

## 3.4 CULTURAL RESOURCES

This section describes the current cultural resources in the SCAG region, discusses the potential impacts of the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategies (2012-2035 RTP/SCS or Plan) on cultural resources, identifies mitigation measures for the impacts, and evaluates the residual impacts.

### REGULATORY FRAMEWORK

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Cultural resources in the six-county SCAG region include structures of national, State, or local significance, archaeological sites of historic or prehistoric origin, and fossil deposits of paleontological importance. These resources are regulated at the federal, State, and local levels as discussed below.

#### **Federal**

**National Environmental Policy Act (NEPA).** NEPA (42 U.S.C. 4321 et seq.) became law on January 1, 1970 and mandates that all federal agencies carry out their regulations, policies, and programs in accordance with NEPA's policies of environmental protection. NEPA encourages the protection of all aspects of the environment and requires federal agencies to utilize a systematic, interdisciplinary approach to agency decision-making that will ensure the integrated use of natural sciences such as geology. NEPA addresses a wide range of environmental issues including the documentation of, and evaluation of potential impacts to, cultural and historic properties. Compliance includes an on-site survey by a qualified archaeologist prior to construction. A report of findings may be submitted to the State Historic Preservation Office (SHPO) for further consultation.

**United States Department of Transportation (USDOT) Act of 1966 (Section 4[f]).** Section 4(f) of the USDOT Act of 1966 affords special protection to public recreational lands and facilities, including local parks and school facilities that are open and available to the general public for recreational purposes, significant cultural resources, historical resources, and natural wildlife refuges. Federally-funded transportation improvement projects are prohibited from the encroachment (direct or constructive use, or a take) of Section 4(f) lands unless it can be demonstrated that no feasible and prudent alternative exists.

**National Register of Historic Places (National Register).** The National Register recognizes properties that are significant at the national, State, and/or local levels. Although administered by the National Park Service, the federal regulations explicitly provide that National Register listing of private property "does not prohibit under federal law or regulation any actions which may otherwise be taken by the property owner with respect to the property." Listing in the National Register assists in preservation of historic properties through: recognition that a property is of significance to the nation, the State, or the community; consideration in the planning for federal or federally-assisted projects; eligibility for federal tax benefits; consideration in the decision to issue a surface coal mining permit; and qualification for federal assistance for historic preservation, when funds are available. In addition, for projects that receive federal funding, a clearance process must be completed in accordance with Section 106 of the National Historic Preservation Act (NHPA). Furthermore, State and local regulations may apply to properties listed in the National Register.

The criteria for listing in the National Register follow the standards for determining if properties, sites, districts, structures, or landscapes of potential significance are eligible for nomination. In addition to meeting any or all of the following criteria, properties nominated must also possess integrity of location, design, setting, feeling, workmanship, association, and materials:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;

- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Yield, or may be likely to yield, information important in prehistory or history.

Historic integrity is the ability of a property to convey its significance and is defined as “the authenticity of a property’s historic identity, evidenced by the survival of physical characteristics that existed during the property’s historic period.”

The National Register recognizes seven aspects or qualities that comprise integrity: location, design, setting, materials, workmanship, feeling, and association. These qualities are defined as follows:

- Location is the place where the historic property was constructed or the place where the historic event occurred;
- Design is the combination of elements that create the form, plan, space, structure, and style of a property;
- Setting is the physical environment of a historic property;
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time; and
- Association is the direct link between an important historic event or person and a historic property.

In assessing a property's integrity, the National Register criteria recognize that properties change over time. In this regard, National Register Bulletin 15 states:

*“To retain historic integrity a property will always possess several, and usually most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance.*

*It is not necessary for a property to retain all its historic physical features or characteristics. The property must retain, however, the essential physical features that enable it to convey its historic identity.*

*A property that has lost some historic materials or details can be eligible if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of the features that once characterized its style.”*

For properties that are considered significant under National Register Criteria A and B, National Register Bulletin 15 states:

*“A property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s).*

*A property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique.”*

**Historic Sites Act of 1935 (HSA).** The HSA became law on August 21, 1935 and declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance." The NHPA expanded the scope to include important state and local resources. Provisions of NHPA established the National Register maintained by the National Park Service, advisory councils on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs. Section 106 of the NHPA requires all federal

agencies to consult the Advisory Council before continuing any activity affecting a property listed on or eligible for listing on the National Register. The Advisory Council has developed regulations for Section 106 to encourage coordination of agency cultural resource compliance requirements (Executive Order 11593).

**Antiquities Act of 1906.** The Antiquities Act of 1906, which aimed to protect important historic and archaeological sites, initiated historic preservation legislation. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbances that may be caused to archaeological sites. New permits are currently issued under the Archaeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands.

**National Historic Preservation Act (NHPA).** The NHPA supplements the provisions of the Antiquities Act of 1906 and established laws for historic resources to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The law makes it illegal to destroy, excavate, or remove from federal or Indian lands any archaeological resources without a permit from the land manager. Regulations for the ultimate disposition of materials recovered as a result of permitted activities state that archaeological resources excavated on public lands remain the property of the United States. Archaeological resources excavated from Indian lands remain the property of the Indian or Indian tribe having rights of ownership over such resources.

**Archaeological and Historic Preservation Act of 1974 (AHPA).** Passed and signed into law in 1974, The AHPA amended and expanded the Reservoir Salvage Act of 1960. The AHPA requires that federal agencies provide for the preservation of historical and archaeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of any alteration of the terrain caused by any federal construction project or federally licensed activity or program.

**Archaeological Resources Protection Act (ARPA).** The ARPA applies when a project may involve archaeological resources located on federal or tribal land. ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

**The American Indian Religious Freedom Act (AIRFA).** The AIRFA proclaims that the U.S. Government will respect and protect the rights of Indian tribes to the free exercise of their traditional religions; the courts have interpreted this as requiring agencies to consider the effects of their actions on traditional religious practices.

**Native American Graves Protection and Repatriation Act of 1990 (NAGPRA).** The NAGPRA also applies if human remains of Native American origin are discovered on federal land. NAGPRA requires federal agencies and federally assisted museums to return "Native American cultural items" to the federally recognized Indian tribes or Native Hawaiian groups with which they are associated. Regulations (43 CFR Part 10) stipulate the following procedures be followed. If Native American human remains are discovered, the following provisions would be followed to comply with regulations:

- Notify, in writing, the responsible federal agency;
- Cease activity in the area of discovery and protect the human remains;
- Certify receipt of the notification;
- Take steps to secure and protect the remains;
- Notify the Native American tribes or tribes likely to be culturally affiliated with the discovered human remains within one working day; and
- Initiate consultation with the Native American tribe or tribes in accordance with regulations described in 43 CFR, Part 10, Subpart B, Section 10.5.

## State

**Office of Historic Preservation (OHP).** As an office of the California Department of Parks and Recreation, the OHP implements the policies of the NHPA on a statewide level. The OHP also carries out the duties set forth in the Public Resources Code and maintains the California Historic Resources Inventory.

The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state's jurisdiction. Also implemented at the State level, CEQA requires projects to identify any substantial adverse impacts which may affect the significance of identified historical resources.

**California Register of Historical Resources (California Register).** The California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."<sup>1</sup> The criteria for eligibility for the California Register are based upon National Register criteria. These criteria are:

- Criterion 1 – Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California of the United States;
- Criterion 2 – Associated with the lives of persons important to local, California or national history;
- Criterion 3 – Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; and
- Criterion 4 – Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register of Historic Places (Category 1 in the State Inventory of Historical Resources) and those formally Determined Eligible for listing in the National Register of Historic Places (Category 2 in the State Inventory)
- California Registered Historical Landmarks from No.0770 onward
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Resources Commission for inclusion in the California Register

Other resources which may be nominated for listing in the California Register include:

- Historical resources with a significance rating of Categories 3 through 5 in the State Inventory. (Categories 3 and 4 refer to potential eligibility for the National Register, while Category 5 indicates a property with local significance);
- Individual historical resources;
- Historical resources contributing to historic districts; and
- Historical resources designated or listed as a local landmark.

Additionally, a historic resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historic resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing.

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<sup>1</sup>Public Resources Code Section 50241(e).

