall be maintained.
	864	33	T2S-R1E	SE	Conserve 75% of the northern half of the cell. Also conserve 25% of the southern half of the cell focused in the east. Conservation shall focus on alluvial fan sage scrub and grassland habitats. Connection to habitat planned for conservation to the north, northwest and west shall be maintained.
	1049	01	T3S-R1E	SW	Conserve 50% of the northern half of the cell generally focusing in the west and 50% of the southern half of the cell generally focusing in the east. Conservation shall focus on alluvial fan sage scrub associated with the San Gorgonio River. Adjacent coastal sage scrub habitat shall also be conserved. Connection with habitat planned for conservation to the east shall be maintained.
	1050	01	T3S-R1E	SE	Conserve the southwestern quarter of the cell. Conservation shall focus on alluvial fan sage scrub associated with the San Gorgonio River. Uplands including coastal sage scrub shall also be conserved. Connection with habitat planned for conservation to the west and south shall be maintained.

# THE PASS AREA PLAN RESERVE DESIGN CRITERIA

## (Preliminary Draft – Subject to Change)

Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
	1140	12	T3S-R1E	NE	Conserve 50% of the northern one third of the cell. Conservation shall focus on alluvial fan sage scrub associated with the San Gorgonio River in addition to adjacent coastal sage scrub uplands. Connection to habitat planned for conservation to the north shall be maintained.
Subunit 4 Badlands to San Bernardino National Forest Connection					
	240	15	T2S-R1W	NE	Conserve 50% of the eastern one third of the cell. Conservation should focus on chaparral and grassland habitat. A connection between habitats to the south and east shall be maintained.
	241	14	T2S-R1W	NW	Conserve 75% of the middle one third of the cell. Conservation should focus on woodland and forest habitat in addition to grasslands. Connection to habitats to the east and west shall be maintained.
	243	14	T2S-R1W	NE	Conserve 50% of the southern half of the cell. Conservation shall focus on woodland and forest and chaparral habitat. Connection to habitats to the west and south shall be maintained. Connection to the San Bernardino National Forest located to the south shall occur.
	311	15	T2S-R2W	SE	Conserve the eastern two thirds of the southern one sixth of the cell. Conservation shall be focused on grassland and chaparral habitat. Connection to conservation proposed south, southeast and east shall be maintained.
	312	16	T2S-R1W	SE	Conserve 80% of the northern half of the cell. Also conserve 50% of the southeastern quarter of the cell. Conservation shall focus on woodland and forest and chaparral habitat. Connection to habitats to the west, east and south shall be maintained.
	313	15	T2S-R1W	SW	Conserve 80% of the northern half of the cell. Also conserve 60% of the southern half of the cell. Conservation shall include woodland and forests and chaparral habitat. A linkage to habitats proposed for conservation to the west, south and east shall be maintained.
	323	14	T2S-R2W	SW	Conserve the southern one sixth of the cell. Conservation shall be focused on chaparral and grassland habitat. Connection to habitat to the south, east, southeast, west and southwest shall also be maintained.
	324	15	T2S-R1W	SE	Conserve 75% of the northern half of the cell. Also conserve 25% of the southern half of the cell focusing on the northern half. Conservation shall focus on chaparral habitat. Connections between habitats to the north and west shall be maintained.
	326	14	T2S-R2W	SE	Conserve the western half of the southern one sixth of the cell. Conservation shall focus on grassland, chaparral and coastal sage scrub vegetation.
	329	16	T2S-R1W	SW	Conserve the western two thirds of the southern half of the cell. Also conserve 66% of the northern half of the cell. Conservation shall consist of riparian and woodland and forest habitat in addition to chaparral habitat. Connection to habitats to the east, south, southeast and west shall be maintained.
	332	17	T2S-R1W	SE	Conserve the southeastern quarter of the southeastern quarter of the southeastern quarter of the cell. Conservation shall focus on chaparral habitat. Connection to the upland linkage being conserved to the southeast shall be made.
	390	21	T2S-R2W	NE	Conserve the southeastern quarter of the southeastern quarter of the southeastern quarter of the cell. Conservation shall be focused on chaparral and coastal sage scrub habitat. Connection to habitat to the south, southeast and east shall be maintained.

