

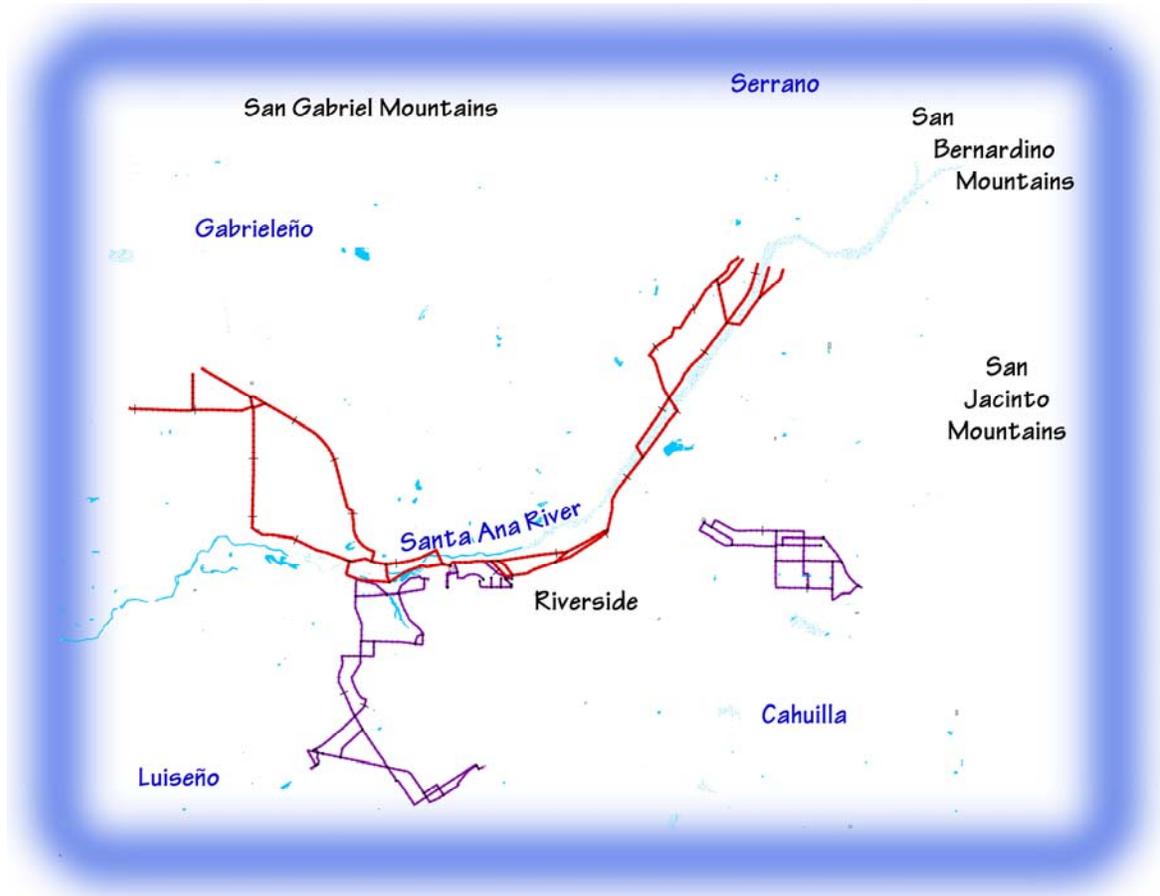
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# **APPENDIX G: AMERICAN INDIAN SOCIAL IMPACT ASSESSMENT**

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**American Indian Social Impact Assessment  
Riverside Transmission Reliability Project  
Riverside, California**

**Final Report**



**Prepared by**

**Rebecca S. Toupal  
Kathleen Van Vlack  
Richard W. Stoffle**

**Bureau of Applied Research in Anthropology  
The University of Arizona**

**August 1, 2007**



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**for**

**POWER Engineers, Inc.  
Hailey, Idaho**

**August 1, 2007**

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Most importantly, the authors wish to express their appreciation to the tribal councils and cultural resource departments who participated in the study including their chairpersons, cultural resource managers and advisors, and the tribal representatives who participated in the field work. We greatly appreciate them taking the time to share their knowledge of traditional life and cultural resources, and provide cultural sensitivity determinations along the proposed powerline routes. The data and findings in this report are theirs and reflect their commitment to tribes and cultural heritage. Many thanks to

### **The Morongo Band of Mission Indians and**

Ernest Siva, Official Tribal Historian and Cultural Advisor  
Britt Wilson, Project Manager  
Robert Martin, Tribal Chairman

### **The Pechanga Band of Luiseño Indians and**

Paul Macarro, Cultural Resources  
Patrick Kudell, Project Manager  
Mark Macarro, Tribal Chairman

### **The Soboba Band of Luiseño Indians and**

Erica Helms, Cultural Resources, Administrative Assistant  
Darren Hill, Cultural Resource, Monitoring Coordinator  
Robert Salgado, Sr, Tribal Spokesman

## **Chapter One**

### **Executive Summary**

The Bureau of Applied Research in Anthropology (BARA) at the University of Arizona (UofA) in Tucson, Arizona subcontracted with POWER Engineers, Inc. of Hailey, Idaho to research social impacts from the Riverside Transmission Reliability Project (RTRP), a proposed electrical system upgrade, to American Indian communities. The research focused on three cultural affiliated American Indian tribes who expressed an interest in participating in the formal Environmental Impact Assessment (EIA) – the Morongo Band of Mission Indians, the Pechanga Band of Luiseño Mission Indians, and the Soboba Band of Luiseño Indians.

#### **Background**

The RTRP is an electrical system upgrade proposed by Riverside Public Utilities (RPU) that includes a new double-circuit 230-kilovolt (kV) transmission line, a new 230/69 kV electrical substation, and new 69 kV transmission lines. The new 230 kV transmission line will connect the proposed substation, to be located on RPU-owned land near the northeast corner of Wilderness Avenue and Ed Perkić Street, to existing 230 kV transmission lines owned by Southern California Edison (SCE). Six to seven new 69 kV transmission lines also would connect the proposed substation to RPU's electrical system (Figure 1).

The RTRP is driven by growth in the Riverside area. The energy provided by RPU to its customers comes through SCE's Vista substation in Grand Terrace, California, and is limited to 557 megawatts. In the summer of 2006, electrical use in the Riverside area exceeded this limit. A drop in customer load was avoided through internal generation, however, such a strategy is not a long-term solution. The RTRP is needed not only to meet current and anticipated growth load, but also to provide support in the event of a loss of supply from the Vista substation. By providing a second point of delivery, the RTRP will reduce dependency on the Vista substation, increase the reliability of RPU's electrical system, and provide flexibility for future expansion.

The three participating tribes represent three ethnic groups, the Cahuilla, the Serrano, and the Luiseño people. The proposed routes of the RTRP, however, fall within a shared use area that also was used traditionally by the Gabrieleño people. This report, consequently, conveys cultural concerns of only the three participating tribes and does not present a comprehensive American Indian cultural interpretation of the area nor comprehensive tribal impact assessment.

The concept of a shared use area presents some challenges to cultural interpretation. While the Native American Heritage Commission (NAHC) has no records of sacred lands in the RTRP project area, it recognizes that a lack of records does not mean that sacred sites and sensitive cultural resources do not exist. The NAHC has recommended that Native American organizations be contacted as part of the cultural resource investigation; this report reflects their participation in the initial ethnographic portion of that investigation.

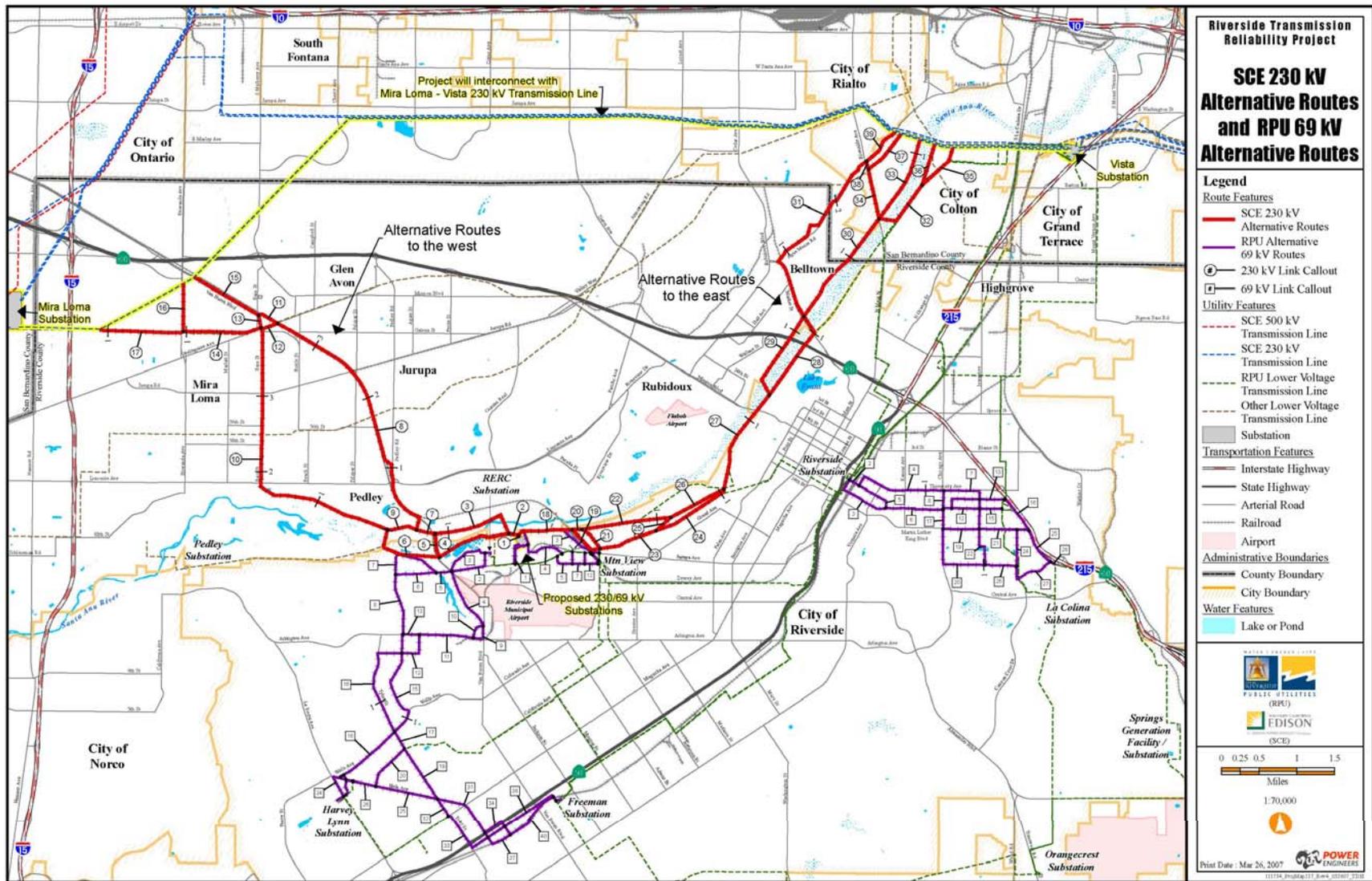


Figure 1. Proposed 230 kV and 69 kV powerline routes as of March 26, 2007.

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## Research Contributions

The UofA research team worked with the Morongo Band of Mission Indians, the Pechanga Band of Luiseño Mission Indians, and the Soboba Band of Luiseño Indians to develop this preliminary cultural sensitivity assessment for the RTRP. The UofA team is guided by more than thirty years of American Indian Social Impact Assessment (SIA) experience including Dr. Richard W. Stoffle's involvement in the first American Indian SIA in 1976 (Bean and Vane 1978), which also addressed a powerline SIA. The team members for this work are:

*Dr. Richard W. Stoffle* is a senior cultural anthropologist at BARA and has more than 25 years of experience with American Indian environmental and social impact issues. He has worked successfully with more than 80 American Indian tribes and many federal agencies to address American Indian environmental concerns in land management decisions, including powerline assessments. His more recent publications include American Indian histories with the Nevada Test Site and with Nellis Air Force Base, and articles on traditional environmental knowledge in *Human Organization*, *American Indian Quarterly*, and *Current Anthropology*.

*Dr. Rebecca S. Toupal* is an Assistant Research Scientist at BARA. Since 1987, she has worked on natural resource management issues with landowners, agencies, and tribal groups in the western U.S. She has degrees in range management, landscape architecture, and natural resource management. Since 1998, she has focused on human-nature relationships and cultural landscapes. Her publications include articles on conservation partnerships (*High Plains Applied Anthropologist*), the use of ethnography with geographic information systems (*Environmental Science and Policy*), and the identification of cultural landscapes to understand natural resource management impacts (*Conservation Ecology*, now *Ecology and Society*).

*Kathleen Van Vlack* is a Ph.D. student in the American Indian Studies Program at the University of Arizona (UA). She has a B.A. in Anthropology, and a Master's in American Indian Studies, both from UA. Her Master's thesis focused on the traditional leadership system of the Southern Paiute Nation. She has worked with BARA as a Research Assistant for five years, as an undergraduate and graduate student, on federally-funded projects to address Native American concerns in the western United States, and Bahamian concerns in the Caribbean.

The methodology used in this study has been published several times (Stoffle, Jake and Bunte 1981; Stoffle et al. 1982; Stoffle et al. 1990; Stoffle, Halmo, and Austin 1997; Stoffle 2000). It comes from decades of negotiations between American Indian tribal governments, federal and state land management agencies, private corporations involved in specific developments, and academically based professionals. Time constraints in the RTRP, however, required an adjustment to the methodology. Tribes usually request 30 to 60 days

notice for formal council presentations but such advanced notification was unavailable. In lieu of that, the UofA team arranged meetings with the tribes' senior cultural resource advisors. In addition to the tribal meetings, other project activities included site scopings, cultural sensitivity assessments, analysis of findings, and report write-up that included a review by the tribal participants and consequent revisions.

The UofA team met with tribal cultural resource advisors between April 6<sup>th</sup> and 10<sup>th</sup>, 2007. The meetings were held at tribal offices in San Jacinto, Cabazon, and Temecula, California. Introductions were followed by brief presentations of the RTRP by POWER Engineer representatives, and detailed explanations of the UofA team's involvement and methods. The UofA team obtained commitments to participate in and tentative dates for the field visits from each tribe.

The UofA team conducted site scopings April 8<sup>th</sup> and 9<sup>th</sup>, 2007. All segments of the proposed 230 kV lines as well as segments of the central and eastern clusters of the proposed 69 kV lines were viewed, driven, and/or located on the first day. The western cluster of the proposed 69 kV lines were driven on the second day. The UofA team made notes and took photographs of most of the segments throughout the scoping trips.

Following the tribal meetings and site scopings, a letter was sent to the tribes that provided additional information about the proposed routes and field visits. The environments of the proposed routes were described and the tribes were asked to provide feedback on the proposed field schedule and identify any routes that they did not want to visit. The field schedule was finalized after the UofA team received tribal responses to the letters.

The cultural sensitivity assessment field visits were made April 25<sup>th</sup> and 26<sup>th</sup>, 2007, and the results were shared with the three tribes for additional comments and any revisions they felt were needed. Since each segment required an assessment, stops were made where one or more segments could be viewed and evaluated. As cultural sites were identified, the UofA team noted them as part of the tribal comments for the segment where it occurred.

The first field day involved a Soboba tribal representative and began at the west end of the proposed 230 kV lines. The central portion of the proposed 230 kV lines is in immediate and parallel proximity to the central cluster of the proposed 69 kV lines. When the field team reached this area, the proposed route segments for both lines were evaluated. From this point, the field team shifted to the eastern cluster of the proposed 69 kV lines to address the segments that encroached on the mountains east of that cluster. This decision was the result of prioritizing anticipated sensitive areas within the time constraints of the tribal representatives. After visiting the eastern cluster of proposed 69 kV lines, the field team continued with the proposed 230 kV lines. The team was able to access all of the eastern segments of the proposed 230 kV lines via the levees administered by the Riverside County Flood Control and Water Conservation District. A key was obtained from the Flood Control District for this purpose. The only segments not visited were those in the heavily developed western cluster of the proposed 69 kV lines, which through the use of aerial imagery had been evaluated earlier by Soboba representatives .