**California Environmental Quality Act (CEQA).** Under CEQA a “project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment.”<sup>2</sup> This statutory standard involves a two-part inquiry. The first involves a determination of whether the project involves a historic resource. If so, then the second part involves determining whether the project may involve a “substantial adverse change in the significance” of the resource. To address these issues, guidelines that implement the 1992 statutory amendments relating to historical resources were adopted in final form on October 26, 1998 with the addition of State CEQA Guidelines Section 15064.5. The CEQA Guidelines provide that for the purposes of CEQA compliance, the term “historical resources” shall include the following:<sup>3</sup>

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register;
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements in Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat such resources as significant for purposes of CEQA unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets one of the criteria for listing on the California Register; and
- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

Section 15064.5 of the CEQA Guidelines also provides that “[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.”<sup>4</sup> Material impairment occurs when a project alters or demolishes in an adverse manner “those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion” in a state or local historic registry.<sup>5</sup>

**California Public Resources Code, Sections 5097.5, 5097.9, and 5097.98-99.** Section 5097.5 of the Public Resources Code defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands. This Section also prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands, and provides for criminal sanctions. In 1987, it was amended to require consultation with the California Native American Heritage Commission whenever Native American graves are found. It also established that violations for taking or possessing remains or artifacts are felonies.

Public Resources Code Section 5097.9 establishes the California Native American Heritage Commission to make recommendations to encourage private property owners to protect and preserve sacred places in a natural state and to allow appropriate access to Native Americans for ceremonial or spiritual activities. The Commission is authorized to assist Native Americans in obtaining appropriate access to sacred places on

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<sup>2</sup>Public Resources. Code Section 21084.1.

<sup>3</sup>CEQA Guidelines Section 15064.f(e).

<sup>4</sup>CEQA Guidelines Section 15064.5(b)(1).

<sup>5</sup>CEQA Guidelines Section 15064.5(b)(2)(A-C).

public lands, and to aid State agencies in any negotiations with federal agencies for the protection of Native American sacred places on federally administered lands in California.

Public Resources Code Sections 5097.98 through 5097.99 require that the Governor's California Native American Heritage Commission be consulted whenever Native American graves are found. According to these Sections, it is illegal to take or possess remains or artifacts taken from Native American graves; however, it does not apply to materials taken before 1984. Violations occurring after January 1, 1988 are felonies.

**California Coastal Act (CCA).** The CCA (Public Resources Code Sections 30000 *et seq.*) includes protection of archaeological resources into Land Conservation Plans that regulate land uses within the coastal zone.

**Native American Heritage Commission (NAHC).** Section 50907.9 of the Public Resources Code and Section 7050 of the Health and Safety Code authorizes the NAHC to regulate Native American concerns regarding the excavation and disposition of Native American cultural resources. Among its duties, the Commission is authorized to resolve disputes relating to the treatment and disposition of Native American human remains and items associated with burials. Upon notification of the discovery of human remains by a county coroner, the Commission notifies the Native American group or individual most likely descended from the deceased.

### Local

In addition to federal and State regulations, cities and counties in the SCAG region may also provide regulatory protection and advisement regarding cultural resources. California law requires that a General Plan include seven elements (Land Use, Open Space, Conservation, Housing, Circulation, Noise, and Safety). Many jurisdictions incorporate policies related to cultural and historical resources into the Conservation Element. Other jurisdictions choose to prepare a separate (optional) element dealing with cultural and/or historic preservation issues. Many jurisdictions also prepare ordinances addressing cultural resources and historic preservation.

## EXISTING SETTING

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### Cultural History of the SCAG Region

**Prehistoric Period (Prior to 1542).** The Prehistoric cultural history of the SCAG region can be outlined by the following chronology:<sup>6</sup>

*Early Man Horizon.* Spanning the period from the end of the Pleistocene to approximately 6,000 BC, archaeological resources attributed to this horizon are characterized by large projectile points and scrapers.

*Milling Stone Horizon.* Characterized by the appearance of hand stones and milling stones, this horizon tentatively dates to between 6,000 BC and 1,000 BC. Cultural resources from this period include choppers and scraper planes but generally lack projectile points. Larger projectile points appeared in the latter portion of the Milling Stone Horizon.

*Intermediate Horizon.* Dated to between 1,000 BC and AD 750, the Intermediate Horizon represents a transitional period. Cultural resources from the Intermediate Horizon sites contain large stemmed or notched projectile points and portable mortar and pestles.

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<sup>6</sup>Wallace, W. J. (1955), A Suggested Chronology for Southern California Coastal Archeology, *Southwestern Journal of Anthropology* 11(3), 214-230.

*Late Prehistoric Horizon.* Extending from AD 750 to Spanish contact in AD 1769, the Late Prehistoric Horizon reflects an increased sophistication and diversity in technology. This is characterized by the presence of small projectile points, which imply the use of the bow and arrow. Additional cultural resources include steatite bowls, asphaltum, grave goods, and elaborate shell ornaments.

*Protohistoric Period (1542 to 1769).* Although early Spanish explorers and mission fathers recorded information on the local Native American populations, professional anthropological studies did not begin until the end of the 19<sup>th</sup> Century after most of the SCAG region Indian groups had been either assimilated by Spanish, Mexican, and American cultures or relocated to reservations.

The SCAG region once was the home to at least eleven distinct Native American groups. These include the Cahuilla, Chumash, Gabrielino, Halchidhoma, Kitanemuk, Luiseno, Mohave, Quechan, Serrano, Southern Paiute, Tataviam, and Tipai. The territorial boundaries of the Native Americans who were residing in Southern California at the time of first European contact do not coincide with today's political boundaries. Moreover, many tribal boundaries overlapped and most groups migrated within their general boundaries throughout the year.

The federal government established reservations in Southern California between 1875 and 1891. This includes the Martinez, Fort Yuma, and Colorado River reservations in Imperial County. In Riverside County are Chemehuevi, Fort Mojave, Torres, Cabazon, Augustine, Santa Rosa, Ramona, Pechanga, Soboba, Agua Caliente, Mission Creek, and Morongo. The two reservations in San Bernardino County are the San Manuel and Twenty-nine Palms reservations. No reservations were established in Los Angeles, Ventura, or Orange Counties. It was believed that the local Native American groups in those counties had become extinct.

### **Historic Resources**

Historic resources are classified into three distinct time periods of the region's history: the Spanish Period, the Mexican Period, and the American Period.

**Spanish Period (1769-1822).** Exploration of California first occurred in 1540 when a land expedition under the command of Hernando de Alarcon traversed inland along the Colorado River. Two years later, Juan Rodriquez Cabrillo was commissioned by the Spanish government to investigate the western shores of the newly acquired territory. In the following two centuries, little interest was given to California.

By the late 18<sup>th</sup> Century, European political powers created renewed interest in California. Military "explorers" from Great Britain, France and Russia began investigating the resources along the western shores of the entire North American continent. The Spanish government, realizing that settlement by any of these foreign parties north of Mexico could become a threat, decided it was time to establish their own settlements in California. In 1769, plans were put in place to found a series of free-standing towns (pueblos), forts (presidios), and Catholic missions along the Alta California coast extending as far north as Monterey Bay.

Over the course of the next half-century, four presidios, twenty missions and three towns were established. The presidios were located at San Diego, Santa Barbara, Monterey and San Francisco. The pueblos were founded at Los Angeles (1781), San Jose (1777) and Branciforte (1797), near Santa Cruz. The settlement at Branciforte failed within five years due to its location and the social construct of the inhabitants but all the other pueblos were successful.

During the early decades of the 19<sup>th</sup> Century, independence groups sprang up throughout the Spanish Empire. Mexico declared its independence in 1810. This attempt failed, but a second attempt ten years later succeeded. At that time, California was considered a province of Mexico. Throughout the Spanish Period, California remained largely unsettled. **Table 3.4-1** lists California Historical Landmarks from the Spanish Period.