## THE PASS AREA PLAN RESERVE DESIGN CRITERIA (Preliminary Draft – Subject to Change)

Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
	392	22	T2S-R1W	NW	Conserve the eastern half of the northern one sixth of the cell. Conservation shall focus on chaparral habitat. Connection to habitat being proposed for conservation to the north shall be maintained.
	396	22	T2S-R2W	NW	Conserve the southern two thirds of the western half of the cell and the northern two thirds of the eastern half of the cell. Conservation shall focus on riparian and alluvial fan sage scrub habitat. Uplands adjacent to the drainage including grasslands, woodlands and forests, chaparral and coastal sage scrub shall also be conserved. Connection to habitats to the south, southwest, west, east and northeast shall be maintained.
	404	21	T2S-R1W	NW	Conserve the northern two thirds of the western half of the cell. Conservation shall focus on woodland and forest habitat in addition to chaparral habitat. Connection to habitats to the north, northwest and west shall be maintained.
	407	24	T2S-R2W	NE	Conserve 66% of the northern half of the cell. Conservation shall focus on chaparral and grassland habitat. Connection to habitats to the west and east shall also be maintained.
	408	19	T2S-R1W	NW	Conserve 66% of the northern half of the cell. Conservation shall focus on alluvial fan sage scrub in addition to woodland and forest habitat. Uplands such as grassland and chaparral shall also be conserved. Connection to habitats to the west and east shall also be maintained.
	410	24	T2S-R2W	NW	Conserve the northern one half of the cell. Conservation shall be focused on chaparral and grassland habitat. Connection to habitats to the east shall remain. Connection through the urbanized area to the west shall also be maintained in natural areas.
	411	23	T2S-R2W	NE	Conserve the northern one half of the cell. Conservation shall focus on alluvial fan sage scrub habitat in addition to grassland and chaparral habitat. Connection to habitat to the west shall be maintained. Connection to habitat to the east of the eastern most cell shall be maintained through the urbanized area in natural areas.
	412	22	T2S-R2W	NE	Conserve the northern one third of the cell in addition to the western one half of the middle one third of the cell. Conservation shall focus on woodland and forest habitat in addition to chaparral, coastal sage scrub and grassland habitats. Connection to habitats to the north, northeast, east and west shall be maintained.
	413	20	T2S-R1W	NE	Conserve 66% of the northern one half of the cell in addition to 66% of the southern half of the cell. Conservation shall consist of woodland and forest habitat in addition to adjacent uplands including chaparral. Connection to habitat to the northeast, east and west shall be maintained.
	414	19	T2S-R1W	NE	Conserve the southern half of the northern one third of the cell in addition to the northern half of the middle one third of the cell. Conservation shall focus on woodlands and forest in addition to chaparral habitat.
	416	20	T2S-R1W	NW	Conserve the southern half of the northern one half of the cell. Also conserve 66% of the southern half of the cell. Conservation shall consist of woodlands and forest as well as chaparral habitat. Connection with habitat to the west and east shall be maintained.
	417	23	T2S-R2W	NW	Conserve the northern one third of the cell. Conservation shall be focused on alluvial fan sage scrub in addition to uplands including grasslands and chaparral. Connection with habitat to the north, northeast, east, west and northwest shall be maintained.
	479	21	T2S-R2W	SE	Conserve the eastern half of the cell. Also conserve the southeastern quarter of the western half of the cell. Conservation shall focus on riparian and alluvial fan sage scrub habitat in addition to grassland, chaparral and coastal sage scrub adjacent to these wetland areas. Connection with habitat to the north, northeast, east and south shall be maintained.