The second day involved tribal representatives from Morongo and Pechanga. They requested a different approach to the field visits and the field team began at the east end of the proposed 230 kV lines, using the levees again for access. After completing the eastern portion of the proposed 230 kV lines, the field team evaluated the segments of the central portion as well as the central cluster of the proposed 69 kV lines. They then moved on to evaluate the segments of the eastern cluster of the proposed 69 kV lines, which completed the field visit. The only segments not visited were those in the heavily developed western cluster of the proposed 69 kV lines, which through the use of aerial imagery had been evaluated earlier by Morongo and Pechanga representatives .

## Findings

The field visits resulted in cultural sensitivity assessments for all segments of the proposed 230 kV and 69 kV powerlines, and discussions of culturally sensitive landscape features. The area encompassing the RTRP was identified as a shared traditional use area with which the Luiseño, Cahuilla, Serrano, and Gabrieleño people are associated. Mountains and waterways are culturally significant features with sensitive features including boulders, traditional use plants, and clay deposits. Village sites, rock art sites, and places for plant gathering, hunting, and ceremony were discussed throughout the field visits. Some place names were given that participants learned as traditional knowledge from tribal elders, and from information gathered by J.P. Harrington from Luiseño informants.

All segments of the proposed routes were identified as at least medium cultural sensitivity. The ratings presented in this report reflect concurrence by the three tribes who emphasized that the ratings are preliminary. Before they can make a final decision on cultural sensitivity, they must review the cultural resource reports for the area and participate in any ground disturbing activities and surveys. The data from these activities will allow the tribes to adjust the sensitivity ratings, particularly for the segments in heavily developed areas.

Several segments of particular concern were identified by tribal representatives. For the proposed 230 kV routes, such segments include #10, #27, #35, #36, and #39 (Figures 2-6). Segment #10 has two sub-segments from a cultural sensitivity assessment perspective. The north-south part of the segment parallels a concrete-lined drainage that may overlay a natural drainage or waterway. The east-west part of the segment runs through an extensive, undeveloped portion of the riverway. Segment #27 runs along the base of Mount Rubidoux at the edge of the Santa Ana River. It has both mountain and riverine features and reflects many aspects of traditional life including ceremonies and power. Segments #35 and #36 also occur along the river at a place where mountains come down to the river's edge. Segment #35 leaves the river's edge to cross the mountains while segment #36 runs along the base of the mountains. Segment #39 runs through the Agua Mansa cemetery, which is California State Historical Landmark #121 and is believed to contain Native American burials. The presence of existing lines along segment #35 and existing lines and developments along segment #39 do not diminish the cultural sensitivity of either segment.

For the proposed 69 kV routes, segments of particular concern to the tribes include #7 along the river at the north end of the western cluster, and #16, #24, #25, #27, and #28, which

are entering rocky, mountainous terrain along the east side of the eastern cluster (Figures 7-12). Segment #7 differs from the segments of the central cluster, which also are near the river, because there is much less development than in the industrialized central cluster. Segments #16, #25, and #28 in the eastern cluster parallel a six-lane highway along the edge of new residential development. Segment #24 parallels these segments though some distance to the west. Segment #27 runs uphill toward segments #25 and #28, and through an area with large, scattered boulders. Tribal representatives expressed concern over the new development seen along these segments, and emphasized that neither the highway nor the developments diminish the cultural sensitivity of any of the segments.

The maps and tables that follow are presented to provide an overview (Figure 13) as well as details about portions of the proposed routes. The first two portions cover segments #1 through #17 (Figure 14) and segments #18 through #39 (Figure 15) of the 230 kV lines. The third, fourth, and fifth portions cover the 69 kV lines from west (Figure 16) to central (Figure 17) to east (Figure 18).

The findings are given context in the chapters that follow. The physical setting of the Santa Ana River watershed provides a geographic and ecological overview. The Native American landscape describes the pre-contact period of the watershed and the four associated ethnic groups. The Spanish and American landscape describes the Mission Period (1769-1834) and early colonizing under Mexican and American governments (1821-1875).



Figure 2. Route 230, segment 10



Figure 3. Route 230, segment 27



Figure 4. Route 230, segment 35



Figure 5. Route 230, segment 36



Figure 6. Route 230, segment 39



Figure 7. Route 69(west), segment 7



Figure 8. Route 69(east), segments 16, 24, 25, 27, 28

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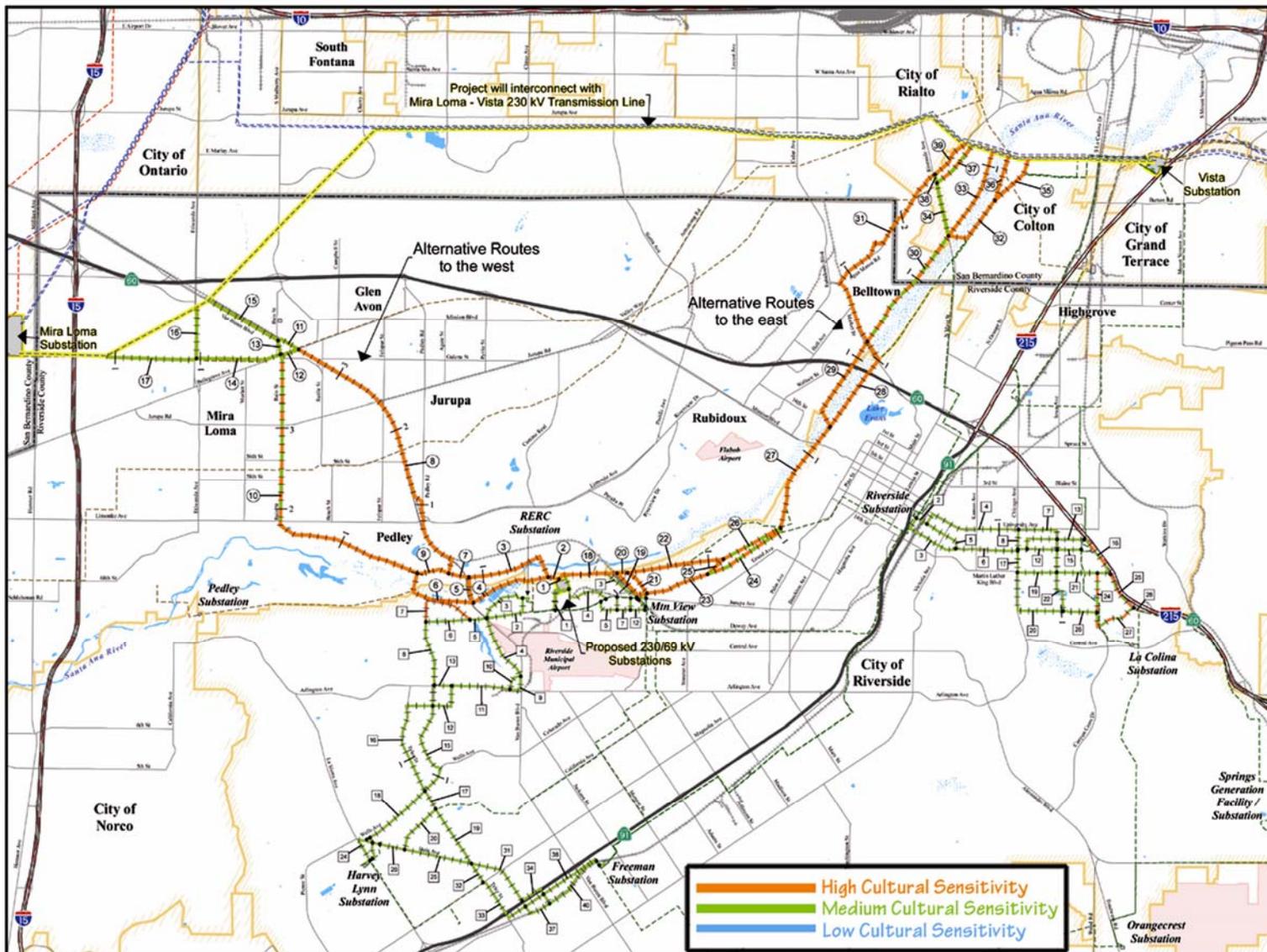


Figure 9. Preliminary tribal cultural sensitivity assessments for proposed 230 kV and 69 kV powerline routes.

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Figure 10. Preliminary tribal cultural sensitivity assessments for segments 1-17 of proposed 230 kV powerline routes.

**Table 1. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #1-#17**

| Segment | Description                                                                         | Rating | Comments                                                                                                                                                                                                                                             |
|---------|-------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | adjacent to Santa Ana River                                                         | High   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| 2       | parallels south side of Santa Ana drainage, east of Van Buren Blvd. (and segment 4) | High   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| 3       | parallels north side of Santa Ana drainage, east of Van Buren Blvd. (and segment 7) | High   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and                                                         |

**Table 1. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #1-#17**

| <b>Segment</b> | <b>Description</b>                                                            | <b>Rating</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                          |
|----------------|-------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |                                                                               |               | records need examined to make conclusive determination.                                                                                                                                                                                                                                                                                  |
| 4              | parallels south side of Santa Ana drainage, east of Van Buren Blvd.           | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                                     |
| 5              | Van Buren Blvd.                                                               | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. Crosses the Santa Ana River.                                                        |
| 6              | crosses Santa Ana River and parallels its south side, west of Van Buren Blvd. | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.                                                                                                                                                                                                                                     |
| 7              | parallels north side of Santa Ana drainage, east of Van Buren Blvd.           | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.                                                                                                                                                                                                                                     |
| 8              | Van Buren Blvd. to Santa Ana River                                            | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Van Buren crosses two drainages before approaching and crossing Santa Ana River.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| 9              | parallels north side of Santa Ana drainage, west of Van Buren Blvd.           | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.                                                                                                                                                                                                                                     |
| 10 N-S         | Bain St.                                                                      | Medium-high   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Especially sensitivity if concrete-lined drainage overlays a natural drainage area; also more so as it approaches Santa Ana River.<br>Development compromises sensitivity rating                                                 |

**Table 1. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #1-#17**

| <b>Segment</b> | <b>Description</b>                    | <b>Rating</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|---------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |                                       |               | but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                                                                                                                                                                                                                                                                          |
| 10 E-W         | parallels Limonite Ave. along river   | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Crosses the Santa Ana River.                                                                                                                                                                                                                                                                                       |
| 11             | Van Buren Blvd.                       | Medium        | Hunting, plant gathering, and possible village or camp sites.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance. |
| 12             | Bellegrade Ave.                       | Medium        | Hunting, plant gathering, and possible village or camp sites.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance. |
| 13             | north of Bain St. and Bellegrade Ave. | Medium        | Hunting, plant gathering, and possible village or camp sites.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance. |
| 14             | Cantu Galleano Ranch Rd.              | Medium        | Hunting, plant gathering, and possible village or camp sites.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive                                                                                                                                                                                                                             |

**Table 1. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #1-#17**

| Segment | Description                 | Rating | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------|-----------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                             |        | <p>determination.<br/>                     Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.</p>                                                                                                                                                                                                                      |
| 15      | Van Buren Blvd. to Bain St. | Medium | <p>Hunting, plant gathering, and possible village or camp sites.<br/>                     Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br/>                     Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.</p> |
| 16      | Etiwanda Ave.               | Medium | <p>Hunting, plant gathering, and possible village or camp sites.<br/>                     Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br/>                     Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.</p> |
| 17      | Cantu Galleano Ranch Rd.    | Medium | <p>Hunting, plant gathering, and possible village or camp sites.<br/>                     Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br/>                     Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.</p> |

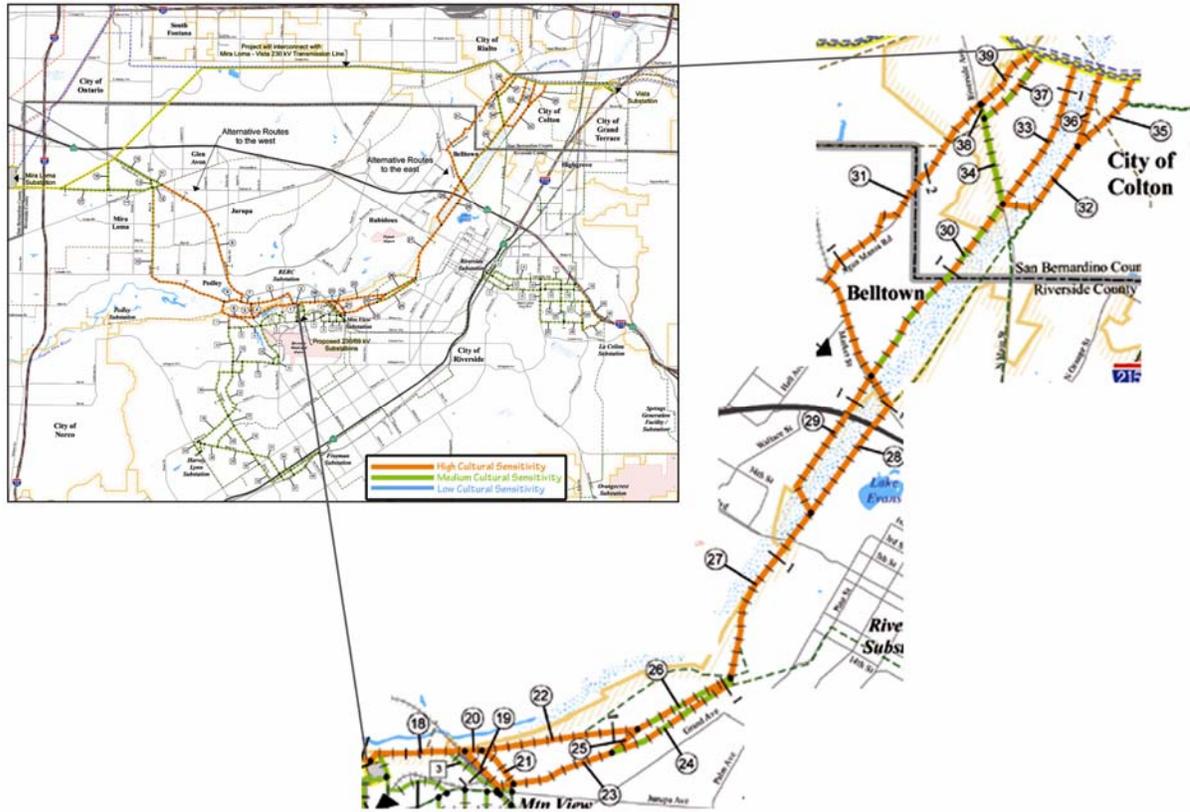


Figure 11. Preliminary tribal cultural sensitivity assessments for segments 18-39 of proposed 230 kV powerline routes.