**TABLE 3.4-1: CALIFORNIA HISTORIC LANDMARKS OF THE SPANISH PERIOD (1769-1821)**

CA Historic Landmark No.	Site Name	General Location	Year
43	The Zanja	Redlands	1819-1820
95	Guahama Rancheria	Redlands	1810
101	Giant Desert Figures	16 miles N of Blythe	N/A
103	De Anza Camp Site	SE of Anza	1774
104	Village of Pochea	Hemet	1774
113	Site of Junipero Serra's Cross	Ventura	1782
114	Old Mission Reservoir	Ventura	1805-1815
114-1	San Buenaventura Aqueduct	Ventura	1805-1815
145	Avila Adobe	Los Angeles	1818
156	Los Angeles Plaza	Los Angeles	1781
157	Mission San Fernando Rey de Espana	Mission Hills	1797
158	Mission San Gabriel Archangel	San Gabriel	1771
161	Site of Mission Vieja	Montebello	1770s
186	Serrano Tanning Vats	8 miles SE of Corona	1819
187	Carved Rock	8 miles S of Corona	N/A
190	Painted Rock	7 miles S of Corona	N/A
200	Mission San Juan Capistrano	San Juan Capistrano	1776
204	Old Santa Ana	Orange	1769
302	Old Mill	San Marino	1816
310	Mission San Buenaventura	Ventura	1782
350	Mission Purisima Concepcion	S of Winterhaven	1780
363	Centinela Springs	Inglewood	N/A
383	Site of Jose Dolores Sepulveda Adobe	Torrance	1818
451	Ortega-Vigare Adobe	San Gabriel	1792-1805
522	Serra Springs	Los Angeles	1769
556	Rancho San Francisco	Valencia	1804
557	Hemet Maze Stone	Hemet	N/A
568	Hernando de Alarcon Expedition	Andrade	1540
618	Garces-Smith Monument	San Bernardino National Forest	1776
620	Yucaipa Rancheria	Yucaipa	1822
624	Warring Park	Piru	1769
638	Old Temescal Road	South of Corona	1820
655	Portola Trail Campsite (I)	Los Angeles	1769
659	Stagecoach Inn	Newbury Park	1876
665	Portola Camp Site (II)	Beverly Hills	1769
689	Los Encinos State Historic Park	Encino	1797
727	Portola Expedition Campsite	Santa Paula	1769
753	San Fernando Cemetery	Sylmar	1800s
781	National Old Trails	Needles	1776
787	De Anza Crossing	Riverside	1775, 1776
911	Chatsworth Calera Site	Chatsworth	1800s
921	Mission San Pedro y San Pablo	Northeast of Bard	1781
965	Point Dume	Malibu	1793
977	The Arrowhead	San Bernardino	N/A
984	Casa Rancho San Antonio	Bell Gardens	1810
1008	Yuha Well	Near Seeley	1774

**SOURCE:** California Department of Parks and Recreation, Office of Historic Preservation, California State Historic Landmarks listed by County, available at: [http://ceres.ca.gov/geo\\_area/counties/lists/land\\_marks\\_county.html](http://ceres.ca.gov/geo_area/counties/lists/land_marks_county.html), accessed August 1, 2011.

**Mexican Period (1822-1848).** When Mexico first gained political independence from Spain, little changed for the citizens of California. The defining event from this time period was the secularization of the Catholic Missions in 1834, following the Act of Secularization of 1833. Over the following sixteen years, all of the former mission lands were granted to secular landowners.

Secularization proved disastrous for the Native Americans who were part of the mission system. In fact, the Native Americans were self-sufficient long before the arrival of Spanish domination. The mission system made the indigenous population completely dependent on the missions. When the missions were closed the Indians were left to fend for themselves.

During the two-decade period between the 1830s until 1848, one government after another ruled California. Meanwhile, the United States pushed west across the North American continent. By 1846, a number of Americans had settled in California, often marrying into landed Hispanic families. Between 1835 and 1846 relations between Mexico and the United States deteriorated. In 1846, a revolt was attempted in Northern California. Although it was quickly thwarted, it planted the seeds for the eventual insurrection that succeeded. Within three weeks, an American naval force appeared off the California coast and formally proclaimed rule over the presidios and coastal towns. On January 13, 1847, Captain John C. Fremont accepted the surrender of Governor Pio Pico and Commander Jose Maria Flores. The United States annexed California by the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican War and beginning the American Period. **Table 3.4-2** lists California Historical Landmarks from the Mexican Period.

**American Period (1848 – Present).** Shortly after the United States annexed California, gold was discovered in central California, changing the State forever. Within months of the news, droves of foreigners poured into California. At the same time, the cattle industry flourished, causing some ranch owners to become wealthy. However, the legality of the land grants issued by the Spanish and Mexican governments came into question. It took the American courts years to decide each individual case. In the meantime, many of the Mexican landowners lost their great ranches to the new Americans through marriage or more often, through deceit.

By the time of the American Civil War (1861-1865), Americans were the dominant group in Southern California, both politically and economically. Their feelings toward the war were divided, but generally Southern sympathizers outnumbered Northern supporters. During this same decade, a great drought struck Southern California, devastating the cattle industry. As a result, many of the former cattle ranches were sold off and used for agricultural purposes. The railroad came to Southern California during the 1870s, resulting in the first great land boom. New towns began to spring up along the new rail lines. Places once thought too desolate soon attracted settlers. As a result of new towns in places like the Mojave Desert, exploration for mineral deposits soon produced new strikes in places such as Calico in San Bernardino County in 1881. During the next several decades, many such mining camps were established in the eastern counties, most of these camps remained in existence only for a short time.

In the 20<sup>th</sup> Century, the region underwent a metamorphosis from a primarily agricultural region into an urban metropolis. Southern California has attracted and maintained millions of people and employment opportunities and has developed into the second-largest metropolitan region in the country.

The activities and achievements of the recent past have generated many important cultural resources throughout the region. **Table 3.4-3** lists California Historical Landmarks from the American Period.

<b>TABLE 3.4-2: CALIFORNIA HISTORIC LANDMARKS OF THE MEXICAN PERIOD (1822-1848)</b>			
<b>CA Historic Landmark No.</b>	<b>Site Name</b>	<b>General Location</b>	<b>Year</b>
42	San Bernardino Asistencia	Redlands	1830
44	Mormon Stockade	San Bernardino	1839
102	Site of Louis Rubidoux House	Rubidoux	1844
115	Olivas Adobe	Ventura	1837, 1849
121	Agua Mensa	Colton	1845
127	Casa de Pio Pico	Whittier	1830's?
144	Church of Los Angeles	Los Angeles	1822
151	Campo de Cahuenga	North Hollywood	1847
152	Dominguez Ranch House	Compton	1826
167	La Mesa Battlefield	Vernon	1847
168	Oak of the Golden dream	Newhall	1842
185	Serrano Adobe Site	South of Corona	1824
189	Dana Point	Dana Point	1835
199	Serrano Adobe	El Toro	1842
217	Black Star Canyon Indian Village Site	Near Silverado	1878
224	Site of Third Serrano House	Southeast of Corona	1840's
226	Bernardo Yorba Ranch Site	Yorba Linda	1834
227	Diego Sepulveda Adobe Costa Mesa	Costa Mesa	Late 1820s
301	Site of Lugo Adobe	Los Angeles	1840's
303	Site of Old Rubidoux Grist Mill	Rubidoux	1846-7
360	Tapia Adobe	Rancho Cucamonga	1839
362	Romulo Pico Adobe	Mission Hills	1834
368	Hugo Reid Adobe	Arcadia	1839
385	Rio San Gabriel Battlefield	Montebello	1847
490	Cucamonga Rancho Winery	Rancho Cucamonga	1839
528	Yucaipa Adobe	Yucaipa	1842
553	Rancho Camulos	2 miles E of Piru	1839
637	Catalina Adobe	Glendale	1830's
756	Sycamore Tree	4 miles E of Santa Paula	1846
920	Casa de San Pedro	San Pedro	1823
942	Site of Rancho Chino Adobe	Chino	1841
944	Site of Fort Romualdo Pacheco	West of Imperial	1822
963	Mojave Road	Northeast of Barstow	1826
978	Rancho Los Cerritos	Long Beach	1844
979	Rancho Simi	Simi Valley	1842
1005	Santa Rosa Rancho	Murrietta	1846

**SOURCE:** California Department of Parks and Recreation, Office of Historic Preservation, California State Historic Landmarks listed by County, available at: [http://ceres.ca.gov/geo\\_area/counties/lists/landmarks\\_county.html](http://ceres.ca.gov/geo_area/counties/lists/landmarks_county.html), accessed August 1, 2011.