# THE PASS AREA PLAN RESERVE DESIGN CRITERIA

## (Preliminary Draft – Subject to Change)

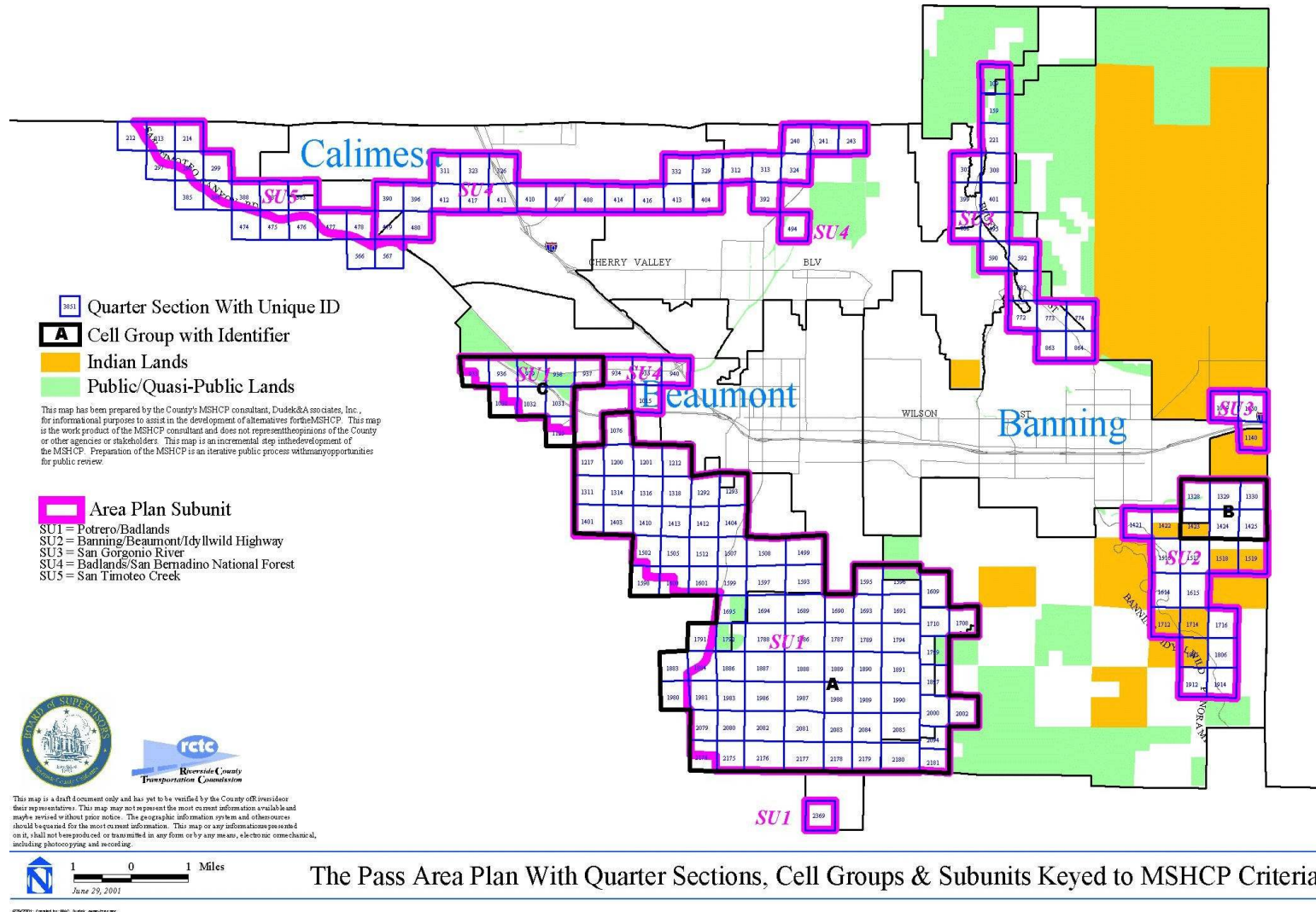
Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
	480	22	T2S-R2W	SW	Conserve 66% of the western one third of the cell. Conservation shall be focused on alluvial fan sage scrub associated with the drainage. Uplands including chaparral, grasslands and coastal sage scrub shall also be conserved adjacent to this drainage. Connection with habitat to the north, northwest and west shall remain.
	494	22	T2S-R1W	SE	Conserve 66% of the eastern half of the southeastern quarter of the cell. Conservation shall focus on alluvial fan sage scrub associated with the drainage. Uplands adjacent to the drainage shall also be conserved. Connection with the San Bernardino National Forest to the east shall be maintained.
	934	06	T3S-R1W	NE	Conserve 66% of the southern half of the quarter section. Conservation shall be focused on Noble Creek and associated riparian and alluvial fan sage scrub habitat. Uplands adjacent to this drainage including grasslands shall also be conserved. Connection to the Noble Creek drainage and associated habitat to the east and west shall be maintained.
	935	05	T3S-R1W	NW	Conserve 90% of the southern half of the cell. Conservation shall be focused on alluvial fan sage scrub associated with Noble Creek in addition to upland habitats such as grassland and chaparral. Connection to habitats proposed for conservation to the south, east and west shall occur.
	940	05	T3S-R1W	NE	Conserve 80% of the southern half of the cell. Conservation shall focus on alluvial fan sage scrub associated with Noble Creek. Uplands including grassland and chaparral shall be conserved. Connectivity between riparian habitats to the west and the existing Noble Creek Channel to the east shall be maintained.
	1015	05	T3S-R1W	SW	Conserve 50% of the northern one sixth of the cell. Conservation shall focus on chaparral habitat adjacent to Noble Creek. Connections to the creek shall be made.
<b>Subunit 5 San Timoteo Creek</b>					