**Table 2. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #18-#39**

| Segment | Description                             | Rating | Comments                                                                                                                                                                                                                                               |
|---------|-----------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 18      | parallels south side of Santa Ana River | High   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.   |
| 19      | perpendicular to Santa Ana River        | High   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Indian trails as indicated by de Anza trail markers; de Anza followed Indian trails.<br>Railroad disturbance.<br>Proximity to Santa Ana River. |

**Table 2. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #18-#39**

| <b>Segment</b> | <b>Description</b>                      | <b>Rating</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-----------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20             | parallels south side of Santa Ana River | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Indian trails as indicated by de Anza trail markers; de Anza followed Indian trails.<br>High point along river from where surrounding peaks and confluence upstream can be seen.<br>These landscape features increase the sensitivity of segment #20 as well as the north ends of segments #19 and #21. |
| 21             | perpendicular to Santa Ana River        | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Indian trails as indicated by de Anza trail markers; de Anza followed Indian trails.<br>Proximity to Santa Ana River.                                                                                                                                                                                   |
| 22             | parallels south side of Santa Ana River | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.                                                                                                                                                                                                                                                                                                            |
| 23             | parallels south side of Santa Ana River | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Proximity to Santa Ana River.                                                                                                                                                                                                                                                                           |
| 24             | in Santa Ana River drainage             | Medium-high   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Possible village sites on hilltop with plant gathering and hunting in floodplain below; plants include elderberry, tobacco, cottonwoods, grapes, willow, large stands of tule.<br>Higher sensitivity on west end.                                                                                       |
| 25             | in Santa Ana River drainage             | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Pechanga village site, Húlvulpa, which means sagebrush is there.<br>Identified tobacco, elderberry, willow, and grape.                                                                                                                                                                                  |
| 26             | in Santa Ana River drainage             | Medium-high   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Higher sensitivity on west end.                                                                                                                                                                                                                                                                         |

**Table 2. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #18-#39**

| <b>Segment</b> | <b>Description</b>                                                            | <b>Rating</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|-------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 27             | parallels south side of Santa Ana River near Mount Rubidoux                   | High          | <p>Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.</p> <p>Mount Rubidoux is a place of prayers and power; also ceremonies, rock art, and vantage point to see surrounding landscape.</p> <p>Significant resources include cottonwood, tobacco, elderberry, willow, cattail, grape hawks, squirrels, rabbits, ducks, and mountain/boulders.</p> <p>Water (Santa Ana River) with the mountain (Mount Rubidoux) makes it a place of power, a place of prayers.</p> <p>Luiseno term for crossing (or patching) is Póchappa, which means “they crossed/patched there,” and refers to the general vicinity of the features atop the Mount Rubidoux, the surrounding east side of the Santa Ana River, and the Mission Ave. bridge.</p> <p>Development compromises sensitivity.</p> |
| 28             | parallels south side of Santa Ana River, west of and under Hwy. 60            | High          | <p>Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.</p> <p>Mountain, boulders are significant resources.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 29             | parallels south side of Santa Ana River, west of and under Hwy. 60            | High          | <p>Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.</p> <p>Mountain, boulders are significant resources.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 30             | parallels north side of Santa Ana River between Market St. and Riverside Ave. | Medium-high   | <p>Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.</p> <p>Mountain, boulders are significant resources.</p> <p>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.</p> <p>Medium if line were to run on top of bench, high if it runs along the base of the bench.</p>                                                                                                                                                                                                                                                                                                                                                                                                              |
| 31             | Agua Mansa Rd. and Market St.                                                 | High          | <p>Grinding stones present; the mountains have songs and origin stories, and were used as landmarks.</p> <p>The mountains, including Slover Mountain, boulder hills, possible slicks (grinding areas).</p> <p>Resources include brittle bush, tobacco, coyote gourd, and white sage.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**Table 2. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #18-#39**

| <b>Segment</b> | <b>Description</b>                                                                                                     | <b>Rating</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                     |
|----------------|------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |                                                                                                                        |               | Area represents the geographic locale of a distinctive morro-hill, which would be considered one of Táakwish's roosts, which figures into beliefs and traditional knowledge. Development compromises sensitivity.                                                                                   |
| 32             | parallels south side of Santa Ana River, east of Riverside Ave. and cuts across river to north end of Riverside bridge | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies. Ceremonial houses were built near the base of mountains like these. Sensitivity getting higher because segment is approaching mountains. Resources include tobacco, brittle bush, and rabbits. |
| 33             | parallels north side of Santa Ana River, east of Riverside Ave.                                                        | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies. Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                   |
| 34             | parallels Riverside Ave., north of Santa Ana River                                                                     | Medium        | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies. Proximity to Santa Ana River.                                                                                                                                                                  |
| 35             | turns from Santa Ana River and runs across mountains, boulders                                                         | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies. Mountain, boulders are significant resources.                                                                                                                                                  |
| 36             | parallels south side of Santa Ana River at extreme east end of proposed routes                                         | High          | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies. Mountain, boulders are significant resources. More developed than #35 but still highly sensitive given its location to the mountains.                                                          |
| 37             | parallels Agua Mansa Rd. a few hundred yards south of it                                                               | Medium-high   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies. Possible village sites on hilltops. Proximity to Santa Ana River.                                                                                                                              |
| 38             | parallels Riverside Ave., north of Santa Ana River                                                                     | Medium        | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies. Approaching natural drainage. Development compromises sensitivity but it gets                                                                                                                  |

**Table 2. Tribal Cultural Sensitivity Assessments of Alternate 230 kV Routes, Segments #18-#39**

| Segment | Description              | Rating | Comments                                                                                                                                                                                            |
|---------|--------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                          |        | higher as you approach the water.<br>Proximity to Santa Ana River.                                                                                                                                  |
| 39      | parallels Agua Mansa Rd. | High   | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Possible village sites on hilltops.<br>Agua Mansa cemetery includes Native American graves. |

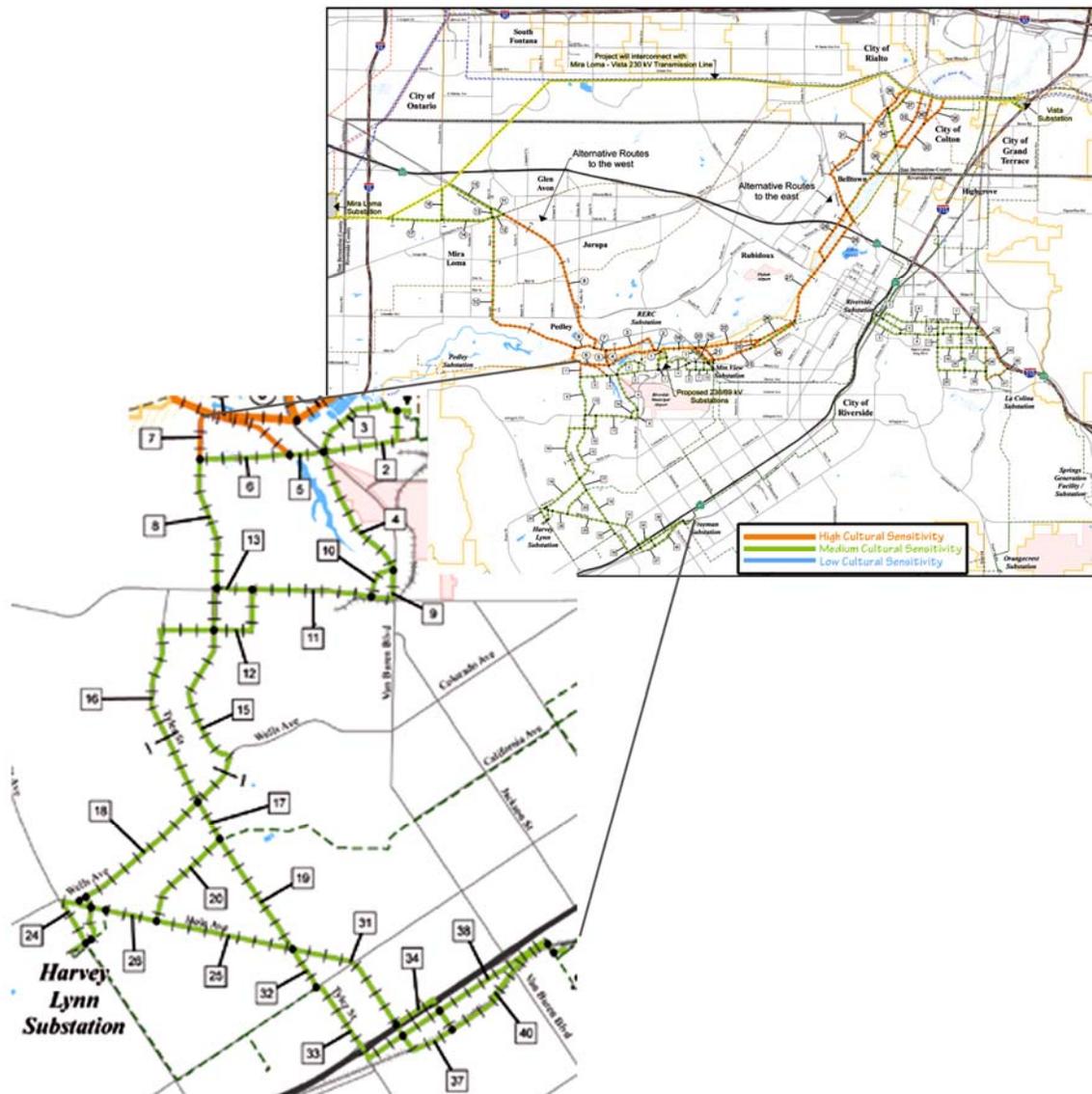


Figure 12. Preliminary tribal cultural sensitivity assessments for the western segments of proposed 69 kV powerline routes.

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| Segment | Description                                  | CS rating | CS why                                                                                                                                                                                                    | Comments                                                                                                                                     |
|---------|----------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| w1      | E-W segment, NE of Acorn St. and Jurupa Ave. | Medium    | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance. | Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| <b>Segment</b> | <b>Description</b>                                                                                      | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                             | <b>Comments</b> |
|----------------|---------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| w2             | Acorn St. and Jurupa Ave.                                                                               | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w3             | NE of Van Buren Blvd. and Jurupa Ave.                                                                   | Medium           | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Proximity to Santa Ana River.                                                                     |                 |
| w4             | Van Buren Blvd.                                                                                         | Medium           | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Proximity to Santa Ana River.                                                                     |                 |
| w5             | undeveloped segment of Jurupa Ave. west of Van Buren Blvd.                                              | Medium           | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Proximity to Santa Ana River.                                                                     |                 |
| w6             | Jurupa Ave. west of Van Buren Blvd. and segment w5, and undeveloped extension through agricultural park | Medium           | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Proximity to Santa Ana River.                                                                     |                 |

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| <b>Segment</b> | <b>Description</b>                                                   | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                             | <b>Comments</b> |
|----------------|----------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| w7             | Crest Ave. , undeveloped through agricultural park, and Bradford St. | High             | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Proximity to Santa Ana River.                                                                     |                 |
| w8             | Crest Ave.                                                           | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w9             | Van Buren Blvd.                                                      | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w10            | NW of Van Buren Blvd. and Arlington Ave.                             | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w11            | Arlington Ave.                                                       | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| <b>Segment</b> | <b>Description</b>            | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                             | <b>Comments</b> |
|----------------|-------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| w12            | Cypress Ave. and Rutland Ave. | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w13            | Arlington Ave.                | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w15            | Crest Ave. and Wells Ave.     | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w16            | Cypress Ave. and Tyler St.    | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w17            | Tyler St.                     | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| <b>Segment</b> | <b>Description</b>       | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                             | <b>Comments</b> |
|----------------|--------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| w18            | Wells Ave.               | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w19            | Tyler St.                | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w20            | Cook Ave. and Jones Ave. | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w21?           | Doane Ave.               | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w22?           | Minnier Ave.             | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| <b>Segment</b> | <b>Description</b>           | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                             | <b>Comments</b> |
|----------------|------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| w23?           | Schuyler Ave.                | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w24            | Hole Ave. and La Sierra Ave. | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w25            | Hole Ave.                    | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w26            | Hole Ave.                    | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w31            | Hole Ave. and Hughes Aly.    | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| <b>Segment</b> | <b>Description</b>          | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                             | <b>Comments</b> |
|----------------|-----------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| w32            | Tyler St.                   | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w33            | Tyler St. and Indiana Ave.  | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w34            | Diana Ave. and Harrison St. | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w35?           | Indiana Ave.                | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w36?           | Harrison St.                | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |

**Table 3. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Western Segments**

| <b>Segment</b> | <b>Description</b>                      | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                             | <b>Comments</b> |
|----------------|-----------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| w37            | Atchison, Topeka, and Santa Fe Railroad | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w38            | Indiana Ave.                            | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w40            | Atchison, Topeka, and Santa Fe Railroad | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w41?           | Gibson St. at east end of w40           | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |
| w42?           | undeveloped segment east of w41         | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |                 |

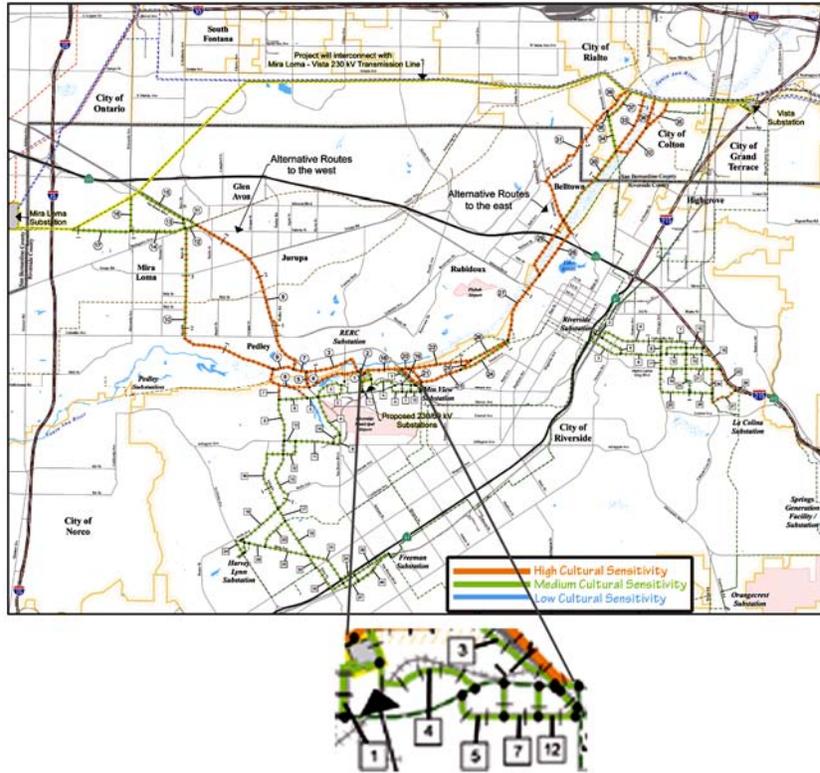


Figure 13. Preliminary tribal cultural sensitivity assessments for central segments of proposed 69 kV powerline routes.