<b>TABLE 3.4-3: CALIFORNIA HISTORIC LANDMARKS OF THE AMERICAN PERIOD (1849 TO PRESENT)</b>			
<b>CA Historic Landmark No.</b>	<b>Site Name</b>	<b>General Location</b>	<b>Year</b>
20	Parent Orange Tree	Riverside	1870
96	Mormon Road	W of Crestline	1851
112	City of Anaheim	Anaheim	1857
147	Banning Park	Wilmington	1850's
150	Brand Park (Memory Garden)	Los Angeles	1920
159	Pico Hotel	Los Angeles	1869-1870
160	Oldest House in Hollywood	Hollywood	1870's
169	Drum Barracks	Wilmington	1862
170	Hancock Park La Brea	Los Angeles	1916
171	Merced Theater	Los Angeles	1870
172	Pioneer Oil Refinery	Newhall	1870
182	Tumco Mines	5 miles NE of Ogilby	1884
188	Butterfield Stage Station	S of Corona	1858
191	Yorba-Slaughter Adobe	S of Chino	1850-1853
193	Picacho Mines	N of Winterhaven	1852
194	Mountain Springs Stage Station	Mountain Springs	1850's
198	Old Landing	Newport Beach	1870
201	Pioneer House of the Mother Colony	Anaheim	1857
202	Silverado	Silverado	1878
203	Red Hill	Santa Ana	1893
205	Modjeska's Home	NE of Lake Forest	1888
218	Barton's Mound	Irvine	1857
219	Anaheim Landing	Seal Beach	1857
225	Flores Peak	Modjeska Canyon	1857
228	Carbondale	Silverado	1878
235	Casa de San Rafael	Glendale	1875
289	First Home of Pomona College	Pomona	1887
367	Lucky Baldwin's Cottage	Arcadia	1865
372	Adobe de Palomares	Pomona	1881
373	Old Salt Lake	Redondo Beach	1850s
380	Site of Diego Sepulveda Adobe	San Pedro	1854
381	Old Whaling Station	Rancho Palos Verdes	1850's
384	Timms' Point and Landing	San Pedro	1852
386	La Casa de Carrion	La Verne	1864
514	Pomona Power Plant	Claremont	1892
516	Well No. CSO	Newhall	1876
516-2	Mentryville	Newhall	1876
531	Lummis House	Los Angeles	1895
536	Original Building of the University of Southern California	Los Angeles	1880
554	DeMille Studio	Hollywood	1913
567	St. Vicent's Place	Los Angeles	1868
573	Sycamore Grove	W of Devore	1851
576	Santa Fe/Salt Lake Trail	N of San Bernardino	1917
577	Mormon Trail Monument	N of San Bernardino	1851
578	Stoddard-White Monument	N of San Bernardino	1849
579	Daly Road Monument	E of Rim Forest	1870
580	Alamitos 1	Long Beach	1921
590	Lang Station	E of Canyon Country	1876
617	Fort Benson	Colton	1856-1857
619	Holcomb Valley	NE of Big Bear	1860
622	Harry Wade Exit Route	Near Baker	1849

<b>TABLE 3.4-3: CALIFORNIA HISTORIC LANDMARKS OF THE AMERICAN PERIOD (1849 TO PRESENT)</b>			
<b>CA Historic Landmark No.</b>	<b>Site Name</b>	<b>General Location</b>	<b>Year</b>
632	Old Short Cut	Angeles National Forest	1900
646	Grave of George Carlambo	Whittier	1867
649	Harry Wade Exit Route	30 miles N of Baker	1849
653	The Cascades	San Fernando Valley	1913
656	Bella Union Hotel Site	Los Angeles	1858
664	Heritage House	Compton	1869
668	Lyon Station	Newhall	1855
669	Gov. Stoneman Adobe, Los Robles	San Marino	1880
681	Paradox Hybrid Walnut Tree	Whittier	1907
688	Lyons Station Stagecoach Stop	Newhall	1850s
716	Griffith Ranch	San Fernando	1912
717	Angeles National Forest	La Canada	1892
717	Angeles National Forest	San Bernardino Mountains	1892
718	First International Air Meet	Carson	1910
725	Old Bear Valley Dam	W of Big Bear	1884
729	Old Maizeland School	Buena Park	1868
730	Old Plaza Firehouse	Los Angeles	1884
737	Chimney Rock	Lucerne Valley	1867
738	Corona Founders Monument	Corona	1886
744	Butterfield State Station Site	Los Angeles	1858
749	Saahatpa	Brookside Rest Area	1851
761	Mission Inn	Riverside	1876
774	Searles Lake Borax Discovery	Trona	1862
775	Site of First Water-to-Water Flight	Newport Beach	1912
782	Calico	Near Yermo	1881
789	Site of the Los Angeles Star	Los Angeles	1851
794	McFadden Wharf	Newport Beach	1888
806	Fort Yuma	Winterhaven	1849
808	Camp Salvation	Calexico	1849
822	First Jewish Cemetery	Los Angeles	1854
837	Santa Ana Courthouse	Santa Ana	1900
840	Old Santa Monica Forestry Station	Los Angeles	1887
845	Plank Road	W of Winterhaven	1915?
847	Ventura County Courthouse	Ventura	1913
859	Von Schmidt Boundary	N of Needles	1873
871	The Gamble House	Pasadena	1908
874	Workman Home	Industry	1842
881	Site of Port of Los Angeles Long Wharf	Pacific Palisades	1893
887	Pasadena Playhouse	Pasadena	1924
892	Harvey House	Barstow	1893
894	S.S. Catalina	Lost	1924
912	Glendora Bougainvillea	Glendora	1901
918	Olinda	Brea	1897
919	St. Francis Dam Disaster Site	N of Saugus	1928
933	Site of Llano Colony	Llano	1916?
934	Japanese Detention Center	Arcadia	1942
939	Charley's World of Lost Art	Andrade	1967
939	Old Trapper's Lodge	Woodland Hills	1951
939	Hula Ville	4 miles NW of Yermo	1954
939	Possum Trot	6 miles NW of Hesperia	1955
939	Grandma Prisbrey's Bottle Village	Simi Valley	1956

<b>TABLE 3.4-3: CALIFORNIA HISTORIC LANDMARKS OF THE AMERICAN PERIOD (1849 TO PRESENT)</b>			
<b>CA Historic Landmark No.</b>	<b>Site Name</b>	<b>General Location</b>	<b>Year</b>
943	Cornelius and Mercedes Jenson Ranch	Rubidoux	1854
947	Reform School Juvenile Offenders (F.C. Nelles)	Whittier	1891
948	Site of Blythe Intake	N of Blythe	1877
950	U.S. Rabb Experimental Station	Fontana	1928
959	Balboa Pavilion	Balboa	1905
960	Los Angeles Memorial Coliseum	Los Angeles	1923
961	Harold Lloyd Estate	Beverly Hills	1929
963-1	Camp Cady	24 miles N of Barstow	1860
966	Adamson House	Malibu	1926
975	El Monte-1 <sup>st</sup> So. Cal. Settlement by U.S. Immigrants	El Monte	1850s
985	Camp Pilot Knob	Felicity	1943
985	Camp Young	28 miles E of Indio	1942
985	Camp Coxcomb	45 miles E of Indio	1942
985	Camp Granite	45 miles E of Indio	1942
985	Camp Iron Mountain	45 miles E of Indio	1942
985	Camp Clipper	37 miles W of Needles	1942
985	Camp Ibis	8 miles E of Needles	1942
988	Pacific Asia Museum	Pasadena	1929
989	Soviet Transpolar Landing Site	San Jacinto	1937
990	Christmas Tree Lane	Pasadena	1920
992	Site of Contractor's General Hospital	Desert Center	1933
993	Watts Towers	Los Angeles	1955
994	A.K. Smiley Public Library	Redlands	1898
996	Union Oil Company Building	Simi Valley	1890
997	Tuna Club of Avalon	Avalon	1898
1004	Old Town Irvine	Irvine	1887
1006	Beale's Cut Stagecoach Pass	Santa Clarita	1862
1009	Ramona Bowl	Hemet	1923
1011	Ennis House	Los Angeles	1924
1014	Long Beach Marine Stadium	Long Beach	1932
1015	Richard Nixon Birthplace	Yorba Linda	1912
1018	Manhattan Beach State Pier	Manhattan Beach	1920
1019	Kimberly Crest	Redlands	1897
1021	Liberty Hill Site	San Pedro	1923
1028	Madonna of the Trail	Upland	1929
1034	Tecolote Rancho	Holtville	1907

**SOURCE:** California Department of Parks and Recreation, Office of Historic Preservation, California State Historic Landmarks listed by County, available at: [http://ceres.ca.gov/geo\\_area/counties/lists/landmarks\\_county.html](http://ceres.ca.gov/geo_area/counties/lists/landmarks_county.html), accessed August 1, 2011.

### Historical Resources

The location of historical sites are open to the general public and are listed in registries found at the federal, State, county, and city levels. Additionally, registries are maintained by regional and local historical societies.

**Federal Registers.** The National Register of Historic Places (NRHP) is the nation's official list of cultural resources worthy of preservation. The NRHP is made up of all historic areas in the National Park System, National Historic Landmarks (NHL), and properties across the country that have been nominated by governments, organizations, and individuals because they are significant to the nation, to a state, or to a community. The NRHP is authorized under the National Historic Preservation Act of 1966. The NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and

protect our historic and archaeological resources. Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The NRHP is administered by the National Park Service, which is part of the U.S. Department of the Interior. There are over 85,000 listings in NRHP of which 751 are located in the SCAG region.

NHL are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. NHL is authorized under Section 213 the National Historic Preservation Act of 1966. There are over 2,400 listings in the NHL of which 28 are located in the SCAG region.