	212	14	T2S-R3W	NW	Conserve 50% of the northeastern quarter of the cell. Conservation shall focus on riparian and alluvial fan sage scrub vegetation associated with San Timoteo Creek. Conservation shall also result in a myriad of upland habitat conservation; grasslands, chaparral and agricultural lands.
	213	14	T2S-R3W	NE	Conserve 50% of the western half of the cell. Also conserve 25% of the southeastern quarter of the cell contiguous with the segment outlined in the previous sentence. Conservation shall consist of grassland and chaparral habitats. Connection to habitat conservation efforts in San Bernardino County should be incorporated. Connection to areas west, east and south shall be made.
	297	14	T2S-R3W	SE	Conserve the northeastern quarter of the cell. Also conserve the northeastern quarter of the northeastern quarter of the northeastern quarter. Conservation shall focus on riparian and alluvial fan sage scrub associated with San Timoteo Creek. Conservation shall also focus on grassland species. Connection to habitats located to the north and east shall be maintained.
	298	13	T2S-R3W	SW	Conserve 50% of the cell. Conservation shall focus on riparian and alluvial fan sage scrub within the San Timoteo Creek. Uplands including grasslands and chaparral shall also be conserved. Conservation of connections to habitats to the west, east, southeast and south shall be maintained.
	299	13	T2S-R3W	SE	Conserve the southwestern 50% of the southwestern quarter of the cell. Conservation shall focus on grassland and chaparral habitats adjacent to San Timoteo Creek. Connection with habitat to the west, southwest and south shall be maintained.
	383	20	T2S-R2W	NW	Conserve 66% of the southern one third of the cell. Conservation shall focus on riparian habitat associated with San Timoteo Creek. The mosaic of upland habitat including coastal sage scrub, grasslands and agricultural lands shall also be conserved. Connection with habitat to the west, southwest and south shall occur.
	385	24	T2S-R3W	NW	Conserve the northeastern 50% of the northeastern quarter of the cell. Conservation shall focus on riparian habitat associated with San Timoteo Creek. Uplands including grasslands shall also be conserved adjacent to the creek. Connection to habitats to the north, northeast and east shall be maintained.