**Table 4. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Central Segments**

| Segment | Description                               | Rating | Comments                                                                                                                                                                                                                                                                                                                                                  |
|---------|-------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| c1      | Wilderness Ave.                           | Medium | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| c2?     | undeveloped N-NE of Wilderness and Jurupa | Medium | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Proximity to Santa Ana River.                                                                     |

**Table 4. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Central Segments**

| <b>Segment</b> | <b>Description</b>                                          | <b>Rating</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                           |
|----------------|-------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| c3             | west of and parallel to Union Pacific line, north of Jurupa | Medium        | Natural drainages, rivers, riparian areas were places for gathering plants, hunting, and ceremonies.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Proximity to Santa Ana River.                                                                     |
| c4             | Columbus St.                                                | Medium        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| c5             | south of and parallel to Mountain View Ave.                 | Medium        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| c6?            | between c5 and c7, Chester St.                              | Medium        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| c7             | south of and parallel to Mountain View Ave.                 | Medium        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |

**Table 4. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Central Segments**

| <b>Segment</b> | <b>Description</b>                          | <b>Rating</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                           |
|----------------|---------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| c8?            | between c7 and c12, Florence St.            | Medium        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| c12            | south of and parallel to Mountain View Ave. | Medium        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| c?             | diagonal NE of c12, Sheppard St.            | Medium        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |



**Table 5. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Eastern Segments**

| Segment | Description                                                                                      | CS rating | CS why | Comments                                                                                                                                                                                                                                                                                                                                                  |
|---------|--------------------------------------------------------------------------------------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                                                                                                  |           |        | Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                                                                                                                                                              |
| e4      | University Ave. and undeveloped segment east of Howard Ave. and perpendicular to University Ave. | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e5      | Tenth St. and Sedgewick Ave.                                                                     | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e6      | Twelfth St.                                                                                      | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e7      | University Ave. and Iowa Ave.                                                                    | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e8      | Chicago Ave.                                                                                     | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.                                                                                                                                                 |

**Table 5. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Eastern Segments**

| Segment | Description                                                                              | CS rating | CS why | Comments                                                                                                                                                                                                                                                                                                                                                  |
|---------|------------------------------------------------------------------------------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                                                                                          |           |        | Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                                                                                                                                                              |
| e9?     | runs through University farm                                                             | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e10?    | borders University farm on the north and west, mostly parallel to and between e7 and e12 | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e11?    | Iowa Ave.                                                                                | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e12     | runs through University farm                                                             | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e13     | Everton Pl.                                                                              | Medium    |        | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.                                                                                                                                                 |

**Table 5. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Eastern Segments**

| <b>Segment</b> | <b>Description</b>           | <b>CS rating</b> | <b>CS why</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                           |
|----------------|------------------------------|------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |                              |                  |               | Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                                                                                                                                                              |
| e14?           | Iowa Ave.                    | Medium           |               | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e15            | runs through University farm | Medium           |               | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e16            | Sycamore Canyon Blvd.        | Medium-high      |               | Significant resources include mountains, rocks/boulders, and riparian areas.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                                                                              |
| e17            | Chicago Ave.                 | Medium           |               | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |
| e19            | Martin Luther King Blvd.     | Medium           |               | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination. |

**Table 5. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Eastern Segments**

| <b>Segment</b> | <b>Description</b>               | <b>CS rating</b> | <b>CS why</b>                                                                                                                                                                                                                                                                                                                                                               | <b>Comments</b> |
|----------------|----------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| e20            | Chicago Ave. and El Conte Dr.    | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                   |                 |
| e21            | Martin Luther King Blvd.         | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                   |                 |
| e22            | runs N-S through University farm | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                   |                 |
| e24            | Canyon Crest Dr.                 | Medium-high      | Near mountains.<br>Low probability given ground disturbance but there may be something below the surface; tribal monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination |                 |
| e25            | Sycamore Canyon Blvd.            | Medium-high      | Significant resources include mountains, rocks/boulders, and riparian areas.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                                                                                                |                 |
| e26            | El Conte Dr.                     | Medium           | Low probability given ground disturbance but there may be something below the surface; tribal                                                                                                                                                                                                                                                                               |                 |

**Table 5. Tribal Cultural Sensitivity Assessments of Alternate 69 kV Routes, Eastern Segments**

| Segment | Description           | CS rating   | CS why                                                                                                                                                                                                                                                                                        | Comments |
|---------|-----------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|         |                       |             | monitors needed for archaeology, site testings, and line construction to check for subsurface significance.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                   |          |
| e27     | El Cerrito Dr.        | Medium-high | Significant resources include mountains, rocks/boulders, and riparian areas.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.<br>Rating applies to segment except on west end at Canyon Crest. |          |
| e28     | Sycamore Canyon Blvd. | Medium-high | Significant resources include mountains, rocks/boulders, and riparian areas.<br>Development compromises sensitivity rating but does not eliminate it; subsurface and records need examined to make conclusive determination.                                                                  |          |

## **Chapter Two**

### **Physical Setting of Santa Ana River Region**

The RTRP lies in an area bounded by Colton, Riverside, and Ontario, California through which the Santa Ana River runs. The area history includes long use by Native American tribes, the Spanish mission era, and Mexican and American ranching and settlement. Earthquakes and floods characterize the entire drainage, which encompasses habitats that include coastal marshes, riparian areas, canyons, and forested hillsides. The geography and ecology of the RTRP area are discussed within the context of the Santa Ana River watershed.

#### **Geographic Setting**

The RTRP lies in the Santa Ana Watershed of southern California. Predominant features of the watershed are the Santa Ana River and the San Gabriel, San Bernardino, San Gorgonio, and San Jacinto Mountains. The proposed 230 kV routes run along the Santa Ana River except at the east end where route segments cross former plains habitats of the Santa Ana Valley. The original habitats of this eastern area have been altered by Euro-Americans over the years, first for farming and livestock grazing, and later for more residential and urban development.

The proposed 69 kV routes occupy different habitats. The western cluster of routes cover an area that formerly included riparian, plains, and foothills habitats. With the exception of segment #7, which runs above the river, the area has gone through a similar evolution as the eastern area of the proposed 230 kV routes. The central cluster of 69 kV routes parallel the river, mostly out of the riparian zone. This area has seen farming and livestock in the past, and today contains residential and industrial developments. The eastern cluster of routes is away from the river and was former plains and foothill habitats. The former plains portion is heavily developed and the foothills area has highway and increasing residential development.

The Santa Ana River was known for a time as the Río de Los Temblores, so named for an earthquake that occurred while Gaspar de Portolá and his men, as part of the expedition to establish missions in Upper California, were camped alongside the river near Olive<sup>1</sup>. Portolá and his men, however, called it the Río Santa Ana because they arrived in the valley on St. Anne's<sup>2</sup> Day, July 26, 1769 (Stephenson 1943).

The Santa Ana River is southern California's largest stream system with the main channel extending over 100 miles southwest toward the Pacific Ocean, dropping almost 6,000 feet, and having more than 50 tributaries. Its watershed drains almost 3200 square miles of southern California in parts of San Bernardino, Riverside, and Orange Counties, which have a population of approximately five million people. Headwaters for the Santa Ana

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<sup>1</sup> Near Anaheim, California.

<sup>2</sup> St. Anne is the mother of Mary, mother of Jesus.

are found in the San Gabriel, San Bernardino, San Gorgonio, and San Jacinto Mountains. Elevations range from sea level to over 11,000 feet (Figure 15) (CA Coastal Conservancy 2001; Larson 1994; Mitchell 2006).



Figure 15. The Santa Ana River Watershed.

The Santa Ana watershed is characterized by mountains that embrace numerous valleys of varying size; the primary axis of uplift is a continuation of the Sierra Nevada range. The Santa Ana River begins in the San Bernardino and San Gabriel Mountains and flows through the Santa Ana Valley where several tributaries feed into it. The river continues southwest through the Prado Basin and a narrow pass in the Santa Ana Mountains before continuing on to the ocean. The Prado Dam was constructed in the early 1940s just east of the pass through the Santa Ana Mountains; it divides the watershed into upper and lower subwatersheds (CA Coastal Conservancy 2001).

Prior to the changes that accompanied European settlement, many springs, swamps, marshes, and bogs were interspersed throughout the watershed, and the Santa Ana River was a perennial stream that flowed from the San Bernardino and San Gabriel Mountains to the Pacific Ocean most of the year (CRWQCB, 1995). The Santa Ana River and its tributaries were characterized by sandy streambeds, willows, cottonwoods, and live oaks. As with any urbanized watershed, the Santa Ana has been altered by a variety of historic factors. The watershed's history includes several distinct cultural periods and significant natural events.

### **Cultural History**

Paleo-Indian sites dating from 10,000 B.C. indicate that people have inhabited the Santa Ana watershed for at least 12,000 years, however, artifacts in the Calico area of San Bernardino County suggest the possibility of much earlier human occupation. Many Native American tribes occupied and/or made use of the watershed, however, the four main ethnic groups are the Cahuilla, who occupied the southeastern part of the watershed; the Serranos,

who lived in the foothills of the San Bernardino Mountains; the Luiseños who occupied an area south of Mount San Jacinto; and the Gabrieleños, who occupied the west valley (Figure 16) (CA Conservancy 2001).

Native Americans made use of the Santa Ana River resources including water, plants for food, medicine, manufacture, and ceremony, wildlife, and minerals such as clay deposits. The tribes managed the watershed habitats with selective burning, which controlled woody growth and increased traditional use species and wildlife forage (Aschmann 1959).

In 1769, the Mission Era brought the first introduction of Europeans to the Santa Ana watershed. The Spanish attempted to construct irrigation systems but struggled with the extremes of flooding and low water flows of the mostly perennial streams (Gentilcore 1961; Moriarty 1983). Eventually, they built a huge system of aqueducts throughout California to irrigate extensive gardens, orchards, and vineyards. The missions prospered until 1821 when Mexico separated from Spain. In 1833, the Secularization Act brought an end to the Mission Era by taking ownership of the mission lands to make the vast acreages available to ranchers seeking new lands. The effects of the Mission program and settlement of the more arable lands by ranchers resulted in the disruption and dissemination of the Indian settlement and land use pattern and populations (Sparkman 1908).

As Spanish and Mexican ranchers acquired land grants, they were able to establish large *ranchos*. Along the Santa Ana, the early ranchos included Rancho San Juan Cajon de Santa Ana, established in 1837 (CA Conservancy 2001); Rancho Jurupa, established in 1838; Rancho San Bernardino, established in 1839 (Harley 1991). The Santa Ana floodplains were the first areas to be developed since these could be irrigated easily by diverting the river flow. Irrigation was used for small gardens and orchards, and small plots of grains for their livestock.

Mormon colonists settled in the upper portions of the Santa Ana watershed in the 1850's. They diverted water from the Santa Ana tributaries of Mill, Lytle, and Warm Creeks for irrigating vineyards, orchards, and grain fields near present-day Redlands, San Bernardino, and Riverside. Another settlement that later became Anaheim also diverted water from the Santa Ana just before it passed through the Santa Ana Mountains for domestic use (CA Coastal Conservancy 2001).

Completion of the Southern Pacific and Santa Fe railroad lines in 1881 increased migration to southern California. The new settlers required farms and orchards of their own, which increased irrigation use in the summer. The increased demand for water led to diversion of the entire flow of the Santa Ana River where it leaves the San Bernardino Mountains. Diversions were made at the stream edge, and were comprised of brush and sand dams, and hand-dug ditches (CA Coastal Conservancy 2001).

Navel oranges were brought in to the Santa Ana watershed in the 1870s. The trees did well in the Mediterranean climate, which increased their popularity as a crop, and subsequent demand for more irrigation water. Dam construction ensued with a masonry dam in the San Jacinto Mountains in 1891. Completed in 1895, it was followed by the Hemet Dam and the

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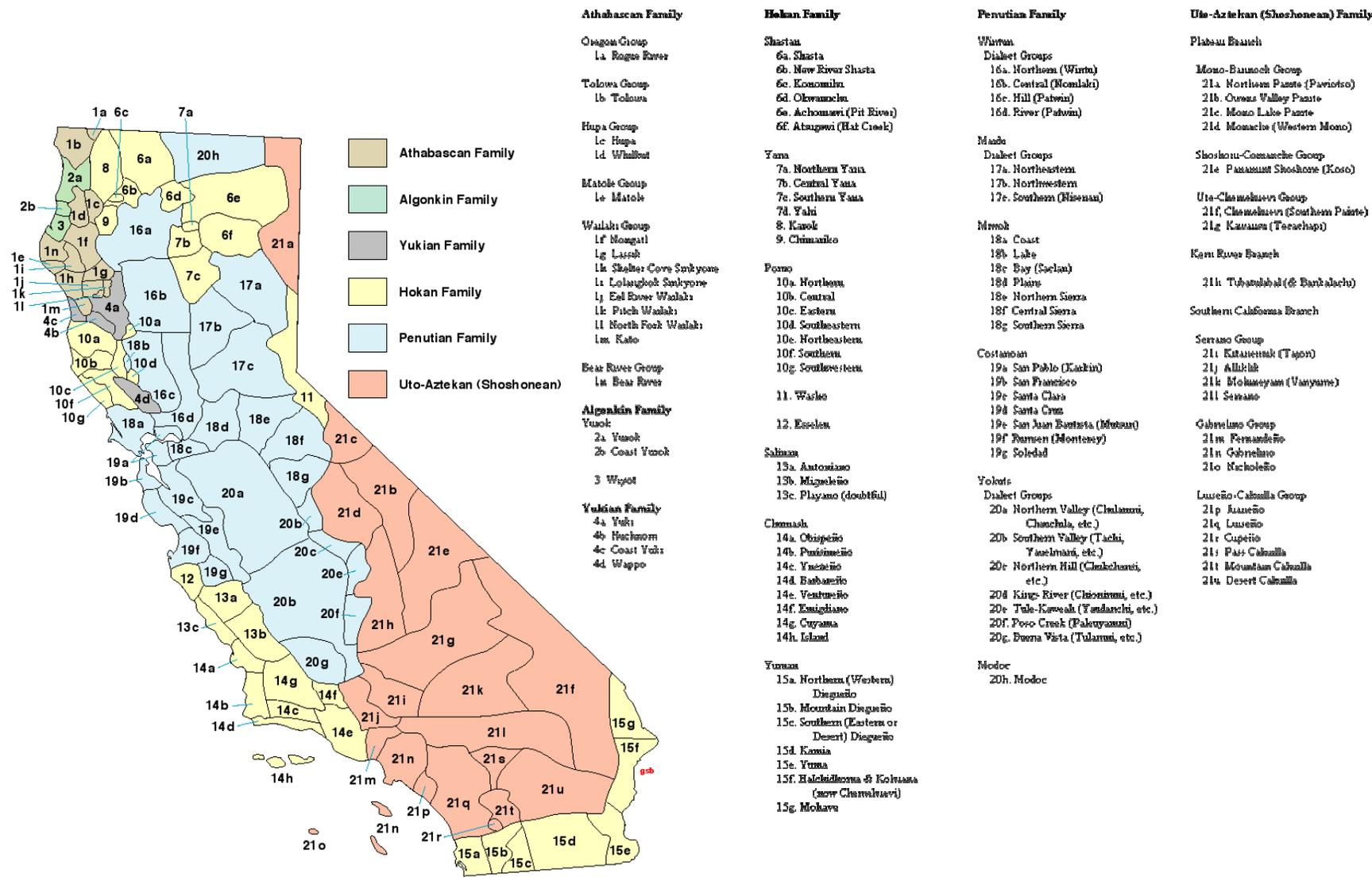


Figure 16. California tribal areas 1770 (Heizer 1966; Kroeber 1925; <http://www.californiaprehistory.com/tribmap.html>)

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organization of water companies and water agencies to manage diversion of the Santa Ana River and its tributaries (CA Coastal Conservancy 2001).

The developments for irrigation water led to dewatering of the once perennial Santa Ana River, and supplementation of surface water with groundwater. The extraction of groundwater began in 1868 with artesian wells in the area above Bunker Hill near Riverside and San Jacinto. As more wells were drilled and pumping increased, groundwater levels dropped and many springs, swamps, and other historically wet areas dried up. Groundwater recharge operations were started in 1895 on San Antonio Creek, and recharge operations near Redlands began in 1911. These efforts were inadequate to offset all of the diverted river water so the Colorado River aqueduct was constructed in 1941 to provide additional water to the cities in the lower watershed. Flood control was addressed also in 1941 with the construction of Prado Dam, which resulted in new development in the floodplain, which created the need for more flood control measures. Today, almost all of the Santa Ana River has been modified by flood control measures. Only portions of the upper river channel remain natural (CA Coastal Conservancy 2001).

### **Natural Events**

The Santa Ana watershed has seen many large floods over the years. The largest one occurred in winter of 1861-1862 when a series of storms swelled the Santa Ana River beyond its banks. Up to four feet of water ran through Anaheim and destroyed the area's cattle industry, drowning 200,000 cattle and washing away much of the soil. Prior to the flood, the river upstream of what is now Redlands was a narrow and meandering with alder, willow, sycamore, and cottonwood trees along its banks. The flood washed out the trees and left sand, gravel, and boulders in the riverbed and adjacent floodplain. Afterward, the Santa Ana ran in several channels from the canyon mouth rather than in a well-defined course (CA Coastal Conservancy 2001).

The winter of 1938 brought much needed rains to the watershed but, once again, more than the river could manage (Figure 17). The volume and rapidity of the runoff were compounded by the larger developed area, steep gradients, and reduced absorptive capacity of the watershed. This event affected a large area including the north half of Orange County in the lower Santa Ana watershed. Almost all of the bridges were destroyed, much agricultural land was damaged, and 50 people were killed.