**Table 3.4-4** summarizes the number of NRHPs and NHLs found in each County in the SCAG region. Table CUL-1 in the Cultural Resource Technical Appendix includes the sites in the SCAG region listed on the NRHP. Table CUL-2 includes the NHL.

<b>TABLE 3.4-4: NATIONAL REGISTERED PLACES AND LANDMARKS IN SCAG REGION</b>		
<b>County</b>	<b>Registered Places</b>	<b>Landmarks</b>
Imperial	10	1
Los Angeles	479	20
Orange	114	2
Riverside	55	2
San Bernardino	57	2
Ventura	36	1
<b>Total</b>	<b>751</b>	<b>28</b>

**SOURCE:** National Park Service, National Historic Landmarks Program, National Historic Landmarks Survey, available at: <http://www.nps.gov/nhl/designations/istsofNHLs.htm>, accessed August 1, 2011; National Park Service, National Register of Historic Places, NPS Focus, available at: <http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>, accessed August 1, 2011.

**State Registers.** California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have been determined to have statewide historical significance. The resource also must be approved for designation by the County Board of Supervisors or the City/Town Council in whose jurisdiction it is located; be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. There are 1,044 listings in the CHL of which 212 are located in the SCAG region. **Table 3.4-5** contains a summary of the period and number of Historical Places and Landmarks in SCAG region, found on the CHL register. Table CUL-1 in the Cultural Resource Technical Appendix lists the CHLs located in the SCAG region.

<b>TABLE 3.4-5: CALIFORNIA HISTORICAL LANDMARKS IN SCAG REGION (SUMMARY TABLE)</b>					
<b>County</b>	<b>Pre-European Period</b>	<b>Spanish Period</b>	<b>Mexican Period</b>	<b>American Period</b>	<b>Total</b>
Imperial	0	3	1	9	13
Los Angeles	3	16	11	66	96
Orange	0	2	4	19	25
Riverside	4	5	5	14	28
San Bernardino	2	5	7	23	37
Ventura	0	6	3	4	13
<b>Total</b>	<b>9</b>	<b>37</b>	<b>31</b>	<b>135</b>	<b>212</b>

**SOURCE:** California Department of Parks and Recreation, Office of Historic Preservation, California State Historic Landmarks listed by County, available at: [http://ceres.ca.gov/geo\\_area/counties/lists/landmarks\\_county.html](http://ceres.ca.gov/geo_area/counties/lists/landmarks_county.html), accessed August 1, 2011.

California Points of Historical Interest (PHI) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. There are 850 PHI listings, of which 285 are located in

the SCAG region. **Table 3.4-6** contains a summary of the number of Points of Historical Interest found in each county in the SCAG region. Table CUL-1 in the Cultural Resource Technical Appendix lists the Points of Historical Interest located in the SCAG region.

<b>TABLE 3.4-6: CALIFORNIA POINTS OF HISTORICAL INTEREST IN SCAG REGION</b>	
<b>County</b>	<b>Points of Historical Interest</b>
Imperial	4
Los Angeles	65
Orange	21
Riverside	72
San Bernardino	119
Ventura	4
<b>Total</b>	<b>285</b>
<b>SOURCE:</b> California State Parks, Office of Historic Preservation, California Historical Resources listed by County, available at: <a href="http://ohp.parks.ca.gov/listed_resources/">http://ohp.parks.ca.gov/listed_resources/</a> , accessed August 1, 2011.	

These registers are administered by the California Office of Historic Preservation (OHP) and the State Historical Resources Commission (SHRC), which are a part of the California Department of Parks and Recreation.

**City and County Registers.** Registries may also be maintained by county and city commissions. Examples of these types of organizations include the Riverside County Historical Commission, the Santa Ana Historic Resources Commission, and the Santa Monica Landmarks Commission.

**Local Registers.** Local groups have also created registries within their area of interest, generally at the community level. An example is Ontario Heritage, a local non-profit organization that aims to protect the historic and cultural resources of Ontario, California.

### Archaeological Resources

Archaeological resources are the physical remains of past human activity, and humans have occupied Southern California for thousands of years. The SCAG region is rich in archaeological resources that range from the early prehistoric period to the historic period. As of August 2011, over 68,000 archaeological resource locations have been identified in the SCAG region. The location of known archaeological sites is confidential to help prevent scavenging of artifacts. Detailed information, especially their location, is considered proprietary by State law, therefore, **Table 3.4-7** lists these resources only by county.

<b>TABLE 3.4-7: ARCHAEOLOGICAL SITE DISTRIBUTION BY COUNTY</b>	
<b>County</b>	<b>Approximate Number of Archaeological Sites</b>
Imperial	11,720
Los Angeles	4,196
Orange	1,710
Riverside	19,858
San Bernardino	29,480
Ventura	1,806
<b>SCAG Region Total</b>	<b>68,770</b>
<b>SOURCE:</b> Imperial County: Jamie Lennox, South Coastal Information Center, August 3, 2011; San Bernardino County: Robin Laska, San Bernardino Archaeological Center, August 3, 2011; Riverside County: Dr. M. C. Hall, Eastern Information Center, August 8, 2011; Los Angeles, Orange, and Ventura Counties: Stacy St. James, South Central Coastal Information Center, August 10, 2011.	

Due to the proprietary nature of archaeological information, the exact location of most of these locales cannot be discussed. However, some of the sites have been made public in county, regional, State, and federal parks, or listed on public registers. These include:

- The site of the Puvunga Indian Village (NR) Los Angeles County
- Vasquez Rocks (NR) Los Angeles County
- The Black Star Canyon Indian Village Site (CHL-217) Orange County
- The Fairview Indian Site (NR) Orange County
- Desert Intaglios (CHL-101) Riverside County
- Site of the Indian Village of Pochea (CHL-104) Riverside County
- Carved Rock (CHL-187) Riverside County
- Painted Rock (CHL-190) Riverside County
- The Hemet Maze (CHL-557) Riverside County
- The Calico "Early Man" Site San Bernardino County
- Anacapa Island Archaeological District (NR) Ventura County

The SCAG region was occupied during both the prehistoric and protohistoric periods; therefore, archaeological sites are widespread and numerous. Rock outcrops, river and stream drainages, and coastal strips were often prime locations for Native American village sites or processing camps. These locations now include highly urbanized locations, such as cities, and undeveloped areas of the high desert. Often archaeological sites are covered by three feet or more of topsoil; however, it is possible that construction may not disturb the surface soils by more than a foot or two, thereby protecting remains even after an area has been fully urbanized. In 1998, a large undisturbed Native American burial ground, dating from the Protohistoric Period, was exposed during construction at the ARCO Refinery in Los Angeles. The refinery had been there for seventy-five years, yet the burial level was located under three to five feet of flood deposits from the nearby Los Angeles River.

### **Paleontological Resources**

Paleontological resources are fossilized remains of non-human organisms that lived in the region in the geologic past. Paleontological sites and fossils are non-renewable resources that are important in our understanding of the prehistory and the geologic development of Southern California. Many paleontological sites include remains of species that are now extinct. Paleontological sites are predominantly found in sedimentary rock deposits, and most of the Los Angeles Basin is composed of these sedimentary deposits. Paleontological resources are most easily found in areas that have been uplifted and eroded, and they can be found anywhere that subsurface excavation is being carried out. Ancient marine fossils have been found both in the Santa Monica Mountains, particularly in exposed canyon areas, streambeds, along road cuts, and beneath the streets of Los Angeles during storm drain and subway construction.

The following types of paleontological resources are known to exist in the SCAG region:

- True Fossils – Lithified or replaced remains of plants and animals preserved in a rock matrix (e.g., microfossils, shells, animal bones and skeletons, and whole tree trunks);
- Trace Fossils – Molds, casts, tracks, trails and burrow impressions made in soft clays and muds which subsequently were turned to stone, preserving the images of past life (e.g., shells, footprints, leaf prints, and worm tubes);
- Breas – Seeps of natural petroleum that trapped extinct animals and preserved and fossilized their remains.

Both marine and land vertebrate and invertebrate fossils are found in the SCAG region.<sup>7</sup> An associated formation is the matrix in which most fossils are found. These formations are different from modern soils and cannot be correlated with soil maps, which depict a thin veneer of surface soils. Geologic formations

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<sup>7</sup>Bedrossian T. L. (1975), Vertebrate Fossils and the History of Animals with Backbones, California Geology, 28(11), 243-259.

form complex relationships below the surface and may range in thickness from a few feet to hundreds of thousands of feet. Geologic maps (available through the U.S. Geological Survey [USGS] and the California Geological Survey [CGS]) show the surface expression of geologic formations along with other geologic features such as faults, folds, and landslides. Although sedimentary formations were initially deposited one atop the other over time the layers have been squeezed, tilted, folded, cut by faults and vertically and horizontally displaced, so that today, any one rock unit does not usually extend in a simple horizontal layer. A sensitive formation bearing fossils can be found at the surface in a rock outcrop that same formation may extend many feet down into the ground and also extend for miles just below the surface. Thus, predicting which areas are paleontologically sensitive is difficult.