## THE PASS AREA PLAN RESERVE DESIGN CRITERIA (Preliminary Draft – Subject to Change)

Cell Group	Quarter Number	Township and Range	USGS Section	Quarter Section	Criteria
	386	24	T2S-R3W	NE	Conserve 66% of the northern one half of the cell and the eastern 33% of the southern half of the cell. Conservation shall focus on riparian and alluvial fan sage scrub habitat associated with San Timoteo Creek. Uplands including grasslands shall be conserved south of the drainage. Connection with conservation planned for the north, northwest, west and east shall be maintained.
	387	19	T2S-R2W	NE	Conserve the southern one half of the cell. Also conserve the southwestern quarter of the northwestern quarter of the cell. Conservation shall focus on riparian habitat associated with San Timoteo Creek. Conservation shall also focus on the mosaic of uplands adjacent to the creek including agriculture, grassland and coastal sage scrub. Connection with habitat to the south, southeast, southwest, west and east shall be maintained.
	388	19	T2S-R2W	NW	Conserve 80% of the southern half of the cell. Also conserve the southwestern quarter of the northwestern quarter of the cell. Conservation shall focus on riparian habitat associated with San Timoteo Creek. The mosaic of uplands including agricultural lands, coastal sage scrub and grasslands shall also be conserved. Connection with habitats to the west, south, southwest and east shall be maintained.
	474	19	T2S-R2W	SW	Conserve the northeastern quarter of the northeastern quarter of the northeastern quarter of the northeastern quarter of the cell. Conservation shall focus on grassland habitat. Connection with habitats to the north, northeast and west shall occur.
	475	19	T2S-R2W	SE	Conserve 66% of the northern one third of the cell. Conservation shall focus on grassland and coastal sage scrub habitat. Connection with habitats to the north, northeast, east, northwest and west shall be maintained.
	476	20	T2S-R2W	SW	Conserve the northern two thirds of the northern one third of the cell. Conservation shall focus on riparian habitat associated with San Timoteo Creek. Conservation of a mosaic of uplands including grassland, coastal sage scrub and agricultural lands shall also be maintained.
	477	20	T2S-R2W	SE	Conserve the northeastern two thirds of the southern half of the cell. Also conserve the southwestern half of the northwestern quarter of the cell. Conservation shall focus on riparian and alluvial fan sage scrub habitat associated with San Timoteo Creek. A mosaic of uplands including grassland and agricultural lands shall be conserved. Connection with habitat to the west and east shall be maintained.
	478	21	T2S-R2W	SW	Conserve 50% of the southern one third of the cell. Conservation shall focus on riparian habitat associated with San Timoteo Creek. Uplands including grassland and coastal sage scrub shall also be conserved. Connection to habitat to the south, southeast and west shall remain.
	566	28	T2S-R2W	NW	Conserve the northeastern two thirds of the northern half of the northeastern quarter of the cell. Conservation shall focus on riparian vegetation associated with San Timoteo Creek. Uplands, including grassland, adjacent to the creek shall also be conserved. Connection to habitats to the north and east shall be maintained.
	567	28	T2S-R2W	NE	Conserve the northwestern two thirds of the northern half of the northwestern quarter of the cell. Conservation shall focus on grassland habitats. Connection with habitats to the northwest and west shall be maintained.