The flood, consequently, prompted renewed flood control efforts, and construction of the Prado Dam began in 1941. Located a little over 30 miles from the Pacific Ocean, where the Santa Ana River enters a narrow pass in the Santa Ana Mountains, the Prado Dam was 566 feet high and designed to store 200,000 acre-feet of water. Not only did the dam provide flood control and water conservation storage, it also changed the hydrology of the Santa Ana River by destroying riparian habitat and creating a sediment trap. Replenishing beach sediment no longer reached the Pacific Ocean and fish migrations from the lower to the upper watershed were blocked (CA Coastal Conservancy 2001).



Figure 17. Santa Ana flood waters in 1938 (RCFCWCD 2007).

### **Ecological Setting**

The Santa Ana River watershed lies within an active seismic area that is subdivided by a complex of intersecting or interlocking fault zones, many of which are active (Figure 18). Some of these zones record repeated movements beginning before 15 Ma<sup>3</sup>. Dikes and irregular intrusive bodies of distinctive Oligocene biotite dacite, and hornblende latite and felsite occur widely in the central and eastern San Gabriel Mountains of southern California. Mountain Meadows Dacite is present beneath Middle Miocene Topanga Group Glendora Volcanics at the northeastern edge of the Los Angeles Basin (McCulloh, Beyer, and Morin 2002). This material is 27.6-Ma and a distinctive intrusive igneous complex that straddles several major fault zones including the San Andreas Fault, the San Jacinto Fault, the Elsinore-Whittier Fault, and the Newport-Inglewood Fault (McCulloh, Beyer, and Morin 2002; Nourse, Weigand and Hazelton 1998; Shelton 1955).

The main mountain axis and subordinate ranges consist principally of granitic formations with occasional outcroppings of limestones. A range of tertiary hills, conglomerates, sandstones and shales stretches from Pasadena to the Santa Ana River (Parish 1903a). The Santa Ana watershed is geologically young and dates to the Quaternary Period. It includes sandy and gravelly mesas, rich loams, ferruginous clays, and black adobe much of which contains soda salts in varying amounts (Parish 1903a).

Historically, the Santa Ana River had a perennial flow, however, the much of the river today is ephemeral as a result of the construction of dams, irrigation and water supply diversions, and groundwater pumping. Summer flow is usually limited to a section extending from the City of Riverside to the recharge basins below Imperial Highway, and consists primarily of sewage treatment plant effluent (mostly secondary treatment), irrigation runoff water, groundwater forced to the surface by underground barriers, and imported water applied for groundwater recharge (CA Conservancy 2001).

The climate of the Santa Ana watershed is Mediterranean with hot, dry summers and cooler, wetter winters. Precipitation amounts, most of which comes in the winter months, are

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<sup>3</sup> Million years ago

wide-ranging from 12-40 inches per year, the amount increasing with elevation from the coastal plain (12") to the inland valleys (18") to the San Bernardino Mountains (40") (USGS 1998). Temperatures vary with elevation and topography with the coastal areas tending to be cooler than the inland areas.

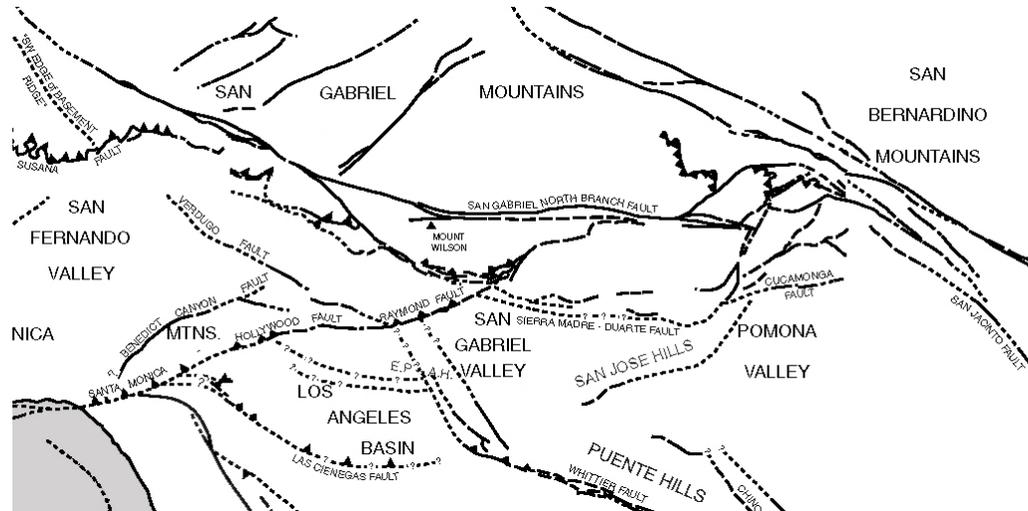


Figure 18. Geographic features and fault map of southern California southwest of the San Andreas Fault Zone (McCulloh, Beyer, and Morin 2002).

Pre-settlement habitats included treeless mountains, which were managed annually with traditional Native American burns (Redway 1894). The plains surrounding the Santa Ana were treeless as well although the river banks had some woody species. “Excepting the willows along the banks of the Santa Ana River, there was hardly a stick of timber growing in the entire plain. But in the seventies, during an unusually rainy winter, the Santa Ana rose above its banks and inundated an area many square miles in extent. The flood carried with it the seeds of a species of willow unknown in the immediate locality, and in the course of a few years the inundated area was covered with a forest of willow” (Redway 1894:212).

### Proposed 230 kV Routes

The Santa Ana River is characterized by extremes, from a narrow perennial flow within a broader dry, sandy channel (Figure 19) to raging torrents that historically have overflown the banks for miles around (Figure 20). Missionaries, early ranchers, and settlers often noted dry riverbeds during the summer and extreme flooding from late winter to early spring. The 1840s saw a period of prolonged drought, which bankrupted several ranchers. The majority of the precipitation and consequent river-flow volumes (80%) occur during winter months with summer rains accounting for less than five percent of the annual rainfall (Larson 1994).

The east end of the proposed 230 kV routes begins in San Bernardino County. The section of the Santa Ana River between San Bernardino and Riverside is leveed, which has altered the riparian community significantly, leaving a sandy riverbottom that supports sparse vegetation compared to other stretches of the river. The plants are predominantly introduced grasses and forbs intermixed with coastal sage scrub community (Table 6). Part of the perennial flow in this section comes from surfacing groundwater and sewage treatment

effluent that maintain a small amount of wetland species including willows (*Salix* spp.) (CA Coastal Conservancy 2001).



Figure 19. The Santa Ana River spring 2007.



Figure 20. Santa Ana River floodwaters in 1969 at the Market Street bridge in Riverside (RCFCWCD 2007).

| Common Name                     | Scientific Name                 |
|---------------------------------|---------------------------------|
| Chamise, Greasewood             | <i>Adenostoma fasciculatum</i>  |
| California Sagebrush (dominant) | <i>Artemisia californica</i>    |
| Coyote Brush                    | <i>Baccharis pilularis</i>      |
| Blue Dicks                      | <i>Dichelostemma pulchellum</i> |
| California Buckwheat            | <i>Erigonium fasciculatum</i>   |
| California Encelia              | <i>Encelia californica</i>      |
| Toyon, Christmas Berry          | <i>Heteromeles arbutifolia</i>  |
| Golden Bush                     | <i>Isocoma menziesii</i>        |
| Bladderpod                      | <i>Isomeris arborea</i>         |
| California Aster                | <i>Lessingia filaginifolia</i>  |
| Coastal Deer Weed               | <i>Lotus dendroideus</i>        |
| Laurel Sumac                    | <i>Malosma laurina</i>          |
| Monkey flower                   | <i>Mimulus aurantiacus</i>      |
| Coastal Prickly Pear Cactus     | <i>Opuntia littoralis</i>       |
| Scrub Oak                       | <i>Quercus dumosa</i>           |
| Lemonadeberry                   | <i>Rhus integrifolia</i>        |
| Fuchsia- Flowered Gooseberry    | <i>Ribes speciosum</i>          |
| Black Sage                      | <i>Salvia mellifera</i>         |
| Purple Sage                     | <i>S. leucophylla</i>           |
| White Sage                      | <i>S. apiana</i>                |

Table 6. Coastal sage scrub species.

Through Riverside, below the leveed section, the streamside vegetation becomes more abundant. The species in this section include Fremont's cottonwood (*Populus fremontii*), California walnut (*Juglans californica*), Mexican elderberry (*Sambucus mexicana*), white alder (*Alnus rhombifolia*), mule fat (*Baccharis salicifolia*), California wild

rose (*Rosa californica*), poison hemlock (*Conium maculatum*), wild grape (*Vitis girdiana*), willows (*Salix* spp.), salt grass (*Distichlis spicata*), wild cucumber (*Marah macrocarpus*), mugwort (*Artemisia douglasiana*), stinging nettle (*Urtica dioica*), poison oak (*Toxicodendron diversilobum*), and the invasive giant reed (*Arundo donax*) (CA Coastal Conservancy 2001; Holland and Keil 1995).

Wildlife along the Santa Ana River decrease from the mountains to the ocean due to the urbanization of the area. Stretches of the Santa Ana, however, continue to provide havens for a variety of smaller wildlife including opossum, raccoon, skunks, rabbits, ground squirrels, lizards, snakes, rodents, salamanders, toads, frogs, and birds. Downstream from Riverside, the Prado wetlands provide habitat for 250 rare and endangered avian species (CA Coastal Conservancy 2001).

### Proposed 69 kV Routes

While the three clusters of proposed 69 kV routes occupy different habitats, the vegetation is predominantly coastal sage scrub community. Segment #7 of the western cluster, all of the central cluster routes run above the river at the edge of the riparian zone. Before non-Indian populations began to alter the environment, these areas would have been transitional between riparian species and coastal sage scrub species. Most of the proposed 69 kV routes are developed and dominated by introduced species although, remnant native coastal sage scrub species may be found in the higher elevation sections of the eastern and western route clusters (Figures 21, 22).



Figure 21. Introduced species of the urban landscape.



Figure 22. Remnant coastal sage scrub habitat.

While wildlife numbers are diminished in the cluster areas, birds make up the most obvious population. Smaller wildlife species occur in the undeveloped foothills and it is possible that coyotes and deer may use the higher, rocky areas (CA Coastal Conservancy 2001).

## **Chapter Three**

### **The Santa Ana River Watershed: A Native American Landscape**

The proposed 230 kV transmission line run parallel to and across the Santa Ana River to link up with a new proposed substation (Figure 23). The participating tribes expressed concern for activities that would cause disturbance to any water feature and associated environment. This chapter contextualizes their concerns with an ethnographic and historical overview of traditional Native American relationships with the Santa Ana River and watershed.



Figure 23. The Santa Ana River

#### **Prehistory of the Santa Ana River Region**

Previous efforts to unpack the prehistory of the Santa Ana River watershed have struggled with what appears to be continuous and slow moving cultural processes. Attempts to understand the archaeology of the region typically have tried to classify interior sites relative to coastal chronologies resulting in conflicting interpretations. A common finding in the various chronologies of the Santa Ana River region is that the area has been occupied continuously by Indian people for at least 12,000 to 15,000 years, with some artifacts being dated tentatively to about 12,000 B.P. (Altschul et al. 1984).

Indian people endured climatological and technological changes such as agricultural techniques and the development of different point styles. The end of the Pleistocene brought monumental changes which increased agricultural activities and the harvesting of certain plant species. Indian people adapted and maintained relatively stable lifeways until the arrival of the Spanish in the 16th century (Altschul et al. 1984).

## Santa Ana River Region as a Multi-Ethnic Area

The Santa Ana River watershed traditionally was a multi-ethnic and multi-use area. The river flows through the territories of four ethnic groups: the Gabrieleños, the Luisenos, the Cahuillas, and the Serranos (Figures 24, 25). The delineations of the four groups is misleading in terms of traditional use boundaries, which often were transparent and represented by broad, shared-use areas.

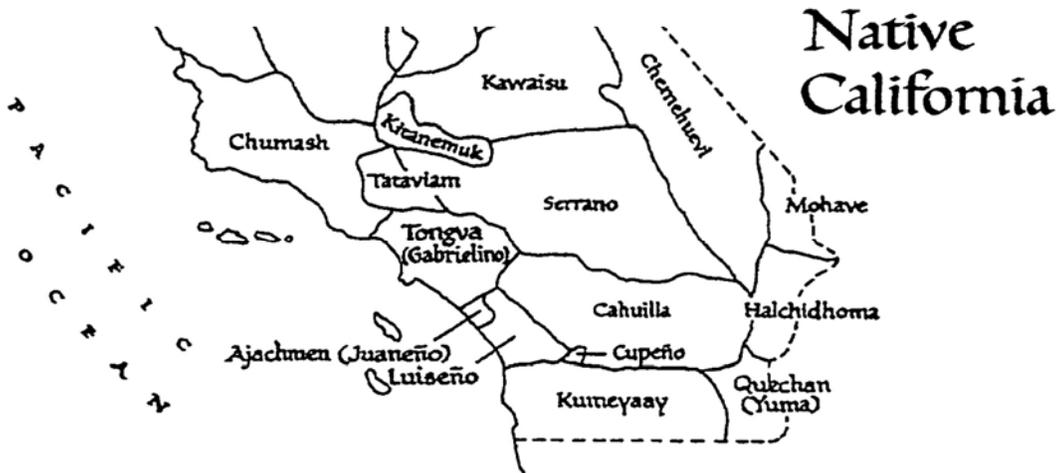


Figure 24. Tribal Territories of Coastal and Central California (adapted from Margolin and Montijo 1995:8).

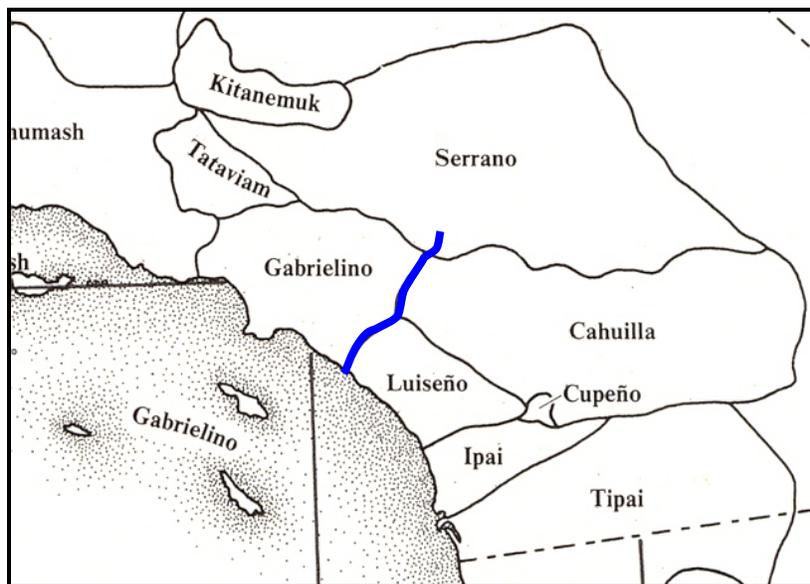


Figure 25. Tribal Territories associated with the Santa Ana River (blue) (Heizer 1978).

A general ethnographic sketch of each of the four associated ethnic groups highlight particular aspects of their cultures, and their relationships with the Santa Ana River and other natural resource features in the watershed. The sketches include traditional settlement, the concept of power, and natural resources.

## Luiseno

The Luiseno people traditionally occupied lands that comprised 1500 square miles of southern California both along the coast and in the interior region (Figure 26). Their boundaries extended along the coast from Agua Hedionda Creek to Aliso Creek. Their interior boundaries reached from the Santa Ana River and Santiago Peak to the eastern side of Elsinore Fault Valley and south to Palomar Mountain and San Jose Valley (Bean and Shipek 1978, White 1963). Luiseno lands included three major river systems: San Luis Rey, Santa Margarita, and Santa Ana.

The Santa Ana River formed the northern boundary with the Gabrieleños and the Serranos. The river valleys represent one of the diverse ecological zones that are found throughout Luiseno traditional territory. Other ecological zones include coastal areas such as the littoral and coastal chaparral, and extensive oak, pine, and cedar stands in the higher elevations.