Paleontologists consider all vertebrate fossils to be of significance. Other types of fossils are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations.

Fossil bearing sedimentary formations and crystalline basement rocks (metamorphic and plutonic) overlain by sedimentary and volcanic rocks are prevalent throughout Southern California. Although the exact locations of these formations are considered proprietary to help prevent the removal or destruction of these important, non-renewable resources, **Table 3.4-8** identifies the general location of some of the more significant fossil localities for the SCAG region.

<b>TABLE 3.4-8: SIGNIFICANT FOSSIL LOCALITIES IN THE SCAG REGION</b>		
<b>Location</b>	<b>Fossil Type</b>	<b>Formations</b>
Octillo Area (Shell Canyon, Coyote Mountains, Painted Gorge, Yuma Buttes)	Invertebrates	Imperial
Plaster City	Freshwater invertebrates	Lake Cahuilla Beds
La Brea Tar Pits	>500,000 specimens, >200 types of animals	
Palos Verdes Peninsula	Mastadon, mammoth, horse, camel, sloth	Palos Verdes Sand
Palos Verdes Peninsula	Grey whale	San Pedro
Palos Verdes Peninsula	Fish, birds, sea lion, plants, baleen whale, horse, sloth, sea otter, mammoth, mastodon, bison, camel, tapir	Monterey Shale
Palos Verdes Peninsula	Dolphin	Monterey Shale
Santa Monica Mountains (Topanga Canyon)	Cypraeid gastropod	Topanga
Santa Monica Mountains (Old Topanga Canyon Road, Piuma Road)	Numerous Fossils	Topanga
Mint Canyon	Oldest hawk in California	Tick Canyon
Mint Canyon	Horse, elephant, camel	Mint Canyon
Puente Hills (Hacienda Heights)	Fish	Puente
Puente Hills (Diamond Bar)	Fish and leaves	Puente
Buena Park (Ralph B. Clark Paleontological Park)	Ice age mammals including Imperial Mammoth	La Habra
Laguna Hills/Dana Point	Baleen whale (largest and most complete skull)	Capistrano
Laguna Hills/Dana Point (Costeau Park)	Terrestrial mammal	Capistrano
San Joaquin Hills, Laguna Niguel	Dolphin	Monterey
Newport Bay East Bluffs	Invertebrates	Palos Verdes Sand
Santa Ana Mountains (Eastern Carriort)	76 Localities with various species	Ladd, Sespe-Vaqueros, Tapanga, Silverado, Santiago, Puente
Santa Ana Mountains (Robinson Ranch/Dove Canyon)	Wood. Leaves, ammonites	Silverado
Santa Ana Mountains (Black Star and Silverado Canyons)	Invertebrates	Ladd
Santa Ana Mountains (Gypsum Canyon)	Invertebrates, shark teeth	Topanga

<b>TABLE 3.4-8: SIGNIFICANT FOSSIL LOCALITIES IN THE SCAG REGION</b>		
Loma Linda to Banning (The Badlands)	Vertebrate fossil remains such as horse, camel and rhinoceros	San Timoteo
Soboba Hot Springs	80 varieties of fossilized chaparral and woodland plant species	Soboba
Lake Elsinore	Plants	Silverado
California Oaks	Horse, coyote, rodents, reptiles, amphibians	Unnamed sandstone
Margarita Creek	Horse fossils	Pauba
Bernasconi Hills	Mammoth, horse, saber toothed cat	Lakeview Hot Springs
Perris	Large oreodonts	Lake Matthews
Temecula (I-15 & I-79)	Vertebrate fossils	Temecula Arkose
Barstow, Rainbow Basin	Horse, camel	Barstow
Cajon Pass	Pleiosaurs	San Francisquito
Cajon Valley	Small mammals	Crowder, Punchbowl
Cady Mountains	Oldest tertiary vertebrates in Mojave	Hector
Badlands east of Barstow	Vertebrates	Manix
Boron Open Pit Mine	Lizards	Kramer Beds
Lava Mountains	Lizards, rodents	Bedrock Spring
Red Rock Canyon	Vertebrates	Dove Spring
Cache Peak	42 taxa including microvertebrates	Bopesta
Hills west of Mojave	23 mammalian taxa including 12 of microinvertebrates	Homed Toad
Lone Pine Road near I-15	Whales	Vaqueros
Calico Mountains	Nonmarine insects, invertebrates	Barstow
Marble Mountains	Trilobites, brachiopods	Latham Shale, Chambless Limestone
Providence Mountains	Trilobites, brachiopods	Latham Shale
Kelso Mountains	Trilobites	Latham Shale
Striped Mountains	Coral and invertebrates	Bird Spring
Soda Mountains	Coral and brachiopods	Bird Spring
Las Posas Hills	Echinoids, small mammals, horse, saber, cat, rhino	Las Posas, Saugas
South Mountain	Small mammals, oreodont	Saugus
Tapo Ranch, Pearson Ranch	Lemurs, carnivores, rhino, monkey	Sespe
Balcom Canyon, Grimes Canyon	Plants, fish, insects	Monterey
Pine Mountain	Invertebrates	Santa Margarita
Rincon Beach	Pine Cones	Pico
Simi Wash	Invertebrates	Las Lajas
Pitas Point	Invertebrates	Santa Barbara
<b>SOURCE:</b> Robin Laska, San Bernardino Archaeological Center, August 3, 2011; Dr. Mcleod, Collections Manager, Natural History Museum of Los Angeles County, August 4, 2011; Meredith A. Rivin, M.S. Associate Curator of Paleontology, The Cooper Center CSU Fullerton, August 2, 2011.		

## THRESHOLDS OF SIGNIFICANCE

The 2012-2035 RTP/SCS would have a significant impact related to cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resources or site or unique geologic feature; and/or
- Disturb any human remains, including those interred outside of formal cemeteries.

## **Methodology**

This section summarizes the methodology used to evaluate the expected impacts of implementation of the 2012-2035 RTP/SCS on historic, archaeological, and paleontological resources in the SCAG region.

## **Cumulative Analysis**

The 2012-2035 RTP/SCS addresses transportation projects and land use distribution patterns, including land use scenarios. These land use distribution patterns identify growth distribution and anticipated land use development to accommodate growth projections. The Regional Travel Demand Model (RTDM) used for this analysis captures pass-through traffic that does not have an origin or destination in the region, but does impact the region, so that too is included in the project analysis. Although a similar level of development is anticipated even without the 2012-2035 RTP/SCS, this Plan would influence growth, including distribution patterns, throughout the region. To address this, the analysis in the PEIR covers overall impacts of all transportation projects and land development described in the 2012-2035 RTP/SCS. In addition, this PEIR considers cumulative impacts from other regional plans (e.g., the South Coast Air Quality Management Plan), which could result in additional impacts inside and outside the region.

## **Comparison with the No Project Alternative**

The analysis of cultural resources includes a comparison of the expected future conditions with the Plan and the expected future conditions if no Plan were adopted (No Project). This evaluation is not included in the determination of the significance of impacts (which is based on comparison to existing conditions); however, it provides a meaningful perspective on the effects of the 2012-2035 RTP/SCS.

## **Determination of Significance**

The methodology for determining the significance of cultural impacts compares the existing conditions to the future 2012-2035 RTP/SCS conditions, as required by CEQA Guidelines Section 15126.2(a). The known historical, archaeological, and paleontological resources located within the SCAG region were evaluated using the criteria set forth by the OHP, the California Register of Historic Resources, and the CEQA Guidelines. The research analysis was limited to State and federally recognized historic resources and landmarks, and does not include landmarks of local significance.

All of the counties within the SCAG region contain archaeological localities and are rich with fossil bearing sedimentary formations. All areas within the region have the potential for yielding, as yet undiscovered, archaeological and paleontological resources and human remains. Over 32,000 archaeological and historic locations have been identified in the SCAG region. Each of these sites is documented at the Archaeological Information Center, which holds location information on archaeological sites for each region in California. Paleontological sites are also numerous in the SCAG region. The development of new transportation facilities may affect archaeological and paleontological resources, primarily through the disturbance of buried resources. Frequently, these resources are previously unidentified. Therefore, any excavation in previously undisturbed soil or geologic formation has the potential to impact archaeological and paleontological resources.

The development of new transportation facilities may affect historic architectural resources (structures 50 years or older), either through direct effects to buildings or through indirect effects to the area surrounding a resource if it creates a visually incompatible structure adjacent to a historic structure. Impacts to historic resources fall into three categories: 1) direct disturbance of buried resources, 2) direct impact or alteration of structures, and 3) indirect impacts to structures, such as vibration and corrosive air contaminants, and creation of a visually incompatible environment. All counties in the SCAG region contain a large number of historic properties and historic residential districts (**Tables 3.4-4 through 3.4-6**); therefore, the potential for impacts to historic properties is significant. Improvements within existing rights-of-way are less likely to affect historical architectural resources. However, new highway segments through historic districts would

constitute a significant impact. Also, reducing buffer zones between transportation corridors and reduction of historic resources through lane widening could cause significant impacts.

Since this document analyzes impacts to cultural resources on a program level only, project-level analysis of impacts must be undertaken as appropriate.

## IMPACTS

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### **Impact 3.4-1: Potential to cause a substantial adverse change in the significance of a historical resource.**

Unrecognized historic resources are those structures that exist whose historic value has not previously been assessed or documented. In more remote areas, structures of historic importance may not be currently listed on State or federal registers and even in urban areas some jurisdictions have not undertaken a detailed inventory of potential resources. Therefore as part of the evaluation of all project sites the potential for impacts to historic resources should be reviewed.

In instances where buildings 50 years or older are located on or adjacent to the site, it is important to treat these structures as historic resources, if they meet the criteria that would make them eligible for the NRHP or California State Historic Landmarks. In general, for new construction, the evaluation of the potential for indirect and direct impacts to historic resources should extend at least 1,000 feet from new construction. This should be applied in evaluating impacts during project level analyses.

Types of projects that would impact historic resources include projects that entail the development of new lanes or tracks and in some instances acquisition of new right-of-ways, and arterials and interchange projects that entail the development of new lanes and right-of-way acquisition. Improvements proposed in existing “rights of way,” such as HOV lanes, HOT lanes, BRT and goods movement capacity enhancement projects, mixed flow lanes, and “right of way” maintenance (such as pot-hole repair) would have limited potential to impact historic resources. The 2012-2035 RTP/SCS includes transportation investments and land use policies that would focus development in High Quality Transit Areas (HQTAs). Many HQTAs are located in older urban centers where structures of architectural or historical significance are likely to be located. This could result in a significant impact to historic resources. Many of the planned projects include the construction of additional lanes and highway arterials, see Chapter 2.0 Project Description, and Appendix B: 2012-2035 RTP/SCS Project List. Construction and implementation of these projects, as well as construction of development could impact the physical and aesthetic integrity of historic buildings and communities, as well as negatively impact the structures through increased levels of corrosive air contaminants and vibrations, which may damage the exterior of historic buildings. Implementation of Mitigation Measures **MM-CUL1** through **MM-CUL4** would reduce historical resource impacts; however, impacts would remain significant.

### **Impact 3.4-2: Potential to cause a substantial adverse change in the significance of an archaeological resource.**

The OHP defines an archaeological “site” as consisting of three or more related resources discovered in one locality. In the event of archaeological discovery, the resources are collected, documented, and curated at an educational institution, such as a school or a museum.

A unique archaeological resource includes artifacts or sites that meet any one or all of the following criteria:

- It has made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
- It is associated with the lives of persons important to California’s past;

- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; and/or
- It has yielded, or may be likely to yield, information important to the prehistory or history of California.

The 2012-2035 RTP/SCS includes transportation projects that have the potential to impact archaeological resources because they could take place in previously undisturbed areas. Improvements, and modifications to existing rights-of-way, such as HOV lanes, HOT lanes, bus-ways and capacity enhancement facilities, mixed flow lanes, other transportation facilities and right-of-way maintenance, would have less potential to impact archaeological resources because these project locations have previously been disturbed. However, construction of additional lanes, would potentially impact archaeological resources, if it would entail grading, trenching, excavation, and/or soil removal of any kind, in an area not previously disturbed. In addition, construction of new transportation facilities has the potential to impact archaeological resources where previous disturbance has not occurred. The 2012-2035 RTP/SCS also includes land use policies that aim to focus growth in HQTAs that are generally urban and therefore previously disturbed. In most cases the potential for discovering buried archeological resources in previously disturbed areas is low as any resources that may have existed have likely been either removed or destroyed during previous excavations. Nonetheless, some projects associated with the 2012-2035 RTP/SCS would be expected to occur on previously undisturbed sites. The potential to discover previously undiscovered archeological resources would be a significant impact.

The locations of Native American villages, burial grounds, and other archaeological sites are confidential. Archaeologists do not reveal information for these locales in order to preserve the integrity of these sites. Particularly the unknown sites run the risk of being impacted, as their locations are unknown and cannot be avoided prior to surveys. As described in the cultural setting, the region has a rich Native American history and therefore it is likely that projects proposed as part of the 2012-2035 RTP/SCS would disturb Native American Sites and, therefore, this impact would be significant. Implementation of Mitigation Measures **MM-CUL5** through **MM-CUL10** would reduce archaeological resource impacts; however, impacts would remain significant.

**Impact 3.4-3: Potential to directly or indirectly destroy unique paleontological resources or sites or unique geological features.**

Excavation related to construction of projects proposed in the 2012-2035 RTP/SCS as well as development undertaken consistent with the Plan could cause unearthing of buried paleontological resources, such as true fossils, fossil casts, and breas. Construction occurring in previously undisturbed areas and deep excavation activities would have the greatest likelihood to affect paleontological resources. However, construction activities for each transportation improvement generally occur within 150 feet on either side of any improvement. In addition development is anticipated throughout the region (although focused in HQTAs). Excavation and soil removal of any kind, irrespective of depth, has the potential to impact resources of paleontological significance. The extensive distribution of resources makes it difficult to predict which areas are paleontologically sensitive. Similar to Impact 3.4-2, construction and excavation activities relating to this project pose a potentially significant impact to paleontological materials.

New roadways and transit facilities can also permanently alter unique geologic features, particularly in rock outcroppings, canyons, coastal areas, and mountain passes. Many, of the projects proposed in the 2012-2035 RTP/SCS would occur in urbanized portions of the SCAG region, particularly in HQTAs (over half of anticipated development growth would occur in HQTAs). Nonetheless, new lanes and transit projects require earthwork and even in urban areas impacts could occur to existing natural and unique geologic features and paleontological resources. Implementation of Mitigation Measures **MM-CUL11** through **MM-CUL14** would reduce paleontological resource impacts; however, impacts would remain significant.

**Impact 3.4-4: Construction and implementation of projects from the 2012-2035 RTP/SCS could disturb human remains, including those interred outside of formal cemeteries.**

Humans have occupied the six-county SCAG region for at least 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, it is possible that excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials. Construction activities for each transportation improvement would generally be within 150 feet on either side of any improvement and could result in a significant impact relative to the discovery of human remains. Similarly construction of development projects throughout the region has the potential to encounter human remains. Under CEQA, human remains are protected under the definition of archaeological materials as being “any evidence of human activity”. Human remains are also protected under NAGPRA, which was enacted to provide protection to Native American graves, as well as culturally affiliated items, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony.

The 2012-2035 RTP/SCS transportation projects have the potential to yield previously undiscovered human remains, because some projects would take place in previously undisturbed or areas with only little previous disturbance. Excavation and soil removal of any kind, irrespective of depth, has the potential to encounter human remains. Implementation of Mitigation Measures **MM-CUL15** and **MM-CUL16** would reduce human remains impacts; however, impacts would remain significant.

**Cumulative Impacts 3.4-5: Potential to contribute to a cumulatively considerable loss of cultural resources.**

Urbanization in the SCAG region will increase substantially by 2035. The 2012-2035 RTP/SCS, by increasing mobility and targeting growth in HQTAs will influence the pattern of this urbanization. The 2012-2035 RTP/SCS’s influence on growth contributes to regional impacts on existing and previously undisturbed and undiscovered cultural resources, is described in Impacts 3.4-1 through 3.4-4 above. Impacts of the Plan would combine with impacts in other areas of Southern California to contribute to a cumulative loss of cultural resources in California. Implementation of Mitigation Measure **MM-CUL17** would reduce cumulative impacts; however, impacts would remain significant.

## MITIGATION MEASURES

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Mitigation Measures **MM-CUL1** through **MM-CUL16** can and should be implemented by project sponsors (for both development and transportation projects) as applicable. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions. Projects taking advantage of CEQA Streamlining provisions of SB 375 can and should apply mitigation measures as appropriate to site-specific conditions. Mitigation Measure **MM-CUL17** identified below shall be implemented by SCAG over the lifetime of the 2012-2035 RTP/SCS.