# THE PASS AREA PLAN RESERVE DESIGN CRITERIA

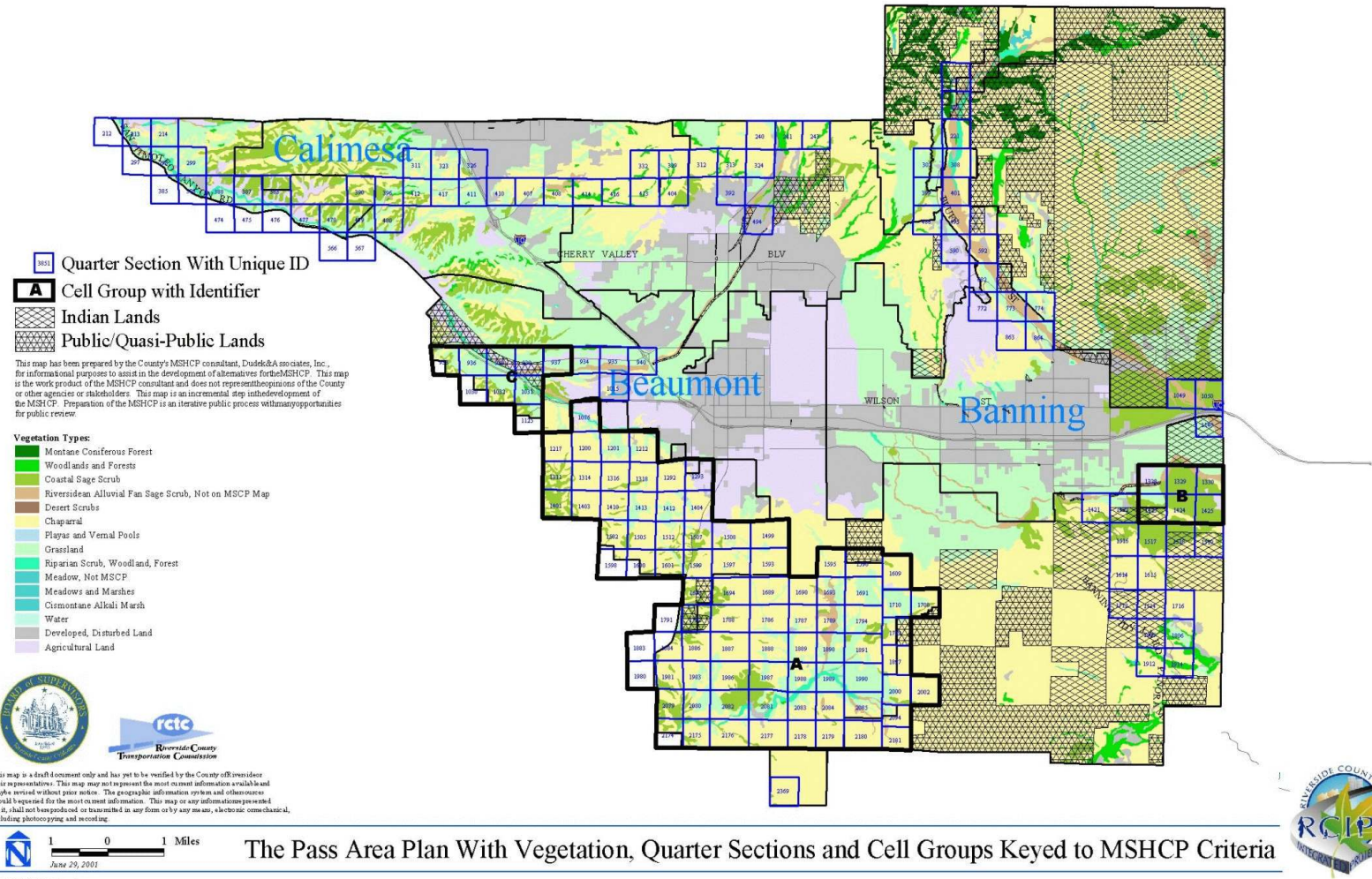
## (Preliminary Draft - Subject to Change)



The Pass Area Plan With Quarter Sections, Cell Groups & Subunits Keyed to MSHCP Criteria

# THE PASS AREA PLAN RESERVE DESIGN CRITERIA

## (Preliminary Draft - Subject to Change)



The Pass Area Plan With Vegetation, Quarter Sections and Cell Groups Keyed to MSHCP Criteria