### *Traditional Settlement*

The Luiseno people lived in sedentary autonomous village groups. Each village was its own sphere of influence, having specific hunting, collecting, and fishing territories. These areas were found in valley bottoms, along streams, or along coastal strands near the mountain ranges. It was common to find villages in sheltered coves or canyons, on the side of slopes in a warm thermal zone near adequate water supplies, and in defensive locations. Each village area was characterized with place names that were associated with important natural resources or sacred beings. Any of these places could be owned by an individual, chief, family, or a group. Some areas of activity like trails, hunting areas, rabbit and deer drive areas, quarry sites, ceremonial areas, and gaming areas were held in common by the community (Bean and Shipek 1978).

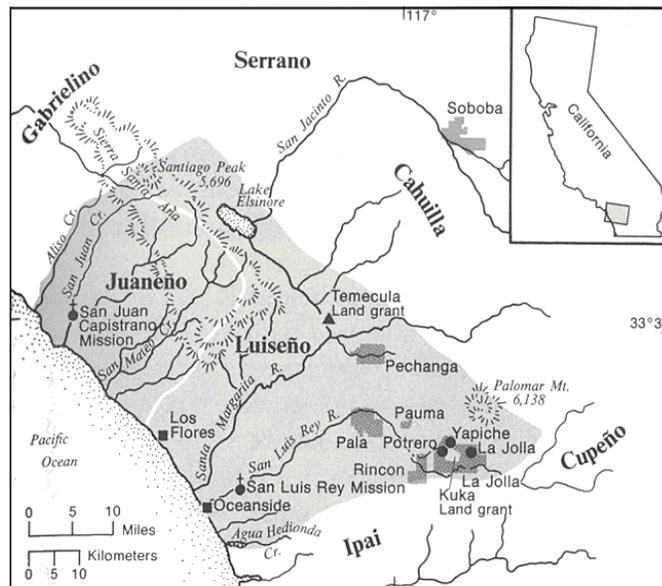


Figure 26. Traditional Luiseno Territory (Heizer 1978).

## ***Power***

Luiŕeño worldview is centered around a dying god motif, a creator-culture hero, and a teacher named Wiyó-t who was the sun of the earth mother, Tamá-yawut. Wiyó-t established the order of the world and was one of the first people or creations. When the death of Wiyó-t was carried out by another of the first people, the world changed and led to the creation of the existing world of plants, animals, and men. The original creations took on various life forms that are now in existence and some continued to maintain contact with their descendants while others went to different levels of the universe.

The death of Wiyó-t brought the people together to work out solutions for living. This included the adoption of the present spatial organization of all the species' living spaces. A chain of being concept was established that places all species into a productive, hierarchically arranged and mutually supportive relationship with one another. According to anthropologist R.C White (1957: 9), "Thus the problems of food and space were solved by the acceptance of predatorship and death for all beings and things: rocks and trees lived on top of the ground, gophers lived under, men ate deer, and deer ate grasses."

When the people disposed of the body of Wiyó-t, the concept of death was affirmed and funeral ritualism for the Luiŕeño people was established. It brought about the end of the formation of prescribed knowledge possessed by each species. Prescribed knowledge, or formulated knowledge, became the exclusive possession of ritual specialists. Wiyó-t's remaining knowledge that was thrown away upon his death became known as residual knowledge, which could be sought and gained by anyone who had the ability consistent with that specific form of knowledge-power (White 1957:6). Those who received knowledge-power, only obtained it because each demonstrated his or her ability to handle it properly. Residual knowledge had to be used according to strict procedures and during appropriate occasions. Failure to follow these rules resulted in the loss of control over the power and negative impacts to the entire community (White 1957).

## ***Natural Resources***

Plants, animals, minerals, water, and other natural resources can be understood as cultural resources based on the resource's role in or relationship with a cultural group. Natural elements such as plants are important to Indian people in many ways. The elderberry tree, for the Luiŕeño people, is central to many aspects of their culture including healing and ceremonies. Elderberry has healing properties and is used for medicines. According to a Luiŕeño consultant, there is a positive correlation between elderberry trees and village or ceremonial sites. Another Indian consultant added that elderberry flowers should be gathered during the full moon, which increases the water level in the plant and as well as its medicinal potency.

## ***Cahuilla***

The fourth ethnic group associated with the Santa Ana River is the Cahuilla. Their traditional territory encompasses diverse topography that includes a series of mountain ranges interspersed by passes, canyons, valleys, and deserts (Figure 27). Their territory is a land of

extremes ranging from 273 feet below sea level at the Salton Sink to 11,000 feet above sea level in the San Bernardino Mountains. According to anthropologist Lowell John Bean, the Cahuilla territory extended from the summit of the San Bernardino Mountains in the north to the Chocolate Mountains and Borrego Springs in the south. It's eastern border included a portion of the Colorado Desert west of Orocopia Mountain, and it's western border included the San Jacinto Plain near Riverside and the eastern slopes of Palomar Mountain.

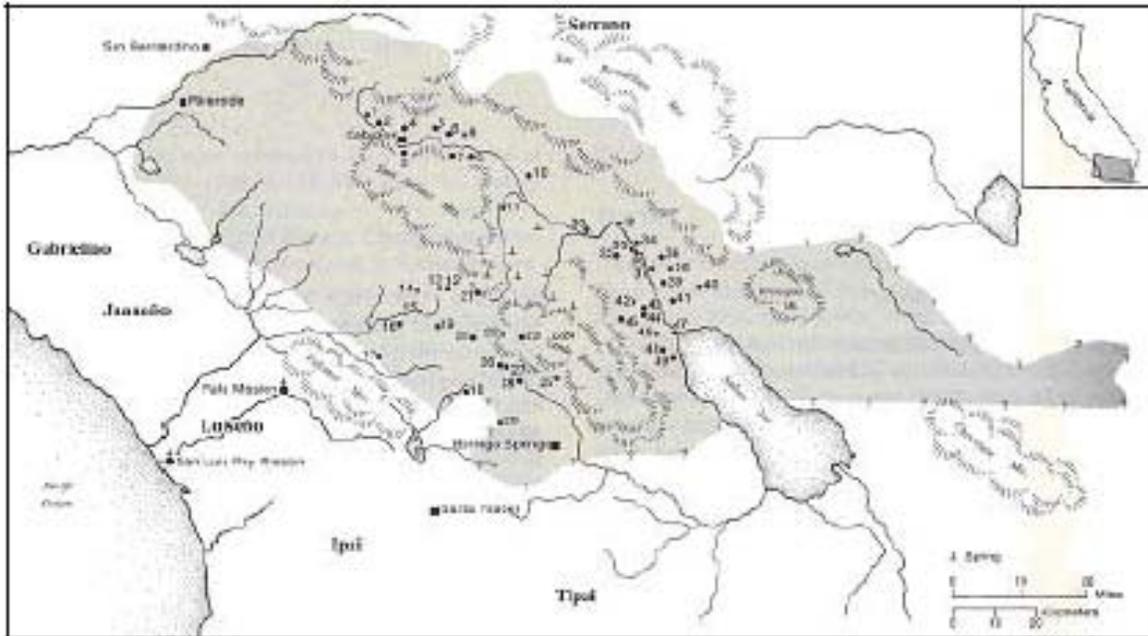


Figure 29. Traditional Cahuilla Territory (Heizer 1978)

### ***Traditional Settlement***

Cahuilla villages usually were located in canyons or along alluvial fans near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracks owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was associated with numerous sacred sites that included rock art panels (Bean 1978).

### ***Power***

The complex worldview of the Cahuilla people is centered on *?iva?al*, a source of power or energy. It is “the creative force behind a systematic but potentially unstable and unpredictable universe” (Bean 1978: 582). Even though *?iva?al* is neither good nor bad, it is quixotic and leaves all things open to unpredictable change. The nature of *?iva?al* causes the Cahuilla people to have pervasive and intense feeling of apprehension towards the present and the future (Bean 1972).

The presence of power is revealed in unusual talents or events, and differences in cultural achievement. It also explains how phenomena containing *?iva?al* are capable of negative and positive actions. People were prepared, consequently, to handle the contrasting phenomena. The

Cahuilla believe that humans are a key part of nature and that the universe is an interacting system. The people have used this to build an environmental ethic. It is assumed that any action by an individual will affect all other parts of the system (Bean 1972). Cahuilla values and beliefs are closely related to environmental and economic circumstances. Tradition is seen as authoritative and the past is understood as the referent for the present and future. Proper behavior and access to power are linked to one another and innovative actions can be potentially dangerous.

### ***Natural Resources***

Cahuilla epistemology explains how they relate to the world around them and how they use the landscape. Their relationship with the environment is of such importance that it is incorporated with their ritual-ceremonial cycle. Bean (1972) and Strong (1929) have documented that the Cahuilla have ceremonies and rituals that are aimed at improving and sustaining subsistence resources. The central focus of the ceremonial activity was the performance of epistemologically-oriented song cycles that placed the universe in perspective and reinforced the relationships the Cahuilla people, collectively and individually, have with the sacred past, the present, one another, and all things.

The Cahuilla use a variety of natural resources for spiritual and practical purposes. Their diverse territory gave them access to a range of lowland and upland resources including over 200 plants that they used for curing diseases, decreasing infections, and stimulating physical activities. Plants like tobacco and datura were used by medicine men to achieve visions and spiritual enlightenment (Bean and Saubel 1972).

In addition to medicine and ceremony, plants had practical purposes. Food was obtained from yucca, six varieties of oak, mesquites including screwbeans, piñon pines, and various types of cacti. Plants were managed and transplanted to create resting places for people making journeys across the desert. Groves of desert fan palms (*Washingtonia filifera*) are widely scattered throughout southern California especially in Cahuilla and Serrano territories. Desert palm oases often indicate the presence of water and frequently harbor a diverse array of plant and animal species. Near these oases, archaeologists have found bedrock mortars, pottery sherds, and rock carvings. In her book, *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*, Kat Anderson (2005:162) discusses the importance of the desert palm to Indian people: "The desert fan palm has been very important to Indian economies in the form of fruit for meals, fronds for thatched roofs of round houses and other structures, and fibers for sandals and basketry."

### **Gabrieleño**

Like so many California tribes, the Gabrieleños were deeply impacted by the arrival of the Spanish in the 1500s. The Gabrieleños and their neighbors endured many changes to their lifeways during missionization and colonization including lost traditional territory, new diseases, and conversion to Christianity. Some scholars believe that colonization had the most devastating impacts on Gabrieleños due to the locations of their primary use and settlement areas along the coast and inland riverways. Bean and Smith (1978) believe that by 1800 most of the

Gabrieleño people were missionized, dead, or had fled to other areas in scattered numbers. By the 1900s, J.P. Harrington and others attempted to document what they believed were the last traces of Gabrieleño culture, which led many scholars to classify them as “extinct.” Harrington, Kroeber, and others were wrong, however, because the Gabrieleños simply were “invisible” having been subsumed by the dominant society. Today, a small Gabrieleño community lives in San Gabriel, whose officials on August 24, 1994 recognized the Gabrieleño people as the aboriginal tribe of the Los Angeles Basin.

Traditionally, the Gabrieleño occupied 4000 square miles of land in southern California including the Los Angeles Basin, which is comprised of three main watersheds: the Los Angeles, San Gabriel, and Santa Ana (Figure 28). The Santa Monica and Santa Ana Mountains form the northwestern and southeastern boundaries respectively. The latter range is divided by Aliso Creek, which was the southern boundary between the Gabrieleño and Luiseño people. Topanga Creek was the Gabrieleños’ northern boundary. Gabrieleño lands extended into the Pacific Ocean and included the islands of San Clemente, San Nicolas, Santa Catalina, and Santa Barbara.

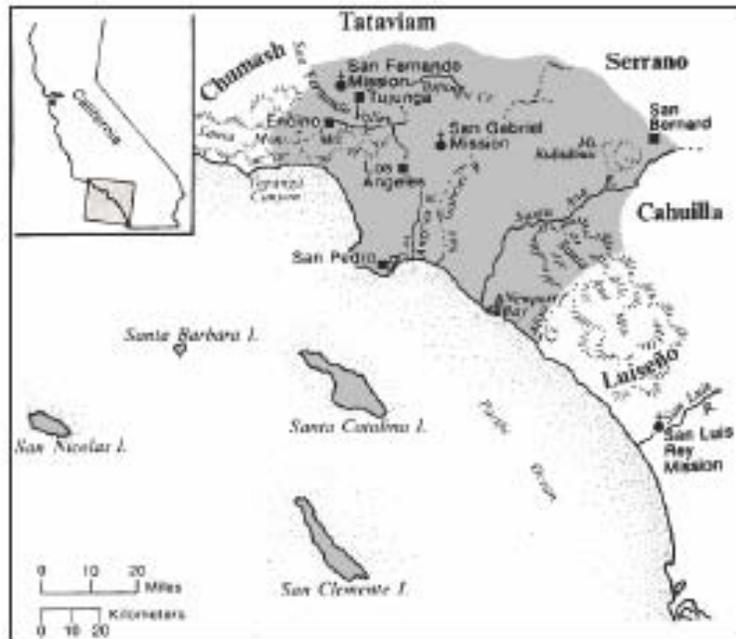


Figure 27. Traditional Gabrieleño Territory (Heizer 1978).

From inland to island biogeography, the traditional lands of the Gabrieleños encompassed several different types of habitats and biotic zones. On the mainland, the traditional territory encompasses four main ecological zones: the interior mountains and foothills, prairie, exposed coast, and sheltered coast. Each zone is characterized by floral-faunal-geographical relationships that aid the delineation of subsistence-settlement patterns (Bean and Smith 1978: 538). The islands present different ecological pictures from the mainland. San Nicolas Island, or *So-yya*, had virtually no land mammals and a scarce population of exploitable plant resources but had favorable habitat for sea mammals such as California and Stellar sea lions, harbor seals, sea otters, and northern elephant seals. The island also was rich in sea fowl and its waters supported

many fish species. Santa Catalina Island, or *Pimu·?a*, is predominately mountainous with very few plant resources but like San Nicolas, it supported an abundance of marine life.

### ***Traditional Settlement***

Permanent settlements were located in fertile lowlands, along rivers and streams, and along the coast near the Long Beach area. Villages were located in sheltered areas as well. As the populations of these villages expanded, satellite communities were established at varying distances. These communities maintained connections with the original villages through economic, religious and social ties (Bean and Smith 1978; Miller 1991).

### ***Power***

Not much is known about Gabrieleño cosmology and notions of power. The orientation to the surrounding environment is an important aspect to Gabrieleño worldview. The four cardinal directions, north, east, west, and south, are named and the year is divided into two parts in conjunction with the summer and winter solstices. The year is marked by ten distinct moon and several stars have animal names. The Pleiades are viewed traditionally as the sacred time maidens. Rainbows are positive elements while white ball lightning is considered negative. Whirlwinds are viewed as evil spirits and water sources including springs and lakes are the dwelling places of possible malevolent spirits (Bean and Smith 1978).

A major value within this cultural system is the issue of respect. A person must have respect for age, gender, and above all secrecy. By not having respect for certain types of information and revealing to inappropriate people, it could cause harm to the people and the surrounding environment.

### ***Natural Resources***

Gabrieleños used a variety of natural resources daily. Plants were used for food, medicine, and spiritual aid. They also were used to obtain power for doctoring and ceremonies. Shamans obtained spiritual power from the spiritual world through dreams or visions. Vision seeking was aided through preparations such as cleansing and ingesting datura. While in their trancelike state, an animal or object would appear to provide energizing power. These animals or objects served as the shamans' spirit helpers and provided power during ceremony.