### Historical Resources

**MM-CUL1:** As part of the appropriate project/environmental review of individual projects, project sponsors can and should identify potential impacts to historic resources. A record search at the appropriate Information Center should be conducted to determine whether the project area has been previously surveyed and whether historic resources were identified.

**MM-CUL2:** If indicated as necessary by a records search, prior to construction activities, project sponsors can and should obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for historical resources within 1,000 feet of the project.

**MM-CUL3:** Project sponsors can and should comply with Section 106 of the National Historic Preservation Act (NHPA) including, but not limited to, projects for which federal funding or approval is required for the individual project. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. These mitigation measures may include, but are not limited to the following:

- Where appropriate, project sponsors should employ design measures to avoid historical resources and undertake adaptive reuse where appropriate and feasible. If resources are to be preserved, as feasible, project sponsors should carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. If resources would be impacted, impacts should be minimized to the extent feasible.
- Where feasible, noise buffers/walls and/or visual buffers/landscaping should be constructed to preserve the contextual setting of significant built resources.

**MM-CUL4:** Project sponsors can and should secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, and architectural drawings, as mitigation for the effects of demolition of a resource. However, such documentation will not mitigate the effects to less than significant.

### **Archaeological Resources**

**MM-CUL5:** As part of the appropriate project/environmental review of individual projects, project sponsors can and should consult with the Native American Heritage Commission (NAHC) to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site.

**MM-CUL6:** Prior to construction activities, project sponsors can and should obtain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified.

**MM-CUL7:** Prior to construction activities, project sponsors can and should obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources.

- MM-CUL8:** If the record search indicates that the project is located in an area rich with cultural materials, project sponsors can and should retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property.
- MM-CUL9:** Construction activities and excavation can and should be conducted to avoid cultural resources (if identified). If avoidance is not feasible, further work may be needed to determine the importance of a resource. Project sponsors shall obtain a qualified archaeologist familiar with the local archaeology, and/or as appropriate, an architectural historian who should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under state or federal guidelines, impacts on the cultural resource will need to be mitigated.
- MM-CUL10:** Project sponsors can and should stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.

### **Paleontological Resources**

- MM-CUL11:** As part of the appropriate project/environmental review of individual projects, project sponsors can and should obtain a qualified paleontologist to identify and evaluate paleontological resources where potential impacts are considered high; the paleontologist should also conduct a field survey in these areas.
- MM-CUL12:** Project sponsors can and should ensure that construction activities avoid known paleontological resources, if feasible, especially if the resources in a particular lithic unit formation have been determined through detailed investigation to be unique.
- MM-CUL13:** Project sponsors can and should ensure that when a construction activity could significantly disturb soils or geologic formations in areas identified as having a moderate to high potential to support paleontological resources, a qualified researcher must be stationed on-site to observe during excavation operations and recover scientifically valuable specimens.

As part of this mitigation, the following actions should be taken:

- A certified paleontologist should be retained (or required to be retained) by the project sponsor prior to construction to establish procedures for surveillance and the preconstruction salvage of exposed resources if fossil-bearing sediments have the potential to be impacted.
  - The paleontologist should provide preconstruction coordination with contractors, oversee original cutting in previously undisturbed areas of sensitive formations, halt or redirect construction activities as appropriate to allow recovery of newly discovered fossil remains, and oversee fossil salvage operations and reporting.
  - This measure should be placed as a condition on all plans where excavation and earthmoving activity is proposed in a geologic unit having a moderate or high potential for containing fossils.
  - Excavations of paleontological resources should be overseen by the qualified paleontologist and the paleontological resources given to a local agency, or other applicable institution, where they could be displayed or used for research.
- MM-CUL14:** Where practicable, project sponsors can and should avoid routes and project designs that would permanently alter unique features with archaeological and/or paleontological significance

### Human Remains

**MM-CUL15:** As part of project oversight of individual projects, project sponsors can and should, in the event of discovery or recognition of any human remains during construction or excavation activities associated with the project, in any location other than a dedicated cemetery, should cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required.

**MM-CUL16:** If any discovered remains are of Native American origin:

- The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner should make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. This may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains. Or;
- If the Native American Heritage Commission is unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the commission, the landowner or their authorized representative can and should obtain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur:
  - The Native American Heritage Commission is unable to identify a descendent;
  - The descendant identified fails to make a recommendation; or
  - The landowner or their authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

### Cumulative Impacts

**MM-CUL17:** Impacts to cultural resources shall be minimized through cooperation, information sharing, and SCAG's ongoing regional planning efforts such as web-based planning tools for local government including CA Lots, and direct technical assistance efforts such as Compass Blueprint's Toolbox Tuesday series. Resource agencies, such as the Office of Historic Preservation, shall be consulted during this process.

## SIGNIFICANCE OF IMPACTS AFTER MITIGATION

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### Historical Resources

Implementation of Mitigation Measures **MM-CUL1** through **MM-CUL4** would reduce the potential impacts to historical resources. However, due to the regional scale of the Plan and potentially large number of historic resources that could be disturbed as a result of the 2012-2035 RTP/SCS transportation projects and development projects that would occur pursuant to the Plan, this impact remains significant.

### Archaeological Resources

Implementation of Mitigation Measures **MM-CUL5** through **MM-CUL10** would reduce the potential impacts to archaeological resources. However, due to the regional scale of the Plan and potentially large

number of archaeological resources that could be disturbed as a result of the 2012-2035 RTP/SCS transportation projects and development projects that would occur pursuant to the Plan, this impact remains significant.

### **Paleontological Resources**

Implementation of Mitigation Measures **MM-CUL11** through **MM-CUL14** would reduce the potential impacts to paleontological resources. However, due to the regional scale of the Plan and the large number of paleontological localities and unique geologic features found throughout the SCAG region that could be disturbed as a result of the 2012-2035 RTP/SCS transportation projects and development projects that would occur pursuant to the Plan, this impact remains significant

### **Human Remains**

Implementation of Mitigation Measures **MM-CUL15** and **MM-CUL16** would reduce the potential impacts to human remains. However, the excavation and construction necessary for some projects in the 2012-2035 RTP/SCS has the potential to adversely disturb human remains on lands that are part of ancient Native American burial sites or sacred lands, therefore, this impact would remain significant.

### **Cumulative Impacts**

Implementation of Mitigation Measures **MM-CUL1** through **MM-CUL17** would reduce potential cumulative impacts; however, the 2012-2035 RTP/SCS's accommodation of approximately 3.89 million people to the SCAG region by 2035 would contribute to cumulative impacts based on expanded urban development. Impacts to cultural resources from the 2012-2035 RTP/SCS would be cumulatively considerable.

## **COMPARISON WITH THE NO PROJECT ALTERNATIVE**

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Implementation of the 2012-2035 RTP/SCS would result in the same regional total population as the No Project Alternative. Population for both the No Project Alternative and the Plan is projected to be approximately 22.1 million people. However, no regional transportation investments would be made beyond the existing programmed projects under the No Project Alternative. The population distribution is assumed to follow past trends, uninfluenced by additional transportation investments and growth polices contained within the 2012-2035 RTP/SCS.

### **Direct Impacts**

Under the No Project Alternative fewer areas would be impacted by excavation and construction activities related to transportation projects. However, the No Project Alternative would consume 742 square miles (474,900 acres) of undeveloped (vacant) land whereas the Plan would consume 334 square miles (213,800 acres) of undeveloped land. While the No Project Alternative would reduce the number of transportation projects built in the SCAG region, it would result in greater vacant land consumption that could, in turn, increase the chance to uncover a greater number of previously undisturbed resources. The Plan would result in concentration of development in previously developed urban areas, which could lead to greater impacts to historic buildings. However, many communities have in place regulations to protect historic resources, and even under the No Project Alternative these areas could still redevelop – although possibly not at the same intensity as under the plan. **On balance, it is anticipated that the 2012-2035 RTP/SCS's impacts to cultural resources would be less than the No Project Alternative because it would result in far less land disturbance.**

### **Cumulative Impacts**

As discussed above, implementation of the 2012-2035 RTP/SCS would result in cumulative impacts to cultural resources throughout the State of California as historic resources are replaced with new development and land is disturbed thereby impacting archeological resources. The No Project Alternative would consume greater amounts of vacant land and result in a more spread out growth pattern that could result in the development of a greater amount of land that contains previously undisturbed and undiscovered archaeological, paleontological, or human remains. **Therefore, the No Project Alternative's cumulative impacts to cultural resources would be greater than those of the 2012-2035 RTP/SCS.**