A shaman served mainly his own village and he possessed the abilities to cause and cure an illness. Curing was accomplished by the use of numerous techniques. Shamans often used plant therapeutics, body manipulation, blood letting, sucking, blowing smoke, and hypnosis. They also used a variety of religious paraphernalia such as a board with rattlesnake rattles attached to it which is worn by the shaman, dried animal skins, plant roots, uniquely shaped rocks, sparkling stones, rare minerals and obsidian (Blackburn 1962). These items were seen as having power themselves and were understood as "particularly efficacious in concentrating power in a particular area," (Bean and Smith 1978: 544).

## Serrano

Traditionally, the Serrano held territory along the eastern end of the Santa Ana River near the present day city of Redlands (Figure 29). They also occupied the San Bernardino Mountains east of Cajon Pass as well as the mountain base, the desert lands north and east of the mountains toward Victoryville and Twentynine Palms, and south toward the Yucaipa Valley.

Serrano territory has a diverse topographic range from 1,500 feet to 11,000 feet. This wide range in elevation brings with it a vast array of plant and animal communities. The lowland regions of the desert and Santa Ana River valley pass through lower and upper Sonoran life zones. In the lower Sonoran zone, which reaches 3,500 to 4,000 feet above sea level, the vegetation is adapted to hot, arid environments and includes creosote bush and other desert shrubs. The Upper Sonoran zone extends from the lower Sonoran to about 7,000 feet. It is comprised of woodland species including oaks, piñon pine, juniper, chaparral, manzanita, buckthorn, and mountain mahogany, grasslands, and Great Basin desertscrub, which is dominated by big sagebrush (*Artemisia tridentata*). From 7000 feet to 9000 feet, the environment enters the Transition Life Zone, which is an open ponderosa pine forest.

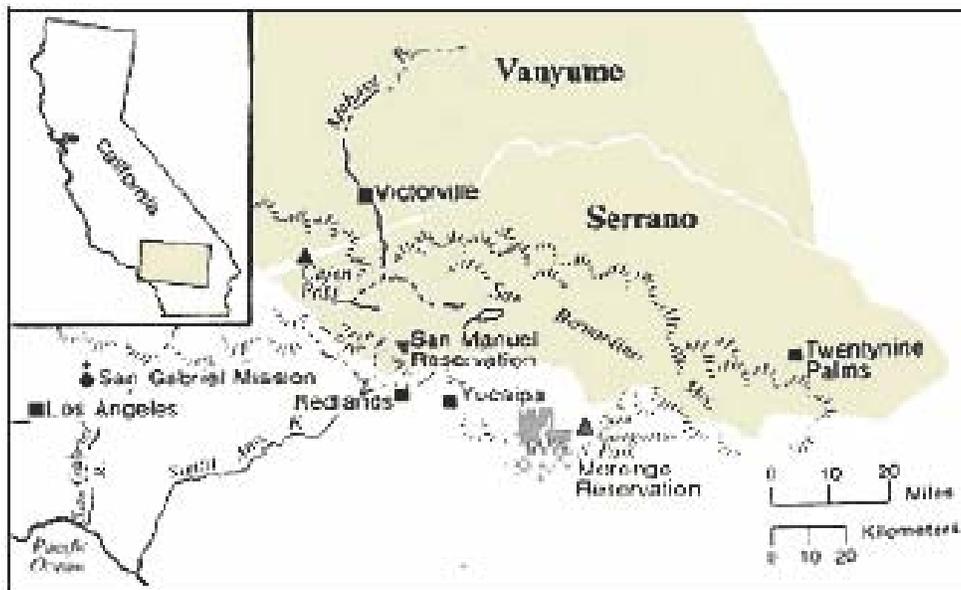


Figure 28. Traditional Serrano Territory (Heizer 1978).

### *Traditional Settlement*

Villages were found in the forest transition zone, the foothills, and in the desert near permanent water sources. The availability of water was a major factor in determining the size, location and the distribution of Serrano settlements (Benedict 1924: 368) and the Santa Ana River was integral to Serrano settlement and village establishment. In 1924, Ruth Benedict documented two Serrano groups and villages along the river. The first group was called Püviatum and the village was Yuhaviat, or the Pines. The second village was called Kutcaviat, or Big Meadows, and the Kutcaviatum lived there. It is important to note that Ruth Benedict's Serrano ethnography represents a moment in time in Serrano history and culture that reflects

impacts from European colonization (Benedict 1924). Disease episodes devastated Native American populations throughout California and Missionization caused relocations and loss of traditional lands.

The Serranos also were impacted by the bi-annual travel of large caravans of traders starting in 1829. Travel between Santa Fe, New Mexico and Los Angeles, California along the Old Spanish Trail brought more people and animals that further impacted the natural resources and Native people along the route. Benedict estimated by the early 1830s most of the Serrano people were removed from their traditional lands and sent to missions. By 1834 there were too few survivors to reconstruct pre-contact Serrano society (Benedict 1924).

### ***Power***

The Serrano see power in all natural elements including plants, animals, water, rocks, landforms, and wind. These elements can help individuals in various ways. Medicine plants have power that can cure one's ailments, or be used by medicine men to achieve visions and obtain power to help his or her community. Water is also a powerful element that is seen as essential for all forms of life.

Power is not restricted to natural elements; people also can have power. In Serrano culture, shamans were mentally predisposed for their positions and they acquired their power and knowledge through dreaming, which was aided by the ingestion of datura. Shamans cured those who were sick and out of balanced. They healed patients through a combination of sucking out disease-causing agents and administering herbal medicines (Bean and Smith 1978, Benedict 1924).

### ***Natural Resources***

In addition to having power and being used for medicinal and spiritual purposes, natural resources were important to the daily life and survival of the Serrano. The Serrano utilized a variety of plants and animals for subsistence and non-subsistence purposes. The main plant staples were acorns and pine nuts from the higher elevations, and honey mesquite, yucca roots, cacti fruits, and chia from the desert and lowland areas. The Serrano women used many plants for fibers to make baskets, and for dyes. A black dye used for basket weaving, *tcupiatium*, was obtained from a variety of elderberry. Sumac fibers that are to be used for basket weaving are left in the black dye for one month. According to Serrano people interviewed by Ruth Benedict, the black dyed fibers are much more significant than the brown fibers. It is possibly that the significance of the black dyed fibers is related to the cultural significance of elderberry to the Serrano.

Botanical resources were processed and prepared in a number of ways. An important tool in plant processing was the grinding stone (stone mortars). During the cultural sensitivity assessments, tribal consultants often discussed grinding stones as important features associated with the Santa Ana River and the surrounding landscape. Grinding stones were associated with food and medicine preparation, and often found near ceremonial areas. Ruth Benedict recorded the following about the use of this tool by the different Serrano groups:

The Palm Springs Serrano used only the bed-rock mortar and the wooden one in the form of a deeply hollowed tree trunk sunk in the earth the greater part of its length. The Mission Creek Serrano used both these types, and also the movable metate. The Serrano farther west in the Pass [Cajon Pass] did not use bed-rock mortars at all, nor the wooden one, but depended on movable stone boulders, some of them very well shaped, and the mortars with basketry rims (Benedict 1924: 387).

The Serrano people hunted a variety of animals for food. They used bows and arrows to hunt large animals such as deer, mountain sheep, and antelope, and curved throwing sticks, traps, snares, and deadfalls to hunt rabbits, quail, and other small birds and mammals (Benedict 1924: 391-392).

### **The Cultural Significance of Waterways and Surrounding Landscape**

Waterways are culturally significant areas for Indian people and the Santa Ana River has been such a place for thousands of years. The Serranos and the Luiseños had villages along the river (Benedict 1924), which also provided Indian people with places where multiple ethnic groups could come together for social and ceremonial occasions. The river also had important medicinal and ceremonial components. Waterways and watersheds frequently are associated with powerful places and powerful elements (Stoffle et al. 1994, Stoffle et al. 2005).

From a cultural standpoint, the four ethnic groups associated with the Santa Ana River shared similar cultural and language traditions. The four groups frequently came together for the purposes of traditional exchange, marriage, and ceremony. Traditional exchange was an important social activity that involved much more than trade activities that typically are associated only with economic benefits. While some items were exchanged for economic gains, many items were given to build social and political relationships. It also was common for people to use traditional exchange as a way of establishing relationships with places.

Traditional exchange was a common activity that had people, goods, and ideas flowing in many directions and in some cases long distances. The inland groups exchanged food items like acorns, seeds, obsidian, and deer skin with the Gabrieleños for marine items like shell beads, dried fish, sea otter pelts, shells, and steatite, a type of soapstone, from the Channel Islands. Steatite was used by many groups to make palettes, arrow straighteners, ornaments, and carvings of animals or animal-like beings.

Indian people also gathered traditional use plants, hunted, and held ceremonial activities in natural drainages and riparian areas. Powerful medicine plants like datura, tobacco, and elderberry grow in these areas and the Santa Ana River area had many key locations for their traditional activities. Other important cultural resources in these areas that tribal consultants identified include cottonwood, willow, cattail, grapes, hawks, squirrels, rabbits, and ducks.

One of the key locations along the Santa Ana River that were identified by tribal consultants is Mount Rubidoux, a prominent hill along the south riverbank of the Santa Ana

River just west of Mission Boulevard (Figure 30). Tribal consultants identified Mount Rubidoux as a ceremonial location that, in combination with the river, is an important spiritual place for power and prayer. They believed that rock art panels, which would have been used in ceremonies, were on the summit of Mount Rubidoux in the past. The summit also served as a vantage point where one would have clear views in all directions of the surrounding peaks and the river. As an important component of ceremonial activity, the Mount Rubidoux viewscape allowed one to communicate and interact with the landscape through songs and prayers. A Morongo elder also noted that there was a fairly well known historic Mountain Cahuilla village on the north end of Mt. Rubidoux called Spring Mountain Rancheria.



Figure 30. Mount Rubidoux

Contemporary ethnography and ethnohistoric data explain how the Santa Ana River is an important area for many Indian people. River systems like the Santa Ana played an important part in sustaining their lifeways and the four associated groups maintain a deep connection to the land, water, and surrounding resources of the river. The relatively stable relationships that existed when the Spanish first arrived were greatly impacted in the 16th and 17th centuries by the new demands that the Spanish placed on the environment and its people. Today, however, the Luiseño and Cahuilla people are rebuilding their relationships with the land and traditional use resources as part of their on-going efforts of cultural revitalization.

## **Chapter Four**

### **The Santa Ana River Watershed: Spanish and American Landscapes**

Spain's frontier institutions, upon which the U. S. would build, were the mission, presidio, and pueblo. Several significant events in the 19th century brought further changes to the landscape. Mexico won its independence from Spain in 1821, completed the secularization of the missions, and lost and sold its northern lands to the U. S. under the Treaty of Guadalupe Hidalgo in 1848. The California Gold Rush followed on the heels of the land transfer and California achieved statehood soon after in 1850. Throughout this period, increasing numbers of settlers came to the area looking for land of their own. The arrival of the Spanish, and later the Americans, brought profound changes to the traditional lives of the Indian people. They lost their land and resources, suffered disease epidemics, and were forced to work on the mission farmlands.

#### **Establishment of the California Missions**

The colonization of Alta California was tied to the existing Spanish settlements along both sides of the Gulf of California. The Spanish missionization and settlement of California began in 1768 when King Carlos III saw other European empires as threats to Spain's claim on Alta California (Lightfoot 2005). The King ordered Visitador-General José de Gávez to organize soldiers and missionaries from Mexico to colonize the distant territory. On May 13, 1769 Commander Don Gaspar de Portolá, Sergeant José Francisco de Ortega, and Fray Junípero Serra who was a Franciscan missionary departed with soldiers and supplies for San Diego from Velicatá, Baja California. Upon arriving in San Diego, Fray Serra founded California's first mission San Diego de Alcalá.

The missions were established primarily along the coast of California (Figure 31) and located in three distinct ranges: the Coastal Range, Transversal Range, and the Peninsular Range. The Spanish selected mission sites in valleys, and on alluvial fans and coastal plains away from marshy flats. Most of the missions were established close to the sea, however some missions like Mission San Gabriel and San Jose were located strategically in the interior as a way of establishing and maintaining inland routes. Preferred locations were near reliable water sources and had adequate arable lands.

The Spanish established three missions in the Peninsular Range: San Diego, San Luis Rey, and San Juan Capistrano. Each mission was located three to six miles from the ocean either in valley bottoms or on terraced slopes along streams.

Six missions were established in the Transversal Range with San Gabriel to the south and La Purísima Concepción to the north along the coast. They were located no more than twenty-five miles from the ocean, which provided the standard day's travel between missions. The San Gabriel and San Fernando missions were located on alluvial fans below the San Gabriel Mountains, and Santa Barbara Mission was located on the alluvial fan below the Santa Ynez range. La Purísima Concepción was first built in the flat lands of the Santa Ynez River but later move uphill to the lower part of an alluvial fan. Mission Santa Inés was built downstream from La Purísima in a part of the valley between the San Rafael and Santa Ynez Mountains. San Buenaventura was built in the lowlands at the mouth of the Ventura River at fifty feet below sea level.

Thirteen missions occupied interior and coastal areas of the Coastal Range. The Salinas Valley was the largest intermontane valley in this range and housed two missions, San Miguel and Nuestra Señora de la Soledad. San Antonio Mission was established on the San Antonio tributary of the Salinas River. Mission San Luis Obispo was built in a narrow section of San Luis Obispo Canyon (Gentilcore 1961). San Juan Bautista was in the interior along San Juan Creek at the junction of the San Benito, Pajaro, and Santa Clara valleys. Santa Clara was located on a large alluvial plain along the coast while San Jose was built on the slopes of Mission Peak. The coastal missions included San Carlos, San Rafael, Santa Cruz, San Francisco, and San Francisco Solano, which was intended to replace the San Francisco Mission because the latter lacked valley lands.



Figure 31. California Missions

## **Mission Impacts on the Indian People of the Santa Ana Region**

The Spanish saw the Indian people as neophytes or new religious converts (Dutschke 1988). "Spain's Indian policy at the time of the invasion of California was a mixture of economic, military, political, and religious motives. Indians were regarded by the Spanish government as subjects of the Crown and human beings capable of receiving the sacraments of Christianity" (Heizer 1978:100). "It was essential under 'missionization' that California Indians be 'reduced' into settled and stable communities where they would become good subjects of the King and children of God. Missionization required a brutal lifestyle akin in several respects to the forced movement of black people from Africa to the American South" (Archibold 1978:172). "It should be clear, then, that the missions of California were not solely religious institutions. They were, on the contrary, instruments designed to bring about a total change in culture in a brief period of time" (Forbes 1969:29).

The priests efforts were directed toward "civilizing" the native peoples with the goal of self-sufficiency in ten years. Once achieved, there would no further need of the missions. The native peoples were to become the owners of the mission lands as well as owners of some of the materials and artifacts they produced.

Missionization was not accomplished without resistance from the Indian people. Within a month after establishment of the San Diego mission in 1769, the Indians "attacked the Spanish camp, attempting to drive the invaders from their territory. But the Spanish soldiers, using guns, defended their settlement and an uneasy peace ensued. Yet, it would be another two years before Mission San Diego could record its first baptism" (Heizer 1978:101). The Indian people continued to resist Spanish rule throughout the mission period. "One of the earliest and most successful demonstrations of native resistance to colonization was the destruction of Mission San Diego on November 4, 1775. Under the leadership of the neophyte Francisco of the Cuiamac Rancheria, the Ipai-Tipai organized nine villages into a force of about 800 men who not only completely destroyed the mission but also killed three Hispanos including Padre Jaime" (Heizer 1978:103). Other resistance was less violent as in the desertion of in San Francisco by more than 200 Indians (Bancroft 1963). The Indian people also resisted the priests' efforts by continuing their native religious activities albeit secretly. Preserving their ancient religions within the missions was difficult but Native revivals are known to have occurred in the Santa Barbara area in 1801 (Forbes 1969).

The priests recruited and forced local Indian populations to work and live at the missions. The Indian people had to give up many of their traditional ways and territories for the new European practices and beliefs. They worked the mission gardens, and served as laborers at the missions and ranches. The four ethnic groups along the Santa Ana River endured these changes, although, their experiences differed based on their proximity to the missions.

### **Luiseno**

The Luiseno people were forced to live and work at two of the Spanish missions. At first only the coastal villages were moved onto mission lands, particularly the mission of San Juan Capistrano. After the mission was running for a number of years, the Spanish began bringing in

Indian people from the more distant Luiseño villages. The Indian people were converted to Catholicism and the Spanish forced them to adopt a European life style. The Spanish taught them the Spanish language, European farming techniques, European husbandry, adobe brick making, carpentry, and other European crafts. Living conditions at the missions and nearby ranches, and Old World diseases left the Luiseño people extremely vulnerable to accelerated population declines.

Spanish conquest of the Luiseño people, however, was not applied uniformly. At San Luis Rey, Father Antonio Peyri pursued the unusual policy of allowing most of the Luiseños to remain on their *rancherías* (Engelhardt 1921; Shipek 1977). Peyri viewed this strategy as an efficient way to maintain a labor force without having to feed and control the Luiseños at the mission. He established *asistencias* and other mission outposts in San Luis Rey territory, which he would visit to conduct religious services including baptisms and marriages. The *asistencias* typically consisted of a chapel surrounded by farming and grazing lands (Rader 1988). The Luiseños associated with San Luis Rey, consequently, were able to continue many of their cultural practices, retain traditional subsistence patterns, and maintain traditional leadership during the mission period.

Peyri's Luiseños, however, were not free from the mission. Periodically, Peyri brought them to the mission for religious instruction, and social and religious occasions such as baptisms and marriages (Engelhardt 1921; Shipek 1987). The results of Peyri's strategy are reflected in his 1831 report, the last report of the mission before it was secularized, which contained a listing of the mission's wealth, which included 26,000 head of cattle, 25,500 of sheep, 2150 horses, and 1750 goats, pigs and mules (Engelhardt 1921). Peyri's strategy also resulted in the continued existence of many Luiseño villages, a smaller decline in the Luiseño populations compared to other Indian people living in mission territories, and the dissemination of farming and livestock-raising techniques throughout Luiseño territory (Rader 1988).

One serious disruption that even Peyri's strategy could not avoid was the partial collapse of the Luiseño territorial system based on *rancherías*. Spanish explorers and missionaries noted in the late 1700s and early 1800s the existence of many villages, some "very large," others smaller (Engelhardt 1921; Tac n.d.). After the missions were closed, however, many ancestral *rancherías* had lost so many residents that some merged while others ceased to exist. Returning clan members who had to move to a neighboring clan's *ranchería* might not have had any land.

The Luiseños also lost much of their knowledge about traditional plant cultivation and harvesting because the Spaniards and Mexicans used their territory more intensively than they did that of neighboring tribes. In contrast, the Cahuilla and Kumeyaay who had more limited contact with the Spaniards and Mexicans were able to retain many more of their aboriginal land-use practices and knowledge into the early 20<sup>th</sup> century (Shipek 1977).

When the missions were secularized in 1834, a political imbalance occurred. The Luiseño people along with other Indian people in the region, revolted against the Mexican ranches who were using many of the Indian people as indentured servants (Bean and Shipek 1978). Many Indian people who were not part of the missions and ranches sought refuge with inland tribes. Other Luiseños acquired Mexican land grants (Kuka, Temecula, and La Jolla) and entered into

mainstream Mexican society. Several Indian communities were established for some of the San Luis Rey Indian rancherías by the Mexican government. The communities, or pueblos, were supposed to be governmental units within the Mexican political system, however, most of them disappeared due to pressure from the Mexican ranches (Bean and Shipek 1978, Lightfoot 2005).

## **Cahuilla**

It is possible that the Cahuilla people were aware of and affected by Europeans and European institutions well before Juan Bautista de Anza traveled through Cahuilla territory in the late 1700s. It is believed that the first contact the Cahuillas had with non-Indian people was a hostile encounter. When the Quechan Indians closed the land route from Baja California in 1781 the Spanish had no reliable overland route to California and turned to the sea. The Cahuilla, consequently, had little direct contact with the Spanish, though, some were baptized at San Gabriel, San Luis Rey, and San Diego. The baptized Cahuilla were integrated with the mission system.

In the early 1800s, several *asistencias* were established near Cahuilla territory. The Cahuilla people interacted with the Spanish at these outposts and learned some aspects of their culture such as cattle raising, European agriculture, the Spanish language, and Christianity (Beattie and Beattie 1939).

When the missions were secularized in 1834, the Mexican government seized the mission lands and redistributed them to Mexican rancheros. The government sold the lands to anyone who had the financial means and ability to tend it. The Indian people who worked and lived at the missions lost large portions of their traditional lands, were forced to fend for themselves, and suffered disease epidemics that precluded recreating their pre-contact lifeways as a means of survival. Left with no real option, many Indian people were forced to become laborers for the Mexican ranch owners.

## **Gabrieleño**

The Gabrieleños are believed to have first come into contact with the Spanish in 1542 when Juan Rodríguez Cabrillo came to southern California. His visit and another that occurred in 1602 were documented as relatively peaceful exchanges. Their relationship with the Spanish changed, however, in 1769 when the Spanish conducted several land expeditions to locate mission sites and eventually to colonize the Gabrieleños. By 1771, four missions were established and relationships between the Spanish and the Indian people had deteriorated.

Mission San Gabriel was built in 1771. The priests began to integrate a small number of Gabrieleños into the mission, although, many Indian people took part in the economic and social aspects of mission life without converting to Catholicism (Miller 1991). By 1778, mass conversions began occurring when some traditional leaders accepted Catholicism and their people followed their example. The social organization of the missions formed in 1779 when the positions of councilmen and alcaldes were established. Conflict over who had authority over Indian labor escalated between the Church and the military as a result.

As Indian people resisted the Spanish and the missions in the mid-1780s, the Gabrieleños staged their own protests. A major revolt occurred in 1785 led by *Toypurina*, the daughter of a powerful Gabrieleño chief. As a result, the Spanish government attempted to increase segregation of the Indian people most of whom became part of a peasant class working for the missions. Apartheid-like policies came to dominate Spanish-Indian relations (Bean and Smith 1978a).

By the early 1800s, the missions and Spanish communities were experiencing poor economic conditions. The authorities at Mission San Gabriel arranged to have the Gabrieleños return to their traditional agricultural practices so that the Indian people became the major food producers for the general populace. The Gabrieleños also became the major labor force in Los Angeles and the outlying ranches and farms, though, many Gabrieleños had died or fled to inland regions of refuge.

When the missions became secularized in the 1830s, they became havens for the elderly and the sick. Most Gabrieleños continued to work as laborers for the gentry class though in some instances the Indian people became landowners.

## **Serrano**

Early contact between the Serranos and the Spanish may have come in the late 1700s with travel along the Old Spanish Trail, in 1771 when San Gabriel Mission was established, or in 1772 when Pedro Fages made an expedition into Serrano territory. Spanish influence, however, was limited until about 1819 when the Spanish built an outpost or *asistencia* near present-day Redlands. Contact with the *asistencia* near Redlands meant that the Serrano people were subjected to many forms of Spanish and European culture. The Serranos, like other Los Angeles Basin ethnic groups, were converted to Catholicism and learned Spanish, European agricultural techniques, and cattle raising. The Serrano and the Spanish established an economic relationship with one another through the trade of goods.

Between 1819 and 1834, most of the western Serranos were removed from their lands and placed at various missions throughout southern California (Beattie and Beattie 1939: 366). The Mission Serranos faced long hours of labor each day, although, the amount of time varied, often from four to nine hours, with the priest in charge, the mission, the labor assignment, and the season of the year. Everyone took part in the labor, regardless of age. Tasks were assigned based on training, gender, age, and attitude of the individual person. Young children performed simple tasks such as scaring birds away from the gardens. Men worked primarily in agricultural and ranching areas, on building projects, and at various crafts. In the 1790s, skilled craftsmen from New Spain trained some of the Indian men as carpenters, soap makers, masons, blacksmiths, and leather workers. Indian women often tended to household affairs, raised children, prepared foods, and produced some craft goods such as baskets and textiles (Lightfoot 2005).

## Spanish and American Colonization and Settlement

Early expeditions to southern California included a sea route up the Pacific coast of Baja California, and Anza's overland route, which he established in 1774. The trail ran from Sonora, Mexico through Arizona territory, across the Colorado River, and the dunes and deserts of southeast California before turning northwest to the Santa Ana Valley and San Gabriel Mission (Figure 32). For eight years, travelers followed the trail into southern California, some founding Los Angeles, others settling along the coast as far north as San Francisco (Beattie 1933). Anza made a second expedition in 1775-1776 following the same trail, which crossed the Santa Ana River at the contemporary railroad crossing approximately two miles east of Van Buren Boulevard. This location also was the New Year's Eve campsite for his 1775-1776 expedition (Smestad 2005). The Quechan Indians closed de Anza's route in 1781, although, Pedro Fages and an escort succeeded in using the route from the Yuma crossing to San Gabriel in 1782 bringing official dispatches (Beattie 1933).



Figure 32. The de Anza Trail, 1775-1776  
([http://www.nps.gov/juba/planyourvisit/upload/AnzaColExpMap\\_web.pdf](http://www.nps.gov/juba/planyourvisit/upload/AnzaColExpMap_web.pdf))

Early settlement was associated mostly with the establishment of the missions along the Pacific Coast but began to increase as the missions began the process of secularization, which had not been complete when Mexico won its independence from Spain in 1821. Although the new government formally recognized that the lands of Alta California primarily belonged to the

native peoples and that they had been enslaved by the missionaries, officials wanted to limit the power of the Catholic Church. To do so, they pursued dual policies of secularization and emancipation. Individual rights were increased while the rights and power of the Church declined. The Mexican government wanted the missions to be converted to voluntary organizations supported by the members, and the mission lands to be returned to the native peoples. Between 1822 and 1829, the new government also abolished social status based on racial or national background, and granted citizenship to the native peoples (Haas 1995; Rader 1988; Weber 1982). The government's secularization efforts eventually succeeded in breaking the power of the Catholic Church, but land and property was not returned to the native peoples because much of what could be used for livestock and agriculture had been granted to Californio and Anglo rancheros (Rader 1988).

Another change that came with the Mexican government was the removal of restrictions on trade with other countries. This change also affected trade along the Old Spanish Trail, which connected Los Angeles with Santa Fe, New Mexico. Not only did trade along this route increase, but potential settlers found a new option and immigration to California from New Mexico began in the early 1840s.

Several land grant ranches were along the Santa Ana River near the proposed RTRP. Rancho Jurupa, from which Riverside grew, was established in 1838, and Rancho San Bernardino was established in 1839 (Harley 1991). The Santa Ana floodplains were the first areas to be developed since these could be irrigated easily by diverting the river flow. Water was diverted as well for small gardens and orchards, and small plots of grains for livestock.

The first settlers to come from New Mexico came from a little town called Abiquiu. They arrived in 1842 and were recruited specifically for their Indian fighting skills as the California rancheros needed help protecting their livestock from the California natives. Initially, they settled at Rancho San Bernardino, also known as Politana, essentially forming an *asistencia* for San Gabriel Mission. Within a couple of years, however, the settlers had a falling out with the Lugo family who owned the ranch. Making new arrangements with Juan Bandini who owned Rancho Jurupa, they relocated a few miles downstream and established Agua Mansa. They were successful in their farming endeavors and as the community grew, they built a small church and school (Harley 1999).

The settlers soon found themselves citizens of a new country when the U. S. took control of California as part of the Treaty of Guadalupe Hidalgo in 1848, however, it was the discovery of gold about the same time that turned their world into a land of confusion. Initially, Indian people were used to mine the ore but as news of the discovery spread, more Europeans arrived and the Indians were soon forced out of mining (Dutschke 1988). Their traditional food supply was affected as well. "Soon after the arrival of the Americans serious depletion of that supply began to occur: mining operations adversely affected salmon fishing and destroyed fish dams" (Heizer 1978:108).

The Agua Mansans and other Santa Ana River settlers were impacted by the flood of people to the area. Many who failed to strike it rich in the gold fields tried to find plots of land

they could farm. Among the new arrivals were 400 Mormons who settled at Rancho San Bernardino in 1851 (Harley 2002).

With the Americans' arrival, the demand for water and land increased. The large ranchos were broken up, and the new landowners were less tolerant of Indian people. The small ranchos were farmed and grazed more intensively, further reducing the land and resources that provided so much of the Indian people's natural food supply. The California natives also found employment less of an option, especially skilled jobs, as these were taken by the newcomers (Dutschke 1988).

Between 1850 and 1875, the population in the Santa Ana River watershed grew though at not quite the same pace as other parts of the state. The coming of the railroad included the establishment of the community of Colton just upstream from and on the opposite side of the Santa Ana River from Jurupa/Riverside. The Agua Mansan families who still resided in the area relocated to Colton presumably to take advantage of job opportunities associated with the railroad. The greatest impact from the railroad, however, was a new wave of immigration. The Southern Pacific Railroad (SPR) in particular encouraged immigration to southern California in the late 1800s with a well-organized settlement plan that was in place by 1875 and showing a profit by 1890. The SPR's colonizing program included advertising campaigns and transportation assistance and brought another vast wave of immigrants to the area during the latter part of the 19<sup>th</sup> century (Parker 1937).

Growth in the Santa Ana River watershed continued through the 20<sup>th</sup> century to bring us to the need for the RTRP today. Just as the Agua Mansans remain, so do the Luiseño, Cahuilla, Gabrieleño, and Serrano people. While the RTRP will benefit the residents of Riverside, the project also has the potential to negatively affect these historic cultural groups. The results of the field assessment with the Morongo Band of Mission Indians, the Pechanga Band of Luiseño Mission Indians, and the Soboba Band of Luiseño Indians provide guidance to avoid or minimize negative impacts. Coincidentally, their cultural sensitivity assessments also benefit the Agua Mansans since they rated route segment #39 as having high sensitivity due to the presence of the Agua Mansa pioneer cemetery where many of the ancestors of today's Agua Mansans are buried.

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**American Indian Cultural Sensitivity Assessment  
Riverside Transmission Reliability Project  
Riverside, California**

**Bureau of Applied Research in Anthropology, University of Arizona**

*We would like to ask you a few questions about the cultural sensitivity of alternatives segments of the proposed power line routes.*

**Interview #:** \_\_\_\_\_ **Tape #:** \_\_\_\_\_ **Route Alternative #** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Ethnographer:** \_\_\_\_\_

**Respondent:** \_\_\_\_\_ **Tribe/Organization:** \_\_\_\_\_

**Gender:** \_\_\_\_\_ **Male** \_\_\_\_\_ **Female** \_\_\_\_\_ **Date of Birth:** \_\_\_\_/\_\_\_\_/\_\_\_\_ **Age:** \_\_\_\_\_

**Place of Birth:** \_\_\_\_\_ **U.S. State of Birth:** \_\_\_\_\_  
(Town, Reservation)

1. What is the name of this place in English? \_\_\_\_\_

2. What is the name of this place in your native language? \_\_\_\_\_

3. Is this place considered a sensitive area by you or other members of your tribe?

1=Yes \_\_\_\_\_ 2=No \_\_\_\_\_ 3=Maybe \_\_\_\_\_ 8=Don't Know \_\_\_\_\_ 9=No Response \_\_\_\_\_

Comments:

4. How would you rank the sensitivity of this site?

1=Low \_\_\_\_\_ 2=Medium \_\_\_\_\_ 3=High \_\_\_\_\_ 8=Don't Know \_\_\_\_\_ 9=No Response \_\_\_\_\_

Comments:

5. Why is this place a sensitive area?

1=Permanent Living \_\_\_\_\_ 2=Hunting \_\_\_\_\_ 3=Seasonal Camping \_\_\_\_\_ 4=Ceremony/Power \_\_\_\_\_

5=Gathering Food \_\_\_\_\_ 6=Other \_\_\_\_\_ 7=Feature/Resource \_\_\_\_\_

8=Don't Know \_\_\_\_\_ 9=No Response \_\_\_\_\_

Comments: